

Appendix L

Responses to Public Comments on the
Draft Environmental Impact Statement (Draft EIS)

Draft EIS Public Comment Period
September 14-October 28, 2015

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Introduction

The Draft Environmental Impact Statement (Draft EIS) was released for public review on September 14, 2015. The public comment period closed on October 28, 2015 4:30 p.m. During the public comment period, a public informational meeting was held on October 14, 2015 in Moorhead, Minnesota at the Courtyard by Marriott Hotel Conference Center. The meeting included an open house with state and federal agency staff available at topic tables to answer questions; presentations about the environmental review process and the Draft EIS; and an oral public comment period. Two stenographers were present at the meeting to record oral public comments in the group setting and individually. Attendees were also encouraged to submit written comments on available forms at the meeting, and/or provide written comments via email or letter prior to the close of the comment period.

Written comments were received on the Draft EIS from a total of 340 different state and local agencies, non-governmental groups, and citizens (Attachment 1). Oral comments were received from a total of 34 individuals at the public meeting. Individual commenters have been assigned unique comment identification (Comment ID) that is listed alphabetically by organization or first name of commenter. Where feasible, the Minnesota Department of Natural Resources (MNDNR) has grouped similar comments together and responded to a comment representative of the grouping or may provide a response for a Comment ID under more than one topic category. This improves the readability of the document and helps to show common themes expressed by commenters. All substantive comments have been responded to in accordance with Minnesota Rules, part 4410.2600, subpart 10, and clarification of subject matter presented in the Draft EIS has been provided where needed. For each group of comments or individual comment this document also indicates whether the issue prompted a change or clarification to the Final Environmental Impact Statement (Final EIS).

The MNDNR received 31 comments outside of the comment period. Comments received outside of the public comment period are not directly addressed (Minnesota Rules, part 4410.2600, subpart 9), but topics included in this document may address those comments. The Project Proposer and all permitting authorities that make a request will receive all comments for consideration.

The following tables include substantive comments received during the public comment period on the Draft EIS, as well as a table reflecting commenter-proposed edits to the Draft EIS. Nonsubstantive and late comments are identified by Comment ID and listed at the end of this document.

List of Commenters and Comment Identification Numbers (IDs)

Name	Commenter ID Number	Unique Comment IDs
Alan and Patricia Otto	41	41a-41v
Alan Roebke	42	42a
Allen Swenson	1	1a-1b
Amber Nefzger	43	43a-43b
Ann Christenson on behalf of Sanford Health	150	150a-150b
April Walker on behalf of the City of Fargo	56	56a-56b
Ardelle Brandt	172	172a-172b
Arden Breimeier	44	44a-44c
Austin Morris and Ben Meland	45	45a
Bernie Dardis	46	46a
Bernie Dardis on behalf of the Fargo-Moorhead West Fargo Chamber of Commerce	30	30a-30c
Beth McConnon	47	47a-47d
Bev and Dean Marsh	48	48a
Brian Leiseth	2	2a-2f
Brad Wimmer	174	174a
Bradley Schlossman on behalf of the West Acres Development LLC	210	210a-210b
Bradley Swenson	173	173a-173b
Brett Lambrecht on behalf of the Richland County Emergency Management	138	138a-138d
Bruce Furness	49	49a
Cam Knutson on behalf of Memory Fireworks	116	116a
Cash Aaland on behalf of MnDak Upstream Coalition	23	23a-23e
Chad Peterson on behalf of the Cass County Commission	175	175a-175b
Charles Christianson	177	177a
Charles Helmstetter	54	54a-54b
Charles Poynter	52	52a
Charley Johnson on behalf of the Fargo-Moorhead Convention & Visitors Bureau	51	51a
Cherie Mathison	53	53a-53f
Clay Dietrich and Bryce Johnson on behalf of the Home Builders Association of Fargo-Moorhead	11	11a-11f
Cliff Enns	57	57a-57b
Cody Lavelle	58	58a
Colleen Israelson	59	59a-59h
Craig Hertsgaard	60	60a-60c
Craig Whitney on behalf of the Chamber	208	208a-208b
Crystel Johnson	178	178a
Curt Bjertness on behalf of the C-W Valley Co-op	61	61a-61b
Dallas Israelson	62	62a-62g
Dan Lindquist	63	63a-63b

Name	Commenter ID Number	Unique Comment IDs
Darlene Askegaard	3	3a-3b
Darrell Vanyo on behalf of the Fargo-Moorhead Diversion Authority	4	4a-4r
Dave and Roxanne Morken	64	64a
Dave Gingrey	65	65a-65b
Dave Kinsky	66	66a-66b
Dave Morken on behalf of the MnDak Upstream Coalition	120	120a
Dave Ness	28, 179	28a-28e and 179a-179f
David and Marilyn Tessier	180	180a
David Wahlstrom	67	67a
Dean Meyer	68	68a
Debbie Fowler	5	5a-5d
Deborah Nichols	69	69a-69c
Dennis and Mary Hanson	182	182a
Diane Itsa on behalf of the MnDak Upstream Coalition	17	17a
Diane Itsa	70	70a-70j
Diane Johnson	183	183a
Don Krassin	71	71a-71c
Don Moffet on behalf of the Richland County Water Resource District	139	139a-139e
Don Nelson	72	72a-72ff
Doug Burgum	73	73a-73f
Doug Busselman on behalf of the Minnesota Farm Bureau	74	74a
Doug Christianson	77	77a-77e
Doug Lingen	76	76a-76b
Doug Restemayer	40	40a-40c
Douglas and Christy Leier	75	75a
Fred Eckhardt	80	80a
Fred Schumacher	81	81a-81j
Gary Gonser	186	186a-186c
Gary Hoffman on behalf of the Western Trust Company	211	211a
Gerald Keller	90	90a
Gerald VonKorff on behalf of the Richland/Wilkin Joint Powers Authority	97	97a-97k
Gerry Zimmerman	82	82a
Governor Jack Dalrymple on behalf of the State of North Dakota	83	83a
Greg Butler	84	84a
Greg Hanson	86	86a-86d
Harlan Goerger	171	171a-171b

Name	Commenter ID Number	Unique Comment IDs
Harold Brandt	187	187a-187b
James Ness	188	188a-188c
Jan Perry	190	190a-190b
Janith Ness	189	189a-189g
Jeff Lewis on behalf of the Red River Basin Commission	19	19a-19b
Jeff Thomas	87	87a
Jenny Mongeau	88	88a-88b
Jeremy Oliver	89	89a-89c
Jerome and Sandy Nipstad	191	191a-191b
Jerry Blomeke on behalf of the Cass Rural Water District	50	50a
Jill Lavelle	85	85a
Jim Gartin on behalf of the Greater Fargo-Moorhead Economic Development Corporation	12	12a-12c
Joan Crooks	192	192a
Joel and Christine Stadling	91	91a
Joel Hanson	39	39a-39b
Joel Hanson on behalf of the Lower Wild Rice and Red River Cemetery	34	34a
John Askegaard	92	92a
John Colvin	93	93a
John Finney on behalf of the Red River Watershed Management Board	147	147a-147i
John Hickman	94	94a
John Zeglin	95	95a
Jon Rich	122	122a-122b
Jon Riewer on behalf of the Eventide Senior Living Communities	184	184a-184b
Jonathan Wolf on behalf of the Joint Powers Association	25	25a-25d
Judith DesHarnais on behalf of the U.S. Army Corps of Engineers	164	164.1-164.119
Judy Ness	38	38a-38b
Judy Willem	193	193a-193f
Julie and Paul Heuer	96	96a
Kathleen Lingen	99	99a-99i
Kathy Carik	98	98a
Keith and Norma Kragerud	100	100a-100b
Kelly Duchscherer	101	101a-101d
Kelly Miller	102	102a-102c
Kenneth Regan	103	103a
Kevin and Kristin Bakko	104	104a
Kevin and Kristy Olsgaard	105	105a-105g

Name	Commenter ID Number	Unique Comment IDs
Kevin Fisher	35	35b
Kevin Fisher on behalf of the Fargo Moorhead Area Association of Realtors	35	35a
Kevin Kain on behalf of the Minnesota Pollution Control Agency	196	196a
Kris Rich	124	124a-124c
Kristi Houska	137	137a-137c
Kurt Wickstom on behalf of the Minn-Dak Farmers Cooperative	119	119a-119c
Larry Ness	37	37a-37b
Leah Rogne	107	107a-107d
Leland Larson	194	194a
Lori Kinskey	108	108a
Luke Brakke	109	109a-109g
Lyle Hovland on behalf of Richland/Wilkin Joint Powers Authority	6	6a-6c
Lynn Fundingsland on behalf of the Fargo Housing and Redevelopment Authority	79	79a-79b
Lynn Larsen and Richard Geurts	110	110a
Marcus Larson	7, 111	7a and 111a-111v
Mari Dailey on behalf of the Moorhead City Council Ward 1	29	29a
Marjorie Cossette	195	195a-195f
Mark and Barbara Askegaard	112	112a-112i
Mark Anderson on behalf of the Comstock Lutheran Church	32	32a
Mark Askegaard on behalf of the MnDak Upstream Coalition	18	18a-18e
Mark Brodshaug on behalf of the Cass County Joint Water Resource District	176	176a-176c
Mark Herwig	113	113a
Mark Vanyo	24	24a
Mark Waltz	8	8a-8d
Marti Kaiser on behalf of the Fargo-Moorhead Area Association of Realtors	185	185a
Martin Johnson	36	36a
Marty Johnson	26	26a
MaryJane Nipstad on behalf of Pleasant Township	133	133a-133n
Matt and Rachel Ness	114	114a-144c
Mayor Chad Olson on behalf of the City of Dilworth	27	27a
Mayor Tim Mahoney on behalf of the City of Fargo	13	13a-13c
Mayor Tom Askegaard on behalf of the City of Comstock	55	55a-55e
Meghan Carik	115	115a

Name	Commenter ID Number	Unique Comment IDs
Michael Brandt	117	117a
Michael Edenberg and David Hunstad on behalf of the Moorhead Business Association	121	121a
Mike Brakke	170	170a
Mike Gunter	118	118a
Nancy and Jon Rich	123	123a
Nancy Ulven	125	125a-125b
Nick Matz	127	127a
Nick Saviking44	126	126a
Patricia Redlin	198	198a-198d
Patrick Chase	129	129a
Paul Heuer	131	131a-131b
Paula Ekman on behalf of Stanley Township	130	130a-130b
Paulette Capps	199	199a
Paulette Spiker	200	200a-200c
Randy Gilbraith	134	134a
Ray Holzhey	33	33a
Renee and Cory Clasen	135	135a-135b
Renee and Michael Grussins	202	202a
Richard and Kristi Houska	136	136a-136b
Rick Alm	140	140a-140b
Rick Petrekovic	203	203a
Riley Maanum	141	141a
Robert Bozovsky	142	142a
Robert Fode on behalf of the North Dakota Department of Transportation	197	197a
Rodney Mathison	143	143a-143c
Roger Minch	144	144a-144b
Ron Cossette	145	145a-145b
Ron Knutson	146	146a-146b
Ryan Hanson	148	148a-148c
Sandy Meyer	149	149a-149j
Sara & Jerry Boyer	151	151a-151b
Sarah Lavelle	152	152a-152b
Scott Handy	153	153a-153b
Senator Larry Luick	106	106a
Senator Larry Luick on behalf of District 25 of North Dakota	22	22a-22b
Shane Cullen	154	154a-154b
Shelley Lewis	155	155a-155z
Shelley Lewis on behalf of the MnDak Upstream Coalition	21	21a-21c
Stanley Fuxa	212	212a
State Representative Paul Marquart	31	31a-31b

Name	Commenter ID Number	Unique Comment IDs
Steve and Lenore Olson	204	204a
Steve Gehrtz	156	156a-156b
Steve Gehrtz on behalf of the Moorhead City Council	16	16a-16c
Steve Scheel	206	206a-206b
Steven Vigesaa	157	157a-157e
Steven Walker	205	205a
Susan Evert	158	158a-158c
Sylvia Storvick	207	207a
Tammy Stoffel	159	159a
Theresa and Peter Orecchia	132	132a-132c
Thomas Lavelle	160	160a
Tim Fox on behalf of Wilkin County	14	14a-14i
Timothy Leiseth	9	9a-9h
Timothy Saylor on behalf of Essentia Health	78	78a-78b
Toby Christensen	20	20a-20c
Todd Ellig	161	161a-161b
Todd Sando on behalf of the North Dakota State Water Commission	128	128a-128o
Tom Dawson on behalf of Dawson Insurance	181	181a-181c
Tom Dawson on behalf of the Business Leaders Task Force for Permanent Flood Protection	15	15a-15g
Tom Jacobs	162	162a-162d
Tom Kenville	10	10a-10e
Trana Rogne	163	163a-163zz
Valerie Peterson	165	165a-165b
Vaughn Johnson	209	209a
Vernon Johnson	166	166a-166b
Vicky Matson	167	167a-167c
Wayne and Marilyn Farsdale	168	168a
Wayne Ulven	169	169a
William Moore and Richard Betting on behalf of the People to Save the Sheyenne	201	201a

Responses to Comments Received During the Draft EIS Public Comment Period

General Topic			
Adequacy Determination, Approve the Project			
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
11e	Adopt a statement of adequacy in the Draft EIS which supports approval of the Project.	An adequacy determination will be determined after completion of the Final EIS in accordance with Minnesota Rules, part 4410.2800, subpart 4. The Determination of Adequacy does not result in an approval for the Project or a Project alternative nor does it mean that the project or a project alternative will be approved.	No change.

General Topic			
Alternatives, All Commenter-Submitted Alternatives			
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
1b, 3a-b, 6b, 8a-b, 18a, 19b, 23a-b, 37b, 38b, 41e, 47a-b, 53d, 59b, 60a-b, 61c, 71b, 72m, 72p-q, 72dd, 76a, 77a-c, 77e, 82a, 86a, 89c, 94a, 97e-f, 102b, 106a, 111g-h, 111p, 111s, 112b-g, 113a, 114a-b, 119c, 123a, 124b, 125b, 133m, 138a-b, 138d, 139a, 139d, 142a, 143c, 147a-b, 149j, 155m, 155s, 157a, 163gg, 163w, 166a-b, 168a,	<p>Commenters requested review of previously-screened (Scoping) alternatives, new alternatives or additional combinations of components of previously-screened alternatives.</p> <p>Alternative 2: Commenter 77e Alternative 3: Commenters 18a, 47a, 97f, 112b, 155s, 157a Alternative 7: Commenter 111s Alternative 11: Commenters 8a, 77b, 114b Alternative 12: Commenters 6b, 8b, 19b, 37b, 53d, 82a, 86a, 94a, 106a, 139d, 149j, 168a, 171a, 198d Alternative 15: Commenters 47b, 60b, 72m,</p>	MNDNR received numerous public comments that requested review of previously-screened (Scoping) alternatives, new alternatives or additional combinations of components of previously-screened alternatives. Some commenters offered only general descriptions of alternatives with insufficient detail to allow for evaluation. MNDNR staff attempted to develop reasonable alternatives from what was offered so that an evaluation could occur. In response to these public comments, MNDNR conducted an “Alternative Rescreen Exercise” to help us determine if any alternatives (Previously-Screened/New/Combination) should be	Added Appendix M: Purpose & Need and Alternative Rescreen Report.

General Topic	Alternatives, All Commenter-Submitted Alternatives		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
169a, 171a, 179f, 182a, 193c, 198d, 203a	<p>72dd, 77a, 86a, 111g-h, 112c, 112g, 114a, 142a, 155m</p> <p>Alternative 16: Commenters 147a-b</p> <p>Alternative 17: Commenters 37b, 72q, 102b, 119c, 138a, 157a</p> <p>Alternative 18: Commenter 112d-f</p> <p>Alternative 19: Commenters 3a, 38b, 97e, 111p, 133m</p> <p>Alternative 20: Commenters 113a, 123a, 124b, 179f, 203a</p> <p>Alternative 21: Commenters 61c, 71b, 89c, 97e, 111s, 138b</p> <p>Alternative 22: Commenters 3b, 41e, 59b, 143c, 166a, 182a</p> <p>Alternative 23: Commenters 60a, 76a, 97e, 138d, 155k, 163w, 163gg, 193c</p> <p>Alternative 24: Commenter 166a</p> <p>Alternative 25: Commenters 166b, 169a</p> <p>Alternative 26: Commenter 139a</p> <p>Alternative 27: Commenters 1b, 72p, 125b, 139a, 169a</p> <p>Alternative 28: Commenters 1b, 77c, 125b, 139a</p> <p>Alternative 29: Commenter 23a</p>	<p>reevaluated or newly-evaluated in the Final EIS. MNDNR used information provided by commenters to develop enough detail about a newly-proposed alternative so that they could be evaluated. MNDNR decided to rescreen the Scoping Alternatives alongside the New/Combination alternatives on their ability to achieve FEMA Accreditation to determine if a less impact alternative existed and was subsequently screened out by one of the remaining two Purpose & Need components. All alternatives were then further evaluated in accordance with Minnesota Rules, part 4410.2300, item G (4410.2300, item G) (i.e., significant environmental benefit or substantially less adverse socioeconomic impact over Project). If the Alternative Rescreen Exercise resulted in zero alternatives that were able to meet the most critical component of the P&N (FEMA Accreditation) and the other criteria of 4410.2300, item G, it would indicate that no Previously-Screened, new or combination alternatives should be fully evaluated in the EIS. None of the Scoping Alternatives or the 15 New/Combination Alternatives were able to pass all five steps of the rescreening criteria; therefore, MNDNR determines none of the Previously-Screened/New/Combination Alternatives</p>	

General Topic		Alternatives, All Commenter-Submitted Alternatives	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		require further analysis. The Purpose & Need and Alternatives Rescreen Report is included as Final EIS Appendix M. Commenters should reference the alternative(s) indicated for their Commenter ID (in the Comment Summary column to the left).	
22a-b, 26a, 57b	Commenters submitted general statements about alternatives.	Commenters did not provide enough detail in their comment to be included in the alternative rescreen exercise (Appendix M).	No change.
102b	There should be a dam on the Wild Rice, Antelope Creek and/or Red River on the South Dakota border.	The Project includes a dam on the Wild Rice River. The MNDNR believes that a dam on Antelope Creek would not measurably help achieve the Project purpose. The North Dakota/South Dakota Red River border dam is evaluated as Alternative 17 in Appendix M.	No change.

General Topic		Alternatives, Alternative Screening	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
99i	Have other options been explored and studied?	During the Federal EIS process, the USACE evaluated numerous alternatives to and variations of the Project. MNDNR evaluated 14 Alternatives during the EIS Scoping Process. The EIS fully evaluated one alternative alignment (Northern Alignment Alternative, described in Chapter 2 of the Final EIS) to the Project as well as multiple No Action Alternatives. Appendix M of this Final	No change.

General Topic		Alternatives, Alternative Screening	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		EIS includes additional information on an alternative rescreen exercise conducted by the MNDNR in response to public comment regarding previously-screened, new and combination alternatives.	

General Topic		Alternatives, Federal Ranking Criteria	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
163v	Commenter states that the USACE received comments from another Federal agency during their public comment periods that stated that the Project cost savings were for development of the floodplain and that that commenter said that the ranking criteria for the project alternatives was skewed as it showed Executive Order 11988 (E.O. 11988) as the lowest criteria.	MNDNR did not rely on the alternative analysis or criteria contained in the FFREIS because it does not comply with State environmental review criteria found in Minnesota Rules, part 4410.	No change.

General Topic		Alternatives, MNDNR Opinion	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
175b	What exactly is the State of Minnesota DNR's position on whether the Minnesota alignment should now be substituted for the North Dakota alignment of the channel?	The Minnesota alignment was evaluated as part of EIS Scoping and again as part of the rescreening exercise that was conducted in response to public comments. In both cases	No change.

General Topic		Alternatives, MNDNR Opinion	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		that alternative was not carried forward for a detailed analysis. The primary reason for not carrying that alternative forward was the inability to develop reasonable measures to mitigate downstream impacts. See Appendix M—Purpose & Need and Alternative Rescreen Report.	

General Topic		Aqueducts, Aqueduct Risk Concerns	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
81b	Studies done to date are not adequate to determine impacts of aqueduct failure due to ice build-up, sheer stress from flow, and spring melt which. The failed structure would shift downstream and ultimately block off the diversion channel.	It is anticipated that the diversion channel would generate a relatively small amount of ice during the winter and that ice retaining structures upstream of the Maple River aqueduct and Sheyenne River aqueduct structures would limit the amount of ice that would get into the diversion channel from those rivers. All structures and foundations would be designed to withstand anticipated loads and shear stresses and would part of the North Dakota State Engineer’s permitting process (per email communication from North Dakota State Water Commission). In addition to ice analyses conducted using the physical model of the Maple River Aqueduct, USACE Cold Regions Research and	No change.

General Topic		Aqueducts, Aqueduct Risk Concerns	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		Engineering Laboratory (CRREL) has investigated ice issues for this Project in two studies. Results of the report "Development of Conceptual Designs for the Prevention of Ice Formation in the Proposed Maple River Aqueduct," July 2014 are summarized in EIS Section 3.5. For information about ice on the Red River, see the report "Ice Analysis for Red River of the North Diversion Project Fargo ND, Moorhead, MN," February 2012.	

General Topic		Aqueducts, Cold Weather Studies	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
155r	Cold Weather testing is inadequate. How can testing be done for the Sheyenne River aqueduct when it has not yet been designed? Terry Williams (USACE) said the cold water station would do some testing, but commenter says this is not adequate.	The diversion inlet structure is about 6 miles west of the Red River and at least 3 miles west of the Wild Rice River. It would be very unlikely that much ice would make it from the Red River or Wild Rice River to the diversion inlet structure. The diversion channel would generate a relatively small amount of ice during the winter. Ice retaining structures upstream of the Maple River aqueduct and Sheyenne River aqueduct structures will limit the amount of ice that would get into the diversion channel and aqueduct structures from those rivers. The	No change.

General Topic		Aqueducts, Cold Weather Studies	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		amount of ice in the diversion channel would be anticipated to be manageable. For information about ice on the Red River, see the report "Ice Analysis for Red River of the North Diversion Project Fargo ND, Moorhead, MN," Ice Engineering Group, US Army Cold Regions Research and Engineering Laboratory (CRREL), February 2012.	

General Topic		Basin-wide Storage, Effect on Project and Project Operation	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
147d	How will basin-wide projects be considered with the Project?	Basin-wide storage projects completed upstream of the Project and after Project implementation may affect Project operation frequency.	No change.

General Topic		Cold Weather, Ice Jams	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
59e	Concern about ice jams with Project.	Comment does not provide enough detail on missing, incomplete or inaccurate information to provide a response. Cold weather impacts, including ice buildup in aqueducts, is included in EIS section 3.9.	No change.

General Topic			
Comment Received, Misinterpretation or Inaccurate Comment			
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
97k	Commenter makes misinterpretations or inaccurate statements.	MNDNR disagrees with the commenter on many statements contained within the comment letter either because the statements are inaccurate or they are a misinterpretation of data/information.	No change.

General Topic			
Communication Concerns, Diversion Authority			
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
55a	The Diversion Authority doesn't communicate well. They developed the Comstock ring levee plan and didn't allow local input.	The flood protection plan that was developed for the City of Comstock, MN is conceptual in nature. A public meeting was hosted by the City of Comstock on August 20, 2013 where details of the conceptual flood protection plan were presented. The Diversion Authority met with the Comstock City Council on Sept. 18, 2014 at their Council's regular meeting in order to receive local input from the City of Comstock on their needs associated with a potential future community ring levee. It was also noted at that time that the plan is conceptual in nature and as Project development moves forward, the USACE and Diversion Authority would have additional communication and coordination with the City to further develop the flood protection plan. The flood protection plan that was presented to the City is the same as the flood	No change.

General Topic		Communication Concerns, Diversion Authority	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		protection plan included in the EIS and depicted in Figure 6 of the Draft EIS. The community ring levee would need to be constructed before Project operation, which would be several years away. Given this, a schedule for refining the flood protection plan and community coordination has not been established.	

General Topic		Communication Concerns, Diversion Authority and USACE	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
59d, 155y, 191a	Commenters state that the Diversion Authority and/or the USACE aren't communicating with staging area residents regarding impacts, negotiations and mitigation.	Comments are acknowledged and concerns have been shared with the Diversion Authority and USACE. See also Final EIS Appendix O—Takings, Flowage Easements and Acquisition Processes.	No change.

General Topic		Communication Concerns, MNDNR	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
130a, 151a	Commenters are concerned that they weren't notified far enough in advance of the Draft EIS availability.	MNDNR has been working on the EIS scoping documents and Draft EIS document since 2012. The EIS process, to date, has included two public comment periods and two public meetings in Moorhead (May 2013 and	No change.

General Topic	Communication Concerns, MNDNR		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>October 2015). Notice of MNDNR's work was made publically available in places such as the Diversion Authority's website, local media outlets (e.g., the Fargo Forum) and local and regional libraries. Environmental review document (e.g., Draft EIS) availability cannot be officially "noticed" until the document is published in the Environmental Quality Board's weekly <i>Monitor</i> publication. Minnesota environmental review documents are distributed through the State of Minnesota environmental review document distribution list; a list that anyone can subscribe to if they wish to receive State environmental review documents. The MNDNR is not aware of such a document distribution system in the State of North Dakota. It is not a requirement to provide the document to anyone other than those who request to receive it. The notification letter that Stanley Township residents received was timed to arrive on, or as close to, the day the EIS was published. MNDNR was not required to send the letter to Stanley Township residents but the Diversion Authority requested and paid for the letters to be distributed to all NAA and Project staging area landowners.</p>	

General Topic			
Comparison of Alternatives, Northern Alignment Alternative More Implementable			
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
30b	The commenter stated that "The DNR implies the NAA [Northern Alignment Alternative] is more implementable. The NAA has not received a ROD [Record of Decision] from the USACE, nor has it received federal authorization. The EIS should reflect the ROD process alone is a 4-5 year decision, which makes the NAA not at all implementable."	The differences between the Project and the NAA are primarily the alignment of the tieback embankment, the river control structure and the elevation of the overflow embankment. The remaining major components of the Project (e.g., the 36 miles of diversion; the diversion inlet control structure; the Maple and Sheyenne River aqueducts and rock-ramp spillways; the Rush and Lower Rush inlet structures; and the diversion outlet control structure) remain the same. A new Record of Decision isn't required for modifications to an approved project when the majority of the project features are retained unless the modifications would potentially cause significant adverse environmental effects.	No change.

General Topic			
Comparison of Alternatives, Flood Depth and Duration			
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
163j	Commenter requests confirmation that the depth and duration of Northern Alignment Alternative (NAA) and Project is, in fact, the same. It is not clear the depth and duration of the flooding is the same, with a flood level of 919 feet (as opposed to 922 feet?).	The MNDNR reviewed the hydrology model results and has verified that the duration of the flood events would be the same. The depth of flooding would vary depending on location.	No change.

General Topic		Comparison of Alternatives, Criteria for Alternative Selection	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
73e	The Draft EIS states in several locations that “economic considerations” alone are not a basis to dismiss an alternative; however the public is asked to provide comments pertaining to “socioeconomic” effects as it relates to the flood control project, a broad concept. Clarification should be provided to the reader on the two concepts. I am concerned readers do not understand what is and is not appropriate criteria for choosing between alternatives. The Proposed F-M Diversion Project puts 274 fewer structures in jeopardy, a legitimate and important rationale for selecting the Project.	The statement that "economic considerations" alone are not a basis to dismiss an alternative essentially means that an alternative cannot be dismissed because it costs too much or, similarly, an alternative cannot be selected because it costs less. One of the purposes of an EIS is to report the potential impacts (e.g., socioeconomic, wetlands, stream stability) of the Project and project alternatives. Each Responsible Government Unit and member of the public has to independently determine what those impacts mean for them. A comparison of number of structures impacted is only one measure of impact. It is important to consider all impacts when determining the least impactful alternative.	No change.

General Topic		Comparison of Alternatives, Side by Side Comparison Needed	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
4g, 73c	Requests a simplified version of Table 5.1 that shows the differences between Project and Northern Alignment Alternative (NAA) be added to the Executive Summary.	The purpose of Table 5.1 is to provide a thorough summary of alternatives analyzed in the EIS so that permittees can get a sense of which alternative poses less environmental consequences and greater social/economic	Summary of Impacts table added to the Executive Summary.

General Topic	Comparison of Alternatives, Side by Side Comparison Needed		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		benefit. MNDNR cannot select which topic, potentially significant environmental or social impacts, or special considerations might be of interest to a permittee; therefore, all topics have remained included in the summary table in Final EIS Chapter 5; however, an abbreviated table with all EIS topics has been added to the Final EIS Executive Summary.	

General Topic	Comstock Ring Levee, Comstock Coordination		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
155g	Commenter requests that the Diversion Authority meet with Comstock to discuss the proposed Comstock ring levee.	MNDNR has passed this request along to the Diversion Authority and the USACE.	No change.

General Topic	Cultural Resources, Cemetery Impacts		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
5a, 39a, 53a, 109e, 137a, 149i, 158c, 163q, 195f	Commenters are concerned about cemetery impacts, including costs, caskets, soil erosion, tombstones, grave markers, vegetation, etc.	Impacts to each cemetery located in the staging area were evaluated for new inundation potential as a result from the Project as well as any proposed cemetery-specific mitigation activities. This evaluation is located in the USACE's 2014 Cemetery	Text added to Section 3.16 and Chapter 6; added Appendix O: Takings, Flowage Easements and Acquisition

General Topic	Cultural Resources, Cemetery Impacts		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>Study and the Cemetery Mitigation Plan Draft Report (the Report), attached to the EIS as Appendix H. For example, the Report identifies that there are no plans for caskets in impacted cemeteries to be moved because no grave buoyancy or eruption is expected. The Report discusses the potential for use of grave relocation in Section 1.7, where it reads "It was conveyed to concerned citizens that any relocation of graves would be conducted only as a last resort and that the only instance where it may be necessary is to relocate grave(s) required as part of constructing a protective berm; in these cases the grave(s) would be relocated to a site within the affected cemetery."</p> <p>There are questions whether the Draft Mitigation Plan addresses concerns and mitigation sufficiency. Additional information regarding the takings process can be found in Final EIS Appendix O. See also "Areas of Controversy and Issues Yet to be Resolved" in the Final EIS Executive Summary for a discussion on mitigation. A discussion regarding social impacts, such as emotional stress due to impacts to cemeteries is included in Section 3.16 of the Final EIS. The Diversion Authority has indicated in their 2016 goals located on their website</p>	<p>Processes; and added "Areas of Controversy" to the Executive Summary.</p>

General Topic	Cultural Resources, Cemetery Impacts		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>(http://www.fmdiversion.com/diversion-authority-goals-for-2016/) and through correspondence that they intend to pursue further cemetery mitigation on a site-specific basis.</p>	
5a, 39a, 158c	Lower Wild Rice and Red River Cemetery impacts.	<p>Regarding mitigation for the Lower Wild Rice and Red River Cemetery, the USACE’s Cemetery Mitigation Plan Draft Report (the Report) states, <i>“For the Lower Wild Rice and Red River Cemetery, the increase in depth and duration of the induced flooding from the Project would not cause an impact beyond making the cemetery inaccessible for an additional two days at the 50-year event, and no taking would result.”</i> Anticipated impacts to this cemetery under various flood events can be found in Table 2 of the Report.</p> <p>There are questions whether the Draft Mitigation Plan addresses concerns and mitigation sufficiency. Additional information regarding the takings process can be found in Final EIS Appendix O. See also “Areas of Controversy and Issues Yet to be Resolved” in the Executive Summary for a discussion on mitigation. A discussion regarding social impacts, such as additional emotional family stress, is included in the Final EIS Section 3.16.</p>	Text added to Section 3.16 and Chapter 6; added Appendix O: Takings, Flowage Easements and Acquisition Processes; and added “Areas of Controversy” to the Executive Summary.

General Topic		Cultural Resources, Cemetery Impacts	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
109e	Hoff Cemetery impacts.	<p>The USACE’s 2014 Cemetery Study and the Cemetery Mitigation Plan Draft Report (the Report) discuss likely impacts from various flood events and potential mitigation strategies for the Hoff Lutheran Church Cemetery in Section 2.7. The Report goes on to state, <i>“parts of the Hoff Cemetery would flood at the 10-year event both with and without the Project. Even with additional areas being flooded, the physical damage to the cemetery would be minimal, and along with the infrequency of the flooding, no taking would result.”</i></p> <p>There are questions whether the Draft Mitigation Plan addresses concerns and mitigation sufficiency. Additional information regarding the takings process can be found in Final EIS Appendix O. See also “Areas of Controversy and Issues Yet to be Resolved” in the Final EIS Executive Summary for a discussion on mitigation. A discussion regarding social impacts, such as additional emotional family stress, is included in the Final EIS Section 3.16.</p>	Text added to Section 3.16 and Chapter 6; added Appendix O: Takings, Flowage Easements and Acquisition Processes; and added “Areas of Controversy” to the Executive Summary.
137a	Further analysis needs to be performed showing full costs associated with damages (many items which are irreplaceable).	The EIS is not required to determine mitigation costs. The concern has been shared with the USACE and the Diversion Authority.	Added Appendix O: Takings, Flowage Easement and Acquisition Processes.

General Topic		Cultural Resources, Cemetery Impacts	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		There are questions whether the Draft Mitigation Plan addresses concerns and mitigation sufficiency. Additional information regarding the takings process can be found in Final EIS Appendix O. The Diversion Authority has indicated in their 2016 goals located on their website (http://www.fmdiversion.com/diversion-authority-goals-for-2016/) and through correspondence that they intend to pursue further cemetery mitigation on a site-specific basis.	
163p	Impact to the visual and spiritual experience.	Impacts to each cemetery located in the staging area were evaluated for new inundation potential as a result from the Project as well as any proposed cemetery-specific mitigation activities (see Appendix H). In addition, potential social and economic impacts, such as periodic visual impacts, were added to the Final EIS text in Section 3.16.	Text added to Section 3.16.
163q	Kindred Family Cemetery impacts.	MNDNR is not aware of the situation referred to by the commenter regarding a cemetery in Kindred, and no further information was provided by the commenter. Without additional information, MNDNR is unable to validate the commenter's concern.	No change.
163q	Commenter states one casket did rise out of the ground in Kindred, North Dakota.	MNDNR is not aware of the situation referred to by the commenter regarding a cemetery in Kindred and no further information was	No change.

General Topic		Cultural Resources, Cemetery Impacts	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		provided by the commenter. Without additional information, MNDNR is unable to validate the commenter's concern.	

General Topic		Cultural Resources, Cemetery Mitigation	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
32a, 34a, 39a, 53b, 133i, 143a, 155d, 163m, 163s	General concern about the Project, including questions about the effectiveness of cemetery mitigation, options, and statements and questions regarding potential cemetery impacts to the Lower Wild Rice and Red River Cemetery.	<p>The Project includes mitigation for all impacted structures located within the FEMA revision reach, and an analysis to determine a taking is proposed to determine mitigation needs for all other impacts outside of the staging area (see Draft EIS subsection 3.16.3). Impacts to each cemetery located in the staging area were evaluated for new inundation potential as a result from the Project as well as any proposed cemetery-specific mitigation activities. This evaluation is located in the USACE's Cemetery Mitigation Plan Draft Report (the Report), attached to the EIS as Appendix H.</p> <p>There are questions whether the Draft Mitigation Plan addresses concerns and mitigation sufficiency. Additional information regarding the takings process can be found in Appendix O. See also "Areas of Controversy</p>	Text added to Section 3.16 and Chapter 6; added Appendix O: Takings, Flowage Easements and Acquisition Processes; and added "Areas of Controversy" to the Executive Summary.

General Topic		Cultural Resources, Cemetery Mitigation	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		and Issues Yet to be Resolved” in the Final EIS Executive Summary for a discussion on mitigation.	
32a	Questions the effectiveness of cemetery mitigation for Clara and Comstock Cemeteries.	<p>According to the USACE’s 2014 Cemetery Study and the Cemetery Mitigation Plan Draft Report (the Report) (Appendix H) both are operated by Comstock Lutheran Church. The Report states, <i>“The least intrusive of the proposed mitigation alternatives from a cultural standpoint is to document the existing cemetery and its features in a detailed report, as has been/is being done for the...Clara Cemetery, Comstock Cemetery, [and others], and to continue cleaning up after flood events as is currently being performed by cemeteries located in the Red River Valley and flood-prone areas.”</i></p> <p>Anticipated impacts to these two cemeteries under various flood events can be found in Tables 9 and 10, respectively, of the Report.</p> <p>There are questions whether the Draft Mitigation Plan addresses concerns and mitigation sufficiency. Additional information regarding the takings process can be found in Final EIS Appendix O. See also “Areas of Controversy and Issues Yet to be Resolved” in the Final EIS Executive Summary for a discussion on mitigation. A discussion regarding social impacts, such as additional</p>	Text added to Section 3.16 and Chapter 6; added Appendix O: Takings, Flowage Easements and Acquisition Processes; and added “Areas of Controversy” to the Executive Summary.

General Topic	Cultural Resources, Cemetery Mitigation		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
34a, 39a	Questions the effectiveness of cemetery mitigation at the Lower Wild Rice and Red River Cemetery. Requests definitive answers to what is a flowage easement? What are some other options? What would it look like if things were diked?	<p>emotional family stress, is included in the Final EIS Section 3.16.</p> <p>Anticipated impacts to this cemetery under various flood events can be found in Table 2 of the USACE’s Cemetery Mitigation Plan Draft Report (the Report). In considering mitigations, the Report states in the context of properties eligible to be listed in the National Register of Historic Places, "For all cemetery sites, eligible or non-eligible, any flood mitigation measure that involves physically altering the cemetery site, such as by adding a ring levee [i.e., dike] or fence where none has been before, may adversely affect the historical integrity of that site, particularly in regard to integrity of design, setting, and feeling." Specifically, regarding mitigation for the Lower Wild Rice and Red River Cemetery, the Report states, "For the Lower Wild Rice and Red River Cemetery, the increase in depth and duration of the induced flooding from the Project would not cause an impact beyond making the cemetery inaccessible for an additional two days at the 50-year event, and no taking would result." Anticipated impacts to this cemetery under various flood events can be found in Table 2 of the Report. Information on flowage easements can be found in Final EIS Appendix O.</p>	Text added to Section 3.16 and Chapter 6; added Appendix O: Takings, Flowage Easements and Acquisition Processes; and added "Areas of Controversy" to the Executive Summary.

General Topic		Cultural Resources, Cemetery Mitigation	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>There are questions whether the Draft Mitigation Plan addresses concerns and mitigation sufficiency. Additional information regarding the takings process can be found in Final EIS Appendix O. See also “Areas of Controversy and Issues Yet to be Resolved” in the Final EIS Executive Summary for a discussion on mitigation. A discussion regarding social impacts, such as additional emotional family stress, is included in the Final EIS Section 3.16.</p>	
53b, 143a, 163s	<p>Concern about existing erosion on the Red River near Hemnes Cemetery getting worse. In order to mitigate (berm) the stream needs to be restored--that cost hasn't been considered in the cost estimate. Concerned about stream erosion and general soil stability of the region. Concern about existing erosion on the Red River near Hemnes Cemetery getting worse.</p>	<p>The USACE's Cemetery Mitigation Plan Draft Report (the Report) discusses impacts and potential mitigations for Hemnes Cemetery, including concerns to erosion, in Section 2.3., with a summary of impacts, including those to Hemnes Cemetery, in Section 3.1. Specifically, the Report discusses current erosion issues and likely impacts from various flood events and potential mitigation strategies for the Hemnes Cemetery in Section 2.3. The Report states, in part, “Hemnes Cemetery is a significant historic site located on the Red River that is currently experiencing erosion issues that have impacted access and parking and may impact graves in the future. In June 2012, the cemetery POC [point of contact] wrote the USACE concerning the erosion issue. The</p>	<p>Text added to Section 3.16 and Chapter 6; added Appendix O: Takings, Flowage Easements and Acquisition Processes; and added “Areas of Controversy” to the Executive Summary.</p>

General Topic	Cultural Resources, Cemetery Mitigation		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>USACE responded that the Project would not likely include any measures to stabilize the riverbank because it is not anticipated that the Project would worsen the current situation. It also stated they could request a Continuing Authorities Program (CAP) Section 14 project/study which would require a local cost share sponsor. See Attachment 1 for copies of these letters. The caretakers have requested assistance from Richland County and were told the county could not help with stabilization.” See also Section 3.3 Stream Stability.</p> <p>There are questions whether the Draft Mitigation Plan addresses concerns and mitigation sufficiency. Additional information regarding the takings process can be found in Final EIS Appendix O. See also “Areas of Controversy and Issues Yet to be Resolved” in the Final EIS Executive Summary for a discussion on mitigation. A discussion regarding social impacts, such as additional emotional family stress, is included in the Final EIS Section 3.16.</p>	
55c	Comstock requesting agreements with Diversion Authority for cemetery mitigation prior to construction.	The Diversion Authority has indicated in their 2016 goals located on their website (http://www.fmdiversion.com/diversion-authority-goals-for-2016/) and through correspondence that they intend to pursue	No change.

General Topic		Cultural Resources, Cemetery Mitigation	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		further cemetery mitigation on a site-specific basis. The Diversion Authority has been provided this request.	
137c	Who will be held accountable and how will citizens be assured the accountable party performs their job? Basically, what recourse will there be if the accountable party does not perform the necessary repairs?	<p>The non-Federal sponsor would be responsible for operating and maintaining the Project in compliance with all applicable laws and permit requirements.</p> <p>There are questions whether the Draft Mitigation Plan addresses concerns and mitigation sufficiency. Additional information regarding the takings process, including the non-federal sponsor's plan for mitigation of impacts to cemeteries, can be found in Final EIS Appendix O. See also "Areas of Controversy and Issues Yet to be Resolved" in the Executive Summary for a discussion on mitigation. The Diversion Authority has indicated in their 2016 goals located on their website (http://www.fmdiversion.com/diversion-authority-goals-for-2016/) and through correspondence that they intend to pursue further cemetery mitigation on a site-specific basis.</p>	Text added to Section 3.16 and Chapter 6; added Appendix O: Takings, Flowage Easements and Acquisition Processes; and added "Areas of Controversy" to the Executive Summary.
163n	Bonds should be required for cemetery mitigation to last as long as the Project is to last has to be provided for.	Information regarding the takings process, including additional mitigation recommendations, can be found in Final EIS Appendix O. See also "Areas of Controversy and Issues Yet to be Resolved" in the Final EIS	Text added to Chapter 6; added Appendix O: Takings, Flowage Easements and Acquisition

General Topic		Cultural Resources, Cemetery Mitigation	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		Executive Summary for a discussion on mitigation.	Processes; and added “Areas of Controversy” to the Executive Summary.

General Topic		Cultural Resources, Cemetery Mitigation Communication	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
109e	Insubstantial information has been provided pertaining to the mitigation that the Hoff Lutheran Church Cemetery will receive.	Comment is acknowledged and has been shared with the USACE and Diversion Authority.	Text added to Chapter 6; added Appendix O: Takings, Flowage Easements and Acquisition Processes; and added “Areas of Controversy” to the Executive Summary.

General Topic		Cultural Resources, Cemetery Taking	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
39b, 133h, 163l	Commenters disagree with USACE that flooding a cemetery isn't a taking. Question about federal law applicability to cemeteries. When the cemetery is flooded, people may	Additional information regarding the takings process, including a comparison of Federal and Minnesota requirements can be found in Final EIS Appendix O. See also “Areas of	Added Appendix O: Takings, Flowage Easement and Acquisition

General Topic		Cultural Resources, Cemetery Taking	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
	have to wait to bury their loved ones.	Controversy and Issues Yet to be Resolved” in the Final EIS Executive Summary for a discussion on mitigation. Specific impacts to cemeteries can be found in Appendix H: Cemetery Mitigation Plan Draft Report.	Processes; and "Areas of Controversy" to the Executive Summary.

General Topic		Cultural Resources, Eligibility Undetermined	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
1551	The historical sites/buildings, etc. which are currently listed in Table 3.48 [Note that Table number and title have been updated in the Final EIS to Table 3.49 Inventoried Cultural Resources within Proposed Project APE (area of potential effects)] “eligibility undetermined” must be researched and decided upon PRIOR to any future construction.	Commenter is correct. This topic is discussed in Draft EIS section 3.12.2. "...Additional areas of the Project footprint and staging area remain to be surveyed, which means additional National Register of Historic Property (NHRP)-eligible sites could be found. A programmatic agreement is in place to avoid and minimize impacts to these properties and any unknown cultural resources in the project area... Sites listed as undetermined eligibility would require a Phase II investigation to further evaluate the NRHP eligibility of the site. This evaluation would be completed prior to Project construction. "	No change.

General Topic	Cultural Resources, Historic Properties Mitigation		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
72u	What is the mitigation for historic properties?	<p>Section 3.12.3 of the Cultural Resources Section describes potential mitigation actions. Mitigation of direct impacts of proposed construction upon a National Register-eligible or listed architectural site would focus on the qualities or elements which made the site eligible, and typically consists of documentation of the property including scaled drawings (plan views and elevations), photographs using a large-format camera, and a detailed history of the property. Mitigation may also include salvage of architectural elements from the building or structure if it is going to be demolished or relocation of the building or structure if it is eligible for its architecture.</p> <p>Archeological sites are usually determined eligible to the National Register of Historic Places because of their potential to provide important information on a region’s prehistory or history (Criterion D). Mitigation of direct or indirect impacts of proposed construction upon a National Register eligible or listed archeological site is usually accomplished through excavation for data recovery purposes of complete cultural deposits or a systematic sample of them from that portion of the archeological site within the construction work limits. Fieldwork is</p>	No change.

General Topic		Cultural Resources, Historic Properties Mitigation	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		followed by the thorough analysis and interpretation of the artifacts and other data recovered from the site. The excavation, analysis, and interpretation methods must be adequate to address the important research questions for which the site was determined eligible.	

General Topic		Cultural Resources, Kurtz Family Cemetery	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
88a	Have all the cemetery risks been evaluated on the Northern Alignment Alternative? There is a family cemetery in Kurtz township that doesn't appear on any of the cemetery studies that would be within the proposed staging area of the Northern Alignment Alternative (NAA).	The 2014 Cemetery Study only included evaluation of cemeteries anticipated to be benefitted or impacted by the Project. The comment has been provided to the USACE if final Project designs indicate any impacts within Kurtz township. According to correspondence between MNDNR and USACE, no impacts to Kurtz Township are currently anticipated under the Proposed Project so no further cemetery studies are planned for that area at this time. If the NAA is selected further cultural resources work, including additional cemetery studies, would be pursued in that area.	Text edit made to subsection 3.12.1.1.5.

General Topic		Cumulative Effects, Tolna Coulee Project	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
201a	The Devil's Lake project could impact flows on the Sheyenne (submittal included info about the Devil's Lake and coulee project).	The Tolna Coulee control structure is designed to prevent catastrophic outflows from Devils Lake while allowing limited natural erosion to occur in Tolna Coulee. The control structure would limit outflows from Devils Lake to 3,000 cfs, which is significantly less than could occur naturally if Tolna Coulee erosion was not controlled. The Project would have sufficient capacity to safely pass flood flows from the Sheyenne River including potential Devils Lake outflows, and operations at the Tolna Coulee Control Structure are not expected to significantly affect the performance of the diversion.	No change.

General Topic		Dam Safety, Evacuation Plan	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
163e	The evacuation plan that is necessary has not been published. The reason this has not been done is unknown. It is suspected that it is bad public relations to provide the plan. The public needs to know the details of all aspects of the Project operation.	The Evacuation Plan is part of the larger Emergency Action Plan (EAP) that is an application requirement for the dam safety permit (for high hazard dams). This plan includes the Loss of Life analysis (MNDNR requires a dam breach analysis). The EAP is usually provided once Project construction is complete and prior to when operation could begin to occur. The EAP would be required to	No change.

General Topic		Dam Safety, Evacuation Plan	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		follow Federal Guidelines for Emergency Action Planning for Dams (FEMA Publication No. P-64) http://www.fema.gov/media-library/assets/documents/3357 .	

General Topic		Dam Safety, High Hazard Dam Permitability	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
17a	Commenter is questioning why the MNDNR is considering permitting a high hazard dam when the Wild Rice Watershed District (WRWD) was told in the past "the DNR doesn't permit high hazard dams"?	The WRWD proposed project (Twin Valley dam) involved on-channel impoundments and a high hazard dam. The WRWD was informed that MNDNR wouldn't issue a permit for a high hazard dam because there were other alternatives that could accomplish the same purpose without the risk. The MNDNR's position on the Twin Valley Dam is consistent with the Public Waters permit rules and with the Minnesota Statute 2008, section 116D.04, subdivision 6. Any proposal for a high hazard dam would be evaluated using the same criteria. MNDNR has previously permitted other high hazards dams in Minnesota, including the seven Rochester flood control dams. MNDNR's permit decision about the Project's dam would be in compliance with Public Waters rules and Minnesota Statutes 2008, section 116D.04, subdivision 6.	No change.

General Topic	Dam safety, Minnesota Rules Chapter 6115		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
28a	Minnesota Rules Chapter 6115 Public Water Resources provides permit requirements.	Commenter is correct.	No change.

General Topic	Dam Safety, North Dakota Dam Safety Program Additions		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
128o	Regarding construction permits, the North Dakota Office of the State Engineer's Construction Permit authorizes the construction of dams, dikes, diversions, or other structures as outlined in North Dakota Century Code Chapter 61-16.1. As part of the permitting process for a dam, the Dam Safety Engineer, through the North Dakota Dam Safety Program, specify the design requirements associated with the appropriate hazard classification of the proposed structure. A completed construction permit application must include: plans and specifications; evidence establishing a property right for the property (includes land and structures) that will be affected by the construction of the dam, dike, or other device; and any additional information required by the State Engineer.	Text has been added to Chapter 1 to include details as provided by Commenter.	Text added to subsection 1.5.6.2 North Dakota Waters Drain Permit.

General Topic		Dam Safety, Permit Decision	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
133k	MNDNR has made it clear that in order to get a permit the Diversion Authority will have to "prove that the benefit to MN outweighs the risk of the dam and damage to rural parts of the state".	The MNDNR would require that the Project meet the requirements of the MNDNR dam safety and work in public waters permit in accordance with Minnesota Rules.	No change.

General Topic		Dam Safety, Professional Engineer Certification Requirements	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
164.80	Text says a Professional Engineer registered in Minnesota must prepare the engineering documents for the dam. It is likely that application materials would include designs prepared by USACE, and therefore may not be prepared by a professional engineer registered in the state of Minnesota. This is allowed by Minn. Stat. 326.13(3) and the doctrine of Federal supremacy.	Commenter is correct. Text has been revised to read "state rules require that a professional engineer registered in the state of Minnesota (or engineers who are employees of the U.S. per Minnesota Statute 2008, section 326.13(3)) who is proficient in dam engineering, prepare the engineering documents, plans, and specifications; inspect the construction; and establish operation and maintenance procedures for the structure(s)."	Text edits to Section 3.15.

General Topic		Dam Safety, Risk Concerns	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
76b, 81c, 163t	General soil stability and freezing/thawing concerns in the area of the proposed high	The USACE has completed soil exploration throughout the area to determine the	No change.

General Topic		Dam Safety, Risk Concerns	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
	hazard dam. Questioning the soil stability of a high hazard dam. Wondering if something smaller would be better.	foundation conditions. Additional soil borings and testing would be accomplished to support detailed design of all structures, channels and embankments and determine the strength of the soil. The USACE would analyze and design the Project accounting for the site conditions, including environmental effects, and meet USACE standards and dam safety requirements.	

General Topic		Dam Safety, Risk and Loss of Life Concerns	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
2a, 38a, 64a, 99d, 140a, 157d, 193f	Commenters concerned about the risk to life and property from the dam. Questions as to whether there has been a study on the amount of property or lives that would be affected if the dam failed and how would that affect the quality of life.	Section 3.15 Minnesota Dam Safety and Public Waters Regulations and Permitting of the EIS includes a discussion of the Loss of Life analysis included with the FFREIS (Attachments 1 and 2 of Appendix D (USACE 2011)) which compared Project (earlier design) and existing conditions [Note that the Final EIS Section 3.15 title has been revised from the Draft EIS]. The study completed looked at current population impacts if the dam were to breach. However, Project designs and hydrology models have changed since that analysis was completed. The MNDNR would require an updated analysis (a dam breach analysis), as part of our	No change.

General Topic		Dam Safety, Risk and Loss of Life Concerns	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>permitting process that would need to be representative of the final Project design and updated hydrology. The dam breach analysis would include potential, projected future populations that could be impacted if the dam were to fail. General methods for the analysis would be similar to those followed in the FFREIS analysis. The social aspect of quality of life (as it pertains to flood risk) under existing conditions and under the Project is discussed in Section 3.16 Socioeconomics.</p>	
15b	The dam meets the safety standards for such a dam [Class 1] under both USACE standards and those established by the Minnesota Dam Safety rules.	<p>Commenter is incorrect. The MNDNR would require the dam to be constructed to meet Minnesota Dam Safety Program requirements. The program sets minimum standards for dams regarding safety, design, construction, and operation. These standards are implemented through inspections, permitting, and correcting deficiencies. This is detailed in Minnesota Rules, parts 6115.0300 through 6115.0520. However a dam has not been permit-approved or constructed so it is premature to state that the dam meets safety standards established by the State of Minnesota.</p>	No change.
41i, 81a	General concerns about dam safety.	The MNDNR would require the dam to be constructed to meet Minnesota Dam Safety Program requirements. The program sets minimum standards for dams regarding	No change.

General Topic	Dam Safety, Risk and Loss of Life Concerns		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		safety, design, construction, and operation. These standards are implemented through inspections, permitting, and correcting deficiencies. This is detailed in Minnesota Rules, parts 6115.0300 through 6115.0520.	
41t, 112i, 163x	Commenters questions Loss of Life analysis presented in Section 3.15.3.11 of the Draft EIS and how population growth is considered.	Section 3.15 Minnesota Dam Safety and Public Waters Regulations and Permitting of the EIS includes a discussion of the Loss of Life analysis included with the FFREIS (Attachments 1 and 2 of Appendix D (USACE 2011)) [Note that the Final EIS Section 3.15 title has been revised from the Draft EIS]. The study completed looked at current population impacts if the dam were to breach. However, Project designs and hydrology models have changed since that analysis was completed. The MNDNR would require an updated analysis (a dam breach analysis), as part of the permitting process that would need to be representative of the final Project design and updated hydrology. The dam breach analysis would include potential, projected future populations that could be impacted if the dam were to fail.	No change.
72k	Believes the loss of life will be less for No Action Alternative (with Emergency Measures) than with Project or Northern Alignment Alternative.	MNDNR believes the commenter is confusing "risk" for "potential of failure". The dam would be considered a Class I dam under Minnesota Rules. A Class I dam is a dam where failure, mis-operation, or other occurrences or conditions would probably	No change.

General Topic	Dam Safety, Risk and Loss of Life Concerns		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>result in any loss of life or serious hazard, or damage to health, main highways, high-value industrial or commercial properties, major public utilities, or serious direct or indirect, economic loss to the public. Section 3.15 Minnesota Dam Safety and Public Waters Regulations and Permitting of the EIS includes a discussion of the Loss of Life (LOL) analysis included with the FFREIS (Attachments 1 and 2 of Appendix D (USACE 2011)) which compared Project (earlier design) and existing conditions [Note that Final EIS Section 3.15 title has been revised from the Draft EIS]. It should be noted that Project designs and hydrology models have changed since that analysis was completed. However, these results provide valuable insight to what the consequences of a dam failure may be to human safety under existing and Project conditions. The MNDNR would require a dam breach analysis that considers current (or final design plans and flood scenarios/updated hydrology) to meet permit requirements. The dam breach analysis would model a hypothetical breach of the tieback embankment or one of the gates during flooding conditions to find out how high the water would rise in the river downstream of the dam – similar to the LOL analysis completed and provided with the</p>	

General Topic		Dam Safety, Risk and Loss of Life Concerns	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		FFREIS.	
111i	Further study and accurate risk assessment relating to “loss of life” is needed comparing existing conditions with and without the assumptions advance within the EOE theoretical framework.	See responses to topic: H and H, EOEP; and Final EIS Appendix N	No change.

General Topic		Dam Safety, USACE Compliance with State and Local Laws	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
164.81	As MNDNR is aware, the USACE has sovereign immunity from many state and local requirements. Given that the parties have been working together, the USACE and the Department of Justice have not made a determination whether the USACE would be required to obtain a dam safety permit. The USACE intends to work with MNDNR and satisfy its concerns to the extent allowed and required by federal law.	Sovereign immunity is not relevant because the Project is a joint Federal and Local Sponsor project. There may be disagreement on whether a waiver of sovereign immunity would be granted to the USACE for a State of Minnesota dam safety permit; there is no disagreement that the Local Sponsors would need to comply with the dam safety permit conditions.	No change.

General Topic		Distributed Storage Alternative, Technical Data Basis	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
147c	Commenter questions the technical data that the Distributed Storage Alternative (DSA) is	Bullet 2: Commenter is correct that the 500-year analysis was not conducted for the DSA.	Text added to section 2.2.1.3.1.

General Topic	Distributed Storage Alternative, Technical Data Basis		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
	<p>based on. This represents bullets #2-4 from the commenter's letter.</p>	<p>If, in fact, only 40 DSA sites were needed upstream to achieve storage capacity, the two primary determinations used to screen out this alternative would still stand: 1) The 40 DSA sites, as stand-alone projects, are not likely to provide complete flood damage reduction for all the communities on the Red River main stem, especially for large flood events; and 2) the time needed to acquire land rights, design and implement 40 upstream DSA sites limits the feasibility of this alternative; FEMA accreditation would not be achieved until all 40 sites were in place. MNDNR acknowledges that distributed storage would provide both local and main stem benefits to the region and, if considered in conjunction with the Project along with flood fighting efforts, the Project would have a greater chance of achieving 500-year flood protection. Text has been added to subsection 2.2.1.3.1 to reflect this.</p> <p>Bullet 3: The commenter suggests running a HUR model with unbalanced runoff distributions. MNDNR acknowledges that additional model runs assuming varying runoff distributions would provide a more certain statement about the DSA's storage utilization capacity. However this additional information would not be expected to</p>	

General Topic	Distributed Storage Alternative, Technical Data Basis		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>substantially change the determination to screen out the DSA as stated in Bullet 2 above.</p> <p>Bullet 4: The commenter suggests running a 500-year flood analysis to determine if the 20% reduction would be met. As described in Bullet 3 above, MNDNR acknowledges that this would provide a more certain statement about the projected reduction, but it would not be expected to substantially change the determination to screen out the DSA as stated in Bullet 2 above.</p>	

General Topic	Environmental Impacts, Environmental Impact Statement Concludes		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
15c, 181b	Commenter stated that the "DNR accurately recognizes that this project will have no impact on critical environmental impacts or issues such as water quality and supply, air emission, erosion and visual impacts."	The commenter incorrectly identified the MNDNR as stating there would be no impact on critical environmental resources or issues such as water quality and supply, air emission, erosion and visual impacts. As stated in the Final Scoping Decision Document (FSDD, February 2014), the MNDNR believes that impacts to water quality; water quantity (i.e., water supply); odors, noise and dust (i.e., air emissions); and visual impacts are expected to be potentially	No change.

General Topic	Environmental Impacts, Environmental Impact Statement Concludes		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		significant. However, the FFREIS adequately addressed the MNDNR's concerns on those topic areas; therefore, those topics are not reevaluated in this EIS. Erosion impacts anticipated from Project operation (as opposed to erosion from construction activities) are discussed in EIS section 3.3 Stream Stability.	
186b	Commenter states that "...Your department's FFREIS has determined that the project will have no impact at all on water use, air emissions, water quality, or erosion, and also not increase geological hazards, traffic, odors, noise, dust or visual impacts. You have also determined that the project is not expected to have any significant impact on wildlife resources cultural resources, cover types, fish passage and biological connectivity or state listed species. In addition, you have determined correctly that potential environmental hazards due to past site use was not an expected risk nor is dam safety."	The commenter is referencing text from the MNDNR's Final Scoping Decision Document (FSDD, February 2014), which outlined the topics to be analyzed in the EIS based on a presumed level of impact and available information. The Draft EIS (September, 2015) thoroughly analyzed all the potential impacts for the outlined topics stated in the FSDD. Based on the information and analysis in the Draft EIS, the FSDD assumptions related to impact significance might no longer be current. While the EIS documents analyze and discuss potentially significant impacts generated by a proposed project or its alternatives, an EIS does not determine the level of, or priority regarding, these impacts. It is up to each permitting and regulating authority to determine the Project impacts that they find more significant or important. See also response to Comments 181b and 15c.	No change.
200b	Commenter stated "Both the Draft EIS and	The commenter incorrectly identified the	No change.

General Topic		Environmental Impacts, Environmental Impact Statement Concludes	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
	the Federal EIS noted the project will not have any adverse impact on the environment.”	MNDNR as stating in the Draft EIS that there would be no adverse impact on the environment. EIS Chapter 3 identifies and discusses potential impacts of the Project on a number of resource topic areas: hydrology and hydraulics, stream stability, wetlands, cover types, land contamination, fish passage and biological connectivity, wildlife and state-listed species, cultural resources, socioeconomics, and infrastructure and public services. MNDNR disagrees that the Federal EIS noted "no adverse impacts on the environment". MNDNR believes the Federal EIS notes "adverse impacts will be mitigated."	

General Topic		Environmental Impacts, General Environmental Impacts	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
28c	The environmental section of this report is weak. It doesn't go into a lot of specifics and relies on previous data.	As explained in the Final Scoping Decision Document (FSDD, 2014), the USACE has prepared the FFREIS for the Locally Preferred Plan, which addressed many of the issues that would need to be addressed in a Minnesota State EIS, and therefore, the MNDNR used the FFREIS, Supplemental EA, and supporting documents to the extent that it adequately addressed the scoped issues and complied with the content requirements	No change.

General Topic	Environmental Impacts, General Environmental Impacts		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		for the Minnesota State EIS. As stated in Minnesota Rules, part 4410.0300, subpart 4(E), one objective of the environmental review rules is to eliminate duplication of effort. The USACE and Diversion Authority have completed significant evaluation, research, environmental review, and study of the Project over a number of years. All of this information was used in the preparation of the state Draft EIS along with additional evaluation and environmental review of the Project as identified through the Scoping EAW and subsequent FSDD for the EIS. The Diversion Authority and the USACE served as a source of information for the preparation of the Draft EIS. No change.	
70e	Request to consider all environmental "damage" that could result if the Project is permitted.	Comment does not include new or additional information above that which is already included within the EIS. Anticipated and potential environmental impacts are discussed within Chapter 3 of the EIS. Information provided within the EIS is used by decision-makers in permit decisions.	No change.
99f	What will the environmental impacts of this decision be?	Comment does not include new or additional information above that which is already included within the EIS. Anticipated and potential environmental impacts associated with the Proposed Project or the alternatives are discussed within Chapter 3 of the Draft EIS and Final EIS. The Draft EIS and Final EIS	No change.

General Topic	Environmental Impacts, General Environmental Impacts		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		are not decision-making documents.	

General Topic	Environmental Impacts, Mitigation		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
15d	Commenter identified that mitigation has been proposed for Project impacts.	Proposed and recommended mitigation is discussed in EIS Chapter 6 [updated in Final EIS] and broadly discussed in each section in Chapter 3 for specific resource areas. Appendix O has been added to the Final EIS which provides further details on proposed and recommended mitigation options.	Added Appendix O: Takings, Flowage Easements and Acquisition Processes. Updated Chapter 6. An “Areas of Controversy and Issues Yet to be Resolved” section has been added to the Executive Summary.

General Topic	Environmental Impacts, Potentially Significant Impacts		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
28b	Statement that there is significant potential for impacts to stream stability, floodplain forests, wildlife habitats, fish and invertebrates, and marginal areas that will be flooded anew.	Comment does not provide enough detail on missing, incomplete or inaccurate information to provide a response. Impacts to stream stability, floodplain forests, wildlife habitat, fish and invertebrates, are described	No change.

General Topic	Environmental Impacts, Potentially Significant Impacts		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		in EIS Sections 3.3, 3.4, 3.6, 3.8 and 3.9, respectively.	

General Topic	Environmental Impacts, Red River and Floodplain Value		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
97c	Commenter requested that the EIS more clearly recognize that the Red River's water storage and conveyance capacity is a protected natural resource under 116D and 116B and under the Wacouta Test.	The comment discusses the application of the Wacouta test to the critical function of floodplains as a protected natural resource in the Red River basin, specifically as it relates to water conveyance and water storage. The comment goes on to discuss that the Project would impair the critical function of the floodplain by removing its ability to store water in the area downstream of the tieback embankment. The comment references the Wacouta Test (http://mn.gov/web/prod/static/lawlib/live/archive/supct/9705/c2961004.htm) (1997), which provides the following: Modified formulation of the Wacouta factors as a guideline for future determinations of whether or not conduct materially adversely affects or is likely to materially adversely affect the environment under Minn. Stat. § 116B.02, subd. 5: (1) The quality and severity of any adverse effects of the proposed action on the natural resources affected; (2)	Minor text additions.

General Topic	Environmental Impacts, Red River and Floodplain Value		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>Whether the natural resources affected are rare, unique, endangered, or have historical significance; (3) Whether the proposed action will have long-term adverse effects on natural resources, including whether the affected resources are easily replaceable (for example, by replanting trees or restocking fish); (4) Whether the proposed action will have significant consequential effects on other natural resources (for example, whether wildlife will be lost if its habitat is impaired or destroyed); (5) Whether the affected natural resources are significantly increasing or decreasing in number, considering the direct and consequential impact of the proposed action.</p> <p>Minnesota Rules, part 4410 outlines the requirements necessary to complete environmental review. These requirements are consistent with the guidelines outlined in the Wacouta Test. The Draft EIS was developed following Minnesota Rules, part 4410. The commenter acknowledges that the Draft EIS identifies the importance of rare and endangered species, fish, and avoidance of invasive species. The Draft EIS was reviewed to determine where the document recognizes the importance of the floodplain and its function as a protected natural</p>	

General Topic		Environmental Impacts, Red River and Floodplain Value	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		resource, and also to determine where text could be added to further emphasize this importance. The Draft EIS was also reviewed to determine where the potential Project impacts on the function of the floodplain were discussed and where text could be added to further recognize Project impacts. Section 3.2 - FEMA recognizes floodplain protection. Subsections 3.3, 3.9, and 3.16. Text was added to the following sections further emphasizing the importance of the floodplain: 1.4, 2.1, 3.1, 3.2, and 3.14. The Draft EIS recognizes the potential Project impacts to the floodplain and floodplain storage in subsections 3.1, 3.2, and 3.2.	

General Topic		Environmental Impacts, Worse Case Scenario	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
179c	EIS should consider all worse-case scenarios for all resources and list them and then discuss.	Minnesota Statutes, section 116D, subd. 2a states that, an "environmental impact statement shall be an analytical rather than an encyclopedic document." Per Minnesota Statutes 2008, section 116D, subdivision 2a and Minnesota Rules, part 4410.2100, MNDNR conducted an early and open process of scoping the EIS beginning with the release of the Scoping EAW for the project on	No change.

General Topic		Environmental Impacts, Worse Case Scenario	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>April 15, 2013, a scoping public meeting which occurred in Moorhead on May 8, 2013, and brought to conclusion when the Final Scoping Decision Document was published on February 10, 2014. During that scoping period, MNDNR identified the form, content, and level of detail to be included in the EIS as well as the alternatives that would be analyzed in the EIS. Neither Minnesota Statutes no Minnesota Rules directs Responsible Governmental Units to consider or analyze all conditions in an encyclopedic and exhaustive way within a single EIS. In addition, per Minnesota Statutes 2008, section 116D, subdivision 2a, and Minnesota Rules, part 4410, existing information that had been developed by previous studies and previous federally required environmental assessment documents was utilized to eliminate any potential duplication of analysis.</p>	

General Topic		Environmental Review, Environmental Impact Statement Process	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
23d	<p>Commenter is frustrated about not being able to participate in the EIS process prior to public comment.</p>	<p>In consideration of the commenter's request for participation and input in the preparation of the EIS and the commenter's</p>	<p>No change.</p>

General Topic	Environmental Review, Environmental Impact Statement Process		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>interpretation of MNDNR’s obligations under Minnesota Environmental Protection Act and Minnesota Rules, part 4410, the MNDNR have the following response:</p> <p>Minnesota Rules, part 4410.0400, subpart 2 defines the responsibilities of an Responsible Government Unit (RGU): RGU's shall be responsible for verifying the accuracy of environmental documents and complying with environmental review processes in a timely manner.</p> <p>The above provision indicates that it is MNDNR’s responsibility to complete the EIS; “...The RGU may request that another governmental unit help in the completion of the EIS.” (Minnesota Rules, part 4410.2200), but MNDNR does not believe it is required. As previously stated in the Responses to Comments on the Draft Scoping Decision Document (DSDD), MNDNR believes that it has sufficient in-house and contracted expertise and adequate submittals and supplemental information to address the topic areas identified in the Final Scoping Decision Document.</p> <p>MNDNR strives to comply with environmental processes; of which the public</p>	

General Topic	Environmental Review, Environmental Impact Statement Process		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>input component (i.e., the formal comment review period) is taken seriously. The information that was submitted by the commenters (May 7, 2014 letter) for consideration of inclusion in the EIS administrative record was not “refused”; rather, it was simply provided at an inappropriate step in the process and could not be accepted. MNDNR advised the commenters to resubmit the information during the formal comment period where all material submitted is required to become part of the official record. MNDNR solicits and accepts any additional expertise or material, on any scoped topic, that is provided during the formal comment review period—that is what the review period is intended for. All commenters, be they an agency, attorney, county, city, elected official or member of the general public, had an equal opportunity to review the EIS. All comments and information submitted are treated with equal weight and consideration during the formal comment period. MNDNR believes that is what is fair. Therefore, MNDNR appreciates the interest regarding participation and input in preparation of the EIS, and hopes that commenters choose to participate fully at the appropriate time, the public comment periods.</p>	

General Topic	Environmental Review, Environmental Impact Statement Process		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
25d	Commenter provided general comments about the environmental review process.	Minnesota Rules, part 4410 require the Responsible Government Unit (RGU) to follow a set of environmental review procedures and provide standards and requirements for completion of environmental review. MNDNR, as the RGU, has followed Minnesota Rules during the course of developing the EIS. This has included following procedures for preparation of environmental review, publication and distribution, comment period, scoping process, alternatives review, and content of an EIS. The MNDNR will continue to follow the environmental review process as required in Minnesota Rules, including publishing and distributing the Final EIS, making a determination of adequacy, and compiling a record of decision.	No change.
155i	If a major change was decided upon by the Diversion Authority, would not a new MN-EIS be required?	According to Minnesota Rules, part 4410.2700, subpart 2, if a major change to the project occurs prior to publication of the final EIS the draft text shall be rewritten. Minnesota Rules, part 4410.3000, subpart 3 indicates that if after a final EIS has been determined adequate, but before the project becomes exempt a supplement to an EIS may be made if, "substantial changes have been made in the project that affect the potential significant adverse environmental effects of the project" or "there is substantial new	No change.

General Topic	Environmental Review, Environmental Impact Statement Process		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		information or new circumstances that significantly affect the potential environmental effects from the project that have not been considered in the final EIS or that significantly affect the availability of prudent and feasible alternatives with lesser environmental effects."	

General Topic	Existing Conditions, Causes of Flooding		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
129a	An explanation of the causes of the Red River flooding is expected and would be an educational for the general public. It seems that "100 year flood" occurs every ten to twenty years. In the long run it would be more advantageous dealing with the "causes" than building dams. Western Minnesota has lost more than 80 % marshes, ponds, low lands that retained water in the spring.	The Red River basin, including the adjacent floodplain in the project area, has been altered by past land use activities (e.g., floodplain development, drainage, and changes to cover types), which has resulted in changes to the historic natural flow and hydrologic regime of the Red River, which has contributed to flooding in the area.	Text added to Section 3.1.

General Topic	Federal Emergency Management Agency, Base Flood Elevation		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
97i	The Draft EIS does not adequately explore the consequences of allowing one community	The Project would not result in a unilateral change to FEMA's base floodplain elevations.	Added Appendix N—Hydrologic

General Topic		Federal Emergency Management Agency, Base Flood Elevation	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
	unilaterally to change the definition of the base floodplain in ways that impact the entire basin.	The Draft EIS did use different hydrology for determining flood elevations than the current FEMA established elevations. This was done because it is generally understood that the current FEMA mapped floodplain elevation in the area of Fargo are much too low. The Project could result in a request to FEMA for a Conditional Letter of Map Revision (CLOMR) and eventually a Letter of Map Revision (LOMR). Neither of these processes are unilateral. It is also uncertain that any potential revisions in the area of Fargo and Moorhead would result in changes to base floodplain elevations throughout the entire basin. See Final EIS Appendix N.	Methodology Review.

General Topic		Federal Emergency Management Agency, Conditional letter of Map Revision	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
4h, 73d, 164.87	Commenters question the number of jurisdictions impacted by a Conditional Letter of Map Revision (CLOMR) and whether or not the CLOMR would be easier to obtain under the Northern Alignment Alternative (NAA).	The number of participating communities affected by the Project is correctly identified in Final EIS Table 3.4, Section 3.2. Based on current hydrology models for the NAA, several of these participating communities would still be affected; however, extent of impacts would differ. Fewer jurisdictions involved, i.e., fewer approvals, could make the CLOMR easier to obtain. The text the	Text edit made to Table 5.1.

General Topic		Federal Emergency Management Agency, Conditional letter of Map Revision	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		Commenters are referring to has been removed from the Final EIS.	
164.118	Commenter questions the use of 0.00' and CLOMR requirements for this Project.	CLOMR applications require state approval. This requirement is valid under the FEMA/USACE Coordination Plan. The State of Minnesota would review the application for adherence to Minnesota state rules and statutes. Minnesota requires mitigation for insurable structures for any increase greater than 0.0 feet. If insurable structures are involved, the State would comment on the need for mitigation. It is MNDNR's understanding that, as described by the FEMA/USACE Coordination plan (Appendix F), FEMA would be willing to limit mitigation to a defined FEMA revision reach area. However, within that defined area the Project would need to adhere to FEMA standards. It should be noted that FEMA requires mitigation for impacts up to the 100-year flood.	No change.

General Topic		Federal Emergency Management Agency, Flood Fringe Mitigation	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
162c	To what elevation do I need to engineer the site? (re: structures in staging area - address provided)	EIS Figure 31 indicates that the property at 12xx 115th Ave., Wolverton, MN is located within the FEMA revision reach; any existing structures on and access to the property	No change.

General Topic		Federal Emergency Management Agency, Flood Fringe Mitigation	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		would likely be impacted by the Project. The hydraulic model for the Project is still preliminary, so the USACE cannot provide final 100-year flood water surface elevations at this time. The FEMA/USACE Coordination Plan outlines proposed mitigation that would be based on actual site conditions. Because of the magnitude of the Project, FEMA has discussed interpreting standards so that the CLOMR includes a list of properties that would be mitigated before Project completion but that the mitigation of those properties can be delayed until the Project affects the property flood risk.	

General Topic		Federal Emergency Management Agency, Flood Insurance	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
14g	Who will pay for flood insurance for the newly impacted properties in the staging area? The Diversion Authority?	The Diversion Authority would be required to mitigate impacts to all insurable structures that are impacted by the Project. Mitigation options are proposed to be determined on a case by case basis and may include elevation, relocation, removal, or ring levee. Once mitigated, no insurable structure would fall within a flood hazard zone in which flood insurance is currently mandated.	No change.

General Topic		Federal Emergency Management Agency, Flood Stage Level	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
41h, 72f	Commenters questioned the National Weather Service Red River flood stage level of 18 feet when considering what flood stage Fargo currently needs to respond to for emergency measures. Commenters stated that the current response flood stage level is greater than 34 feet and that current in-town levees and dikes are constructed to 44 feet, and floodwalls to 45 feet. In addition, the commenter stated that once the gaps in the in-town levees and dikes are addressed, a 40-foot flood stage level in Fargo wouldn't be a concern. The flood stage level should be set at the point at which residential structures may be impacted.	Emergency measures would still be needed for the situation as described by the commenter. The extent and magnitude of those efforts would be less in the future than there were for example, during the 2009 flood. At some point in the future it may be appropriate for the National Weather Service and the local communities to revisit the question what the appropriate "flood stage" number is.	No change.

General Topic		Federal Emergency Management Agency, Map Revision	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
11d	Commenter is concerned for future FEMA map revisions and the repercussions in absence of an approved project.	There are currently no FEMA map revisions funded or planned at this time. Commenter is correct that FEMA map revisions would occur at some point in time that would include updated data.	No change.

General Topic	Federal Environmental Impact Statement, MNDNR Comments on the Federal Environmental Impact Statement		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
18c, 25a, 25b	<p>Commenters are concerned that the Draft EIS doesn't show that the Project is the least impact solution or the most ecologically sustainable, which were comments MNDNR submitted to USACE.</p>	<p>The commenters are referencing MNDNR comments on the Federal EIS documents that were submitted in June and November 2011. In 2011, the purpose and need statement did not include protection from the tributaries. MNDNR was concerned that selection of the Locally Preferred Plan (LPP) wouldn't allow the USACE to meet their Section 404(b)1 obligations (which requires the selection of the Least Environmentally-Damaging Practical Alternative, or the LEDPA) and submitted comments accordingly:</p> <ul style="list-style-type: none"> • <i>"...it's apparent that significant additional work is needed to demonstrate that the selected alternative is: ecologically sustainable, the least impact solution, one in which adverse effects can and will be mitigated, and consistent with other standards, ordinances, and resource plans of local and regional governments. This information will be necessary for both the state environmental review and permitting process."</i> <p>In April 2012, the Diversion Authority submitted their final purpose and need statement for State environmental review, which included protection from the</p>	No change.

General Topic	Federal Environmental Impact Statement, MNDNR Comments on the Federal Environmental Impact Statement		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>tributaries as one of three critical components.</p> <p>At the time of MNDNR’s 2011 comments, we questioned selection of the LPP as the LEDPA because we hadn’t done our own alternative screening and analysis. Since that time, MNDNR has completed two Alternative Screenings. The first alternative screening occurred in December 2012 and included 14 alternatives. The second alternative screening was completed in February 2016 in response to public comments received on the Draft EIS, and included the original 14 alternatives plus all commenter-submitted alternatives. Since MNDNR has now conducted a thorough alternative analysis and rescreen, MNDNR’s 2011 comments are no longer applicable.</p> <p>MNDNR’s decision on the dam safety permit application would be in compliance with Minnesota Statutes, section 116D.04, subd. 6 that states: “No state action significantly affecting the quality of the environment shall be allowed, nor shall any permit for natural resources management and development be granted, where such action or permit has caused or is likely to cause pollution, impairment, or</p>	

General Topic	Federal Environmental Impact Statement, MNDNR Comments on the Federal Environmental Impact Statement		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		destruction of the air, water, land or other natural resources located within the state, so long as there is a feasible and prudent alternative consistent with the reasonable requirements of the public health, safety, and welfare and the state's paramount concern for the protection of its air, water, land and other natural resources from pollution, impairment, or destruction. Economic considerations alone shall not justify such conduct.”	
97a, 97b	Commenter states that the Draft EIS fails to address the DNR's original objection to the LPP, that it modified the original project purpose in order to justify violation of environmental principal and foster illegal development of the floodplain.	Commenter incorrectly states that the MNDNR's original objection to the LPP was due to the modified Project purpose. MNDNR remains committed to flood protection in the Red River Valley. Commenter incorrectly states Minnesota’s environmental review was launched when the Diversion Authority rejected the USACE’s selection of the Minnesota 35K diversion plan. Minnesota's environmental review was triggered when the Project included a Class 1 dam. Without a Class 1 dam Project component, the State of Minnesota would not be conducting an EIS. MNDNR acknowledges that the USACE might not be complying with the 1998 Mediation Agreement. Commenter incorrectly states that MNDNR is required to examine all alternatives. MNDNR	No change.

General Topic			
Federal Environmental Impact Statement, MNDNR Comments on the Federal Environmental Impact Statement			
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		is required to examine only the alternatives in the Final Scoping Decision Document (FSDD, 2014) and any Commenter-Submitted Draft EIS comments that pass the screening criteria. See also Comments 18c and 25a-c and Final EIS Appendix M.	

General Topic			
Federal Executive Order 11988, Compliance			
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
164.119	Commenter stated that the Project fully complies with Executive Order 11988 (E.O. 11988).	E.O. 11988 requires federal agencies to consider the impacts their activities may have on floodplains. Each federal agency is responsible for developing their own regulations for implementation of E.O. 11988. The USACE has determined that the Project is in compliance with E.O. 11988 and that all decision-making process evaluation steps have been met (Chapter 3.0 FFREIS 2011). E.O. 11988 addresses federal decision-making considerations; neither the Minnesota environmental review process nor state or local permitting is required to consider this Order.	Added subsection 1.5.1.3.

General Topic			
Federal Executive Order 11988, Does Not Apply to the State			
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
4i	Commenter requested that the MNDNR state that Executive Order 11988 (E.O. 11988) does not apply to the state of Minnesota.	E.O. 11988 requires federal agencies to consider the impacts their activities may have on floodplains. Each federal agency is responsible for developing their own regulations for implementation of E.O. 11988. The USACE has determined that the Project is in compliance with E.O. 11988 and that all decision-making process evaluation steps have been met (Chapter 3.0 FFREIS 2011). E.O. 11988 addresses federal decision-making considerations; neither the Minnesota environmental review process nor state or local permitting is required to consider this Order.	Added subsection 1.5.1.3.

General Topic			
Federal Executive Order 11988, Not Addressed or Inadequately Addressed.			
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
14a, 14i, 110b, 111q, 120a	Commenters pointed out that the Draft EIS lacks a discussion on and/or inadequately addressed the topic of Executive Order 11988 (E.O. 11988)	The MNDNR has added subsection 1.5.1.3 to the Final EIS that addresses the topic of E.O. 11988.	Added subsection 1.5.1.3 to the Final EIS.

General Topic			
Federal Executive Order 11988, Violation			
Comment ID	Comment Summary	Comment Response	Impact on Final EIS

General Topic		Federal Executive Order 11988, Violation	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
25c, 41b, 81h, 97d, 101c, 107a, 136b, 155j, 163i	Commenters state that the Project is in violation of Executive Order 11988 (E.O. 11988) and question how the Project can proceed if it is in violation or if no federal funds can be used per E.O. 11988.	E.O. 11988 requires federal agencies to consider the impacts their activities may have on floodplains. Each federal agency is responsible for developing their own regulations for implementation of E.O. 11988. The USACE has determined that the Project is in compliance with E.O. 11988 and that all decision-making process evaluation steps have been met (Chapter 3.0 FFREIS 2011). E.O. 11988 addresses federal decision-making considerations, neither the Minnesota environmental review process nor state or local permitting is required to consider this Order.	Added subsection 1.5.1.3.

General Topic		Fish Passage and Biological Connectivity, Fish Impacts	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
70h	Comment quoted: "How can the DNR state that there will be fish passage? When frozen with little or no water under the ice and when the Fargo area has a lack of rainfall so there is no water in the diversion ditch how is this possible? The DNR and the Fargo Authority are putting their head in the sand and just hoping the bridges over 5 rivers will work properly for fish passage."	As proposed, the Project would include the construction of 2 aqueducts; one over the Maple River and one over the Sheyenne River. Impacts to fish passage are discussed in EIS Section 3.8 and fish passage impacts due to cold weather are discussed in EIS Section 3.5. It is not anticipated that there would be significant impacts to fish passage. Chapter 6 and Appendix B (Draft Adaptive Management and Monitoring Plan) include a discussion of	No change.

General Topic	Fish Passage and Biological Connectivity, Fish Impacts		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		proposed and recommended mitigation and monitoring for impacts to fish passage.	
72x	Commenter is concerned about fish impacts from stranding.	Comment does not provide enough detail on missing, incomplete or inaccurate information to provide a response. Impacts to fish are described in EIS section 3.8. Proposed and recommended mitigation related to spawning and stranding are addressed in the EIS Table 6.11, Summary of Fish Passage and Biological Connectivity Proposed and Recommended Mitigation and Monitoring.	No change.
111j	Operation of a Class 1 High Hazard Dam associated with the Fargo Moorhead Flood Risk Management Project could disrupt spawning in the staging and storage area and along the diversion channel, relocating spawn activities for all aquatic species into areas outside the regular river channel and leave those aquatic species stranded without biologic connectivity during drawn down. This could lead to population fluctuation, collapse and/or diversity imbalances in reaches of the river system that are affected by project operation. (Commenter included attachment of Red River of the North Management Plan).	Impacts to fish are described in Section 3.8. Fish impacts related to spawning and stranding are addressed in EIS section 3.8 and EIS Table 6.11 includes a summary of fish passage and biological connectivity proposed and recommended mitigation and monitoring.	No change.
127a	Commenter is concerned about the impact the Project would have on fish and that the addition of the dam appears to contradict progress. Questions where the research is	The current design does not utilize fish ladders. It is anticipated that fish passage, including passage for lake sturgeon, would be impacted during Project operation. However,	No change.

General Topic		Fish Passage and Biological Connectivity, Fish Impacts	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
	that shows fish ladders work on the Red River. Wonders what lake sturgeon stocking efforts the MN DNR has been involved in and if it is known if lake sturgeon will use fish ladders.	it is unknown to what extent as there are many variables that could factor in that may or may not be Project related. EIS Section 3.8 Fish Passage and Biological Connectivity includes a discussion on potential impacts to fish and aquatic habitats, including fish passage, as a result of the Project. Section 3.8.3 discusses mitigation and monitoring measures proposed to address Project Impacts. Chapter 6 and Appendix B - The Draft AMMP provide more detail on the proposed mitigation and monitoring efforts as well as any additional recommendations to avoid or minimize impacts to fish and fish passage.	

General Topic		Fish Passage and Biological Connectivity, Habitat Loss from Project	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
164.65	We [USACE] did not consider the habitat at the outlet structure as "lost" habitat, especially in the same context of habitat lost from abandonment. We identified it would be influenced, but not lost and not mitigated for (discussed in the main text and Attachment 6 of the FFREIS). Information about impacts from constructing the outlet structure was addressed in the Federal	Table 3.41 has been revised to address comment.	Text edit made to Table 3.41.

General Topic	Fish Passage and Biological Connectivity, Habitat Loss from Project		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
	Supplemental EA and supplemental 404.		

General Topic	Fish Passage and Biological Connectivity, Lower Rush Sampling Plan		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
164.64	USACE requested that it be clarified that there is no intention of sampling the Lower Rush River in the future as well.	As stated in the Draft AMMP - Appendix B of the EIS, the Lower Rush River was originally considered for biotic and habitat sampling. However, because this channelized drainage ditch is typically dry for extended periods during the summer, the intermittent tributary was dropped from sampling for fish, macroinvertebrates, and physical habitat. Minor text edits were made to Section 3.8 as requested by the commenter to add clarity.	Text edits made to Section 3.8.

General Topic	Fish Passage and Biological Connectivity, Qualitative Habitat Evaluation Index		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
164.63	Commenter stated that the Qualitative Habitat Evaluation Index (QHEI) isn't specific to macroinvertebrates, that is a separate physical habitat characterization and that macroinvertebrates have their own Index of Biological Integrity.	MNDNR agrees with commenter's statement. Text has been revised to correct this error.	Text edits made to Section 3.8.
179b	Commenter questioned the categorization of	The QHEI provides a measure of macro scale	No change.

General Topic			
Fish Passage and Biological Connectivity, Qualitative Habitat Evaluation Index			
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
	"fair to poor" for stream quality and questioned the use of QHEI methods.	habitat and corresponds to physical variables that impact fish communities and other aquatic life. The Index of Biological Integrity (IBI) scores were also typically low in areas with low QHEI scores, supporting the validity of the QHEI evaluation tool.	

General Topic			
Fish Passage and Biological Connectivity, Water Quality Impacts on Aquatic Species			
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
111k	Commenter is concerned that bacterial transfer of sediments, pollutants, and other toxin transfer impacts on aquatic species have not been addressed in the MNDNR EIS, which could also exert unfavorable influence on aquatic species.	Water quality was not a scoped topic for this EIS. As stated in the Final Scoping Decision Document (FSDD, 2014), water quality was adequately addressed in the FFREIS (Water Quality, Surface Water Runoff Section 3.1.2.3; Water quality: Wastewaters Section 3.1.2.4, the Supplemental EA and the MNDNR's scoping EAW under Water Quality: Surface Water Runoff Item 17). Impacts to fish and macroinvertebrates are described in EIS Section 3.8. Water quality monitoring has been included in the Geomorphology Monitoring Plan (Draft AMMP - Appendix B) as changes in water quality can be connected to geomorphological system responses.	No change.

General Topic		Government Approvals, Dam Safety Permit Requirement	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
164.26	“As previously discussed with DNR, no determination has been made whether there is a waiver of sovereign immunity for a dam safety permit, particularly with regard to the Corps' construction of the dam.”	Sovereign immunity is not relevant because the Project is a joint Federal and Local Sponsor project. There may be disagreement on whether a waiver of sovereign immunity would be granted to the USACE for a State of Minnesota dam safety permit; there is no disagreement that the Local Sponsors would need to comply Minnesota regulations.	No change.

General Topic		Government Approvals, USACE Compliance with State and Local Laws	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
164.23	USACE provided the following statement during review of the Draft EIS: "In implementing a federal project, the USACE is required to comply with State and local laws, regulations and ordinances only to the extent specifically required by federal law". A softened and somewhat confusing statement is included just before Table 1.1 on page 1-6, but I suggest the more straightforward sentence be included.	The statement about federal projects being subject to state and local regulations is irrelevant because this is joint federal/local sponsor project. The local sponsor's would need to comply with state and local regulations regardless of what the USACE is or is not required to do. The project would need to comply with all local and state regulations.	No change.

General Topic		Hydrology and Hydraulics, 1897 Flowage	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS

General Topic		Hydrology and Hydraulics, 1897 Flowage	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
62g	Commenter is concerned that there is no mention of 1897 flowage has been compared in any of the USACE studies.	The 1897 flood at Fargo was included in the Full Period of Record analysis, as discussed in the FFREIS in Appendix A. The wet period hydrology (used by the EOEP) does not include the 1897 flood event since the wet period is from 1942-2009. There is very little data available to study the 1897 flood in detail. The 1997 and 2009 floods were larger than the 1897 flood and both of those events have been studied as part of the hydraulic modeling effort.	No change.

General Topic		Hydrology and Hydraulics, Base No Action Flooding	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
14d	There are base no action areas that have never flooded that are labeled as "it would flood anyway" due to use of Expert Opinion Elicitation Panel (EOEP).	The updated 100-year flood discharge is greater than the peak flow recorded during the flood of record (2009). Therefore it would be expected that some areas identified as being inundated during the 100-year base no action flood have not previously experienced flooding. See Final EIS Appendix N.	Added Appendix N—Hydrologic Methodology Review.

General Topic	Hydrology and Hydraulics, Downstream Impacts		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
70f	<p>With Fargo increasing their flow through town to 35 cfs and a very strong possibility the cfs will increase, how can it be assured that there will be no downstream impacts? The USACE was instructed to have "zero" impacts.</p>	<p>Models are simplifications of landscape and drainage systems. A model cannot provide a guarantee, but it can help determine potential effects. Using Phase 7.0 hydrology, the MNDNR completed a comparison of flood elevations between existing conditions (with emergency measures) and Project conditions for the 10-year, 50-year, 100-year, and 500-year flood events at five different model cross sections downstream of the Project. These model cross sections included locations at (in order of going downstream) diversion outlet (confluence of the Buffalo and Red Rivers), Georgetown, Halstad, Thompson Gage, and Grand Forks. Average differences between the existing conditions and the Project in flood elevations between all model cross sections and across all flood scenarios showed increases of 3 inches or less (10-year flood average difference of 0.08 ft.; 50-year flood average difference of 0.13 ft.; 100-year flood average difference of 0.12 ft.; and 500-year flood average difference of 0.39 ft.). The Operation Plan would need to be optimized to address balancing the need to minimize downstream impacts with the need to drain the staging area. Details on downstream impacts can be found in Final EIS section 3.1; the USACE's Draft Operation Plan can be found in Final EIS Appendix A.</p>	<p>Added text and table to Section 3.1.</p>

General Topic		Hydrology and Hydraulics, Downstream Impacts	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
111b	Argues that the project will not minimize downstream impacts.	The staging area feature of the Project was added to earlier, water storage-less versions of the Project and potential Project alternatives (see FFREIS Appendix O - Plan Formulation for detailed discussion of study phases) to address downstream stage increases that hydrology models showed would occur under a diversion-only plan. The addition of water storage features greatly reduced downstream stage increases from occurring. Under the Project as proposed in the EIS, the Project would raise the 10-year to 100-year flood levels by approximately 0.1 feet downstream from the outlet of the proposed diversion channel to Grand Forks. The 500-year flood levels would be expected to increase by approximately 0.4 feet. See also response to comment 70f.	Added text and table to Section 3.1.
147f	Not enough discussion on downstream impacts.	A discussion on the results from the USACE HEC-RAS unsteady flow model version 7.0 were tabulated and added to the EIS.	Added text and table to Section 3.1.
157c	Concern about downstream impacts during a very specific scenario.	The Project would extend higher flows after peak than would otherwise be experienced. The Operation Plan would need to be optimized to address balancing the need to minimize downstream impacts with the need to drain the staging area. Details on downstream impacts can be found in Final EIS section 3.1; the USACE's Draft Operation Plan can be found in Final EIS Appendix A.	Added text and table to Section 3.1.

General Topic	Hydrology and Hydraulics, Expert Opinion Evaluation Panel		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
7a, 9a, 23c, 23e, 41a, 44b, 72n, 72z, 109f, 111a, 138c, 139c, 155h, 163h, 163k, 163z, 198c	Commenters question the credibility of the Expert Opinion Elicitation Panel’s wet-dry cycle hydrology (EOEP hydrology), some request using a different method.	<p>Several public comments questioned the credibility of the EOEP hydrology that is being used for Project design and for this EIS. Many commenters suggested that the updated Period of Record (POR) or the FEMA flood discharge values (FEMA hydrology) should have been used instead of the EOEP hydrology. MNDNR initially accepted the EOEP hydrology to use in the EIS because FEMA hydrology was outdated and unreasonably low. However, in response to public comment and concern, MNDNR determined that a good approach to resolving the choice among hydrology methodologies would be to evaluate the most appropriate way to determine the flood discharge frequency data for the Red River at Fargo-Moorhead.</p> <p>To determine the most appropriate hydrologic method, MNDNR compared the EOEP to the POR and FEMA hydrology. The hydrologic methodology comparison involved referencing and evaluating historical data, USACE data used in the FFREIS, hydrologic modeling, as well as conducting statistical analyses. Considerations were made for assumptions and other potential hydrologic</p>	Added to Section 3.1 and Executive Summary: a clarifier on what the "wet-dry" terminology was intended to portray. Added Appendix N: Hydrologic Methodology Review.

General Topic	Hydrology and Hydraulics, Expert Opinion Evaluation Panel		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>system influences. To work, or “be the most appropriate way to determine the flood discharge frequency data...”, the method would need to make sense when considering the full range of flood discharge values being evaluated (i.e., 10-year, 50-year, 100-year, and 500-year floods).</p> <p>The comparison exercise results indicated that the FEMA hydrology was outdated and is not a reasonable choice among methodologies. When evaluating the EOEP, both climate trends and land use changes suggested that splitting the gage record may provide a better answer than the POR alone; especially for the lower frequency events, such as the 10-year and 50-year flood events. Comparison of the EOEP to the POR resulted in very small differences (e.g., 0.1 to 0.8 feet). Based on these conclusions, it is unlikely that either the Project design or the results of the EIS would have been substantially different had the POR been adopted. Therefore, the MDNR’s decision to use the EOEP remains. The full results of this analysis can be found in Appendix N of the Final EIS.</p> <p>Supplemental Response to Comments 7a and 23c regarding EOE information, McEwen's memo and Larson graph: The</p>	

General Topic		Hydrology and Hydraulics, Expert Opinion Evaluation Panel	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		commenters submitted EOEP information, a memo and a graph indicating that the “wet cycle” conclusions used in the EOEP is unsupported by the precipitation record; is not statistically significant; and should not be used. The EOEP use of the terms “wet cycle” and “dry cycle” were not intended to imply wet or dry climatic conditions. Rather, the EOEP used those terms to identify periods of generally lower (dry) and higher (wet) river flows. The EOEP did not reach any conclusion about why flows on the Red River at Fargo have been higher since the 1940s. Flood discharge frequency data (e.g., the 100-year flood discharge) are based on statistical analyses of historical gage station records when those data are available – not precipitation data.	

General Topic		Hydrology and Hydraulics, Fargo’s Levees and Floodwalls	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
9e, 72i	Commenters state that without the Project Fargo will be able to get FEMA accreditation for current and proposed in-town levees. In addition, Fargo should consider adding more in-town levees to address flood concerns.	The existing and proposed levees for Fargo and Moorhead provide protection for the 100-year flood elevations (or 1 percent flood elevations) shown on the current FEMA maps. However, Fargo has gaps in the levee system; these gaps are protected with	No change.

General Topic		Hydrology and Hydraulics, Fargo's Levees and Floodwalls	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>emergency measures. FEMA doesn't accredit areas protected by emergency measures. To provide protection during the 100-year flood additional levees would be required. There are geotechnical and topographic limits to the height and location of further levee improvements. These physical levee limits prevent this option from meeting two of the Project purpose and need components – protection from floods the greater than the 100-year flood and protection from flooding from the tributaries. Also, if levee height is increased without a diversion, flow would be restricted through town storing water in the floodplain upstream of the F-M urban area and increasing upstream flood elevations. The current system of permanent levees will not meet FEMA 100-year standards if and when FEMA adopts the updated hydrology.</p>	

General Topic		Hydrology and Hydraulics, Flood Fringe Depths	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
72h	<p>Commenter stated "Where it says <i>"All of the fringes of the inundated area within the staging area would experience additional flood depths of zero to one foot."</i> This statement is not even remotely close to</p>	<p>The EIS text on page ES-14 specifically and correctly discusses the flood- fringe areas <i>"within the staging area."</i> The EIS text goes on to say: <i>"... In contrast, there are areas outside of the staging area that would</i></p>	<p>Text was clarified in the EIS. Added Appendix O: Takings, Flowage Easement and Acquisition</p>

General Topic	Hydrology and Hydraulics, Flood Fringe Depths		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
	<p>accurate. I am just outside the “red box” on MN side and just on south side of the dike/dam. I currently sit 8 feet above the Army Corps 500-year flood level. If this project was to happen I would have a foot of water in the yard. Going from 8 feet above the 500 year level to having a foot of water in your yard is severely more than “would experience additional flood depths of zero to one foot”!!!! It would take an additional 13 feet to put that 1 foot in my yard under existing conditions.”</p>	<p><i>become newly inundated . . .</i>” The comment concerns a location that is outside of the staging area and may experience increased flood depths greater than one foot, as correctly explained in the text. Mapping/modeling is a tool that helps assess the environmental effects of Project operation inundation. Site specific conditions on individual properties may have differences in elevation or other factors that may lead to variability in actual flood impacts than what is predicted by the model. Properties that may be affected would need to be analyzed on a property-by-property basis when determining mitigation. Specific determinations of mitigation needs in Minnesota would be addressed as part of the MNDNR dam safety and work in public waters permitting. Text has been revised to provide more clarity in the Final EIS. See also Appendix O.</p>	<p>Processes.</p>
155t	<p>Commenter questioned how the USACE arrived at the zero to one-foot depth for the inundation area? Is the measurement arbitrary? Is that depth what the Corps’ uses for all of its projects? If the measurement is arbitrary and/or a depth used on all USACE projects. Commenter further stated that “each place in the country has different characteristics, topography, etc. The projects should be looked on a case-by-case basis. A</p>	<p>The USACE is no longer basing mitigation needs on the threshold depths mentioned in this comment and as described in the July 2011 FFREIS. USACE policy in Engineer Regulation 1105-2-100, 3-3.b. (5) states: <i>“Induced Flooding. When a project results in induced damages, mitigation should be investigated and recommended if appropriate. Mitigation is appropriate when economically justified or there are overriding</i></p>	<p>No change.</p>

General Topic	Hydrology and Hydraulics, Flood Fringe Depths		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
	<p>specific project should also be reviewed for obvious variations which call for different depths to be used to define the inundation area and the staging area. If you have 6" or 1-1/2 feet of water, you are still impacted."</p>	<p><i>reasons of safety, economic or social concerns, or a determination of a real estate taking (flowage easement, etc.) has been made.</i>" As described in the Draft EIS, USACE and FEMA developed a Coordination Plan that does not refer to the depth ranges in the 2011 FFREIS. Mitigation is proposed for all impacted structures located within the FEMA revision reach, and an analysis to determine a taking would determine mitigation needs for all other impacts outside of the staging area (see Draft EIS Section 3.16.3). Within the staging area, nonstructural measures and ring levees would be considered for impacted structures with less than two feet of 100-year flood depth and viable access. The two-foot depth threshold is based on a maximum ring levee height of five feet and allowing for three feet of freeboard to meet FEMA accreditation requirements (see FFREIS page 123 for related discussion). USACE defined the staging area based on the difference between the with-project water surface and the without-project water surface. The staging area encompasses the inundated areas downstream of the points along the main-stem Red River and Wild Rice River where the change in water surface would be one foot or greater and flood storage would need to be protected to ensure that the</p>	

General Topic	Hydrology and Hydraulics, Flood Fringe Depths		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>project could operate. (As stated in the Draft EIS, there are areas outside of the staging area that experience flood stage increases greater than one foot but would not need to be protected from future encroachment.) The comment refers to a "zero to one-foot depth for the inundation area;" the Draft EIS defined "inundation area" as "any flooded area, regardless of depth." USACE defined the staging area based on change in depth of inundation, not actual depth of inundation.</p>	
193d	<p>Commenter stated that neighbors outside the staging area box will get over a foot of water which is 7-8' in their basement.</p>	<p>There are 2 categories that address structure mitigation that are described in the EIS in Section 3.2 FEMA and the CLOMR Process. If the structure is in the FEMA revision reach (defined by the Red River profile and limited to where the Project will alter the river profile flood elevation by more than 0.5 feet under the 100-year flood event) mitigation would be required and depending on depth of inundation, the structure would need to be elevated, relocated, bought out or other non-structural measure. For businesses, they would also be allowed to flood proof. Within that defined area, mitigation in Minnesota would be required for increases greater than 0.0 feet. It should be noted that the FEMA revision reach is not the same as the staging area. Outside of the FEMA revision reach, there could be increases less than 6 inches</p>	No change.

General Topic		Hydrology and Hydraulics, Flood Fringe Depths	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		that could flood a basement. Minnesota Rules would require mitigation for these structures. Mitigation could include landscaping to mitigation methods. If the structure isn't currently mapped, landscaping could eliminate the needs for flood insurance. If they are currently in the floodplain and already have flood insurance, mitigation won't negate the need for insurance. Minnesota Rules for floodplain impacts applies for impacts at the 100-year flood.	

General Topic		Hydrology and Hydraulics, General	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
9d	Commenter stated that the USACE does not utilize the Traverse Storage.	USACE operates the Lake Traverse Flood Control Project at the headwaters of the Bois de Sioux River. The Lake Traverse Project was completed in 1941 and includes Reservation Dam and White Rock Dam. Since 1941 the project has prevented more than \$4.4 billion in flood damages (http://www.mvp.usace.army.mil/Home/Projects/tabid/18156/Article/571128/flood-control-sites-mn.aspx). USACE operates the project in accordance with an approved operating plan as presented in the Water	No change.

General Topic		Hydrology and Hydraulics, General	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		Control Manual. The project is primarily operated to benefit Wahpeton/Breckenridge. Additional storage availability in Lake Traverse would need to be coordinated with the Reservation Dam and White Rock Dam and Project operators. See also Appendix M (Alternative 17) which evaluated dam storage near the North Dakota/South Dakota border.	
149g	How will the water duration and the volume of water effect the ecosystem?	Chapter 3 of the EIS discusses the potential impacts of the Project and Project alternatives to the environment under the 10-year, 25-year, 50-year, 100-year and 500-year flood events.	No change.

General Topic		Hydrology and Hydraulics, Mapping	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
21b	The Corps produced a subjective map that shows areas where the Corps claims people will build. Request to remove the map.	Comment does not refer to a specific map. Draft EIS and FFRES figures and illustration were reviewed to try to determine a map that reflected the commenter's concern. However, it is unclear which map the commenter is referring to.	No change.

General Topic	Hydrology and Hydraulics, Modeling		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
33a	<p>None of the alternatives are based on a baseline that currently exists. Why isn't drain tile included in the modeling parameters? Drain tile provides storage. Consideration of other projects such as Baldhill Dam and Maple River dam. Why wasn't diking included [in the model]? The removal of houses and restriction of the river's flow have not been included.</p>	<p>The hydrologic and hydraulic (H and H) modeling completed by the USACE and their team of consultants for the Project is very comprehensive and complete. These models have been developed over a number of years. The USACE is constantly updating their modeling. The EIS utilized the USACE's Phase 7 H and H model (the model). Phase 8 is currently underway. Models are simplifications of landscape conditions and drainage systems at specific point in time. The model needed to be calibrated to historic events (1997 and 2009). These types of models typically don't include houses in the cross sections nor drain tile systems (it is unknown how much drain tile there was in 1997 and 2009, nor the effect drain tile had on those events). The landscape and drainage systems are constantly changing (e.g., drain tile, North Ottawa project initiating operation) which makes development of an accurate model challenging. Trying to model a moving target is challenging. Restriction of flow was included in the model for structures such as bridges, but not for other items such as houses and debris. Dikes were accounted for in 3 scenarios: the No Action Alternative (with Emergency Measures), Project, and Northern Alignment Alternative. In all,</p>	No change.

General Topic	Hydrology and Hydraulics, Modeling		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		MNDNR believes that the level of detail in the model does a credible job dealing with the very complex flow patterns as influenced by the flat topography and road networks.	

General Topic	Hydrology and Hydraulics, NDSU Initial Agricultural Risk Impact Study		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
107c	The fundamental flaw in all the planning by the USACE and by the North Dakota State University (NDSU) agricultural risk impact study is the lack of consideration of the impact of the barriers created by county and townships roads and frozen culverts while the staging area is being used. The USACE's calculations of how long the water would be staged on agricultural land are grossly underestimated because of their failure to examine the real dynamics of how the water flows off the land when it is inundated.	Roadway and culvert contribution to flood conditions is an existing basin wide flood issue and would be a continued concern under Project operation. Modeling accounted for the major roads that would pose barriers. The NDSU Initial Ag Impact Study (NDSU, 2015) used the same hydrology that was used in this EIS. The Commenter is correct that an assumption was made in the hydrology model that culverts would not be frozen. However, frozen culverts aren't anticipated to be a large scale problem. Local Government Units have experience with maintaining culverts. Potential impacts to roadways, ditches, and culverts are proposed to be addressed as part of the O&M Plan. Examples of roadway ditch and culvert maintenance include: (i) removing debris and deposited material from roadways and ditches after project operation, (ii) clearing	No change.

General Topic	Hydrology and Hydraulics, NDSU Initial Agricultural Risk Impact Study		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		culverts of debris, (iii) repairing roadway washouts, and (iv) armoring roadway embankments that are vulnerable to overtopping and washout during project operation.	

General Topic	Hydrology and Hydraulics, OHB Ring Levee Impacts in Minnesota		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
72a	The OHB impact provided to MNDNR was with FEMA numbers, not Expert Opinion Elicitation Panel (EOEP). Request that DNR do their own impact study on the OHB project using EOEP and include that in the EIS. Attachments include cross sections (USACE impact to various cross sections using EOEP); OHB Levee impact analysis using EOEP; OHB memo using FEMA numbers.	The commenter is referencing a memo submitted by the Project consultants dated April 8, 2014 documenting the 100-year flood impact without the Project. The memo was created as part of a submittal to the North Dakota State Water Commission (SWC) for a Construction Permit for the OHB levee. The steady flow HEC-RAS model developed for the Southern Cass County Preliminary Flood Impact Study was used for the analysis because it is the current regulatory model and its use is required by the SWC for permit applications. As noted in the memo, the maximum impact based on FEMA's effective Flood Insurance Study is less than 0.01 feet (0.12 inches). An analysis of the impacts of the OHB ring levee without the diversion and staging area was also completed using the Project unsteady HEC-RAS model and the	No change.

General Topic	Hydrology and Hydraulics, OHB Ring Levee Impacts in Minnesota		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		same USACE EOEP hydrology that has been used for all diversion project analysis. The analysis indicates that the addition of the OHB ring levee in the absence of the diversion and staging area results in a maximum impact to the water surface elevation during a 100-year flood of 0.04 feet (0.48 inches). A difference of one-third inches would not change the impact analysis or alternative analysis for this EIS.	

General Topic	Hydrology and Hydraulics, Project Operation Description		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
164.33	USACE states there are some inaccuracies within the text under subsection 3.1.2.1 Project. The request was made to substitute text in subsection 3.1.2.1 with text from subsection 2.1.1.14 Project Operation.	Text was revised in subsection 3.1.2.1 Project utilizing some of the information included under subsection 2.1.1.14. Information that was not relevant to the intent of subsection 3.1.2.1 was not included.	Text edit to subsection 3.1.2.1.

General Topic	Hydrology and Hydraulics, Seasonal Affects		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
14b	Seasonal affects (wet fall, heavy snowfall, wet spring, other flooding, and snowmelt) will cause greater cumulative impact than is	Modeling is a representation of conditions and inputs, and all of the Commenter's examples are accounted for in the model.	No change.

General Topic	Hydrology and Hydraulics, Seasonal Affects		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
	presented in the EIS.	There are likely some seasonal affects that when combined could result in a slightly greater than presented flood event, but it is not likely to change the impact analysis of the EIS. See also Comment 163b.	

General Topic	Hydrology and Hydraulics, Staging Area Drainage		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
72cc	Request to look into how the eastern inundation area will drain.	Subsection 3.3.3.1.2 of the Draft EIS discusses geomorphology in the upstream staging area and potential impacts to channels and drainage ditches. The Draft EIS figures correctly show the impacts east of County Road 61. The USACE Operation Plan is still in draft form, but in general, water would be released from inundated areas upstream via the Red River and the Wild Rice River control structures and the Diversion Inlet Structure. Water levels would generally decrease at a rate of 0.2 to 0.6 feet per day and would be controlled so that rates of water level decreases do no exceed what typically occurs during a natural flood event. Mitigation for the eastern inundation area would be considered as part of the dam safety permit application review. The Diversion Authority and the USACE are evaluating options to	Added additional mitigation for drainage systems to subsection 3.3.3. Table 5.1, Executive Summary Table 1 and Chapter 6 were updated accordingly.

General Topic	Hydrology and Hydraulics, Staging Area Drainage		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>handle local drainage in the eastern inundation area and mitigation. Options that are being considered include constructing a drainage channel along the south side of the embankment/dam that would convey local runoff west to the Red River; and an option of adding a structure through the embankment/dam to convey local runoff from the eastern inundation to the north along its current flow path. Both of these options would require mitigation of the eastern inundation area through proposed combinations of property acquisition, flowage easements, and acquisition of impacted residential structures and farmsteads. A ditch on the south side of the Minnesota tieback embankment to aid/assist in drawdown of the staging area. This feature has not been designed, but it is anticipated that the ditch on the south side of the Minnesota tieback would be sufficient to collect existing local drainage flowing north that is "cut off" by the Minnesota tieback embankment and conveyed to the Red River. Any work (construction/mitigation) affecting an existing public drainage system in the eastern inundation area would need to comply with Minnesota Drainage Law 103E.</p>	

General Topic		Hydrology and Hydraulics, Township Roads	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
81d	Concerned that township roads were not included in the hydraulic modeling, which would provide a highly inaccurate estimate of existing conditions.	All roads are included in the hydraulic modeling. Road elevations are mostly based on LiDAR data with road and bridge plans supplementing LiDAR where necessary.	No change.

General Topic		Hydrology and Hydraulics, Tributary Modeling	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
163f	Since simultaneous events on the tributaries have not been modeled the impact of the operation of the overflow function is not known.	Each Red River flood event would be unique, depending on relative amounts of snow depths and spring rainfall within each tributary and variable melt conditions. It is not feasible to analyze all possible combinations of flow conditions. The project design hydrologic modeling have been based on representative flows & volume from each tributary resulting in a realistic flood event along the Red River main stem. This design event would likely never occur; but it is appropriate to use for project design and evaluation. Assuming simultaneous 100-year flood events on all tributaries would result in a flood along the Red River far in excess of the 100-year event.	No change.

General Topic		Hydrology and Hydraulics, Wolverton Creek	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
6c	Draft EIS does not address impacts to the Wolverton Creek and Comstock Coulee (map and correspondence with Buffalo-Red River Watershed District were included with comment).	The hydraulic modeling does include the lower portions of Wolverton Creek and Comstock Coulee where the impacts are measurable. The NDSU October 2015 report, "Initial Assessment of the Agricultural Risk of Temporary Water Storage for FM Diversion" (available online at: http://www.fmdiversion.com/wp-content/uploads/2015/02/AAE745.pdf) also includes these areas.	No change.
149c	Another area to consider is doing studies on the Wolverton creek. How far does it expand and how many acres does it affect when the project is in use?	Wolverton Creek is included in the HEC-RAS hydraulic model as a river reach, which begins at the mouth of Wolverton Creek with the Red River and extends upstream to about 3 miles southeast of Wolverton, MN. Detailed flood mapping is available. See Draft EIS Figures 3, 4, 11, 12, 13, 14, and 15.	No change.

General Topic		Hydrology and Hydraulics, Wolverton Creek and Comstock Coulee	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
112h	Bullet 7: Requesting an analysis of how/if the Buffalo-Red River Watershed District (BRRWD) will suffer damage to drainage systems (watershed) in the staging area that all flow eventually to the Wolverton Coulee or the Red River and if there are damages who should pay for them.	MNDNR met face-to-face with the BRRWD on February 4, 2016 to discuss ordinances, plan compatibility, and additional information that might be needed (see also response to comment topic: Land Use, LGU compliance). The results of that meeting indicated that any Board authorization would be subject to the	Added additional mitigation for drainage systems to subsection 3.3.3. Table 5.1, Executive Summary Table 1 and Chapter 6 were

General Topic	Hydrology and Hydraulics, Wolverton Creek and Comstock Coulee		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>conditions under Minnesota Drainage Law 103E. Section 3.3.3.1.2 of the Draft EIS discusses geomorphology in the upstream staging area and potential impacts to channels and drainage ditches. Project operation would include a controlled drawdown of the upstream staging area to minimize erosion and bank failures. Roadways, ditches and culverts that would be impacted during project operation would be mitigated by the Diversion Authority either by easement acquisition or as part of the Operation and Maintenance (O&M) plan for the Project. The Diversion Authority would negotiate a flowage easement with the Local Governmental Unit that owns public right-of-way. This flowage easement would identify how O&M would be performed and whether the LGU would perform the O&M and be compensated by the Diversion Authority, or whether the Diversion Authority would contract for the O&M. Anticipated O&M activities for roads and ditches include removing debris and soil that may be deposited on roadways and in culverts; repairing damages to ditches and culverts; and re-establishing ditch inverts. If the Diversion Authority contracts for the O&M work, they would work with the LGU to develop a schedule and priorities for cleanup</p>	updated accordingly.

General Topic		Hydrology and Hydraulics, Wolverton Creek and Comstock Coulee	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		following Project operation. The Diversion Authority member entities have multiple taxing authority options, including sales tax and a Project special assessment district, which could be used to fund long-term O&M costs for the Project. Any work (construction/mitigation) in the Project Area under the authority of the BRRWD area would need to comply with Minnesota Drainage Law 103E.	
117a	The Comstock/Wolverton Creek was never considered in the EIS. It should be studied to determine the amount of water that flows through there.	The USACE's Phase 7 hydraulic modeling effort includes Wolverton Creek flows and local inflows. See EIS Section 3.1 for a discussion of hydrology and Section 3.3 for a discussion on stream stability.	No change.

General Topic		Infrastructure and Public Services, Comstock/Hickson Bridge	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
62a	Concern about maintenance of Comstock/Hickson bridge and funding.	The bridge over the Red River just south of Hickson on Cass Highway 18 is a jointly owned bridge by Cass County ND and Clay County MN. This bridge currently is the first bridge on the Red River in Cass County to be overtopped. This bridge is typically overtopped around 30' on the Fargo gauge. Any debris clean-up and damage costs are split between Cass and Clay Counties. In the	No change.

General Topic	Infrastructure and Public Services, Comstock/Hickson Bridge		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		case of this bridge, the Diversion Authority may help. To clarify, for flood events where the Diversion Authority would not operate (gates on the Red and Wild Rice Rivers do not close and stage water) Cass and Clay County would pay for cost to maintain and operate the Cass Hwy 18 bridge. For events where the Diversion Authority would operate, the cost to clean up debris on the Cass Hwy 18 bridge would be paid for by the Diversion Authority.	

General Topic	Infrastructure and Public Services, Comstock Ring Levee		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
55e	Concern about having only one road into and out of town. Will make it hard for businesses to stay and will increase school bus travel time, impacting children's education due to lack of sleep.	The conceptual flood protection plan that was developed for the city of Comstock included an earthen closure for Clay County Highway 2 on the east edge to maintain freeboard during Project operation; however, the roadway elevation is above the staging elevation for the 100-year and 500-year flood events. Additional detail on the closure and the opportunity to maintain access during project operation would be defined as Project development moves forward. The community ring levee and associated work would need to be completed before the	No change.

General Topic		Infrastructure and Public Services, Comstock Ring Levee	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		Project is operational, so it may be several years before they are constructed.	
164.76	Commenter states that details in 3.13.2.1.1 Infrastructure and Public Services, Project, Roads and Bridges, Comstock Ring Levee are incorrect. FEMA does not require 4 feet of freeboard, and it is not clear what it meant by saying an earthen levee would be constructed where the levee crosses Highway 2.	Text in 3.13.2.1.1 Infrastructure and Public Services, Project, Roads and Bridges, Comstock Ring Levee has been updated to reflect current preliminary draft plans and requirements of a future design.	Text edit to Section 3.13.

General Topic		Infrastructure and Public Services, Flood Impacts to Roadways, Ditches, and Culverts	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
9g, 41n, 41p 47c, 53c, 62b, 81e, 99e, 105d, 105e, 109d, 110a, 119b, 133e, 155u, 163d, 163ee, 195c, 198a	Many commenters expressed concerns about impacts to staging area roadways, ditches, and culverts and questioned who would pay for the cleanup.	Section 3.3.3.1.2 of the Draft EIS discusses geomorphology in the upstream staging area and potential impacts to channels and drainage ditches. Section 3.13.2 discusses impacts to Infrastructure and Public Services, including roads. Project operation would include a controlled drawdown of the upstream staging area to minimize erosion and bank failures. Roadways, ditches, and culverts that would be impacted during Project operation are proposed to be mitigated by the Diversion Authority as part of the Operation and Maintenance (O&M) plan for the Project. The Diversion Authority	Added text to subsection 3.14.2.1.4 to acknowledge Minnesota Drainage Law 103E.

General Topic	Infrastructure and Public Services, Flood Impacts to Roadways, Ditches, and Culverts		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>proposes to negotiate a flowage easement with the Local Government Units (LGU), such as the Buffalo-Red River Watershed District (BRRWD). This flowage easement would identify how maintenance would be performed and whether the LGU would perform the maintenance and be compensated by the Diversion Authority, or whether the Diversion Authority would contract for the maintenance. Anticipated O&M activities for roads and ditches include removing debris and soil that may be deposited on roadways and culverts; repairing damages to roadways, ditches, and culverts; and re-establishing ditch inverts. If the Diversion Authority contracted for the O&M, they would work with the LGU to develop a schedule and priorities for cleanup following Project operation. The Diversion Authority member entities have multiple taxing authority options, including sales tax and a Project special assessment district, which could be used to fund long term O&M costs for the Project. Drainage system impairments would likely require a permit from the BRRWD to ensure that drainage systems provide landowners their assessed benefits. The BRRWD would be required to request specific information about impacts to staging area roadways, ditches, and culverts.</p>	

General Topic		Infrastructure and Public Services, Flood Impacts to Roadways, Ditches, and Culverts	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		The MNDNR met face-to-face with the BRRWD on February 4, 2016 and they indicated that permit approval would be subject to the conditions under Minnesota Drainage Law 103E, which governs drainage systems (i.e., a system of ditch or tile, or both, to drain property, including laterals, improvements, and improvements of outlets, established and constructed by a drainage authority). "Drainage system" includes the improvement of a natural waterway used in the construction of a drainage system and any part of a flood control plan proposed by the United States or its agencies in the drainage system.	

General Topic		Infrastructure and Public Services, Impacts to Water Treatment Plants and Associated Infrastructure	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
50a	Commenter states that the description of potential impacts to water treatment plants in Cass County Rural Water District and associated infrastructure and costs needed to mitigate those impacts is missing from the Draft EIS.	The MNDNR followed up with the Cass Rural Water District on February 17, 2016 regarding the comment to confirm the location of the Phase I Water Plant. This location was reviewed on aerial photographs relative to the proposed location of the Project tieback embankment and the Northern Alignment Alternative tieback embankment. Text was added to the Final EIS	Edits made to Section 3.13, Table 3.50, Table 5.1 and Executive Summary.

General Topic			
Infrastructure and Public Services, Impacts to Water Treatment Plants and Associated Infrastructure			
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		reflecting the potential impacts to the Phase I Water Plant due to the Project or NAA.	

General Topic			
Infrastructure and Public Services, Railroad Study			
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
126a	To protect the integrity of the diversion and the assets it will protect, a study to consolidate and re-route the metro area's main rail lines north of the diversion should be performed.	The Diversion Authority and USACE coordinated with Burlington Northern Santa Fe to develop a mitigation plan for railroad impacts. Section 8.0 (Recommendations, page 390) of the FFREIS includes four railroad bridges in the Project. Planned railroad bridges over the diversion channel are not anticipated to impact the integrity of the Diversion Channel.	No change.

General Topic			
Infrastructure and Public Services, Richland County Drain 5 (27) Impact and Mitigation			
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
139b	Impairment of Drain 5 in Richland County has not been addressed, which underestimates impacts to Richland County and therefore mitigation hasn't been proposed.	The impacts to Drain 5, as well as other Drains in northern Richland County, were addressed in Attachment 2 to the Hydraulics Appendix of the FFREIS. The HEC-RAS hydraulic model used for the Diversion project includes the northern portion of Richland County including the Drain 5 area.	No change.

General Topic		Infrastructure and Public Services, Richland County Drain 5 (27) Impact and Mitigation	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		The model accounts for the impact of the diversion project, breakout flow from the Sheyenne River, and runoff from the local watershed. The impacts to the Drain 5 area for a 100-year flood event are less than 0.25 feet. EIS subsection 3.3.3.1.2 of the Draft EIS discusses geomorphology in the upstream staging area and potential impacts to channels and drainage ditches. Project operation would include a controlled drawdown of the upstream staging area to minimize erosion and bank failures. Ultimately, roadways, ditches, and culverts that are impacted during Project operation would be mitigated by the Diversion Authority as part of the Operation and Maintenance plan for the Project.	

General Topic		Infrastructure and Public Services, U.S. Highway 75	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
164.77	Clay County, Minnesota bullet list incorrectly does not include the raise of Hwy. 75.	Text was revised to reflect MN Hwy 75 would be raised up to the 500-year staging area elevation as part of proposed mitigation for the project.	Text edit made to Section 3.13.

General Topic		Invasive Species, Cross Contamination of Invasive Species	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
111m	The staging area upstream of the Class 1 High Hazard Dam could lead to cross contamination of invasive species between river systems within the Project area.	Cross contamination of invasive species is addressed in Executive Summary Table 14 and Final EIS section 3.11.2.1. A monitoring plan is proposed to be prepared that would include procedures on survey for identifying invasive species, treatment plans, and follow-up surveys to confirm that treatments are effective. Monitoring would be completed on an annual basis in accordance with the Operation and Maintenance Plan and adaptive management plan.	No change.

General Topic		Land Use, Chapter Inadequacy	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
97g	Land use chapter is inadequate.	The Commenter made broad claims about the insufficiency of the Draft EIS Land Use section; however, only specifically addressed inadequacies for three specific jurisdictions. In order to provide the most useful information in the EIS, MNDNR met face-to-face with those three jurisdictions to understand how the Project relates to their plans and ordinances. Relevant information obtained from those jurisdictions are included as additions or revisions in the Final EIS Land Use section. MNDNR acknowledges that the Draft EIS	Minor text edits were added to or amended in Section 3.14.

General Topic	Land Use, Chapter Inadequacy		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>statements regarding Fargo Comprehensive Plan compatibility oversimplified the full breadth of information and considerations that are required for determining land use plan compatibility. The Project could be considered in-line with those aspects of the plan that have goals around flood risk reduction. However, there are other aspects of Fargo's land use plans where the Project may have challenges meeting compatibility. The commenter identified specific areas of concern related to development density, area needed for new development and the ability to provide infrastructure at a reasonable cost for future development. MNDNR acknowledges that the Project would provide flood risk reduction for a large, currently-undeveloped area south of Fargo. Protection of this area would likely encourage development in this area. Unplanned development (i.e., not considering goals of the City) within this area could very well be incompatible with Fargo's future growth plans and associated land use development ordinances as it relates to the specific areas emphasized by the commenter (density, area and infrastructure at a reasonable cost). The community must determine on its own whether new development is compatible. On February 8, 2016, MNDNR met face-to-</p>	

General Topic		Land Use, Chapter Inadequacy	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		face with the City of Fargo Planning staff to gain a better understanding of how the Project relates to their plans and ordinances. The City indicated that each proposed new development would be individually evaluated against City goals and ordinances. The City's Land Use Development Ordinances contain criteria (Sec. 20.0906, Part F) that would need to be considered to ensure compatibility with those aspects that would be challenged (density, area and infrastructure at a reasonable cost).	

General Topic		Land Use, Fargo's Comprehensive Plan	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
21c	The Project is not compatible with Fargo's Comprehensive Plan. Request that MNDNR look into how the USACE came to the number of 50 square miles (or 8 square miles) as the number of square miles needed for future development.	MNDNR could not find reference to 50 square miles as the number of square miles needed for future development in the City of Fargo. According to the City of Fargo's Growth Plan 2007, new development is planned to occur in two areas: Tier One is approximately 8.74 square miles, is located immediately south and north of existing Fargo city limits and is planned to handle growth for the next 20 to 25 years; Tier Two is approximately 11.11 square miles, is located immediately south of the southern	No change.

General Topic		Land Use, Fargo's Comprehensive Plan	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		Tier One area and is planned to handle growth for years 25 to 50. Over the next 50 years, the City of Fargo has planned growth for an estimated 19.85 square miles across these two growth Tiers. Both of the two Tiers of development have goal densities of 7 dwelling units per acre, and their boundaries should become an effective growth limit line for that time period. See also response to comment 97g.	
62f	Concern about Fargo's Land Use plan-- specifically allowing development along the river and golf course development.	Comment is acknowledged and concerns have been shared with the City of Fargo.	No change.
111r	Not one reference in EIS of how much water has been displaced by Fargo's floodplain development.	This type of detailed data relating to specific existing conditions was not included in the Final Scoping Decision Document nor required by Minnesota Rules to be evaluated in the EIS.	No change.

General Topic		Land Use, Fargo Floodplain Management	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
56b	Additional information on Fargo's floodplain management was provided	There is no requested action by the Commenter. Section 3.14.1.3 accurately describes the City of Fargo's floodplain management to the level of detail appropriate for the EIS.	No change.

General Topic		Land Use, Flood Damage Reduction Project Update	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
56a	Commenter identifies the difficulties with implementing previously identified flood reduction projects under the Base No Action Alternative and No Action Alternative (with Emergency Measures).	There is no requested action by the Commenter. Commenter provides information about the difficulty of providing flood protection to the City of Fargo under the Base No Action and the No Action Alternative (with Emergency Measures). The EIS identifies that these alternatives would not meet the Project purpose and need.	No change.

General Topic		Land Use, Interstate Compact	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
97j	The Draft EIS does not recognize that the proposed revisions are inconsistent with the letter and spirit of the Compact (MN and ND have signed a Congressionally approved interstate compact in the management of Red River waters).	The interstate compact was signed in 1938 to establish a Tri-State Water Commission between South Dakota, North Dakota and Minnesota for control of floods and prevention of the pollution of the waters of the Red River of the North. The compact was amended in 1980 to add criteria for approval of agricultural dikes. The 1980 Amendment was codified in Minnesota Rules, part 6115.1300 – 1400. These Rules are superseded by Commissioner approved local floodplain ordinances. The Rules also clarify that dikes that propose to cross public waters must receive a work in public waters from the Department. Both local floodplain ordinances and work in public water requirements are	No change.

General Topic	Land Use, Interstate Compact		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		addressed in EIS sections 3.14 and Chapter 1.	

General Topic	Land Use, Land Use Study		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
207a	Request for a land use study.	Comment does not provide enough detail on missing, incomplete or inaccurate information to provide a response.	No change.

General Topic	Land Use, Local Government Unit Compliance		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
97h	MNDNR failed to ask LGUs if the plan would be consistent with their plans or what permitting information might be necessary. (Specific to Wilkin County and Buffalo Red River Watershed District).	The Commenter made broad claims about the insufficiency of the Draft EIS Land Use section; however, only specifically addressed inadequacies for three specific jurisdictions. In order to provide the most useful information in the EIS, MNDNR met face-to-face with those three jurisdictions to understand how the Project relates to their plans and ordinances. Relevant information obtained from those jurisdictions are included as additions or revisions in the Final EIS Land Use section.	Text deletions made to Section 3.14 - removed the reference that Wilkin County zoning amendment requirements would be needed only after Project operation. The Final EIS has been revised to include new information on

General Topic	Land Use, Local Government Unit Compliance		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p><u>Wilkin County</u> MNDNR acknowledges the error in the Draft EIS about Wilkin County zoning amendment requirements being needed only after Project operation. Wilkin County’s ordinance identifies that a zoning amendment is required before Project operation. On February 4, 2016, MNDNR met with Wilkin County’s Environmental Services Officer to discuss Comprehensive Local Water Plan/Land Use Plan ordinances, plan compatibility, and additional information that might be needed. The additional information that has been included in the Final EIS does not provide the full level of detail required by the County for their permit decision, but it can be used as a basis for future information /discussion during the application process. The County would be responsible for requesting remaining permit-level information as part of their zoning amendment application. The level of information around both the commenter’s and the County’s topic areas of concern (i.e., impacts and suitability of mitigation) that is included in this EIS are found in the following sections of the Final EIS or other resources listed:</p> <ul style="list-style-type: none"> • Ag impacts: a discussion on the NDSU Initial Ag Impact study has been added to 	<p>relevant regulatory authorities.</p>

General Topic	Land Use, Local Government Unit Compliance		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>Final EIS Section 3.16—Socioeconomics; the full NDSU study is available on the Diversion Authority’s website (http://www.fmdiversion.com/wp-content/uploads/2015/02/AAE745.pdf).</p> <ul style="list-style-type: none"> • Water conveyance/drainage: this would be addressed according to Minnesota Drainage Law 103E (referenced in Final EIS Section 3.14); • Roads: EIS Section 3.13—Infrastructure and Public Services, see also response to comment topic: Infrastructure and Public Services, Flood Impacts to Roadways and Ditches; • Flood debris: Final EIS Sections 3.13, 3.16, Final EIS Chapter 6, Appendix O, see also response to comment topic: Project Operation, Flood Debris and Cleanup; • Septic systems: EIS Section 3.16—Socioeconomics; • Wolverton Creek: EIS Section 3.3—Stream Stability; • Flood assumptions: Appendix N, see also response to comment topic: H and H, Base No Action Flooding; • Flood insurance: EIS Section 3.16—Socioeconomics. <p><u>Buffalo Red River Watershed District (BRRWD)</u></p>	

General Topic	Land Use, Local Government Unit Compliance		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>Commenter asserts that the BRRWD was not consulted. MNDNR met face-to-face with the BRRWD on February 4, 2016 to discuss ordinances, plan compatibility, and additional information that might be needed. The results of that meeting indicated that any Board authorization would be subject to the conditions under Minnesota Drainage Law 103E.</p> <p><u>Other LGUs</u> Besides the City of Fargo, BRRWD and Wilkin County, who were independently engaged, MNDNR also contacted all Local Governmental Units listed in the Draft EIS as having permits and approvals that may be needed for Project construction or operation in order to understand how the Project relates to their plans and ordinances. The following LGUs submitted responses:</p> <ul style="list-style-type: none"> • County: Cass • Regional: Cass County Joint Water Resource District, Two Rivers Water Resource District • City: Moorhead, West Fargo • Townships: Mapleton, Pleasant, Warren <p>The following LGUs were contacted and did not provide responses:</p> <ul style="list-style-type: none"> • County: Clay • City: Argusville, Horace 	

General Topic	Land Use, Local Government Unit Compliance		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<ul style="list-style-type: none"> • Township: Mapleton 	
		See also response to comment 97g.	

General Topic	Land Use, USACE Compliance with State and Local Laws		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
164.78, 164.97	During review of the Preliminary Draft EIS, USACE proposed adding the following statement: " <i>In implementing a federal project, the USACE is required to comply with State and local laws, regulations and ordinances only to the extent specifically required by federal law</i> ". A softened and somewhat confusing statement is included at the end of 3.14.3 on page 3-200. USACE prefers the more straightforward sentence be included in a more prominent location.	The MNDNR does not disagree with the requested text. However, we believe the proposed text and the text as written in the EIS do not contain material differences so no change has been made to the EIS. The relationship between Federal projects and state and local projects aren't relevant for this Project as the non-Federal sponsor would have to adhere to state and local requirements.	No change.

General Topic	Mitigation, Wildlife Corridor Along Red River		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
42a	Wildlife Corridor along Red River You Tube video. Video includes a discussion on how wildlife habitat and hunting recreation have been lost with the loss of CRP acres.	The Red River Wildlife Corridor concept presented in the video would provide benefits to wildlife and wildlife habitat. It would also potentially benefit sportsman and	No change.

General Topic	Mitigation, Wildlife Corridor Along Red River		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
	<p>Commenter appears to be asking North Dakota Game and Fish and Minnesota Soil and Water Conservation Districts to consider a "Red River Wildlife Area" proposal. Proposal includes converting a 1.0-1.25 mile wide corridor of the Red River from Fargo airport to Climax, MN from flood-prone farmland into a wildlife/hunting corridor. (0:00-12:00 mins). Video then goes into advertising opportunities and actual ads and seems unrelated to the comment and EIS.</p>	<p>overall land conservation along the Red River corridor. However, based on the alternatives screening analyses previously completed for the Project on similar alternatives, the Red River Wildlife Corridor concept is not likely going to meet the defined purpose and need of the Project. An alternative with similar characteristics, the Distributed Storage Alternative (DSA), was evaluated during the EIS process. The DSA would utilize potential storage areas within the upstream contributing major sub watershed to reduce flow rates through the F-M metropolitan area along with structural and non-structural measures to reduce flood risk and meet the defined purpose of the Project. The DSA would include a combination of flood barriers, wetland/grassland restoration, non-structural measures, and upstream watershed storage to achieve the desired flood protection for the F-M metropolitan area. The upstream watershed storage aspects are based on the recent Halstad Upstream Retention Study (HUR) completed by the Red River Basin Commission (RRBC) in December 2013. The HUR Study was intended to quantify potential benefits of storage within the upstream watersheds. The DSA was determined to not meet the defined purpose and need for the Project, and</p>	

General Topic	Mitigation, Wildlife Corridor Along Red River		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		therefore, was not carried forward for detailed analysis of impacts in the EIS.	

General Topic	Mitigation and Maintenance, Draft Adaptive Management and Monitoring Plan		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
155f	Thinks that the AMMP approach is inadequate. Thinks mitigation should be agreed upon before impacts occur.	As discussed in Attachment 6 of the USACE's FFREIS, USACE regulations require projects take an adaptive approach to implementing, monitoring, and modifying mitigation actions to ensure they are offsetting significant project impacts (USACE Implementation Guidance for Section 2036a of WRDA 2007, Aug 2009). This guidance requires mitigation plans include; 1) monitoring until successful; 2) criteria for determining ecological success; 3) description of available lands and the basis for the determination of availability; 4) development of contingency plans (i.e. adaptive management); 5 identification of the entity responsible for monitoring; and 6) establishing a consultation process with appropriate federal and state agencies in determining the success of mitigation. Adaptive management is not a new concept and is an acceptable approach to addressing concerns when it is unknown what level of impact a project may have on a particular	No change.

General Topic	Mitigation and Maintenance, Draft Adaptive Management and Monitoring Plan		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		resource or where impacts may be anticipated but it is difficult to assess what the impact may be.	

General Topic	Mitigation and Maintenance, Funding		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
14e, 155c	Commenter has doubts about the Diversion Authority following through with adaptive management and mitigation, and having the funds (e.g., cemetery, church and resident mitigation).	An EIS does not provide details on the funding source or funding approval of a Project or a project feature. The EIS is an informational document that described the potential environmental and social impacts of a Project. Additional detail on mitigation commitments and financial obligation would be developed as part of the permit application process.	No change.
155c	Concern that cost of annual dam maintenance is too much.	An EIS does not provide details on the funding source or funding approval of a Project or a project feature. The EIS is an informational document that described the potential environmental and social impacts of a Project. Additional detail on mitigation commitments and financial obligation would be developed as part of the permit application process.	No change.

General Topic		Mitigation and Monitoring, Masks Project Impacts	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
14h	Believes the comparison of alternatives is biased towards project because including the mitigation and monitoring masks Project impacts.	The purpose of and EIS is to provide a thorough summary of anticipated and potential environmental and socioeconomic impacts of the Project and Project alternatives, as well as proposed mitigations. The intent of Chapter 5's comparison of alternatives was to provide permitting authorities a go-to place to reference impacts and mitigation, because proposed mitigation must be considered when making permit decisions. MNDNR cannot select which anticipated or potential environmental or socioeconomic effect, proposed mitigation or special considerations might be of interest to a permitter; therefore, all topics remain included in the summary table in Final EIS Chapter 5; however, an abbreviated table without Mitigation and Monitoring with all EIS topics has been added to the Final EIS Executive Summary.	Summary of Impacts table added to the Executive Summary.

General Topic		Mitigation and Monitoring, Will it be Followed Through?	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
163bb	How can we expect that the wetland mitigation to occur. How can we expect the continued maintenance on mitigation features? How can we depend on the	The potential and anticipated Project impacts as detailed by the commenter are discussed throughout Chapter 3 of the EIS. Proposed mitigation and monitoring for impacts is	No change.

General Topic	Mitigation and Monitoring, Will it be Followed Through?		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
	<p>mitigation function of a low flow stream in the bottom of the diversion channel be functional when it is washed out each year. Diversion channel flow precludes the low flow stream mitigation feature from functioning, also. The river bank erosion when it occurs is a not condition that can be mitigated. What is the enforcement of the findings of assessment of mitigation features? Once the project is in operation there is no mitigation for some damages.</p>	<p>discussed in Chapter 3 as well as in Chapter 6, Appendix B, Appendix G, Appendix J, and Appendix O of the EIS. If a feature is regulated, such as the case with wetlands, wetland mitigation would be required to follow the requirements and processes of those regulatory laws (e.g., Wetlands Conservation Act, Section 401 and 404 of the Clean Water Act). If an impact is not regulated (or not obviously regulated) such as the case with for example stream stability; those required mitigations and or monitoring terms could be established through Project permit conditions by regulators. The EIS includes a Draft Adaptive Management and Monitoring Plan (Draft AMMP) (Appendix B) that was developed to address areas where impacts are anticipated to occur but for which it is unknown the extent of or need for mitigation at this time. The adaptive management process allows for the flexibility in adjusting the needs for monitoring and mitigation options through observation of actual impacts. This plan is different than the Adaptive Management Plan that is presented by the USACE in the FFREIS as it has been updated and reflects recommendations of the MNDNR. The USACE intends to use adaptive management for some of these resource impacts but is not required to use</p>	

General Topic	Mitigation and Monitoring, Will it be Followed Through?		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>the State Draft AMMP unless it becomes a permit condition. Flowage easements are proposed as a one-time, perpetual agreement. Once the terms with the landowner would be agreed upon they would become legally binding. Impacts that would occur beyond those that have been identified or those that may potentially happen would need to be considered in those negotiations. The USACE and Diversion Authority would prepare an Operation and Maintenance Plan for the Project. This plan would include and address some anticipated Project operation impacts. This would include for example, the maintenance and repair of roadways and ditches following Project operation. Additionally, the Diversion Authority may consider mitigation for Project impacts that are not required by any one regulating agency. The Operation and Maintenance Plan is a permit application requirement for the MNDNR dam safety permit. The commenter is encouraged to review the EIS and EIS appended materials for more information. See also comment 155f.</p>	

General Topic	No Action Alternatives, Environmental Impact Statement Concludes		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
16b	Commenter makes statements that suggest the Draft EIS provides findings, solutions, confirmations, conclusions or a preferred alternative (No Action Alternatives are not a solution for flood protection).	The EIS contains significant information that may be used for regulatory authorities to draw conclusions. The EIS is not a decision document.	No change.

General Topic	Northern Alignment Alternative, Comstock Ring Levee		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
4k	References to the need for the Comstock levee under NAA should be modified to indicate that it is undetermined at this time whether the Comstock ring levee would be necessary or prudent. (Two maps enclosed).	The NAA as discussed in the EIS does not include a community ring levee for the city of Comstock. It is acknowledged that the sewage lagoons located on the north side of the city would require mitigation; however current hydrologic modeling does not indicate that a community ring levee would be necessary to provide protection to the city from NAA operation. The city of Comstock is currently not located within the 100-year flood. Flooding that is currently experienced under existing conditions during major flood events is the result of floodwaters backing up in ditches. This has resulted in the use of emergency measures in the past.	No change.
164.91	Pertaining to Table 5.1, Socioeconomics: 1) Correct sentence so it reads, "Under Project Comstock ring levee could allow for relocations of displaced residences, which	Comment 1) has been addressed. Comment 2) was not accepted as Comstock is not currently within the floodplain. Comstock may experience flooding under existing	Minor text edit made to Table 5.1.

General Topic	Northern Alignment Alternative, Comstock Ring Levee		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
	could increase the tax base for the City and the school district." 2) Add sentence that "Under Project, Comstock would be protected from flooding from larger flood events that it might otherwise be subject to, potentially reducing stress and increasing economic vitality."	conditions by way of ditches during extreme flood events that result in emergency measures being employed. See also comment 4k.	

General Topic	Northern Alignment Alternative, General Opposition		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
10a	The Northern Alignment Alternative (NAA) has impacts to St. Benedict's Catholic Church.	St. Benedict's Catholic Church currently has no flooding during the 10-year event, but experiences flooding during the 50-year event to a depth of 2.5 feet for 11 days, during the 100-year event to a depth of 3.0 feet for 12 days, and during a 500-year event to a depth of 4.0 feet for 16.5 days. Under the NAA, it is anticipated that St. Benedict's Catholic Church would be subject to increased frequency, depth, and duration of flooding over current conditions by being in the staging area of the NAA. If permitting authorities and/or the project proposer choose to pursue the NAA, a more detailed cultural resources study would be deployed for this site to determine more detailed potential impacts and necessary mitigations.	No change.

General Topic		OHB Ring Levee, Prohibition	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
133l	Concern about proceeding with OHB ring levee.	MNDNR has communicated with the Diversion Authority regarding the prohibition on governmental actions for a Project until environmental review is complete. However, the OHB ring levee is located entirely within North Dakota where the MNDNR does not have authority to prevent approvals or construction by North Dakota entities. Additionally, MNDNR is not authorized to enforce Minnesota state environmental review rules.	No change.

General Topic		Operation & Maintenance, Cost	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
89b	Believes ongoing maintenance costs and risk of failure are substantial and not adequately addressed.	While the EIS does contain some estimates of ongoing maintenance costs, these estimates are preliminary and would be updated if the Project were to proceed. These estimates are not material to the impact analysis and comparison of alternatives made within the EIS. A preliminary Loss of Life analysis was completed and included in the EIS on an earlier iteration of the Project. This analysis	No change.

General Topic	Operation & Maintenance, Cost		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		would need to be updated and would be considered in the dam safety permit application.	

General Topic	Operation Plan, Downstream Impacts		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
147e	Bullet 6: Operation Plan question related downstream impacts: How could the operational plan be improved to utilize the flood storage capacity of the upstream staging area to provide added protection for areas downstream for events less than the 10-year flood event?	The Project and the environmental effects of the Project area based on the premise that Project operation would not occur until flows at the Fargo gage are expected to exceed 17,000 cfs. Questions regarding optimizing the operation plan to maximize flood damage reduction benefits and minimize adverse impacts, both downstream and upstream, are best addressed during permitting.	No change.

General Topic	Operation Plan, Operation Plan		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
147g	An operating plan is not clearly presented for a cursory review. It appears that the most recent operating plan in not included in the Draft EIS, is that correct? Are there plans to include it?	The EIS includes a draft operating plan as Appendix A. The MNDNR would require a completed and final Operation and Maintenance plan prior to making a permit decision.	No change.

General Topic		Operation Plan, Operation Plan Criteria	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
147h	<p>Operation plan in Draft EIS says that the gate to the diversion will not be opened until the peak flows from tributaries outletting into the diversion have reached the diversion. Why is this a criteria?</p> <p>Operation plan requires that drawdown of the staging area minimize upstream impacts without resulting in upstream stages falling faster than historic floods. What is the technical basis for this criteria?</p>	<p>Storing water in the staging area prior to peak tributary flows entering the diversion would be key to minimizing downstream impacts. Maintaining a stage fall rate similar to what has occurred historically is important since there is concern that dropping the staging area level faster than what has occurred historically would increase streambank failures, increase the potential for fish stranding, or result in erosion for example. It may be possible to lower stages faster than what has occurred historically while the pool is above the banks of channels within the staging area, but this would have to be studied in more detail since upstream channel banks would become exposed even as the lower staging area has water well above the local channel banks.</p>	No change.

General Topic		Overflow Embankment, Overflow Embankment Impacts and Mitigation	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
163g	<p>Request for mitigation plan for flows exiting the staging area. Via the overflow embankment would flow overland into the Sheyenne River basin (Kindred, Davenport and north to I-94). Mitigation for subsequent damages are not provided for and must be.</p>	<p>Additional flooding of Sheyenne basin lands is possible for events exceeding the 500-year flood event due to the stage profile in the diversion for floods of that magnitude. The Supplemental Environmental Assessment published in September of 2013 contains a</p>	<p>Added Appendix O— Takings, Flowage Easements and Acquisition Processes and Executive Summary “Areas of</p>

General Topic		Overflow Embankment, Overflow Embankment Impacts and Mitigation	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		figure of 500-year flooding, both with and without the Project. USACE proposes to conduct an analysis to determine a taking to define appropriate mitigation for anticipated impacts downstream of the overflow embankment. See EIS Section 3.16.3.2.3. See also Appendix O—Takings, Flowage Easements and Acquisition processes and Executive Summary “Areas of Controversy” section.	Controversy”.

General Topic		Permitting Approval, Permitting Process	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
102c	Wants the USACE to get approval (signatures) from impacted property owners, similar to the way ditch impact signature process goes.	The comment has been shared with the USACE, Diversion Authority, and MNDNR permitting authorities.	No change.

General Topic		Potential Environmental Hazards, Non-point Pollutants	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
1111	The staging area upstream of the Class 1 High Hazard Dam could lead to elevated levels of non-point pollutants.	The Final Scoping Decision Document (February 2014) indicated that a discussion of recognized environmental conditions (RECs) identified during Phase I and II Environmental Site Assessment surveys would be discussed	Text added to Section 3.7.

General Topic	Potential Environmental Hazards, Non-point Pollutants		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>in the EIS. The identified RECs are considered point sources of pollution that would be impacted during a flood event. In general, flooding can carry contaminants and soils as it moves across the watershed. The concentration of these contaminants and soils is dependent on the nature of the flood event and the condition of the watershed. For example, a large flood event occurring in an agricultural area would have different non-point sources of water pollution concentrations than a flood event occurring in an urbanized area. Non-point sources of pollution may include pesticides, fertilizers, detergents, motor oil, and sediments that are typically found untreated on impervious surfaces and in soils or waterbodies in a watershed. Flooding can carry or spread these non-point pollution contaminants and soils as water flows and recedes with flood events, which can lead to contamination or concentrations of contamination in other areas of a watershed. RECs are point sources of pollution. However, if over time, RECs have leaked or leached into soil or waterbodies, they may contribute to overall non-point sources of pollution in the watershed, which would then be spread to other areas during flood events.</p>	

General Topic		Potential Environmental Hazards, Potential Environmental Hazards	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
53e	Commenter is concerned that several of the farmsteads that will be vacated as a result of the Project likely contain old dumping areas in and around farm structures as well as buried fuel tanks and waste drums that could pollute the Red River and staging area during Project operation.	Potential Environmental Hazards to the Red River and staging area resulting from Project operation are addressed in EIS section 3.7. Subsection 3.7.3 Proposed Mitigation and Monitoring Measures includes the recognition that additional studies may need to be completed. Those studies could identify the need for remediation actions or mitigation for properties that would be impacted from Project construction or operation to avoid or minimize the potential for contamination to adjacent lands and waters.	No change.

General Topic		Potential Environmental Hazards, Salt Impacts	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
53f	Concern about salt levels that will be brought to the surface after repeated flooding.	Much of the staging area already floods during existing conditions without causing increased salt levels in the soil. Salts that are dissolved in the water stay dissolved and leave the area when the water drains away. The Project would increase the frequency and duration of flooding within areas that are currently above the 10-year flood; however, it is not anticipated that the floodwater would remain on the landscape long enough to evaporate and leave dissolved salts	No change.

General Topic		Potential Environmental Hazards, Salt Impacts	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		behind. Based on the frequency of inundation, the short duration of inundation and the fact that the water would eventually flow off the landscape and not evaporate on the landscape, it is not anticipated that the Project would appreciably raise salt levels in the soil within the staging area.	

General Topic		Potential Environmental Hazards, Soil Contamination	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
149d	Commenter is concerned about soil contamination.	Potential Environmental Hazards to soils resulting from Project operation are addressed in EIS section 3.7. The comment does not provide enough detail on missing, incomplete or inaccurate information to provide a further detailed response pertaining to soil contamination.	No change.

General Topic		Project Proposer, MNDNR Should Not Develop Natural Resources	
Comment ID	Comment Summary	Comment Response	Impact on FINAL EIS
9h	DNR should not develop natural resources.	The Diversion Authority is the project proposer for the F-M Flood Risk Management Project; not the MNDNR. MNDNR's mission is to work with citizens to conserve and manage	No change.

General Topic	Project Proposer, MNDNR Should Not Develop Natural Resources		
Comment ID	Comment Summary	Comment Response	Impact on FINAL EIS
		the state's natural resources, to provide outdoor recreation opportunities, and to provide for commercial uses of natural resources in a way that creates a sustainable quality of life.	

General Topic	Proposed Project and Northern Alignment Alternative, Local Drainage Improvements Illegal		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
72t	Commenter stated that in the Draft EIS - Appendix A, page 5 where it says "Besides the Maple River and Sheyenne River, all local drainage would be directed into the diversion." that it is illegal to improve local drainage as a result of this Project.	The EIS identifies the necessary permits required for the Project (e.g., local drainage improvements). These are identified and discussed in Table 1.1 which identifies the need for a Waters Drain Permit. Section 1.4.6 of the EIS describes the North Dakota State Water Commission's role in surface drain permits as outlined in the North Dakota Century Code (NDCC). Subsection 1.4.6.2 in the EIS describes North Dakota Waters Drain Permit pursuant to NDCC. Ch. 61-32 and North Dakota Administrative Code. Ch. 89-02-01.	No change.

General Topic	Proposed Project Description, Comstock Ring Levee		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS

General Topic		Proposed Project Description, Comstock Ring Levee	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
55b	Concern about railroad and sewage lagoon impacts and proposed mitigation.	The Burlington Northern Santa Fe Moorhead Subdivision rail line would be raised through the upstream staging area to maintain access during Project operation. The sewage lagoons for the City of Comstock are proposed to be raised or relocated. Additional detail on the design of these mitigation features would be developed and coordinated with the City of Comstock as Project development moves forward. The sewage lagoon impacts and the need to relocate or raise them were presented at a public meeting hosted by the City of Comstock on August 20, 2013, along with other details of the proposed flood protection plan. No detailed design has been completed on the lagoon replacement or relocation; however, a line item was included in the cost estimate that was prepared for the conceptual community ring levee. The community ring levee and associated work would need to be completed before the Project is operational, so it may be several years before they are constructed.	No change.

General Topic		Proposed Project Description, OHB Ring Levee	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
5b, 8c	Questions about OHB ring levee design,	The OHB Levee system would meet or exceed	No change.

General Topic	Proposed Project Description, OHB Ring Levee		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
	maintenance, safety, aesthetics and operations.	USACE standards for levee construction. The system would include drainage ponds, gravity drains, and pumping stations to prevent flooding from snowmelt and rainfall inside the leveed area. Water would be pumped to the Red River when gravity drains are closed during flood events. Interstate Highway 29 and portions of Cass County Roads 18 and 81 between OHB and I-29 would be raised to maintain emergency access between OHB and Fargo. The Diversion Authority or the non-Federal sponsor would be responsible for operation and maintenance of the levee system. Social impacts (i.e., aesthetics) are discussed in EIS Section 3.16.	
8d	The OHB golf course extended into the floodway. Will the OHB Golf Course be allowed to stay?	Figure 5 of the EIS provides a depiction of where the ring levee would be constructed. The OHB ring levee would protect portions of the OHB golf course. Golf courses are an allowable floodplain, even floodway, use. The structures need to be elevated and frequently the designers want the tees and greens, especially greens, to be elevated. The floodplain rules allow grading at golf courses to elevate the tees and greens, as long as supporting engineering analysis shows that the new grading doesn't increase the flood stage on existing structures or exceed the allowable cumulative surcharge (0.5 ft. MN, 1 ft. ND)	No change.

General Topic	Proposed Project Description, OHB Ring Levee		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
72aa	Request to require a culvert be added to OHB Design.	Hydraulic modeling indicates that the culvert referred to in the comment would not be justified to minimize hydraulic impacts of the ring levee. The HEC-RAS model used for this analysis includes all OHB ring levee features including the ring levee alignment and geometry and existing and new culverts through roads. The model accurately represents the fact that there is no culvert installed at the south levee access point. All analysis of the staging impacts of the diversion project also include the OHB ring levee as well as raising Cass County Roads 81 and 18 to accommodate access.	No change.
170a	What are the impacts of moving the OHB ring levee boundary southeast of Oxbow farther to the east? Would it narrow the river channel?	It appears that the commenter is describing a vague new location for the southeast portion of the OHB ring levee. Moving the levee closer to the river could potentially restrict flood flows. A definitive determination cannot be made without knowing the extent to which the levee would be moved. Using the same USACE EOEP hydrology that has been used for all project analysis, the addition of the OHB ring levee in the absence of the diversion and staging area as currently designed would result in a maximum impact to the water surface elevation during a 100-year flood of 0.04 feet.	No change.

General Topic		Proposed Project Description, Rush and Lower Rush Rivers	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
128f	It is the Commenter's understanding that the 2.7 and 3-mile remnants of the Rush and Lower Rush Rivers, respectively, will continue to convey local drainage to the Red River after the Project is constructed. The Draft EIS references these remnants as "channel abandonment". Clarification of the fate of the orphaned channels could alleviate confusion on the term "abandonment" and potential impacts to local drainage between the Project and the Red River.	The portions of the Rush and Lower Rush rivers located between the diversion channel and the Sheyenne River would experience reduced flows and continue to convey local drainage. Draft EIS Section 3.4.2.1.2 says: "the two rivers would be diverted into the diversion channel and the lower 2.3 miles of Rush River and 2.7 miles of the Lower Rush River would be abandoned and no longer receive water from the historic upstream catchment area." This is correct as following Project construction, the contributing watershed to these channels would be limited to local runoff. Paragraph 7 on page 3 of the December 19, 2011 Chief's Report states that the portions of the channels between the diversion and the Sheyenne River, " while no longer necessary to reduce flood risk in the same manner as when they were originally constructed, would continue to convey local drainage and need some measure of maintenance."	No change.

General Topic		Proposed Project Description, Staging Area Definition	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS

General Topic	Proposed Project Description, Staging Area Definition		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
72b	Commenter suggests corrections to the staging area definition to include impacted areas.	It appears that the commenter is confusing the definition of the staging area with the inundation area. The EIS defines the staging area as “a Project component that is being used as a management tool for land use/development and application of mitigation by the USACEUSACE, such as property acquisition, easements, and programmatic agreements, and it does not constitute the total area affected by Project operation.” The difference between the staging area and inundated areas is described in EIS Section 2.1: "It is estimated that approximately 20,000 acres of land that does not currently receive flood waters would be newly inundated within and beyond the boundaries of the staging area. Any land that becomes flooded (including areas that are flooded without the Project), regardless of depth, and as a result of Project operation is referred to as inundation area(s) for this EIS (Figure 3). A 1-percent chance flood (100-year flood), with construction and operation of the Project, has the potential to create an inundation area of approximately 80,000 acres which would be inundated with or without the Project and 20,000 acres of new inundation, for an inundated area totaling approximately 100,000 acres."	No change.
164.3, 164.5, 164.27	The first sentence incorrectly states that	Sentence was changed to read: "The staging	Text edit to Chapter

General Topic		Proposed Project Description, Staging Area Definition	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
	<p>225,000 acre-feet of storage is required before directing it to the connecting channel. It also incorrectly focuses on just the 500-year flood. 225,000 acre-feet is the total amount of storage in the staging area for both the 100-year and 500-year floods (they both have a staging area elevation of 922.2), and the connecting channel fills as the rest of the staging area fills. What's important is the additional storage provided by the project. The additional storage required to minimize downstream impacts is approximately 150,000 acre-feet for the 100-year flood (225,000 - 150,000 = 75,000 acre-feet of existing floodplain storage in the staging area for the 100-year flood.)</p>	<p>area boundary contains 75,000 acre-feet of existing floodplain storage for the 100-year flood. In order to minimize downstream impacts, an additional 150,000 acre-feet of storage is needed. 225,000 acre-feet is the total amount of storage in the staging area for both the 100-year and the 500-year floods. Roughly 32,000 acres is required for the storage needed for Project operation."</p>	<p>2 and Executive Summary.</p>

General Topic		Proposed Project Operation, Flood Debris and Cleanup	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
62d, 191b	<p>Concern that dead trees on river banks will clog the river and increase flooding.</p>	<p>Flooding naturally occurs in the Project area. Dead tree deposition on river banks is a natural part of flooding. Project-induced debris (e.g., trees) on public land (including roads and bridges) is proposed to be removed by the Project Owner and is included in the Operation and Maintenance (O&M) Plan for the Project. During non-</p>	<p>Added text to Section 3.13.3.</p>

General Topic	Proposed Project Operation, Flood Debris and Cleanup		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>operating periods, maintenance and removal of debris on public land (including roads and bridges) would be the responsibility of the local government entity having jurisdiction over a specific infrastructure. Project-induced debris on private land is proposed to be the responsibility of the landowner per the proposed flowage easement terms. See also other responses to comments under this topic and Final EIS Appendix O – Takings, Flowage Easements and Acquisition Processes.</p>	
133f, 149e	<p>Commenter states that the Draft EIS inadequately addressed flood trash debris impacts and cleanup.</p>	<p>The Diversion Authority, either by acquisition of flowage easements from local government units or via the project O&M plan, would properly collect and dispose of flood debris (including animal carcasses) on public property. Please note that federal mitigation requires the non-Federal sponsors obtain flowage easements for Project operation (flooding) impacts to properties within the staging area. The flowage easement would allow the non-Federal sponsors to operate the Project without further compensation to landowners for impacts caused by Project operations. All cleanup and incidental damages on private property under a flowage easement would be the responsibility of the property owner. Since the Diversion Authority would be conducting public</p>	<p>Added text to Section 3.13.3.</p>

General Topic		Proposed Project Operation, Flood Debris and Cleanup	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>property clean-up operations after an event, assistance to private property owners may be considered. Examples of clean-up assistance strategies that could be made available to private property owners impacted by the project include but are not limited to: (i) transfer stations within the staging area to receive and dispose of debris removed from private properties, (ii) roadside debris collection programs, (iii) and an assistance program which could help coordinate debris removal with public safety implications such as large animal carcasses from private property.</p> <p>See also Final EIS Appendix O: Takings, Flowage Easement and Acquisition Processes.</p>	

General Topic		Proposed Project Operation, Project Operation	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
128b	<p>Page ES-14 and page 2-4, 2.1.1.5: The first sentence states that 225,000 acre-feet or 32,000 acres are required for staging water before directing it to the connecting channel. That volume, and acreage, is the total for the staging area. Wouldn't water have been directed to the connecting channel and down the diversion channel long before reaching</p>	<p>Operation of the Project would occur when it becomes known that a stage of 35.0 feet would be exceeded at the Fargo gage. At that stage, which is approximately 17,000 cfs, the gates would be partially closed at the Wild Rice and the Red River control structures. Once this occurs water would begin to accumulate in the staging area. Water would</p>	<p>Text edit to subsection 2.1.1.5 and Executive Summary.</p>

General Topic		Proposed Project Operation, Project Operation	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
	<p>this capacity? Page ES-14, 1st paragraph 2nd to last sentence and page 2-4 2.1.1.5: It appears to read that the water elevation in the staging area would be 922.2 for all events. Would the water elevation in the staging area be raised to an elevation of 922.2 for the 100-year event, and remain at the same elevation up to the 500-year event?</p>	<p>continue to flow through the Fargo-Moorhead urban area but would remain restricted to 17,000 cfs. The diversion inlet control structure gates would be opened only after the initial diversion tributary (Sheyenne River, Maple River, Lower Rush River, and Rush River) flow peaks have made it to the diversion. Flood stages through the F-M urban area and upstream of the control structures would depend on the shape and size of the Red River and Wild Rice River flood hydrographs coming towards Fargo-Moorhead. The 100-year flood would produce an elevation of 922.2 feet just upstream of the control structures in the staging area. Peak flood levels in the staging area for floods less severe than the 100-year event would be somewhat lower. See subsection 3.1.2.1.2 for a comparison of the 25- and 100-year floods. The flood elevation upstream of the control structure would remain at an elevation of 922.2 for floods exceeding the 100-year event, up to the 500-year flood.</p>	

General Topic		Proposed Project Purpose, Minnesota Environmental Protection Act	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS

General Topic	Proposed Project Purpose, Minnesota Environmental Protection Act		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
18e	The Diversion Authority's project purpose is a perversion of the purpose of the Environment Protection Law.	<p>The purpose of the Minnesota Environmental Policy Act (MEPA) is included in Minnesota Statutes 2008, section 116D.01, which describes "(a) ...a state policy that will encourage productive and enjoyable harmony between human beings and their environment; (b) to promote efforts that will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of human beings; and (c) to enrich the understanding of the ecological systems and natural resources important to the state and to the nation."</p> <p>The Project's purpose is included in Chapter 1 of the Draft EIS, and includes, in part, to reduce flood risk, flood damages, and flood protection costs related to flooding in the Fargo-Moorhead metropolitan area. The purpose of MEPA is applicable to the environmental review process currently underway, whereas the purpose of the Project should inform the EIS project description. A project proposer develops their own Purpose and Need statement, which must meet criteria to make it applicable for use in the alternative screening and analysis as needed for the State EIS process. See also response to comment topics: Purpose and Need, Purpose and Need Development; and Final EIS Appendix M:</p>	No change.

General Topic	Proposed Project Purpose, Minnesota Environmental Protection Act		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		Purpose & Need and Alternative Rescreen Report.	

General Topic	Proposed Project Purpose and Need, Purpose and Need too Narrow and/or Excessive		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
18d, 111f, 157b, 163a	Commenters assert that the Project Purpose and Need was too narrow, excessive, not beneficial to Minnesota, and contained unnecessary components (tributary protection) such that it improperly/inappropriately screened out other less impact alternatives.	<p>The Draft EIS Purpose and Need (P&N) statement included 3 components against which potential alternatives were screened; all 3 components had to be met in order for an alternative to be considered for full evaluation in the Draft EIS. MNDNR received many public comments on the Draft EIS stating the P&N for the Project was too narrowly-focused such that it improperly/inappropriately screened out other less impact alternatives.</p> <p>Because public comments received alleged that the Draft EIS P&N was too narrow, a way to evaluate this was to conduct an alternative screening exercise (i.e., the Alternative Rescreen Exercise) by broadening the P&N by using only the Federal Emergency Management Agency (FEMA) 100-year flood accreditation (accreditation) component of the P&N. FEMA accreditation is likely the most essential part of the need for the</p>	No change.

General Topic	Proposed Project Purpose and Need, Purpose and Need too Narrow and/or Excessive		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>Project because it is the minimum flood risk reduction level that communities typically seek. For this exercise, MNDNR rescreened 14 Scoping Alternatives and screened 15 New/Combination Alternatives, for a total of 29 alternatives, using the broadened P&N.</p> <p>If the Alternative Rescreen Exercise resulted in zero alternatives that were able to meet the most critical component of the P&N (FEMA Accreditation) in the context of the Minnesota Rules EIS alternative criteria, it would indicate that the Draft EIS P&N was NOT too narrowly-focused. None of the 29 alternatives “passed” all five steps of the rescreening criteria (i.e., Reasonable, 100-year flood accreditation, environmental benefits, employment/economic benefits); therefore, MNDNR has determined that the P&N, as originally proposed in scoping, is acceptable, not too-narrowly focused, and not too excessive. The Purpose & Need and Alternatives Rescreen Report is included as Appendix M. See also responses to comments on topic: Alternatives, All-Commenter Submitted Alternatives.</p> <p>Supplemental Response to Comment 157b and 163a regarding Project Creep/Addition of tributary protection: see also response to</p>	

General Topic	Proposed Project Purpose and Need, Purpose and Need too Narrow and/or Excessive		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		comment 4e; Topic: Purpose and Need, Purpose and Need Development.	

General Topic	Proposed Project Purpose and Need, Questions Project Purpose		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
9b, 44c, 59a, 60c, 70c, 86b, 133j, 155a, 163i, 163ii, 177a, 198b	Commenters question the motives of the Diversion Authority in defining the Project Purpose stating that the primary driver behind the LPP is drainage of the floodplain for development. Some commenters mentioned that the Project is a direct violation of Executive Order 11988 and others stated that Fargo is already protected to 42.5'.	MNDNR acknowledges that added flood protection in the metropolitan area would also make development opportunities more attractive south of Fargo. However, MNDNR did not receive any new information from commenters on environmental or social impacts with respect to hidden motives that would make us change any of the EIS analysis. As part of addressing comments on Land Use, MNDNR asked the City of Fargo about the Project Purpose and Need, to which they replied (February 5, 2016) that the Project was not conceptualized to promote floodplain development. Regardless of any project proposer's motive, MNDNR regulatory authority is limited to comparing the Project with the requirements of Minnesota Rule and Statute. See also response to comments topic: Federal Executive Order 11988.	No change.

General Topic		Proposed Project, Dam Ownership	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
155q	Is the USACE going to “own” or operate the high-hazard dam? If not, should that be an area of concern?	The Diversion Authority and/or non-Federal sponsors would own and operate the dam in accordance with the Water Control Manual and Operations, Maintenance, Repair, Rehabilitation, and Replacement manual that would be completed and provided by the USACE prior to Project operation.	No change.

General Topic		Proposed Project, Design Plans	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
155n	Design plans were not available during the development of the EIS, therefore not all direct and indirect impacts have been evaluated at this time. The plans and results need to be available so decisions can be made on whether or not to go ahead with the Project.	Final design plans are not available at this time. The MNDNR used the most current data available in the EIS. Minnesota Rules, part 4410.2300, item H states that "...Data and analysis shall be commensurate with the importance of the impact and the relevance of the information to a reasoned choice among alternatives and to the consideration of the need for mitigation measures; the RGU shall consider the relationship between the cost of data and analyses and the relevance and importance of the information in determining the level of detail of information to be prepared for the EIS...". The EIS is not meant to be representative of all material that may be necessary to make an informed permit decisions but rather be used as a	No change.

General Topic		Proposed Project, Design Plans	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		guide for government units to avoid or minimize adverse environmental effects (Minnesota Rules, part 4410.0300, subpart 3). The MNDNR dam safety program would require more detailed, technical and engineering documents be submitted as part of the permit application. Other regulating authorities can also request additional materials above and beyond the level of detail that is provided in this EIS in order to make a more informed decision.	

General Topic		Proposed Project, Environmental Impact Statement Concludes	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
4f, 13b, 15a, 144a	Commenter states that the Draft EIS provides findings, solutions, confirmations, conclusions or a preferred alternative.	The EIS contains significant information that may be used for regulatory authorities to draw conclusions. The EIS is not a decision document. There are many strategies in addition to the Project (the Project) that would provide some level of flood protection to the Fargo-Moorhead metro area. However, the MN Draft EIS was required to evaluate only those alternatives that met all 3 components of the Proposer's Purpose and Need statement, as well as the No Action Alternative, which is required per Minnesota Rules, part 4410.2300. Only the Project and	No change.

General Topic	Proposed Project, Environmental Impact Statement Concludes		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		the Northern Alignment Alternative were compared in the Comparison of Alternatives chapter because the No Action Alternative is not practical. This Comparison of Alternatives is not intended to portray those two alternatives as an exhaustive list of strategies that offer protection (Minnesota Rules, part 4410.2300, item G).	

General Topic	Proposed Project, Number Protected		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
77d	Says the Diversion Authority's estimate of 200,000 people protected by the Project is incorrect.	The Draft EIS does not state that 200,000 people would be protected by the Project. It appears as though the commenter is confusing the population of the F-M metro area (which is about 200,000 people) with the number of people potentially protected by the Project; which are not the same.	No change.

General Topic	Proposed Project, Plan B		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
44a	Request to examine Plan B.	Plan B was an alternate Project funding approach that was discussed in case the project was not federally authorized. The	No change.

General Topic	Proposed Project, Plan B		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		Project has been authorized in WRRDA 2014 and is receiving Federal funds in the FY16 USACE Work Plan. Alternate funding options are not being explored at this time.	
72v	Fargo has intentions to do the Northern Reach and southern Embankment/Dam and possibly never finish the Diversion. This does not match the plan in the MN EIS. (Plan B).	The "Plan B" approach is not currently being considered by the Diversion Authority. "Plan B" was discussed in July 2013, which was prior to the Project receiving WRRDA 2014 authorization and receiving a New Start for construction and Federal funds in the FY16 USACE Work Plan. The USACE and the Diversion Authority are in the process of developing a Public-Private Partnership (P3) arrangement to implement the Project. Under the P3 implementation plan, the Project is not divided into the three reaches that made up "Plan B." Instead, under P3, USACE would design and build the dam and control structures. The Diversion Authority would hire a contractor to design, build and construct the entire diversion channel downstream of the Diversion Inlet Control Structure; the contract would also include operation and maintenance of the diversion channel for 20-30 years. The USACE would oversee all construction activities and turn the entire Project over to the Diversion Authority for OMRR&R in perpetuity.	No change.

General Topic		Proposed Project, Project Cost	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
136a	Request updated Project cost breakdown, including new mitigation, the OHB ring levee, buyout prices, additional maintenance on cemeteries, roads, ditches, weed control.	The most current Project cost estimate is the feasibility cost estimate completed in 2011 with a first cost of \$1.78 billion (October 2011 dollars) and a fully-funded cost of \$2.01 billion (escalated through mid-point of construction) (see USACE FFREIS [2011] Table 28). The USACE is in the process of updating the project cost estimate which is currently anticipated to be completed in 2016.	No change.

General Topic		Proposed Project, Project Description	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
41o	Questions about the location of project features.	The Project and the location of project features are described in EIS Chapter 2.	No change.

General Topic		Proposed Project, Project Operation	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
59g	Questions about frequency and timing of project operation.	Project operation is discussed in EIS Chapter 2 and EIS Appendix A: Draft Operation Plan.	No change.
72g	Believes project operation should start at 40 flood stage because Fargo dikes can handle over 40 feet easily. (ES pg. 12)	Our findings in regard to more flow through town based on a River Stage of 37 feet: "Since the More Flows Through Town Alternative marginally meets the Project	No change.

General Topic	Proposed Project, Project Operation		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>purpose, it could be included for full analysis in the EIS provided it has similar environmental benefits but substantially less adverse economic, employment or sociological impacts (Minnesota Rules, part 4410.2300, item G). Moderate environmental benefits would be realized for fish passage and wetlands (reduced sedimentation occurrences and accumulation. Further reduction in frequency of operation would provide only minor geomorphic benefits. While this alternative would provide incremental environmental benefits, the social benefits are not substantial enough—the staging area footprint is projected to be the same, and mitigation (i.e., buyouts) would still be required. Therefore, it was determined that this alternative offers similar environmental benefits (an incremental benefit) but fails to provide substantially less social impacts. Therefore, the More Flows Through Town Alternative does not present a feasible and prudent alternative.”</p> <p>A river stage of 40 (RS40) is essentially the 50-year flood. It is questionable whether a flow through town based on RS40 would still meet the Project purpose, in part due to the number of adversely affected structures at</p>	

General Topic		Proposed Project, Project Operation	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		the up- and downstream ends of the project. The inability to mitigate downstream impacts due to the loss of storage of the North Dakota tributaries would also be a key consideration. Finally, the above comments regarding environmental benefits would still apply.	
72o	Regarding Appendix A pg. 4: To go from a 50 year flood to a 100 year flood at the location of the Embankment is .69 feet. Yet to go from a 50-year flood to a 100 year flood in Fargo it is 1.68 feet. Moreover to go from a 100 year flood to a 500 year flood at the location of the Embankment is 1.22 feet. Yet to go from a 100 year flood to a 500 year flood in Fargo it is 4.2 feet. The Fargo numbers are a bit exaggerated.	Several factors affect the flood depth at a given location along a river, including slope of the river, channel capacity, and flow restrictions in the immediate vicinity of that location. A typical example of a flow restriction would be a bridge. A bridge and associated roadway may have little impact during smaller flood events, but may cause a significant impact during a major flood event as flows reach the bridge deck. That impact would be higher flood depths (one or more feet) upstream of the bridge than downstream. Because of localized conditions, it is fully expected that the relative change in depth between the 100-year and 500-year floods would not be the same at all locations along the river.	No change.

General Topic		Purpose and Need, Can't Change Purpose and Need	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS

General Topic		Purpose and Need, Can't Change Purpose and Need	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
73a	Commenter stated that the MNDNR can't change the purpose and need because it's too late to allow comment on the purpose and need.	Everything in the Draft EIS is open for public comment. Changing the purpose and need is allowable during Draft EIS editing if public comment received on the Draft EIS reveals that acceptance of the original purpose and need should be reexamined. In response to public comment on the Draft EIS, the Purpose and Need was reevaluated through an alternative rescreen exercise (summarized in Appendix M). The exercise substantiated the original purpose and need; however, the exercise could have resulted in the need to amend the scoping decision, which is allowable under Minnesota Rules, part 4410.2100, subpart 8.	No change.

General Topic		Purpose and Need, Purpose and Need	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
4e, 164.1	DNR was involved in development of the purpose and need; therefore, references to the "project proposer's" purpose and need should be removed in all instances.	The purpose and need of a project is defined by a project proposer; therefore, it is appropriate to describe the purpose and need as belonging to the proposer. The role of MNDNR in the development of the purpose for this EIS was related to the alternative screening and analysis that is required as part of the Minnesota State EIS process. During Minnesota EIS Scoping for	No change.

General Topic	Purpose and Need, Purpose and Need		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>the EIS there were discussions with the USACE to understand the criteria that had been used in the FFREIS for alternatives analysis. These discussions resulted in a determination that the criteria for alternative screening and analysis that was used by the USACE for the federal process would not comply with the requirements of Minnesota Rules, part 4410.2300, item G. which identifies the alternative screening and analysis that must be used as part of a Minnesota State EIS process.</p> <p>One of the criteria for the Minnesota State EIS alternative screening and analysis is a determination of whether or not the alternative meets the Project purpose. The purpose for the Project as stated in the FFREIS (Section 2.5) was "...to reduce flood risk, flood damages and flood protection costs related to the flooding in the Fargo-Moorhead Metropolitan Area." Planning objectives included: "reducing flood risk and flood damages in the Fargo-Moorhead metropolitan area, restore or improve degraded riverine and riparian habitat in and along the Red River of the North, Wild Rice River (North Dakota), Sheyenne River (North Dakota), and Buffalo River (Minnesota) in conjunction with other flood risk</p>	

General Topic	Purpose and Need, Purpose and Need		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>management features; provide additional wetland habitat in conjunction flood risk management features, and provide recreational opportunities with other flood risk management features.” (FFREIS). This fulfilled the requirements under NEPA CEQ regulation, Section 1502.13—the Purpose and Need Statement “shall briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action.” A more refined Project purpose was used for the Clean Water Act Section (404(b) (1) evaluation (Attachment 1 – FFREIS) that considered the non-Federal sponsors needs for the Project which included addressing flooding from the five tributaries.</p> <p>For the State EIS, the MNDNR sought to clarify one defined Project purpose and need that would be able to be applicable for use in the alternative screening and analysis as needed for the State EIS process. Therefore, a Project purpose and need statement for the EIS was developed by the Diversion Authority in consultation with the USACE to meet the needs of the state environmental review process.</p> <p>The purpose and need as detailed in the Draft</p>	

General Topic	Purpose and Need, Purpose and Need		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		EIS was accepted by the MNDNR for use in the scoping process and Draft EIS.	
31b	<p>Comment about the need for a Project. "I would not want anything in the EIS to somehow preclude the governor and the MN legislature from saying whether or not this project is needed or not, because I don't know if that was the purpose or the scope of the EIS. I would like that very clear that somehow this document is not endorsing the need for that.</p>	<p>The purpose of a state EIS is to provide information for governmental units, the proposer of the project, and other persons to evaluate Projects which have the potential for significant environmental effects, to consider alternatives to the Project, and to explore methods for reducing adverse environmental effects (Minnesota Rules, part 4410.2000) and mitigation. While the project has been reviewed by federal entities discussing feasibility and the overall necessity of a project such as the one proposed, the role of the purpose and need in the Minnesota EIS is slightly different. For the purposes of the Minnesota EIS process, Minnesota Rules, part 4410.2300 identifies that the project description in an EIS include, "...no more detail than is absolutely necessary to allow the public to identify the purpose of the project, its size, scope, environmental setting...[etc.]." Therefore, the project purpose and need section of an EIS is provided by the project proposer to provide context of the project and to assist in the development of prudent and feasible alternatives to ensure compliance with Minnesota Statutes 116D.04 Subdivision 6.</p>	No change.

General Topic		Purpose and Need, Purpose and Need	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		The purpose and the need of the Project are included in EIS Section 1.4 as well as Section 3.1 and discuss the overall threat of flooding in the area which in part has prompted this Project proposal. Inclusion of a project's purpose and/or need does not constitute or imply an endorsement or final governmental action. See also Executive Summary "Areas of Controversy and Issues to be Resolved" sections.	

General Topic		Purpose and Need, Support for Greater Than 100-Year Flood Protection	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
19a	Commenter supports greater than 100-year flood protection (by including distributed storage).	MNDNR acknowledges that distributed storage would provide about a 20% flood flow reduction, which would provide both local and main stem benefits to the region and, if considered in conjunction with the Project along with flood fighting efforts, the Project would have a greater chance of achieving 500-year flood protection. Text has been added accordingly to subsection 2.2.1.3.1.	Added text to subsection 2.2.1.3.1.

General Topic		Recreational Features, Funding	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
41k, 163c	Statement that the North Dakota Legislature has decided to not provide state funds for Project recreational features.	An EIS does not contain details about the funding source or funding approval of a Project or a Project feature. The EIS is an informational document that describes the potential environmental and social impacts of a Project.	

General Topic		Recreational Features, Maintenance Concerns	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
41l	Concerns about failure/degradation of recreational features leading to less utilization of the diversion and causing more impacts to staging area.	Recreation features included in the Project would be designed and maintained to not impact the ability of the Project to operate effectively to manage flood risk. As discussed in the EIS, the recreation features associated with the diversion channel include one concrete multi-purpose trail and one aggregate equestrian trail loop as well as an aggregate maintenance road on both sides of the outer banks of the excavated material berm (EMB). These recreation features would be designed to specific standards to minimize the potential impact to the function and operation of the diversion channel. The banks of the EMB would be stabilized and revegetated upon construction completion, which would further minimize the potential for bank failure.	No change.

General Topic	Request for More Information, General Environmental Impacts		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
59f	General request for more alternative analysis and information about the Project.	<p>Numerous studies have been completed that evaluated alternatives to the Project and also provide information about the Project. The Project studies and planning have occurred over many years and have involved numerous cooperating agencies, public comments, compilation of data, evaluation of comments and data, and refinement of Project models and designs. Some of the main studies include the following:</p> <ul style="list-style-type: none"> • Final Feasibility Report and Environmental Impact Statement (FFREIS), Fargo-Moorhead Metropolitan Area Flood Risk Management, USACE, July 2011; • Final Technical Memorandum: Fargo-Moorhead Diversion Post-Feasibility Southern Alignment Analysis: VE-13, north of Wild Rice River, south of Oxbow, HMG, October 2012; • Scoping Environmental Assessment Worksheet, MNDNR, April 2013; • Alternatives Screening Report Fargo-Moorhead Metropolitan Area Flood Risk Management Project, prepared for MNDNR, Wenck 	No change.

General Topic		Request for More Information, General Environmental Impacts	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>Associates, December 2012;</p> <ul style="list-style-type: none"> • Distributed Storage Alternative Final Report, prepared for the MNDNR, Wenck Associates, July 2014; • Halstad Upstream Retention Study (HUR), Red River Basin Commission, December 2013 • Distributed Storage Alternative Screening Analysis – EIS Version, MNDNR, February 2015; • Fargo-Moorhead Flood Risk Management Project EIS, MNDNR, September 2015; • Fargo-Moorhead Flood Risk Management Project Final EIS, Appendix M Purpose & Need and Alternatives Rescreen. <p>Many of these studies also have associated supporting documents and list of references that can be reviewed for additional Project and study information.</p>	

General Topic		Socioeconomic, Agriculture Impacts and Mitigation (Planting Delays)	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
14c, 61a, 72j, 105b,	Numerous commenters expressed concern	The Initial Assessment of the Agricultural Risk	Added to Section

General Topic	Socioeconomic, Agriculture Impacts and Mitigation (Planting Delays)		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
107d, 119a	about agricultural impacts related to planting times being delayed and resulting negative financial impacts (yield loss).	<p>of Temporary Water Storage for FM Diversion (NDSU Initial Ag Impact Study) (NDSU 2015) was a first attempt to address potential impacts Project operation would have on agricultural production within the staging area. The focus of the NDSU study was to determine what planting delays were likely under the Project scenario at 10-, 25-, 50-, 100-, 500-year and 1997-like flood year events. Yield losses were estimated based on the potential of loss due to delayed planting. (Note that historical crop yields reflect both planting conditions and seasonal growing conditions, including factors which occur after planting that affect yield.) Four of the main agricultural crops within the project area were assessed as part of this study. Those included were corn, sugar beets, wheat, and soybeans. All four of these situations represented traditional agricultural practices (i.e., as opposed to organic farms). Hydrology used for modeling was the same hydrology that was used for this EIS. Growing conditions after planting were assumed to be unrelated to the Project and producers indicated that timing of planting is important.</p> <p>The study examined Project-caused agricultural production revenue impacts to producers in 98 storage areas defined by the</p>	3.16 a discussion on the Initial Ag Impact Study. Also added additional agricultural impacts to Section 3.16.

General Topic	Socioeconomic, Agriculture Impacts and Mitigation (Planting Delays)		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>hydrology model, but did not include areas along the river corridors due to data availability from the hydrology model. It concluded that 85 percent of the time, the Project would not cause upstream flooding. It also concluded that the impacts from most of the flooding events induced by the Project would end at a similar timeframe as the typical regional planting start dates. This means that the annualized farm revenue impacts from the project are modest, but the impacts could be variable based on actual flood timing.</p> <p>Many assumptions were used in the development of this study. In addition, the study needed to use available information that would enable a conclusion. In addition, several recommendations were made to further the study that would go towards more accurately identifying Project impacts and adequate mitigation options.</p> <p>The NDSU Initial Ag Impact Study was to be a step in the process towards identifying with more accuracy, potential Project impacts to agricultural producers that could be used to identify what else is necessary to know to determine impacts and adequate mitigation and was not intended to present a final</p>	

General Topic	Socioeconomic, Agriculture Impacts and Mitigation (Planting Delays)		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>conclusion of what Project impacts would be to agricultural production/producers. Many assumptions were used in the development of this study.</p> <p>Several recommendations were made to further the study that would go towards more accurately identifying Project impacts and adequate mitigation options. An extended updated study is being required by state law to be completed by September 1, 2016. This study will incorporate additional agricultural land along the river corridors as well as land with up to 6 inches of Project impacts upstream of the staging area. The addition of these areas will add approximately 70 additional storage areas to the model that was used in the 2015 study. The assumptions and analysis for the extended NDSU study will be the same as the assumptions and analysis used in the Initial NDSU Study. See also The Initial Assessment of the Agricultural Risk of Temporary Water Storage for FM Diversion (NDSU Initial Ag Impact Study), located online: http://www.fmdiversion.com/wp-content/uploads/2015/02/AAE745.pdf</p>	
163b	Inundation will be greatly impacting agricultural production when combined with a dry up time. Crop planting delay could	The Initial Assessment of the Agricultural Risk of Temporary Water Storage for FM Diversion (NDSU Initial Ag Impact Study) (NDSU 2015)	Added to Section 3.16 a discussion on the Initial Ag Impact

General Topic	Socioeconomic, Agriculture Impacts and Mitigation (Planting Delays)		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
	<p>approach a month with normal climatic conditions. Rain and cloud cover would increase dry out time. The crop loss is substantial with this much delay. Federal crop would not cover this. The Diversion Authority will thus be responsible for losses. The mitigation for agricultural impacts must cover all possible scenarios for all individual situations.</p>	<p>was a first attempt to address potential impacts Project operation would have on agricultural production within the staging area. The focus of the NDSU study was to determine what planting delays were likely under the Project scenario at 10-, 25-, 50-, 100-, 500-year and 1997-like flood year events. Yield losses were estimated based on the potential of loss due to delayed planting. (Note that historical crop yields reflect both planting conditions and seasonal growing conditions, including factors which occur after planting that affect yield.) Modeling used for this study is a representation of conditions and inputs, which considers the variability in conditions that affect spring planting. There are likely some seasonal affects that when combined could affect estimated dry down times. Flowage easements are proposed mitigation for agricultural properties within the FEMA revision reach. In addition to obtaining flowage easements, the Non-federal Sponsors may exceed federal requirements and offer additional mitigation. A supplemental farm revenue replacement program continues to be explored. If a supplemental farm revenue replacement program is provided, it is likely that the flowage easement valuation would be</p>	<p>Study. Also added additional agricultural impacts to Section 3.16. Added text to Chapter 6. Added Appendix O— Takings, Flowage Easements and Acquisition Processes.</p>

General Topic			
Socioeconomic, Agriculture Impacts and Mitigation (Planting Delays)			
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		reduced because that impact to property owners would be compensated through the supplemental farm revenue replacement program. See Final EIS Appendix O—Takings, Flowage Easements and Acquisition Processes. See also Comment 14b.	

General Topic			
Socioeconomic, Agriculture Impact on Local Economy			
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
9f, 62e, 109b, 149h	Commenters are concerned about the agriculture industry being negatively impacted and affecting local economics.	The agricultural industry and local economics may be impacted by Project operation. However, it is not anticipated that effects would be long-term or permanent. Farming would still be allowed in the staging area and surrounding lands under the Project. A recent study completed by NDSU in 2015 for the Project suggested that 85 percent of the time, the Project would not cause upstream flooding. It also concluded that the impacts from most of the flooding events induced by the Project would end at a similar timeframe as the typical regional planting start dates. This means that the annualized farm revenue impacts from the project are modest, but the impacts could be variable based on actual flood timing.	Added to Section 3.16 a discussion on the NDSU’s Initial Ag Impact Study. Also added additional agricultural impacts to Section 3.16.

General Topic	Socioeconomic, Agriculture Impact on Local Economy		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>Many assumptions were used in the development of this study. In addition, the study needed to use available information that would enable a conclusion. In addition, several recommendations were made to further the study that would go towards more accurately identifying Project impacts and adequate mitigation options.</p> <p>The NDSU Initial Ag Impact Study was to be a step in the process towards identifying with more accuracy, potential Project impacts to agricultural producers that could be used to identify what else is necessary to know to determine impacts and adequate mitigation and was not intended to present a final conclusion of what Project impacts would be to agricultural production/producers. See also response to comment topic: Socioeconomic, Agriculture Impacts and Mitigation (Planting Delays).</p>	
105c	Has the regional economic impact of a failed agricultural community been calculated?	The Socioeconomic Report completed for use in the EIS did not quantify flood related losses for agriculture producers. It has been anticipated that agricultural land in the upstream staging area could continue to be farmed for both the Project and NAA Alternatives. However this land would be more susceptible to flooding with the operation of the staging area. If flooding	Added to Section 3.16 a discussion on the Initial Ag Impact Study. Also added additional agricultural impacts to Section 3.16.

General Topic	Socioeconomic, Agriculture Impact on Local Economy		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>occurs prior to the growing season there may not be any impact to agricultural production.</p> <p>The Initial Assessment of the Agricultural Risk of Temporary Water Storage for FM Diversion (NDSU Initial Ag Impact Study) (NDSU 2015) was a first attempt to address potential impacts Project operation would have on agricultural production within the staging area. The study examined Project caused agricultural production revenue impacts to producers in 98 storage areas defined by the hydrology model, but did not include areas along the river corridors due to data availability from the hydrology <i>model</i>. It concluded that 85 percent of the time, the Project would not cause upstream flooding. It also concluded that the impacts from most of the flooding events induced by the Project would end at a similar timeframe as the typical regional planting start dates. Based on the initial results of the study, it does not seem likely the agricultural community would fail during a Project operation year. See also other responses under the topic: Socioeconomic, Agriculture Impact on Local Economy.</p>	

General Topic	Socioeconomics, Agriculture Impacts/Organic Farms		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
2d, 109a, 112a	<p>The analysis should address the impacts to organic farming from genetically modified seed movement onto organic farmland from flooding within the staging area, weed seed movement and its impacts on organic farmland from flooding, chemical contamination with soil and water movement, nutrient movement as well as depletion from water staging, impacts to organic crop rotations, soil pathogens, potential planting delays, loss of federal crop insurance for losses due to when project is in operation and its relationship to income potential and land valuations, what potential easements payments should be for organic farmland, as well as damages to the ecosystem from long periods of inundation.</p>	<p>Additional information has been added to Section 3.16 under Agricultural Impacts that expands on the potential impacts that could occur from Project operation both to traditional and organic farm productions. The discussion pertaining to federal crop insurance is limited as those discussions are still ongoing between the Diversion Authority and the United States Department of Agriculture. A flowage easement is proposed to be a one-time transaction between the USACE or Diversion Authority (non-Federal sponsor) and the landowner. Terms of flowage easements can be negotiated. A supplemental farm revenue replacement program continues to be explored. If a supplemental farm revenue replacement program is provided, it is likely that the flowage easement valuation would be reduced because that impact to property owners would be compensated through the supplemental farm revenue replacement program. An "early" buyout option may be a possibility. The early buyout is intended to allow the organic producer to purchase land not impacted by the Project and establish their organic practices on that newly purchased land. The Diversion Authority would be willing to take this approach because it takes approximately 3-5 years to</p>	<p>Text additions to EIS Section 3.16. Added: Appendix O— Takings, Flowage Easements and Acquisitions Processes. Additions made to Chapter 6- Proposed and Recommended Mitigation and Monitoring.</p>

General Topic	Socioeconomics, Agriculture Impacts/Organic Farms		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>establish organic certification. During the establishment period, the Diversion Authority would rent the existing organic land to the existing producer so they can maintain organic production. Other potential mitigation options include those identified in Appendix O of the EIS.</p>	
31a	<p>The EIS should better define what "significant impacts" are for agriculture (e.g., 1" or 12") and get farmer input on potential impacts and level of significance.</p>	<p>It would not be appropriate to define what a "significant impact" would be to any one farmer. There are several factors that need to be considered such as: Are they traditional farmers or organic farmers? What produce do they farm? Where are they located on a farmstead? What are their capabilities (equipment/operation considerations)? etc. For the purposes of the discussion in the EIS an impact for agricultural lands would be land which would be newly inundated by Project operation (no minimum depth) and those that would experience an increase of inundation during Project operation. See also The Initial Assessment of the Agricultural Risk of Temporary Water Storage for FM Diversion (NDSU Initial Ag Impact Study), located online: http://www.fmdiversion.com/wp-content/uploads/2015/02/AAE745.pdf</p>	No change.

General Topic	Socioeconomics, Agriculture Impacts/Organic Farms		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
111d	Agricultural impacts should be extensively studied.	<p>The Initial Assessment of the Agricultural Risk of Temporary Water Storage for FM Diversion (NDSU Initial Ag Impact Study) (NDSU 2015) was a first attempt to address potential impacts Project operation would have on agricultural production within the staging area.</p> <p>The goals of the NDSU Initial Ag Impact Study were to gain insights on flooding duration, variability of effects based on land elevation and flood size, expected timeline for the effects of flooding to be gone, quantify the risk of delayed planting and its potential financial impact on producers. The NDSU Initial Ag Impact Study was to be a step in the process towards identifying with more accuracy, potential Project impacts to agricultural producers that could be used to identify what else is necessary to know to determine impacts and adequate mitigation and was not intended to present a final conclusion of what Project impacts would be to agricultural production/producers. Many assumptions were used in the development of this study. In addition, the study needed to use and define available information that would enable a conclusion.</p> <p>Several recommendations were made to</p>	<p>Added to Section 3.16 a discussion on the Initial Ag Impact Study. Also added additional agricultural impacts to Section 3.16. Additions made to Chapter 6-Proposed and Recommended Mitigation and Monitoring.</p>

General Topic	Socioeconomics, Agriculture Impacts/Organic Farms		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>further the study that would go towards more accurately identifying Project impacts and adequate mitigation options. An extended updated study is being required by state law to be completed by September 1, 2016. This study will incorporate additional agricultural land along the river corridors as well as land with up to 6 inches of Project impacts upstream of the staging area. The addition of these areas will add approximately 70 additional storage areas to the model that was used in the 2015 study. The assumptions and analysis for the extended NDSU study will be the same as the assumptions and analysis used in the Initial NDSU Study. See also The Initial Assessment of the Agricultural Risk of Temporary Water Storage for FM Diversion (NDSU Initial Ag Impact Study), located online: http://www.fmdiversion.com/wp-content/uploads/2015/02/AAE745.pdf</p>	

General Topic	Socioeconomics, Agriculture Mitigation		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
14f, 41u, 141a, 195d	Concern that manmade flooding will not qualify them for crop insurance.	As discussed in subsection 3.16.3.2.1, USDA Risk Management Agency has indicated the purchase of crop insurance in the staging	Added Appendix O—Takings, Flowage Easements and

General Topic	Socioeconomics, Agriculture Mitigation		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>areas could still be obtained; however, flood impacts resulting from the Project may not be covered. Federal crop insurance would apply to crops which can be planted prior to the established late planting dates. More recent discussions between the Diversion Authority the USDA Risk Management Agency indicated that if crops can be planted, federal crop insurance would be available to producers even if the project operates after planting. However details on the conditions where it would be available or not has yet to be defined.</p> <p>The Diversion Authority is looking into a supplemental farm revenue replacement program. The risk policy could also provide coverage for damages caused by Project operations on planted crops (summer impacts). If a supplemental farm revenue replacement program is provided, it is likely that the flowage easement valuation would be reduced because that impact to property owners would be compensated through the supplemental farm revenue replacement program. The Diversion Authority risk policy would be based on federal crop insurance programs and would be funded through the Operation and Maintenance for the Project. Other potential mitigation options that may</p>	<p>Acquisitions Processes, and Executive Summary “Areas of Controversy”. Additions made to Chapter 6-Proposed and Recommended Mitigation and Monitoring.</p>

General Topic	Socioeconomics, Agriculture Mitigation		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
41g, 59h, 72ee, 81f, 107b, 133c, 163ff	Several commenters stated a concern for the lack of or inadequacy of mitigation proposed as well as the lack of action that has been taken to address agricultural producers concerns.	be offered are outlined in Appendix O of the EIS. Flowage easements are proposed to be acquired on agricultural land within the staging area. For land outside of the staging area, an analysis to determine a taking is proposed to be completed on a case-by-case-basis to determine mitigation needs for all inundated undeveloped land outside of the staging area. Flowage easements are proposed to be obtained only where the taking analysis determines impacts rise to the level of a taking under the Fifth Amendment of the U.S. Constitution. The non-Federal sponsors may offer additional mitigation. A supplemental farm revenue replacement program continues to be explored. If a supplemental farm revenue replacement program is provided, it is likely that the flowage easement valuation would be reduced because that impact to property owners would be compensated through the supplemental farm revenue replacement program. There are other potential mitigation options that may be offered as outlined in Appendix O of the EIS. See also Executive Summary "Areas of Controversy".	Added Appendix O— Takings, Flowage Easements and Acquisitions Processes, and Executive Summary "Areas of Controversy". Additions made to Chapter 6-Proposed and Recommended Mitigation and Monitoring.
70i	Commenter questions easement purchase	The NDSU October 2015 report, "Initial	Added Final EIS

General Topic	Socioeconomics, Agriculture Mitigation		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
	<p>amount and terms as it pertains to cost of future unknown crop costs/losses, future crop insurance availability, and future crop loss compensation assurance.</p>	<p>Assessment of the Agricultural Risk of Temporary Water Storage for FM Diversion" considered Project agricultural impacts. The NDSU study combined hydrology with historical data and reported that there is an eighty five percent (85%) chance that the Project would not operate in any given year, and when the Project does operate the effects of flooding would be over for a majority of lands at approximately the same time regional planting starts (historical data). While the NDSU study did not specifically address crop insurance, the study did define the impacts to farm revenues, which would be valuable for determination of flowage easement payments to farmland owners. In addition to the NDSU study, the USDA Risk Management Agency indicated that if crops can be planted, federal crop insurance would be available to producers even if the project operates after planting. NDSU is currently modeling agricultural impacts for an expanded geography. Final results and information from the study would provide guidance for the development of a crop mitigation plan. Table 6.2 of the EIS provides a summary of FEMA regulations and the CLOMR process, along with proposed and recommended mitigation for 100-year flood inundation impacts to residential and non-</p>	<p>Appendix O— Takings, Flowage Easements and Acquisitions Processes, and Executive Summary “Areas of Controversy”. Additions made to Chapter 6-Proposed and Recommended Mitigation and Monitoring.</p>

General Topic	Socioeconomics, Agriculture Mitigation		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		residential insurable structures and agricultural land. See also Appendix O— Takings, Flowage Easements and Acquisitions Processes, and Executive Summary “Areas of Controversy”.	
158b	Who pays for the compensation to landowners to agricultural producers for losses of financial gain due to Project operation?	Flowage easements are proposed to be acquired on agricultural land within the staging area and on inundated land outside of the staging area where the taking analysis determines impacts rise to the level of a taking under the Fifth Amendment of the U.S. Constitution. Flowage easements costs were included in the estimated construction, operation, and maintenance costs for the Project (see Section 3.16). Additional potential mitigation may be offered by the non-Federal sponsors. For example, a supplemental farm revenue replacement program continues to be explored that would be based on federal crop insurance programs. There are other potential mitigation options that may be offered outlined in Appendix O of the EIS. Additional mitigation for agricultural impacts would be funded through the Operation and Maintenance for the Project.	Added Appendix O— Takings, Flowage Easements and Acquisitions Processes, and Executive Summary “Areas of Controversy”. Additions made to Chapter 6-Proposed and Recommended Mitigation and Monitoring.

General Topic		Socioeconomic, Average Annual Damages	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
72d	Commenter believes that Average Annual Damages is \$37 million, not \$51 million.	The commenter provided a cost estimate of \$36,905,730 as a total expenditure obtained from the City of Fargo for flood fighting costs from 1994 to 2015. Flood fighting costs typically include items such as sandbags/materials, labor/overtime, cleanup, etc. in the actual flood fights. This is different from the cost used to calculate the Average Annual Damage used in the socioeconomic analysis where costs included physical damages to structures, infrastructure, etc. for the alternatives that were considered. The two numbers should not be compared because they account for different costs.	No change.

General Topic		Socioeconomics, Benefited/Unbenefited Areas	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
2b	Commenter has concerns about impacts to Holy Cross Township.	Comment does not provide enough detail on missing, incomplete or inaccurate information to provide a response. Project impacts to unbenefited areas are addressed in EIS section 3.16.	No change.

General Topic		Socioeconomics, Century Farmers	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
70a, 114c	Project impacts to century farmers not addressed.	Potential social impacts to century farmers are discussed in EIS Section 3.16.	No change.

General Topic		Socioeconomics, Community Ring Levee Benefits	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
164.82	The last paragraph regarding community ring levees discusses only the negatives of a ring levee, without acknowledging that the ring levee may reduce stress or increase economic vitality because Comstock would be protected from the large floods it would currently be subjected to. In addition, why would the Project reduce economic vitality, when the ring levee would provide protection from floods the area is currently subjected to? Any negatives are purely speculative; if DNR is going to speculate, it should acknowledge the positive possibilities as well.	Subsection 3.16.2.4.4 does state that (community) ring levees do reduce flood risk to those who would reside and work within the levee but that they would also result in social impacts, including disruptions during construction as well as the perception of living behind a levee. Comstock would be subjected to increased inundation and duration under the Project. To provide protection from Project operation, the Project includes a community ring levee for Comstock. Comstock is currently not in the 100-year floodplain. Some backup water from floods do currently impact Comstock by way of ditches resulting in some emergency measures being necessary under major flood events. This has not resulted in a change to the base floodplain elevation to date. Hydrology data reviewed for existing conditions does not indicate that Comstock is within the 500-year floodplain.	No change.

General Topic		Socioeconomics, Comstock Economics	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
55d	Questions about negative impacts to Comstock from the construction of a community ring levee.	Potential socioeconomic impacts as a result of the Project for properties and communities located upstream of the dam are discussed in Section 3.16 of the EIS.	No change.

General Topic		Socioeconomics, Economics	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
4j, 12a, 69b, 167b	Commenters state that the regional economic data in a source they referenced is different than what was presented in the EIS.	Information from the Regional Economic Impact of Cass County, ND and Clay County, MN Report (Greater Fargo-Moorhead Economic Development Corporation, 2015) was used as a source of economic data for the Fargo-Moorhead metropolitan area. This was a more consistent source of data since the metropolitan area is located in two different states. The sources cited in the Regional Impact Report for the statistic regarding 39 percent of Clay County labor force work in Cass County include: Research 360; Census Bureau Longitudinal Employer-Household Dynamics LED OnTheMap data tool; Job Service ND, and MNDEED LAUS.	No change.
16a	Residents in Minnesota rely on jobs in Fargo and visa-versa.	This statement was acknowledged in Section 3.16 Socioeconomics of the EIS.	No change.
40a	Moorhead/Fargo, Minnesota and North Dakota share economic vitality.	This statement was acknowledged in Section 3.16 Socioeconomics of the EIS.	No change.

General Topic		Socioeconomics, Economic Impacts to Staging Area Communities	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
99b	What will the true economic impact of this decision be for the county, the township, the schools, and surrounding areas? The tax base could potentially be eliminated and the communities destroyed.	Section 3.16 of the EIS includes discussions on the anticipated economic and social impacts that the residents and communities within the staging area would experience if the Project were to be constructed.	No change.

General Topic		Socioeconomics, Emergency Access and Services	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
41d, 41m	How will there be emergency access to areas within and outside of the staging area during flood events? How will medical emergencies for people outside the Diversion be handled with so many flooded roads?	Access to the project area by emergency services during flood events is discussed in EIS Sections 3.13 and 3.16.	No change.

General Topic		Socioeconomics, Federal Emergency Management Agency Flood Insurance Costs	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
72ff	Who is going to pay my flood insurance if I live in the staging area?	The Diversion Authority would be required to mitigate impacts to all insurable structures that are impacted by the Project. Mitigation options would be determined on a case-by-case basis and may include elevation, relocation, removal, or ring levee. Once mitigated, no insurable structure would fall within the flood hazard zone in which flood	No change.

General Topic	Socioeconomics, Federal Emergency Management Agency Flood Insurance Costs		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		insurance is currently mandated.	

General Topic	Socioeconomics, Flood Fighting		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
20a	Description of flood fighting efforts.	Social impacts from communities that have participated in flood fighting are addressed in EIS Section 3.16 and Appendix D of the USACE's FFREIS.	No change.

General Topic	Socioeconomics, Kindred School District Economic Impacts		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
99a	What will the economic impacts on the Kindred School District be? With 23% of the tax base and 125 of the students potentially affected, it is a significant concern.	Project impacts to the Kindred School District are discussed in subsection 3.16.2 Effects of Relocations and Flowage Easements in the EIS.	No change.

General Topic	Socioeconomics, Livestock Impacts		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
72y	What would be done with cattle operations in the staging area?	As discussed in EIS Section 3.16.2, livestock production would not be compatible with flooding in the staging area, and therefore,	No change.

General Topic	Socioeconomics, Livestock Impacts		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		livestock operations would be relocated.	

General Topic	Socioeconomics, Minnesota and North Dakota		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
2f	Net loss for the State of Minnesota.	Comment Acknowledged. See also Final EIS Executive Summary “Areas of Controversy”.	Added to Executive Summary “Areas of Controversy”.
9c	They want to store water on Minnesota land for their development.	Comment does not provide enough detail on missing, incomplete or inaccurate information to provide a response. The comment is addressed in EIS section 3.16. See also response to comment topic: Project Purpose, Question the Project Purpose. See also Final EIS Executive Summary “Areas of Controversy”.	Added to Executive Summary “Areas of Controversy”.
28e	The entire state of Minnesota should be included in the definition of the unbenefited area.	Comment does not provide enough detail on missing, incomplete or inaccurate information to provide a response. The comment is addressed in EIS section 3.16. See also Final EIS Executive Summary “Areas of Controversy”.	Added to Executive Summary “Areas of Controversy”.
29a	General discussion about Minnesota not benefitting from the Project and general conditions of the Red River.	Comment does not provide enough detail on missing, incomplete or inaccurate information to provide a response. The	Added to Executive Summary “Areas of Controversy”.

General Topic	Socioeconomics, Minnesota and North Dakota		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		comment is addressed in EIS section 3.16. See also Final EIS Executive Summary “Areas of Controversy”.	

General Topic	Socioeconomics, Mitigation		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
99c	How will the individuals affected by this project be protected and taken care of?	Section 3.16 provides a discussion how individuals and their property or way of life may be impacted by the Project. Subsection 3.16.3 discusses how mitigation would be implemented for individual landowners that would be affected by impacts from Project construction and operation. Mitigation may include negotiation for impacts to structures, impacts to agricultural land, and impacts from construction of the OHB ring levee or Comstock ring levee. Mitigation may include property acquisition and working with landowners through an analysis to determine a taking. Each landowner would be consulted on a case-by-case basis for implementation of mitigation for Project impacts. See Appendix O—Takings, Flowage Easements and Acquisition Processes.	Added Appendix O—Takings, Flowage Easements and Acquisition Processes.
193e	Thinks the only way people outside of staging area can get compensated is to sue the USACE.	The Project would include mitigation for all impacted structures located within the FEMA revision reach. An analysis to determine a	Added Appendix O—Takings, Flowage Easements and

General Topic		Socioeconomics, Mitigation	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>taking would be used to define mitigation needs for all other impacts outside of the staging area (see Draft EIS Section 3.16.3). The takings process would not be performed until after the Project Partnership Agreement is signed between the non-federal sponsors and the USACE and the design of the relevant features is finalized. It is the USACE's intent to perform the analysis for properties outside the staging area and for structures outside the FEMA revision reach where modeling shows there would be impacts induced by the Project. As stated in Paragraph 12-16(c)(9) of the Corps' Real Estate Handbook, ER 405-1-12, dated 1 May 1998, "The analysis should incorporate the facts relating to the depth, frequency, duration, and extent of the expected induced flooding; discuss such facts in relationship to relevant case law regarding physical invasion takings and just compensation payment requirements; and present a reasoned conclusion on whether the expected induced flooding would rise to the level of a taking for which just compensation would be owed." See also Final EIS Appendix O—Takings, Flowage Easements and Acquisition Processes, and Executive Summary "Areas of Controversy and Issues to be Resolved."</p>	<p>Acquisition Processes, and Executive Summary "Areas of Controversy and Issues to be Resolved".</p>
195a	Questions about mitigation for her property--	Figure 32 of the EIS indicates that the	Added Appendix O—

General Topic		Socioeconomics, Mitigation	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
	believes her dike will need to be raised 10'. And they've been told they cannot relocate their farmstead inside the benefited area.	property that is identified in the comment letter would experience greater than two feet of 100-year flood depth with Project operation. Final EIS Table 3.103 indicates that the proposed mitigation for all insurable structures with greater than two feet of flood depth would be acquisition or relocation, and ring levees would not be considered for these sites. FFREIS Figure 39 and the text in FFREIS Section 3.13.1.2 (page 122) presented similar information stating that these structures would be purchased as part of proposed Project mitigation. Details of proposed acquisitions have not been developed yet. The Project would not restrict where individuals may purchase land or relocate their own residences independently from the Project. See also Final EIS Appendix O— Takings, Flowage Easements and Acquisition Processes, and Executive Summary “Areas of Controversy and Issues to be Resolved.”	Takings, Flowage Easements and Acquisition Processes, and Executive Summary “Areas of Controversy and Issues to be Resolved”.
204a	Comstock residents wondering about buyout compensation adequacy.	EIS Figure 32 shows the areas that are expected to experience greater than two feet of 100-year flood depth with Project operation. Final EIS Table 3.103 indicates that proposed mitigation for insurable structures with greater than two feet of flood depth would be acquisition or relocation, and ring levees would not be considered for these sites. Details of proposed acquisitions have	Added Appendix O— Takings, Flowage Easements and Acquisition Processes, and Executive Summary “Areas of Controversy and Issues to be

General Topic	Socioeconomics, Mitigation		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>not been developed yet. Draft EIS 3.16.3.3 states: "Property acquisitions would primarily be governed under Public Law 91-646, the "Uniform Relocation Assistance and Real Property Acquisitions Policies Act of 1970 (Uniform Act) which grants protections and assistance for those affected by federally-funded projects. The Uniform Act was enacted to assure that those whose real property is acquired or who are forced to move as the result of a federally-funded project are treated fairly, equitably, and receive assistance in moving." The Uniform Act requires first an Appraisal by a qualified real estate appraiser, which would be specific as to the property value on a specific date at the time of the acquisition. This appraisal would reflect values in the current market as a basis for estimating just compensation.</p> <p>In addition to the compensation for the property itself, there are several other provisions of the Uniform Act which require consideration specific to each homeowner on a case by case basis.</p> <p>The total compensation to a home owner includes not only the appraised value of the property, relocation and moving expenses, but also possible additional compensation from the provisions of Section 203 (a) (1),</p>	Resolved".

General Topic		Socioeconomics, Mitigation	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>Replacement Housing for Homeowners, and Section 206 (a) Housing Replacement By Federal Agency as Last Resort. Examples of other compensation provisions include increased interest costs, title, recording fees, and other closing costs required for purchase of a new property.</p> <p>The intent of Congress in this regard (Section 201 (C) (2)) reads in part as follows: “2) uniform procedures for the administration of relocation assistance shall, to the maximum extent feasible, assure that the unique circumstances of any displaced person are taken into account and that persons in essentially similar circumstances are accorded equal treatment under this Act. “</p> <p>These provisions of the Uniform Act combine to make an individual homeowner’s buyout adequate and equitable.</p>	

General Topic		Socioeconomics, Moorhead College at Risk	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
72e	Commenter states that "there are no college campuses at risk in Moorhead, Minnesota" as a response to Draft EIS text under Section	Under existing conditions, there are two Minnesota colleges that at a minimum are partially flooded under the EOEP 100-year	No change.

General Topic	Socioeconomics, Moorhead College at Risk		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
	1.4; "Infrastructure at risk in the F-M urban area includes several regional medical centers, three college campuses, and city and county government offices."	flood within the F-M urban area; the University of Minnesota – Moorhead and Concordia University.	

General Topic	Socioeconomics, NDSU Initial Agriculture Impact Study		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
41v	Initial Assessment of the Agricultural Risk of Temporary Water Storage for FM Diversion was biased and inadequate.	<p>The NDSU Initial Ag Impact Study was a first step in the process towards identifying with more accuracy, potential Project impacts to agricultural producers that could be used to identify what else is necessary to know to determine impacts and adequate mitigation and was not intended to present a final conclusion of what Project impacts would be to agricultural production/producers. Many assumptions were used in the development of this study.</p> <p>Several recommendations were made to further the study that would go towards more accurately identifying Project impacts and adequate mitigation options.</p> <p>MNDNR reviewed this study for inclusion to the EIS and discussed the methods, assumptions and results with NDSU and</p>	Added to Section 3.16 a discussion on the Initial Ag Impact Study. Also added additional agricultural impacts to Section 3.16.

General Topic		Socioeconomics, NDSU Initial Agriculture Impact Study	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		Minnesota Department of Agriculture. MNDNR does not feel that this study was biased as it clearly presents study limitations and assumptions as well as provides numerous recommendations for additional studies.	

General Topic		Socioeconomics, OHB Ring Levee	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
137b	Further socioeconomic analysis needs to be done on the Bakke/Hickson/Oxbow ring dike. What benefit is Bakke/Hickson receiving out of this? We are actually being left in a much worse scenario – no expansion, living behind a 12 ft. wall, possibility of dike breaching, loss of life, only one escape route, undue stress, and internal flooding issues.	The recommended plan in the July 2011 FFREIS included a complete acquisition of the communities of Oxbow, Hickson and Bakke, North Dakota. The USACE, at the request of the non-Federal sponsors, determined that constructing a ring levee around the Oxbow, Hickson, and Bakke area was a viable alternative to a total fee acquisition. (See the 2013 Supplemental Environmental Assessment). The ring levee around the Oxbow, Hickson, and Bakke area was the alternative recommended by the non-Federal sponsors. The OHB levee system allows these communities to remain essentially intact in their current locations with limited room for expansion and robust flood protection in excess of a 500-year level.	No change.

General Topic		Socioeconomics, OHB Ring Levee	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		The OHB ring levee would be constructed to USACE standards. Socioeconomic impacts, including impacts of a ring levee are discussed in EIS section 3.16. See also response to comment topic: Project Description, OHB Ring Levee.	

General Topic		Socioeconomics, Organic Farms	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
4l	Subsection 3.16.2.4.6 should make clear there is no evidence that any organic operation in the Red River has had its organic certification impaired by flooding. The bullets detailing differences in organic acreage between the Project and NAA should be deleted.	Of the farmers interviewed for the development of Appendix K of the EIS (organic farm technical memo); no farmer indicated that previous flood events had resulted in the loss of their certification. The MNDNR did not make the deletion in Table 5 as requested. Organic farm concerns was a topic identified through EIS Scoping that would be further evaluated in the EIS. It is appropriate to identify and address potential impacts to organic farms from the Project or Project alternatives.	No change.
41f	How will organic farms be protected?	The discussion pertaining to organic farm federal crop insurance is limited as those discussions are still ongoing between the Diversion Authority and the United States Department of Agriculture. A flowage easement is proposed as potential mitigation	Text added to Section 3.16 and Chapter 6. Added Appendix O— Takings, Flowage Easements and

General Topic		Socioeconomics, Organic Farms	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		and would be a one-time transaction between the USACE or Diversion Authority (non-Federal sponsor) and the landowner. Terms of flowage easements can be negotiated. A supplemental farm revenue replacement program continues to be explored. If a supplemental farm revenue replacement program is provided, it is likely that the flowage easement valuation would be reduced because that impact to property owners would be compensated through the supplemental farm revenue replacement program. An "early" buyout option may be a possibility for organic farms. The early buyout would allow the organic producer to purchase land not impacted by the Project and establish their organic practices on that newly purchased land. The Diversion Authority would be willing to take this approach because it takes approximately 3-5 years to establish organic certification. During the establishment period, the Diversion Authority would rent the existing organic land to the existing producer so they can maintain organic production. Other potential mitigation options include those identified in Appendix O and Chapter 6 of the Final EIS.	Acquisition Processes.
47d, 162a	What are the effects to organic farms from Project operation? Would organic certification be lost?	The effect to organic farms from Project operation are described in EIS Section 3.16 and Appendix K of the EIS, "Fargo-Moorhead	No change.

General Topic		Socioeconomics, Organic Farms	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>Flood Risk Management Project EIS - Organic Farms Inventory" (2015).</p> <p>Impacts from Project operation to organic farm certification would require consultation with a certification agency to determine appropriate action for the certification following a flood. Certification agencies have indicated that each farms' organic certification would be evaluated on a case-by-case basis. It is unknown at this time how that evaluation would be conducted and whether or not a variance would be given, how the variance would be applied (for the whole certified organic farm acreage or for only the portion affected by flood), or if organic certification would be lost or other result. Organic farming is performed in accordance with United States Department of Agriculture (USDA) organic standards and regulations, which are administered through the National Organic Program (NOP). It is anticipated that agricultural lands would be impacted by the Project primarily in the spring, which would allow most cropland areas to be farmed that season.</p>	
133g	Concern about soil quality after operation. Organic Farm mitigation information is inadequate.	Soil quality concerns are a noted potential Project operation impact to both traditional and organic farm operations. Soil quality may be altered by flood waters through the	A discussion on soil health has been added to Section 3.16 under

General Topic		Socioeconomics, Organic Farms	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		deposition of sediment, erosion of quality top soil, transport of undesirable seeds or invasives, and the transport and deposition of prohibited substances (those materials that are not approved for use in organic farming) for example. See Appendix O—Takings, Flowage Easements and Acquisition Processes, and Comment 41f.	"Agricultural Impacts". Added Appendix O—Takings, Flowage Easements and Acquisition Processes.

General Topic		Socioeconomics, Perennial Crop Impact and Mitigation	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
162b	Questions whether there is a plan that considers impacts to and compensation for impacts to perennial crops and how to prevent impacts from occurring.	As stated in Draft EIS, Section 3.3.3.1.2 flooding and operation of the project is anticipated to happen in the months of March and April, while trees are still dormant and therefore Project caused damage is not anticipated. Per the Federal process and as discussed in subsection 3.16.2.2.1 Agricultural Mitigation, proposed flowage easement compensation to private property owners in the staging area can consider future impacts, including yield loss impacts due to project operation. This includes perennial crop damage.	No change.

General Topic		Socioeconomics, Project Cost	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
5c, 155z	What is the cost/benefit ratio? What is the project cost?	The State process does not require a cost-benefit analysis. The most current Project cost estimate is the feasibility cost estimate completed in 2011 with a first cost of \$1.78 billion (October 2011 dollars) and a fully-funded cost of \$2.01 billion (escalated through mid-point of construction). See FFREIS Table 28. The USACE is in the process of updating the project cost estimate which is currently anticipated to be completed in 2016.	No change.
81g	Doesn't see how the Project could have a positive cost/benefit when the average annual damages are high.	The State process does not require a cost-benefit analysis and the Federal Cost-Benefit ratio was not utilized in the evaluation or analysis of this EIS.	No change.
99h	What is the true cost of this project with the current plan?	The State process does not require a cost-benefit analysis and the Federal Cost-Benefit ratio was not utilized in the evaluation or analysis of this EIS. The most current Project cost estimate is the feasibility cost estimate completed in 2011 with a first cost of \$1.78 billion (October 2011 dollars) and a fully-funded cost of \$2.01 billion (escalated through mid-point of construction). See FFREIS Table 28. The USACE is in the process of updating the project cost estimate which is currently anticipated to be completed in 2016.	No change.

General Topic		Socioeconomics, Social Impacts	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
10c	Commenter states that there is an emotional tie to the community.	Comment acknowledged. EIS Section 3.16 discusses socioeconomic impacts.	No change.
179e	Draft EIS incorrectly surmises people will move into ring levee communities when most people will move away from the area to avoid further government impact.	Section 3.16 Socioeconomics of the EIS does not state that relocated residents would move into the ring levee community. The EIS states the OHB ring levee (and possibly the Comstock ring levee) would provide "...additional residential development lots for other displaced residents within the upstream inundation area, <u>if they choose...</u> "	No change.

General Topic		Socioeconomics, Socioeconomics	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
111e	Socioeconomic impacts upstream and downstream should be extensively studied.	Section 3.16 of the EIS discusses the socioeconomic conditions within the study area. Socioeconomic impacts resulting under the Project, NAA and No Action Alternatives are discussed in that section as well.	No change.

General Topic		Socioeconomics, Staging Area Hydrology Impacts	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
133d	Draft EIS inadequately addressed socioeconomics related to hydrology.	Comment does not provide enough detail on missing, incomplete or inaccurate information to provide a response.	No change.

General Topic	Socioeconomics, Staging Area Hydrology Impacts		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		Socioeconomic impacts are described in EIS section 3.16.	

General Topic	Socioeconomics, Wells and Groundwater Quality		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
1a, 6a, 105f, 149f, 155b, 195e	Commenters are concerned that Project operation will result in unhealthy impacts to aquifers, drinking water well contamination, and damage to septic systems resulting in a discharge of pollutants	Potential effects of the Project and Project alternatives to wells and septic systems has been addressed in EIS Section 3.16. Aquifers were adequately discussed in the FFREIS, subsection 4.2.1.7.	No change.

General Topic	State Listed and Special Status Species, Project Operation Impacts		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
2e, 155o	Commenter is concerned that the Endangered Species will not be able to survive the conditions that would result under Project operation.	State Listed Species and Special Status Species are discussed in Section 3.10 of the EIS. Six Minnesota state listed species may occur within the project area. Four of these species are associated with riparian habitats along the Red River or its tributaries. The Project has the potential to negatively impact these species directly or indirectly through construction, operation, or maintenance activities. However the Project would mostly impact land that is used for agricultural	No change.

General Topic			
State Listed and Special Status Species, Project Operation Impacts			
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		purposes which does not provide the critical habitat needs for these species so impacts to these species is not likely or is anticipated to be minimal. The Project is not anticipated to cause long-term decline in species population.	

General Topic			
Stream Stability, Flood Impacts to Trees			
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
101b	Commenter is concerned about flood impacts to trees (including seedlings, saplings, and mature trees).	Impacts to trees in terms of wildlife habitat are discussed in EIS subsection 3.9.2.1. Temporary and/or permanent impacts from flood events would vary depending on the individual tree species, age of the tree, health and type of impact (e.g., sediment or other debris, inundation depth and duration). Generally, tree species that are tolerable to flood events tend to make up the species in flood-prone areas through natural selection processes. Those are the changes that would occur over the long-term. Landscape trees that are non-native or trees within the staging area that were not exposed to flooding in the past or those that may experience the higher extremes of flood inundation or durations as estimated by hydrology models under Project operation	Text added to Section 3.9.

General Topic		Stream Stability, Flood Impacts to Trees	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		may be affected more adversely during any given singular event (particularly for larger flood events, greater than or equal to a 100-year flood).	
179d	Commenter is concerned about Project impacts to floodplain forests.	Impacts to floodplain forest are dependent on flooding and the health and condition of the trees at the time of flooding. Impacts to floodplain forest are discussed in EIS Sections 3.3, 3.4, 3.6, 3.9, and 4.5. Each of these sections identified potential impacts from construction and/or operation of the project on floodplain forests.	

General Topic		Stream Stability, Mitigation	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
111o	Commenter is concerned that the MNDNR Draft EIS or USACE documentation does not indicate maintenance to remove debris associated to mass wasting that could increase velocity, undercut and additional bank slumping. There does not appear to be a quantified cost to address damages to river crossings, piers, footings or abutments as a result of project operation. There also does not appear to be a concise benchmark inventory listing or register of mass wasting areas to monitor for comparison if the	The Project Operation and Maintenance (O&M) plan would include the proper collection and disposal of flood debris (including trees) on public property. This would occur in a timely manner following Project operation (emergency clean ups for example would have priority). Flowage easement compensation to private property owners in the staging area can consider future impacts, including debris impacts due to project operation.	No change.

General Topic	Stream Stability, Mitigation		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
	Project were constructed and operated.	<p>The Diversion Authority, either by acquisition of flowage easements from local government units or via the project O&M plan, is proposed to collect and dispose of flood debris (including trees) on public property.</p> <p>All cleanup and incidental damages on private property under a flowage easement would be the responsibility of the property owner. However, terms of flowage easements can be negotiated. Project impacts would be determined by an analysis to determine a taking.</p> <p>Chapter 6 discusses proposed and recommended monitoring and mitigation for the Project. This includes specific monitoring and mitigation proposed for potential impacts to stream stability. As discussed in EIS subsection 6.3.1, adaptive management is proposed to address many of the potential Project impacts. Adaptive management is a process wherein management actions can be changed in response to a monitored response. During the EIS process, the MNDNR, USACE, and Diversion Authority collaborated on developing the Draft Adaptive Management and Monitoring Plan (AMMP). The Draft AMMP builds upon FFREIS Attachment 6 proposed survey monitoring</p>	

General Topic		Stream Stability, Mitigation	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>plan, ongoing communications, and studies completed to date, and therefore, is similar to the USACE Adaptive Management Plan. The Draft AMMP is included with the EIS as Appendix B. Some of the mitigation and monitoring measures include:</p> <p>geomorphology assessment-monitoring pre- and post-construction, analysis of hydrology, bank stability, sediment transport, and morphological classification, final control structure designs to reduce shear stress, and adaptive management to include monitoring for: sediment, cross section, bed scour, hydraulic and hydrology, bathymetry, water quality, and other field reconnaissance. See also Comment 62a.</p>	

General Topic		Stream Stability, Recurrence Intervals	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
128c	<p>Commenter was concerned that the average bankfull recurrence for Minnesota (Draft EIS stated was 1.5 year) was inapplicable to the bankfull conditions of the Sheyenne and Maple Rivers. This is because the hydrologic and hydraulic conditions vary between Minnesota and North Dakota so using the Minnesota average bankfull recurrence is</p>	<p>Return periods of field-determined bankfull discharges from rivers throughout North America range from 1.05 to 1.8 years (Rosgen 2006). The Geomorphology Report (West 2012) had bankfull recurrence of 1.16 years for the Maple River and 1.67 years for the Sheyenne River at the sites of the proposed aqueducts. Text has been revised in the</p>	<p>Text revised in Executive Summary and Chapter 2.</p>

General Topic			
Stream Stability, Recurrence Intervals			
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
	potentially misleading and could be misrepresentative of actual conditions in North Dakota.	Project Descriptions for the Maple and Sheyenne River aqueducts that states what bankfull recurrence was for those two rivers using the findings from the West 2012 report.	

General Topic			
Stream Stability, Stream and Soil Stability Impacts			
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
59c, 111c, 149b	Commenters are concerned that the Draft EIS does not contain enough detail relating to specific stream stability existing conditions. Existing conditions are already poor. Stream impacts should be extensively studied. Soil stability studies are needed on the river banks on the Minnesota side of the Red River.	Soil stability was evaluated in the Geomorphology Report (WEST 2012) by looking at erosion rates over time through aerial photography along the channel and composition of bank samples taken at various sites in the project area which included banks on the Minnesota side. Additional preconstruction studies would be needed to establish a baseline condition of soil stability in the project area. Baseline data would inform future monitoring and management of streams, which is proposed to be managed using an adaptive management approach. The Draft Adaptive Management and Monitoring Plan (EIS Appendix B) cites the Geomorphology Report for the soil types and stability. It also lays out a procedure for surveying the stream channel in specific areas to evaluate if the Project is causing any erosion issues. If erosion occurs as a result of	No change.

General Topic	Stream Stability, Stream and Soil Stability Impacts		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		the Project mitigation would be pursued.	

General Topic	Wetlands, Data Collection		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
164.56	It is unclear how the numbers were determined for wetland table 3.17 (Draft EIS).	Wenck drafted a technical memorandum in May 2014 in consultation with the DNR and USACE regarding project impacts to wetlands. This memo was used as the basis for Draft EIS Section 3.4. The wetland impacts were calculated based on wetland and tieback embankment shapefiles provided by the USACE. This information was used to calculate wetland impacts in the project construction footprint, including the diversion channel and tieback embankment.	No change.

General Topic	Wetlands, Minnesota Wetland Bank Option		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
164.46	USACE commented that within subsection 3.4.3 Proposed Mitigation and Monitoring within the Wetlands section of the EIS contains an inaccurate statement that under WCA rules; there are no wetland bank options in Minnesota that would provide the	Text has been edited to add more clarity to the statements. Currently there are <i>limited</i> wetland bank options in Minnesota that would provide the necessary credits for Project impacts. Preferred sites for wetland bank options are those that are within the	Text edit made to subsection 3.4.3.

General Topic		Wetlands, Minnesota Wetland Bank Option	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
	necessary credits for project impacts occurring in Minnesota. Commenter believes that this statement seems unfounded because the Board of Water and Soil Resources wetland banking tool does identify several banks that have credits available that would satisfy at least some of the Wetland Conservation Act mitigation requirement.	bank service area local or near where the impacts would occur.	

General Topic		Wetlands, Section 401 Permitting	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
196a	To properly evaluate wetlands for State of Minnesota 401 program, specific impacted wetlands in each state must be clearly identified on maps and in the various sections of the Draft EIS that reference wetlands. These wetland identifications must clearly differentiate between permanent and temporary impacted wetlands. In addition, the applicant must identify which wetlands are waters of the state and which wetlands are subject to Wetland Conservation Act.	The information provided in the EIS represents the most current data available. Wetland delineations have been completed for the majority of the Project footprint where direct impacts would likely occur with the exception of the Comstock ring levee footprint in which wetland impacts have been estimated by desktop analysis. Total anticipated wetland acreage impacts have been included in the EIS as well as a detailed discussion on types of wetlands likely to be impacted and potential indirect impacts to wetlands through increased on new flood inundation and sedimentation for example. As noted, maps identifying the locations, type, and extent of each wetland impact, as	No change.

General Topic	Wetlands, Section 401 Permitting		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		well as wetland jurisdiction, has not been included in the EIS. The Diversion Authority would be required to follow the Wetland Conservation Act and Section 404 requirements. The details requested would be provided to the Minnesota Pollution Control Agency by the Diversion Authority during that review and permitting process, in addition to detailed proposed mitigation plans. The MNDNR has provided this comment to the USACE and Diversion Authority.	

General Topic	Wetlands, Temporal Loss Considered for Mitigation to Wetland Forests		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
164.51	The USACE commented that the text in subsection 3.4.3.1 of the Draft EIS suggests that temporal losses were not considered, or should be considered further in the context of impacts to forested wetlands. For clarification, the Habitat Evaluation Procedures analysis completed by the St. Paul District did take into consideration the temporal lag associated with developing forested mitigation sites (see the FFREIS AMP). The commitment in the Final EIS to a 2:1 ratio for mitigation for these impacts is	MNDNR agrees with the commenter that the text is misleading and text has been updated accordingly.	Text edit to subsection 3.4.3.1.

General Topic	Wetlands, Temporal Loss Considered for Mitigation to Wetland Forests		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
	partly attributable to an appreciation of the time it takes for these areas to reach a mature condition.		

General Topic	Wetlands, USACE Authority over Wetlands		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
164.41	The USACE commented that the statement made in subsection 3.4.1.2 regarding jurisdictional determinations is incorrect. The USACE does not assert regulatory authority through a jurisdictional determination. A jurisdictional determination can be requested by a property owner, and informs the landowner of the USACE's view that a particular property contains waters of the United States. In addition, if a waterbody is jurisdictional, it does not mean all impacts to the waterbody are regulated under Section 404 of the Clean Water Act. Only discharges of dredged or fill material are regulated under Section 404.	Text has been revised to address inaccuracies.	Text edit made to subsection 3.4.1.2.

General Topic	Wetlands, USACE Compliance with Section 404		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS

General Topic		Wetlands, USACE Compliance with Section 404	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
164.57	USACE noted that Draft EIS Section 3.4.3.2.2 Tieback Embankment should also contain a statement that the wetland impacts associated with the tieback embankment would also require mitigation under Clean Water Act (CWA) Section 404.	Text was corrected in subsection 3.4.3.2.2 on page 3-53 to read, "The Wetland Conservation Act requires two to one ratio replacement for these impacts which is an estimated 38 acres of mitigation in Minnesota." and an additional sentence added as follows: "Mitigation would also be required under the CWA Section 404."	Text edit to subsection 3.4.3.2.2.

General Topic		Wetlands, USACE Wetland Mitigation Methods	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
164.47	USACE commented that text within Draft EIS subsection 3.4.3 Proposed Mitigation and Monitoring of the Wetland section incorrectly lumps wetland mitigation into a habitat-based approach. This is inaccurate in that the mitigation for non-forested wetlands proposed to be in the diversion channel is based on wetland function and not on habitat (see Sections 2.5 and 3.3 of the USACE AMP - FFREIS). The forested wetland mitigation is habitat-based since the mitigation requirement was determined using the U.S. Fish and Wildlife Service Habitat Evaluation Procedure and the quality of the mitigation will be evaluated using the same tool (see sections 2.4 and 3.3 of the USACE AMP -	Text has been revised within subsection 3.4.3 Proposed Mitigation and Monitoring of the Wetlands Section to address the comment.	Text edit to subsection 3.4.3.

General Topic			
Wetlands, USACE Wetland Mitigation Methods			
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
	FFREIS).		
164.53, 164.58	Statements in the Wetland section state that the wetland mitigation in the diversion channel follows a habitat-based approach. This is an incorrect statement since the mitigation in the diversion channel is functionally-based and evaluated using MNRAM.	Text has been revised to clarify that there are two approaches for wetland mitigation; habitat-based and function-based.	Text edits to Section 3.4.

General Topic			
Wetlands, Wetland Mitigation			
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
163aa	Questions about OHB and Ducks Unlimited mitigation plans.	Under the USACE Clean Water Act Section 404 permit for the OHB ring levee, compensatory mitigation would come from two sources: permittee-responsible wetland mitigation, and the purchase of credits from the Ducks Unlimited North Dakota Aquatic Resource In-Lieu Fee Program (DU-ND-ILF). The permittee-responsible mitigation was broken up into two pieces: the Forest River Site and the Oxbow site. The Forest River site has already been constructed and seeded, and the Oxbow site is currently being designed and is planned to be constructed within the next two to three years. The Diversion Authority purchased 17.27 credits from the DU-ND-ILF in July 2014. Under the	No change.

General Topic	Wetlands, Wetland Mitigation		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>terms of the permit, the responsibility for providing the mitigation transferred from the Diversion Authority to the DU-ND-ILF at the time the DU-ND-ILF accepted payment for the credits. This transfer of responsibility is documented in the instrument that governs the establishment and operation of the DU-ND-ILF and in the Federal Mitigation Rule (33 CFR 332). Thus, from a regulatory perspective, the Diversion Authority has provided the required mitigation through the purchase of the DU-ND-ILF credits. With respect to meeting their obligation to provide the required mitigation, the DU-ND-ILF has three full growing seasons from the date the funds were accepted to complete land acquisition and initial physical and biological improvements at a selected site (unless the USACE determines additional time to plan and implement a project is warranted). The DU-ND-ILF is currently working on a project that would fulfill the mitigation requirement and expects to have the project implemented within the timeframes required by the Federal Mitigation Rule.</p>	
164.52	Request to elaborate on what type of monitoring is recommended for indirect wetland impacts within the inundation area.	Indirect wetland impacts within the inundation area are included within the Geomorphology Monitoring Plan (Draft Adaptive Mitigation and Monitoring Plan – Appendix B). Reference to this was added in	Text edits made to subsection 3.4.3.

General Topic	Wetlands, Wetland Mitigation		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		text.	

General Topic	Wildlife and Wildlife Habitat, Bird Collision		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
111n	Concern about bird-plane collisions.	This topic was addressed in the FFREIS. The Project is not anticipated to appreciably change the migration patterns of migratory birds. The U.S. Fish and Wildlife Service concurred with this assessment. Also, according to the Federal Aviation Administration’s Advisory Circular 150/5200-33B Hazardous Wildlife Attractants On or Near Airports, the agency recommends a distance of five miles between the edge of an airport and any hazardous wildlife attractant. The closest airport is Hector International Airport which is located slightly over 6 miles from the Project.	No change.

General Topic	Wildlife and Wildlife Habitat, Disposal of Flood-Related Dead Animals		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
41q, 148c	Concerns over who will clean up dead animals resulting from project operation.	The Project Operation and Maintenance (O&M) plan would include the proper	No change.

General Topic	Wildlife and Wildlife Habitat, Disposal of Flood-Related Dead Animals		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
	<p>Concerns that dead animals resulting from project operation will spread disease to people and other animals.</p>	<p>collection and disposal of flood debris (including animal carcasses) on public property. This is proposed to occur in a timely manner following Project operation (emergency clean ups for example would have priority). Per the Federal process and as discussed in Section 3.16.2.2.1 Agricultural Mitigation, flowage easement compensation to private property owners in the staging area can consider future impacts, including debris impacts due to project operation.</p> <p>The Diversion Authority, either by acquisition of flowage easements from local government units or via the project O&M plan, would properly collect and dispose of flood debris (including animal carcasses) on public property.</p> <p>Please note that federal mitigation requires the non-Federal sponsors obtain flowage easements for Project operation (flooding) impacts to properties within the staging area. The flowage easement would allow the non-Federal sponsors to operate the Project without further compensation to landowners for impacts caused by project operations. All cleanup and incidental damages on private property under a flowage easement would be the responsibility of the property owner.</p>	

General Topic		Wildlife and Wildlife Habitat, Disposal of Flood-Related Dead Animals	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		<p>Project impacts would be determined by an analysis to determine a taking.</p> <p>Since the Diversion Authority would be conducting public property clean-up operations after an event, assistance to private property owners may be considered. Examples of clean-up assistance strategies that could be made available to private property owners impacted by the project include but are not limited to: (i) transfer stations within the staging area to receive and dispose of debris removed from private properties, (ii) roadside debris collection programs, (iii) and an assistance program which could help coordinate debris removal with public safety implications such as large animal carcasses from private property. Deceased animals discovered following Project operation are not anticipated to spread disease to people and other animals if they are handled and disposed of properly.</p>	

General Topic		Wildlife and Wildlife Habitat, Flood Impacts to Wildlife and Wildlife Habitat	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
41r	Who will cover the costs incurred by damage to plants on private property by wildlife that	Federal mitigation requires the non-Federal	Text edit made to Section 3.9.

General Topic		Wildlife and Wildlife Habitat, Flood Impacts to Wildlife and Wildlife Habitat	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
	are displaced due to flooding events?	Sponsors obtain flowage easements for Project operation (flooding) impacts to properties within the staging area. The flowage easement would allow the non-Federal Sponsors to operate the project without further compensation to landowners for impacts caused by Project operations. All cleanup and incidental damages on private property under a flowage easement would be the responsibility of the property owner. Flowage easement terms can be negotiated by landowners.	
62c, 86c, 101a, 148a	Concern about Project operation (over time) creating a dead zone for animals needing river habitat.	Species that require river habitat are generally adapted to a flood regime ecosystem. Section 3.9.2.1.2 of the Draft EIS discusses the potential impacts from Project operation; specifically, the subsection on permanent impacts discusses the potential for impacts in the inundation area over time.	No change.
72w	Concern about impacts to wildlife and wildlife habitat.	Impacts to wildlife are addressed in EIS section 3.10, impacts to wetland habitat types are adequately addressed in Section 3.4.	No change.
193a	Concerned for small animal impact.	Impacts to wildlife are addressed in EIS Section 3.10.	No change.

General Topic		Wildlife and Wildlife Habitat, Potential Risk for Mosquito Borne Disease	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
41s	Concern that the Project will create unnatural breeding sites and that mosquitos will carry diseases and infections.	If the staging area held varying water levels throughout the mosquito season (May through early September), there would be potential to create habitat that could be used by <i>Culex tarsalis</i> , the mosquito species that can transmit West Nile virus and Western equine encephalitis virus to humans in our region. The MNDNR does not believe this would be a potentially significant impact. See also MNDNR's Scoping EAW, Public Comments and Agency Responses (February 2014).	No change.

Proposed Edits

General Topic		Editorial Comments-Accepted	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
4n-r, 72l, 128d-e, 128g-n, 155e, 155p, 155v-w, 164.2, 164.6-7, 164.9-22, 164.24-25, 164.28-30, 164.32, 164.35-40, 164.42-45, 164.48-50, 164.54, 164.59-62, 164.66-75, 164.79, 164.83-86, 164.88-90, 164.93-96, 164.98-102,	Commenters submitted editorial suggestions (e.g., misspellings, grammar, formatting, updated numbers, clarifiers, substitutions, revisions, corrections, additions, definitions).	Edits accepted.	Minor text edits made.

General Topic		Editorial Comments-Accepted	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
164.104-111, 164.114-15, 164.117, 197a			

General Topic		Editorial Comments-Not Accepted	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
72c	Requesting change: remove Maple, Rush and Lower Rush as "through or in the metropolitan area."	As described in the Definitions section of the EIS, the F-M metropolitan area is defined as: "The urbanized and rural area within and surrounding the cities of Fargo and Moorhead specific to the USACE' and Diversion Authorities' study and focus area for the Fargo-Moorhead Metro Flood Risk Management Feasibility Study. This area, which would include all of Cass and Clay counties, is a larger area than the Fargo-Moorhead urban area." The text in the Executive Summary is correct as written.	No change.
147i	Statements that the Project will not be operated during lessor than 10 year floods are confusing and/or misleading. A correct statement may be that the control gates will not be operated. The diversion channel component of the project downstream of the control gates will always operate and will tend to increase downstream flows. This possibility is not clearly discussed.	The text as written is correct. Portions of the Project would operate passively for floods smaller than the 10-year flood event. The Draft EIS accurately describes the Project features that operate passively. The USACE 2013 Supplemental Environmental Assessment presents the downstream impacts of passive operations for the 10-year flood, which does not include operation of	No change.

General Topic		Editorial Comments-Not Accepted	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		the control gates. See the 2013 Supplemental EA, Appendix D, Figure 7 and Figures 11-20.	
164.4, 164.31	USACE comment received stated that the last three sentences on Draft EIS page ES-24 (and also within subsection 2.2.2.1.2) incorrectly imply that FDR projects would be accredited if not for the USACE's EOEP hydrology and that even a standard update of the hydrology would prevent flood damage reduction projects from being accredited by FEMA.	Edit was denied because we have stated that we will use EOEP hydrology for this EIS. A more detailed discussion as to why EOEP hydrology was used is included in Chapter 2, Section 3.1 Hydrology and Hydraulics. It is not appropriate to include a discussion on differences in or the rationale for using EOEP hydrology in this discussion on FDR projects. Public comments received on the Draft EIS did pose the question on whether use of the EOEP hydrology was appropriate. To respond to these comments, the MNDNR completed an exercise that further evaluated and discussed different hydrology that could be used for the Project. See Responses to Comments on Hydrology and Hydraulics - EOEP and the Final EIS Appendix N - EIS Hydrology Methodology Review. A reference to Appendix N has been added to the Final EIS text.	No change.
164.8	Edit requested: Bank failures occur under existing conditions and will continue to occur under project conditions.	Column 3 of Table 4 (Final EIS) is for recommended mitigation. In addition, as stated, the text reads that "following Project operation" which means observations made following Project operation. In accordance with the AMMP, baseline (pre-construction surveys) could be compared to post-Project operation observations to determine level of	No change.

General Topic		Editorial Comments-Not Accepted	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		Project operation impacts to river banks and if mitigation is necessary.	
164.34	Description of the FEMA revision reach is incorrect.	The FEMA revision reach definition that is included within Section 3.2 of the EIS was adapted from the Coordination Plan to a more "plain language" definition for use in the EIS. The Coordination Plan is included as Appendix F to the EIS.	No change.
164.55	The last sentence in this paragraph needs further clarification or should be deleted. Currently it suggests that the mitigation plan to offset the impacts to non-forested wetlands is insufficient.	Comment no longer applies. Text was deleted to address another comment.	No change.
164.92	The socioeconomic discussion states that the Comstock ring levee would cause stress, without acknowledging that the Comstock ring levee would alleviate stress from higher flood events that the city could otherwise be subject to. It is also likely that Comstock residents would have less stress under the Project than under the NAA, since with the Project they will have a ring levee protecting them and under the NAA they are relying on assurances that 100-year flood levels will not reach them and will have no protection from larger events.	Comstock would be subjected to increased inundation and duration under the Project. To provide protection from Project operation, the Project includes a community ring levee for Comstock. Comstock is currently not in the 100-year floodplain. The NAA would result in inundation impacts to northern portions of Comstock but are not anticipated to result in impacts to residential structures. However, some public infrastructure would likely be impacted such as the sewage lagoons located on the north side of the community. This has been acknowledged in potential impacts that would result under the NAA. Some backup water from floods do currently impact Comstock by way of ditches resulting in some emergency measures being	No change.

General Topic		Editorial Comments-Not Accepted	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		necessary under major flood events. This has not resulted in a change to the base floodplain elevation to date. Hydrology data reviewed for existing conditions does not indicate that Comstock is within the 500-year floodplain. Modeling conducted for the USACE Cemetery Study completed in June 2014 also indicates that for Comstock Cemetery there is no river flooding under the 500-year flood event.	
164.112	Commenter states that the EIS should add off-Project environmental mitigation project areas to figure.	Executive Summary Figure 2 and Draft EIS Figure 2 were not edited as suggested. Although the Wild Rice Dam control structure and the Drayton Dam are proposed as mitigation features for the Project, this figure focuses on illustrating Project construction features and does not show mitigation features. Additionally, it would be difficult to illustrate all mitigation features of the Project as they include non-structural measures, recreation features, and other mitigation that has not yet been geographically determined.	No change.
164.113	Two more utilities exist in the staging area: an electrical substation and two communication towers in upstream staging area. Substation in T137N, R49W, Sec 12 on west side of Hwy 81. Communication Tower (ND) in T137N, R49W, Sec 26, SWSWSW, Cass County. Communication Tower (MN) in T137N, R48W, Sec 22, SESESW, Clay County.	The EIS was scoped to include a review of available information to assess and describe the impacts of the Project and scoped alternatives on infrastructure and public services. The scope did not include impacts to individual utilities. Impacts to Infrastructure and Public Utilities is discussed in EIS subsection 3.13.2.1.3. Considerations	No change.

General Topic	Editorial Comments-Not Accepted		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		for utility modifications are discussed in EIS subsection 3.13.3.	

Nonsubstantive Comments

There were a number of comments received during the public comment period that were considered non-substantive for a variety of reasons, such as an opinion, request to approve or deny or general statement about the Project by the commenter.

General Topic	Nonsubstantive Comments		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
2c	Transportation will be negatively impacted.	Comment does not provide enough detail on missing, incomplete or inaccurate information to provide a response.	No change.
4a	The NAA has more impacts.	Comment acknowledged.	No change.
4b	The NAA has more impacts and is not better than the Project, as OHB would still be required.	Comment acknowledged.	No change.
4c	Commenter opinion that the Project is the most adequate project.	Comment acknowledged.	No change.
4d	The Diversion Authority agrees with the purpose and need within the Draft EIS.	Comment acknowledged.	No change.
4m	Commenter shared four results of the North Dakota State University Initial Agriculture Impact Study (NDSU 2015).	The MNDNR has included a discussion on the NDSU Initial Agricultural Impact Study in Section 3.16 of the Final EIS.	No change.
5d	It seems the Fargo Diversion has a blank check as far as Oxbow is concerned. This bribery should be illegal. They should never have begun any of that before all permits	Comment does not provide enough detail on a desired action or missing, incomplete or inaccurate information to provide a response.	No change.

General Topic	Nonsubstantive Comments		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
	were obtained.		
10b	The Northern Alignment Alternative requires more property buyouts and increasing costs.	Comment does not include new or additional information above that which is already included within the EIS.	No change.
10d	Do not put forward the Northern Alignment Alternative and destroy St. Benedict's.	The EIS is not a decision document. Decisions on whether to permit the Project can be made only after the EIS is determined to be adequate. Permitting is a separate process and is not part of Environmental Review.	No change.
10e	"French Fur Traders" to current church members are in our cemetery co-located inside our dike.	Commenter does not provide sufficient details about impacts to cemeteries in order to provide a response. Comment acknowledged.	No change.
11a, 12b, 20c, 43a, 45a, 46a, 54b, 63a, 66a, 69c, 78b, 79b, 92a, 103a, 108a, 132a, 145b, 150b, 154b, 156b, 167c, 181c, 186c, 190b, 200c, 206b, 208a, 210b	Recommendation/request to approve the Project (many in form letter).	The EIS is not a decision document. Decisions on whether to permit the Project can be made only after the EIS is determined to be adequate. Permitting is a separate process and is not part of Environmental Review.	No change.
11b, 13a	Description of existing conditions.	Comment Acknowledged.	No change.
11c, 20b, 24a, 30a, 35a, 35b, 40b, 40c, 49a, 54a, 63b, 66b, 69a, 73f, 83a,	General support for the Project.	Comment acknowledged.	No change.

General Topic	Nonsubstantive Comments		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
118a, 185a, 144b, 146a, 146b 150a, 156a, 167a, 175a, 176a 186a, 190a, 208b			
13c	Commenter provides information related to the need for the Project.	Project Need is addressed in chapter 1 of the EIS. Comment does not provide enough detail on a desired action or missing, incomplete or inaccurate information to provide a response.	No change.
15e	The Base no action with emergency measures does not meet the purpose and need.	Comment acknowledged.	No change.
15f	Statements about the Northern Alignment Alternative has more impacts, is more expensive, will delay flood protection.	Comment acknowledged.	No change.
15g	Concurs with purpose and need.	Comment acknowledged.	No change.
16c	The NAA is not the federally authorized plan.	Comment acknowledged.	No change.
18b	Description of Project.	Comment acknowledged.	No change.
21a, 72s	Don't build in the floodplain.	The EIS is not a decision document. Decisions on whether to permit the Project can be made only after the EIS is determined to be adequate. Permitting is a separate process and is not part of Environmental Review.	No change.
27a	General support for the project and opposition for the NED.	Comment acknowledged.	No change.
28d	There will be impacts to the unbenefited area.	Comment does not provide enough detail on missing, incomplete or inaccurate information to provide a response. The economic impacts to the staging area are	No change.

General Topic	Nonsubstantive Comments		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
		described in EIS section 3.16.	
30c	Discussion of the emotional and physical effects of flood fighting.	Comment acknowledged.	No change.
36a, 37a, 71a, 124a, 172a, 194a,	General opposition to the Project.	Comment acknowledged.	No change.
41c	The Project will protect the group of people represented by the Diversion Authority while they are pushing the burden of flooding and carrying flood insurance onto people who currently live in in areas that do not flood.	Comment acknowledged.	No change.
41j, 133n, 143b	Request to deny the permit.	The EIS is not a decision document. Decisions on whether to permit the Project can be made only after the EIS is determined to be adequate. Permitting is a separate process and is not part of Environmental Review.	No change.
43b	General Support for the Project based on the Diversion Authority's purpose and need and existing conditions	Comment acknowledged.	No change.
48a	Commenter asks that DNR reject NAA in favor of the Project.	Comment acknowledged.	No change.
51a	Fargo-Moorhead Convention and Visitors Bureau resolution in support of the Project.	Comment acknowledged.	No change.
52a, 130b, 131b, 135b, 152b, 153b, 160a, 161b, 165b,	Request to reject the Northern Alignment Alternative.	The EIS is not a decision document. Decisions on whether to permit the Project can be made only after the EIS is determined to be adequate. Permitting is a separate process and is not part of Environmental Review.	No change.
57a, 58a, 84a, 85a, 89a, 90a,	Form Letter: General opposition to the Northern Alignment Alternative (NAA)	Comment acknowledged. The NAA impacts more total acres, but many of those acres are	No change.

General Topic		Nonsubstantive Comments	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
96a, 104a, 115a, 131a, 132b, 135a, 152a, 153a, 165a	because it isn't approved, is a waste of money, will flood more homes, will affect more farmland, and St. Benedict's is impacted.	already impacted. The NAA has about 4,700 less newly-inundated acres than the Project.	
61b, 95a	Believes the Project is not morally or ethically right.	Comment acknowledged.	No change.
65a	Fargo has no right to take land which does not belong to the City for a project which may never be used.	Comment acknowledged.	No change.
65b	Fargo created the flooding problem by allowing floodplain development and not constructing flood protection.	Comment acknowledged.	No change.
67a, 68a, 73b, 75a, 87a, 134a, 116a	General opposition for the Northern Alignment Alternative.	Comment acknowledged.	No change.
70b	Comment statement of funds and projects that have been completed to address flood concerns as well as acknowledgment of emergency efforts.	Comment acknowledged.	No change.
70d, 148b, 172b, 187b	Request to reject the Project.	The EIS is not a decision document. Decisions on whether to permit the Project can be made only after the EIS is determined to be adequate. Permitting is a separate process and is not part of Environmental Review.	No change.
70g	Comment on previous flood reduction projects and past development actions that have resulted in "disaster".	Comment acknowledged.	No change.
70j	Quote provided and adapted from Forum Opinion page stating that the Project will do more harm than good.	Comment acknowledged.	No change.

General Topic		Nonsubstantive Comments	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
71c	New engineering is available that will solve Fargo's flood problem without Project impacts.	Comment does not provide enough detail on a desired action or missing, incomplete or inaccurate information to provide a response.	No change.
72r, 74a, 80a, 105a, 133a	General opposition to the Project and Northern Alignment Alternative.	Comment acknowledged.	No change.
78a, 79a, 93a, 145a, 154a, 174a, 181a, 200a, 206a 210a	General support for the Project (form letter).	Comment acknowledged.	No change.
81i	Concern about funding sources and cost burdens.	An EIS is not concerned with the funding source or funding approval of a Project or a project feature. The EIS is an informational document that described the potential environmental and social impacts of a Project.	No change.
81j	General opposition to Project because of cost and risk.	Comment acknowledged.	No change.
86d	Doesn't want the USACE to experiment in the F-M area.	Comment acknowledged.	No change.
89a	General opposition to Project because of cost, staging area impacts, and maintenance costs.	Comment acknowledged.	No change.
91a	General opposition for Northern Alignment Alternative and support for proposed mitigation.	Comment acknowledged.	No change.
98a	General opposition inhibiting growth of Fargo and Horace, increase cost, major delays of flood protection.	Comment acknowledged.	No change.

General Topic		Nonsubstantive Comments	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
99g	Comment stating “How can it be justified to potentially put 10 feet of water on cemeteries? How could the loss of 50,000 acres of farmland ever be acceptable?”	Comment acknowledged.	No change.
100a	General opposition because it's unfair, unethical, impactful and will kill mature trees.	Comment acknowledged.	No change.
100b	Comment about the need for regional protection; keep water off the natural flood plain; questions Fargo's land use practice of building in the flood plain, and general opposition; dam isn't the answer.	Comment acknowledged.	No change.
101d	Concern about Fargo's development and Cass County's lack of citizen support.	Comment acknowledged. This information has been shared with the Project Proposer.	No change.
102a, 122a, 183a	General opposition to the Project because of upstream impacts.	Comment acknowledged.	No change.
105g	Request to deny both plans.	The EIS is not a decision document, comment Acknowledged. Decisions on whether to permit the Project can be made only after the EIS is determined to be adequate. Permitting is a separate process and is not part of Environmental Review.	No change.
109c	There has been little to no answers given to the mitigation we would incur to take on the problem of urban sprawl into the flood plain of south Fargo.	Comment acknowledged. This information has been shared with the Project Proposer.	No change.
109g	Doesn't think the project is fair.	Comment acknowledged.	No change.
121a	General statements about the need for 100-year accredited protection.	Comment acknowledged.	No change.

General Topic		Nonsubstantive Comments	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
122b, 124c	Request for MNDNR to take action to prevent construction of FM Diversion.	The EIS is not a decision document. Decisions on whether to permit the Project can be made only after the EIS is determined to be adequate. Permitting is a separate process and is not part of Environmental Review.	No change.
125a	General opposition to the dam portion of the Project.	Comment acknowledged.	No change.
128a	Commenter opinion that the Project is the most adequate project and that the EIS reinforces that.	Comment acknowledged.	No change.
132c	Commenter states that the MNDNR stated the Project is the best alternative.	The commenter incorrectly identified the MNDNR as stating that the Project is the best alternative. While the EIS contains significant information that may be used for regulatory authorities to draw conclusions, an EIS is not a decision document nor does it contain findings/solutions/confirmations/conclusions.	No change.
133b	The economic vitality of the Red River Basin relies on a healthy agricultural industry.	Comment acknowledged.	No change.
139e	Prefers retention or Northern Alignment Alternative over Project.	Comment acknowledged.	No change.
140b	Objects to the whole process and believes planning was done poorly.	Comment acknowledged.	No change.
149a	General opposition to a diversion.	Comment acknowledged.	No change.
151b	Do NOT allow the diversion to be moved north.	Comment acknowledged.	No change.
155x	Blank comment letter, no attachment included.	No comment was provided in this submission.	No change.
158a	Opposition to a diversion because of	Comment acknowledged.	No change.

General Topic	Nonsubstantive Comments		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
	property impacts.		
159a	Generally bothered by Project and Project impacts.	Comment does not provide enough detail on missing, incomplete or inaccurate information to provide a response.	No change.
161a	General opposition to Northern Alignment Alternative plus form letter	Comment acknowledged.	No change.
162d	General support for the Distributed Storage Alternative.	Comment acknowledged.	No change.
163o	[Regarding the Cemetery Mitigation Study:] "Comments were requested but none were received so the Study was considered final." This was not our understanding. We were led to believe that we were to wait to make comments for this current study to be completed.	Comment acknowledged. Comment has been shared with the USACE.	No change.
163r	"Raising Roads to Provide/Maintain Access: Raising roads within the staging area may impact hydraulics during some flood events. Analysis using the Project's Phase 7 HEC-RAS model shows that raising roads to access cemeteries during floods will impact water surface elevations in the area." This has not been a concern with the Oxbow/Hickson/Bakke ring dike. The impact to water surface elevations is minuscule in comparison to the impact to surface elevations of the O/H/B ring dike.	Comment acknowledged.	No change.
163u	Reasons why Home Builders Association and Fargo-Moorhead Area Association of Realtors in benefitted area support the	Comment acknowledged.	No change.

General Topic	Nonsubstantive Comments		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
	Project.		
163v	Commenter submitted a duplicate letter, incomplete letter, invalid hyperlink or attachments to a comment.	MNDNR cannot consider incomplete comments. Duplicate submittals are considered as one submittal. Invalid hyperlinks cannot be considered. Attachments to letters were noted and documented.	No change.
163y	The financial ability to provide the long term maintenance and operation by the PPP provider must be assessed before the tax payer accedes to a private provider for these services. The F-M diversion Project must not be allowed to move forward until there adequate long term warrantee of the ability to provide the services as part of any PPP plan.	An EIS is not concerned with the funding source or funding approval of a Project or a project feature. The EIS is an informational document that described the potential environmental and social impacts of a Project.	No change.
163cc	Submittal of an opinion piece from the Grand Forks Herald.	The EIS is an informational document that does not include opinions or recommendations or endorsements for or against the Project or other alternatives.	No change.
163dd	Submittal of Joint Powers Association opinion piece.	The EIS is an informational document that does not include opinions or recommendations or endorsements for or against the Project or other alternatives.	No change.
163hh	Statements about Diversion Authority funding, BRRWD voting, Diversion Authority Committee representation.	Comment acknowledged.	No change.
164.103	This EIS was much improved over the previous draft with inclusion of stratigraphic information on the soils and changes in the	Comment acknowledged.	No change.

General Topic		Nonsubstantive Comments	
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
	paragraphs that result in clear and consistent language describing the conditions.		
164.116	Previous comment suggestions were incorporated accurately to Table 1 and preceding paragraph.	Comment acknowledged.	No change.
176b	Support for the Red River Basin Commission's recommendation for 500-year protection.	Comment acknowledged	No change.
176c	Happy to see greater than 500-year protection in the purpose and need and concur with MNDNR on this.	Comment acknowledged.	No change.
179a	The EIS lacks details and justifications.	Not enough detail is provided in this comment on a desired action or missing, incomplete, or inaccurate information to provide a response. Comment has been noted. However, the commenter is recommended to also review documents listed in the References section of the EIS for more documents that provide additional detailed studies and information.	No change.
180a	Thinks Northern Alignment Alternative is unacceptable and criticism of Fargo's growth plan and means of getting it (submittal includes Trana Rogne opinion article and a map of Fargo's land use plans with hand-written notes).	Comment acknowledged.	No change.
184a	General support for the project because it will benefit their senior living community (evaluation logistics).	Comment acknowledged.	No change.

General Topic	Nonsubstantive Comments		
Comment ID	Comment Summary	Comment Response	Impact on Final EIS
184b	Request to not delay approval.	The EIS is not a decision document. Decisions on whether to permit the Project can be made only after the EIS is determined to be adequate. Permitting is a separate process and is not part of Environmental Review.	No change.
187a	General opposition to the staging of water for 10-20 days because of planting delays.	Comment acknowledged.	No change.
195b	Commenters state that the Diversion Authority and/or the USACE aren't communicating or responding to direct inquiries.	Comment acknowledged. Comment has been shared with the Diversion Authority.	No change.
193b	Opposed to Project and Northern Alignment Alternative because of staging area impacts and because dam is too dangerous.	Comment acknowledged.	No change.
199a	Opposition to a project with agricultural impacts.	Comment acknowledged.	No change.
205a	Impacted resident generally opposed to Project.	Comment acknowledged.	No change.
209a	Support for a diversion.	Comment acknowledged.	No change.

Duplicates Received

General Topic	Draft EIS Comment Letter Submitted, Duplication, Incomplete, Invalid, Attachments		
Comment ID	Comment Summary		
7a	Duplicate of email submittal 111a.		
11f	Same comment letter as comments 11a-e.		
72bb	Comments included herein are described in other comments 72a-72aa.		
72p	Email is same as Comment 72p.		

General Topic	Draft EIS Comment Letter Submitted, Duplication, Incomplete, Invalid, Attachments
Comment ID	Comment Summary
101	See comments 101a and 101b. Same letter with mailing address added.
111t	Same comment as 111q-s.
157e	Duplicate comment letter. Same as 157a-d.
163x	Duplicate comment letter. Same as comment 163x.
163v	Duplicate comment letter. Same as 163v.

Late Comments

General Topic	Late Comments Received
Comment ID	Comment Summary
12c, 88b, 111u-v 155z, 163jj-zz, 171b, 173a-b, 178a, 188a-c, 189a-g, 192a, 202a, 211a, 212a	Comments received after the deadline of October 28, 2015, 4:30 pm.

Attachment 1

Public Comment Letters Received

Commenter 1

Written Comments

Comment on the DEIS for the proposed Fargo-Moorhead Flood Risk Management Project.
*Please note that any information provided to the MNDNR is public data. While you are not required to provide your contact information, doing so allows us to mail you our response to your comment.

Name: <i>Allen Swenson</i>	Mailing Address: <i>1795 2nd St SE Brentwood MN 55005</i>
Representing: <i>Wild Rive Department of Minnesota</i>	Email: <i>ALSWA3846@mg.gov</i>

*What is being done to address flood issues
pertaining around water walls?*

*If the Wild Rive could be diverted south
of Fargo what would help with the Wild Rive
near Breckenridge that is now it is after down in range
the Wild Rive to have to improve flood water level
Brentwood the Wild Rive around Fargo is about 100 miles
is long stretch of water not flowing Breckenridge*

Thank you

Summary of Comments on AllenSwenson_Commenter1a-b_CommentBox1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/2/2015 10:45:19 AM -06'00'
Commenter 1

Author: Medopera Subject: Sticky Note Date: 3/30/2016 2:24:04 PM
Comment ID: 1a
Topic: Socioeconomics, Wells and Groundwater Quality

Author: Medopera Subject: Sticky Note Date: 3/30/2016 2:24:57 PM
Comment ID: 1b
Topic: Alternatives, Alternative: Wild Rive River Diversion, no dam

Commenter 2

To Fill Township Project Manager Environmental Policy
From Brian Leiseth 4372 110th Ave S Moorhead
I am a farmer & Kurke township Supervisor.
I am opposed to this high board dam for the following
reasons,

1. puts the residents of clay county at greater risk
2. Holy Cross township will no future at all
3. Transportation will be negatively impacted
4. Damage to farmland from erosion, & further
trucking take & prevented planting & so on
5. loss of wildlife
6. This is a net loss for the state of Minnesota

Brian Leiseth

Summary of Comments on BrianLeiseth_Commenter2a-f_CommentBox1.pdf

Page: 1

Author: Medopera	Subject: Text Box	Date: 11/2/2015 11:16:32 AM -06'00'
Commenter 2		
Author: Medopera	Subject: Typewritten Text	Date: 11/2/2015 11:16:21 AM -06'00'
Author: Medopera	Subject: Sticky Note	Date: 3/30/2016 3:37:37 PM
Comment ID: 2a	Topic: Dam Safety, Dam Risk and Loss of Life Concerns	
Author: Medopera	Subject: Sticky Note	Date: 4/20/2016 4:12:39 PM
Comment ID: 2b	Topic: Socioeconomics, Benefited/Unbenefited Areas	
Author: Medopera	Subject: Sticky Note	Date: 3/30/2016 3:40:45 PM
Comment ID: 2c	Topic: Infrastructure and Public Services, Transportation	
Author: Medopera	Subject: Sticky Note	Date: 3/30/2016 3:43:45 PM
Comment ID: 2d	Topic: Socioeconomic, Agriculture Impacts	
Author: Medopera	Subject: Sticky Note	Date: 4/21/2016 9:27:36 AM
Comment ID: 2e	Topic: State and Special Status Species, Project Operation Impacts	
Author: Medopera	Subject: Sticky Note	Date: 4/20/2016 4:27:49 PM
Comment ID: 2f	Topic: Socioeconomics, Minnesota and North Dakota	

Commenter 3

Written Comments

Comment on the DEIS for the proposed Fargo-Moorhead Flood Risk Management Project.
*Please note that any information provided to the MNDNR is public data. While you are not required to provide your contact information, doing so allows us to mail you our response to your comment.

Name: <i>Darlene A. Skoglund</i>	Mailing Address: <i>1480 W. Bluff Ave. 58105</i>
Representing: <i>Maple Hill Community</i>	<i>Fargo, ND</i>
	Email: <i>Darlene.skoglund@gmail.com</i>

*consider moving the staging area
west to a place west of or adjacent*

*consider dredging or at least clearing
with the area of the river water through
rapid. Manning has done this and
will have minimal area as well.*

Summary of Comments on DarleneA_Commenter3a-b_CommentBox1.pdf

Page: 1

- Author: Medopera Subject: Text Box Date: 11/2/2015 11:44:28 AM -06'00'
Commenter 3
- Author: Medopera Subject: Sticky Note Date: 3/30/2016 4:02:38 PM
Comment ID: 3a
Topic: Alternatives, Alternative:Move Staging Area
- Author: Medopera Subject: Sticky Note Date: 3/30/2016 4:04:34 PM
Comment ID: 3b
Topic: Alternatives, Alternative:Dredge the River

Commenter 4

Comments on Minnesota DNR' Draft Environmental Impact Statement

By: Darrell Vanyo

Chairman, Fargo-Moorhead Diversion Authority

October 14, 2015

Good evening. Thank you for allowing me to make some brief comments on the Draft Environmental Impact Statement. My name is Darrell Vanyo. I am a former West Fargo City Commissioner and Cass County Commissioner, and now am currently serving as Chairman of the Diversion Authority, which is a Joint Powers entity made up of three North Dakota entities and three Minnesota entities. Jointly they have elected me as their Chair and today I am making comments on behalf of this joint entity.

I would like to say thank you to the DNR, especially to Commissioner Landwehr and others who have made the trip here tonight to present the report and listen to our comments. I have read the report in its entirety and it is clear that the DNR, and the State of Minnesota, understand the purpose and need for the project along with the difficult and complex flooding problem we face. It is also clear to me that through all the study that has gone into solving the problem of flooding, that there has been a pretty clear and consistent answer that has continually risen to the top, a diversion project with temporary upstream staging.

Given the results of this Draft EIS are two nearly identical diversion projects; I would like to focus my comments on the differences between federal authorized diversion project and the Northern Alignment Alternative (NAA) that the document compares it to.

A considerable amount of effort by the Diversion Authority and others has gone into a number of changes and improvements to the design of the project over the last three years through additional design and other value engineering efforts in order to limit the impacts from need to stage water. It remains an overarching goal of the Diversion Authority to continue to look for ways to limit these impacts.

Summary of Comments on FMdiversion
authority_DarrellVanyo_Commenter4a-
c_CommentBox1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/2/2015 12:21:38 PM -06'00'
Commenter 4

I believe the DNR and others have a similar hope or goal for how this project ultimately gets implemented. With that in mind, the NAA alternative studied in this EIS does not seem to fit this goal and in fact, works greatly counter to this goal and all the similar efforts made to date to limit the impacts upstream.

In the past, the Diversion Authority and the Corps evaluated a similar option to the NAA. These were detailed conversations with heavily discussed conclusions. What our research found was similar to the results in the Draft EIS before us tonight. The NAA alignment requires a staging area of similar size that impacts 274 additional structures at a cost of \$81 million dollars more than the currently proposed federally authorized project.

Without significant other variables that differ, making the argument that the NAA is an adequate or even better suited alternative does not seem practical. I would question how anyone can be in support of the NAA over the current proposed plan when the EIS shows considerably more impacts to those upstream of the metro area. More impacted farmland, more impacted homes, more impacted structures, more cost, and the large and admittedly controversial project around Oxbow-Hickson-Bakke would still be required.

I want to applaud the work done by the DNR in consideration of all the possible alternatives and for a review of the project proposed by the Diversion Authority and the Corps. To me, the results are organized, detailed, and clear. The proposed Fargo-Moorhead Diversion Project is the most adequate project that can ensure that the metro area will be protected from a 100-year event and have a fighting chance at larger flood events we know are out there and have been seen in similar cities of Minot, North Dakota and Duluth, Minnesota. These flood events are real and we need to be prepared for them.

Thank you Commissioner Landwehr to you and your staff for helping take another big step forward to realizing this protection we need.

Author: Medopera Subject: Comment on Text Date: 3/30/2016 4:25:15 PM
Comment ID: 4a
Topic: Comparison of Alternatives, Northern Alignment Alternative
Unsubstantive

Author: Medopera Subject: Highlight Date: 3/30/2016 4:25:21 PM
Comment ID: 4b
Topic: Comparison of Alternatives, General Opposition
Unsubstantive

Author: Medopera Subject: Highlight Date: 3/30/2016 4:25:31 PM
Comment ID: 4c
Topic: Proposed Project, General Support
Unsubstantive

From: [Townley, Jill \(DNR\)](#)
To: [Magnuson, Caroline \(DNR\)](#)
Subject: FW: DEIS Comments
Date: Wednesday, October 28, 2015 2:59:34 PM
Attachments: [DEIS Comments Darrell Vanyo 10 28 2015.pdf](#)
[Copy of DEIS comment spreadsheet.xlsx](#)
[ComstockZooms_ Ex_NAA_102115.pdf](#)
[2009FloodImage.pdf](#)

Commenter 4 cont.

Summary of Comments on DiversionAuthority_DarrelVanyo_Commenter4d- r_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/13/2015 3:45:17 PM -06'00'
Commenter 4 cont.

Author: Date: Indeterminate

Author: Date: Indeterminate

Author: Date: Indeterminate

Author: Date: Indeterminate

Jill Townley

Planner Principal, EIS Project Manager
Environmental Policy and Review Unit
Division of Ecological and Water Resources
MN Department of Natural Resources
500 Lafayette Road, Box 25
St. Paul, MN 55155
651-259-5168

 Please consider the environment before printing this e-mail.

From: Berndt, Keith [mailto:BerndtK@casscountynd.gov]
Sent: Wednesday, October 28, 2015 1:39 PM
To: Townley, Jill (DNR)
Cc: Darrell Vanyo; Rocky.Schneider@AE2S.com; Worden, Heather
Subject: DEIS Comments

Jill,

Please accept this comment letter with enclosures from Darrell Vanyo, Chairman of the FM Diversion Authority.

Keith Berndt, PE
Cass County Administrator
701-241-5770



211 Ninth Street South, Box 2806, Fargo, ND 58108-2806
Phone 701-241-5600 Fax 701-241-5728

October 28, 2015

Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road
St. Paul, MN 55155-4025

Dear Ms. Townley:

Please find the enclosed comments from the Fargo-Moorhead Flood Diversion Board of Authority ("Diversion Authority").

Introduction

The Diversion Authority appreciates the opportunity to comment on the Minnesota Department of Natural Resources ("MDNR") Draft Environmental Impact Statement ("DEIS") for the Fargo-Moorhead Flood Risk Management Project ("Project"). The realization of long-term protection from flooding, and with it the stability of the Fargo-Moorhead Metropolitan Area, is closer than ever. The Project will dramatically improve the lives and safety of the 200,000 people in the Fargo-Moorhead metropolitan area, and ensure the continued future vitality of this key regional hub. The Diversion Authority applauds the joint effort between the MDNR and the U.S. Army Corps of Engineers ("USACE"), which has been commendable, productive, and successful. I look forward to a prompt conclusion of the study process so that all can begin to implement the Project that we agree is needed.

The DEIS is the culmination of nearly three years of intensive effort, costing millions of dollars, and has produced an impressively thorough document, building especially upon the prior five years of study by the USACE. The Diversion Authority concurs in the MDNR's principal determinations regarding Project Purpose and Need, hydrological determinations, and the range of reasonable alternatives meriting detailed study under Minnesota state law. The Diversion Authority provides these comments to address a select range of issues to clarify the intent of the document, and to accurately communicate the clear scientific facts related to the federal flood control project. The Diversion Authority also provides notes related to arguments raised during the October 14, 2015 Public Meeting on the DEIS ("Public Meeting"). The two most significant issues the Diversion Authority identifies below are: (1) the need to clarify the discussion of the Project Purpose and Need; and (2) the need to prominently identify

<u>City of Fargo</u>	<u>City of Moorhead</u>	<u>Cass County</u>	<u>Clay County</u>	<u>Cass County Joint Water Resource District</u>	<u>Buffalo-Red River Watershed District</u>
Tim Mahoney	Nancy Otto	Darrell Vanyo, <i>Chair</i>	Kevin Campbell	Rodger Olson	Gerald Van Amburg (ex-officio)
Melissa Sobolik		Ken Pawluk			
Mike Williams		Mike Thorstad (City of West Fargo)			

This page contains no comments

the differences between the Project and the Northern Alignment Alternative, which is fundamental to the adequacy of the DEIS and its value in informing the public and permitting decisions.

The Diversion Authority has also received a courtesy copy of the October 22, 2015 comments by the USACE ("USACE Comments"), and concurs with the USACE Comments. For efficiency, the Diversion Authority will not reiterate USACE Comments, and addresses them here only where the Diversion Authority has additional perspective to provide.

Purpose and Need

The DEIS details a purpose and need that was broadly established with agency input during scoping and environmental review. The Purpose and Need for the Project was stated at Section 1.3 of the February 10, 2014 Final Scoping Decision Document ("FSDD"). This section explained that while there were refinements from the Purpose and Need employed in the federal Final Feasibility Report and Environmental Impact Statement ("FFEIS"), those refinements were developed specifically "to meet the needs of the state environmental review process." At no point in the FSDD did the MDNR indicate that it had any concerns over the Project Purpose and Need, including especially the fundamental need for flood protection or the specific requirements of state law. Indeed, on the critical subject of hydrology, which underpins the need for the project and range of reasonable alternatives, MDNR explained that "DNR hydrologists have participated in meetings between FEMA and the USACE aimed at defining specific requirements for the Project." Throughout this time, MDNR has never questioned that the North Dakota and Minnesota tributaries to the Red River are an appropriate focus of study and risk reduction, for the obvious reason that they pose risks of flooding and property damage just as does the mainstem of the Red. MDNR has been an active participant and contributor throughout these analyses, and has never indicated that it had any concerns over the Project Purpose and Need.

It should further be noted that Project Purpose was not something that has been overlooked in the process; clearly it was carefully developed and the subject of comments on the Draft Scoping Decision. In response, MDNR explained that while an EIS cannot be used to justify a decision, the EIS is intended to inform permit decisions. See MDNR Response to Comment 1.5. Importantly, MDNR did not identify any deficiencies in the Project and Purpose and Need for that function, and consequently declined to modify the stated Purpose and Need in the FSDD.

The Diversion Authority agrees with the purpose and need within the DEIS. The DEIS lays out three criteria which are each important and necessary in order to provide adequate flood protection to the Fargo-Moorhead metro area.

- While the Red River offers the biggest threat to flooding the metro area, there are five key tributaries to the Red River that run through and around the metro area that also flood and need to be considered: Wild Rice River (ND), Sheyenne River (ND), Maple River (ND), Rush River (ND), and Lower Rush River (ND). Without a flood damage reduction project that includes these tributaries, thousands of people and large swaths of the metro area will still be at risk from flooding. This key project purpose is one reason the Diversion Authority and the Corps of Engineers did not advocate a diversion channel alignment on the Minnesota side of the river. For these same reasons, the MDNR also screened out a Minnesota alignment.

- The need to “qualify substantial portions of the F-M metropolitan area for 1-percent chance flood accreditation” is recommended by numerous state and federal agencies. In addition, 20,000 homeowners in the metro area (800 in Moorhead) could be placed into the 100-year floodplain and face the growing costs of flood insurance requirements. This standard level of flood protection is absolutely necessary for the all structures possible within the metro area.
- The third aspect of the project Purpose and Need refers to the importance of effectively fighting floods larger than 100-year event floods, relying on and building upon the permanent 100-year structural base. The region has seen these events before and it will surely see them again; these flood events can have costly and dramatic impacts, demonstrated as recently and as close as the flooding of Grand Forks and Minot, ND and East Grand Forks and Duluth, MN. In addition, the Red River Basin Commission in their Long Term Flood Solutions for the Red River Basin paper recommends 500-year flood protection for the Fargo-Moorhead metro area. Having the ability to effectively fight floods over the 1-percent chance is critically important to the stability of our flood-prone region.

For these reasons, the Diversion Authority is particularly concerned about the unnecessary and inappropriate addition of the qualifier “Project Proponent’s” to the description of Purpose and Need throughout the DEIS. This certainly could, and with respect likely would convey the inaccurate impression that MDNR has previously had little or no role in the formulation of Purpose and Need, and improperly implies that the MDNR may have reservations about the scope as related to an Adequacy Determination or for purposes of informing permit decisions. We trust that MDNR will agree that this is not an accurate modification to the earlier draft. No such concerns had ever been previously articulated by MDNR during the scoping process or in the FSDD. Given that history, and the undisputed facts, it is essential that the MDNR should make clear in the FEIS that the Purpose and Need were not articulated and adopted solely by the Diversion Authority.¹

Ultimately, it appears that the additional qualifier in the DEIS from the Preliminary DEIS is the work of a single MDNR editor, displaying a high degree of sensitivity to the distinction between environmental review and permitting. While no doubt well-intentioned, the repetitive nature of the qualifier could confuse the public and decision makers as to the highly collaborative and well-considered process that led to the determination of Purpose and Need.

Recommended Change: Any references in the FEIS to Purpose and Need should eliminate the “Project Proponent’s” qualifier, and the FEIS should describe in the Purpose and Need section the collaborative process that led to the development of the Project Purpose and Need during the scoping process and the resulting FSDD.

¹Ultimately, it appears that the additional qualifier in the DEIS, significantly changing the Preliminary DEIS, resulted from the preference of a single MDNR editor. While presumably well-intentioned, the repetitive nature of the qualifier could confuse the public and decision makers as to the highly collaborative and well-considered process that led to the determination of Purpose and Need.

Northern Alignment Alternative (NAA)

The MDNR has completed an exhaustive search for alternatives to the proposed project as is required by Minnesota Law. The only other alternative deemed feasible within the DEIS is a diversion project that is essentially the same project as the proposed project, but shifting the route north. We concur with the MDNR's finding that only a diversion project with upstream staging can sufficiently protect the metro area. While we generally concur on the project type needed, the alternative put forward for further review cannot be supported by the goals and past work of the Diversion Authority and other entities collaborating in the process.

The Diversion Authority has worked since the beginning of the Federal Feasibility Study in 2008 to develop a project that met the needs of the metro area, but also that would limit the resulting impacts on people, property, and the environment. As stated on the MDNR's website for flood damage reduction, "the goal of existing regulations and programs for flood damage reduction is to minimize the threat to life and property from flooding." Throughout the evolution of the Project, the Diversion Authority has spent a considerable amount of effort to find the most optimal ways to achieve this goal. The NAA is not consistent with this goal, which has repeatedly been shared between the Diversion Authority and the MDNR, and is demonstrably inferior to the USACE alignment for the following reasons:

- 274 more structures are impacted by the NAA than by the proposed project
- 60 more homes and homeowners would be impacted and require mitigation in the NAA
- The NAA would cost at least \$81 million more to construct, and likely more after all NAA impacts are addressed.
- Numerous businesses along the I-29 corridor would now need to be bought out or relocated, with significant economic and social costs.
- The historic St. Benedict's Church (ND) and the community of Rustad, MN are impacted by the NAA, would need to be bought out and relocated, and these costs and impacts have not been fully explored.
- Cass County Road 16 / Clay County Road 8 – Table 3.50 (NAA Infrastructure Impacts) on page 3-175 of the DEIS states "the Cass County Road 16/Clay County Road 8 Bridge at the Red River would likely be inaccessible during NAA flood event operation". This Bridge is not impacted by the Proposed Project. This Bridge is approximately 1 mile south of the DNR's NAA and will be impacted by NAA project operation. In fact, the next Red River crossing is 5 miles north at 52nd Avenue South in Fargo, ND and closure of the CR-16/CR-8 Bridge during NAA project operation will require an approximately 20 mile detour to cross the Red River, and will systematically impact emergency service response times in the area. The text in the "Notes" column of Table 3.50 should be changed to read "Bridge at Red River will be inaccessible during flood event operation, will require a 20 mile detour to cross the Red River, and will increase emergency response times in the vicinity of the this bridge."

While the essential information for decision makers and the public conveying these critical facts is contained in the DEIS, these really important differences may difficult to see because of the sheer quantity of information in the document and appendices. The Diversion Authority suggests that in

Page: 5

Author: Medopera Subject: Highlight Date: 4/20/2016 3:34:24 PM
Comment ID: 4f
Topic: Proposed Project, Environmental Impact Statement Concludes

Author: Medopera Subject: Highlight Date: 4/20/2016 10:00:45 AM
Comment ID: 4g
Topic: Comparison of Alternatives, Table 5.1

order to avoid this problem, a simplified presentation of the material displayed in Table 5-1 be presented in the Executive Summary.

Recommended Change: Present a simplified list of bullet points, perhaps incorporating the ones presented above, identifying the significant differences between the Project and the NAA in the Executive Summary.

Floodplain Mitigation

The Table 5.1 indicates that "The CLOMR will likely be easier to obtain with NAA due to limited new inundation in Richland and Wilkin Counties." The Diversion Authority disagrees with this statement because the number of jurisdictions impacted by a CLOMR for the Project and NAA will be identical. Below is a list of upstream jurisdictions that would be affected by the CLOMR for each alternative:

- Project: Clay County, Wilkin County, City of Comstock, Eagle Township, Pleasant Township, City of Christine, City of Oxbow, City of Horace, City of Fargo
- NAA: Clay County, Wilkin County, City of Comstock, Eagle Township, Pleasant Township, Stanley Township, City of Oxbow, City of Horace, City of Fargo

Recommended Change: It is suggested that the Table 5.1 comment "FEMA Regulations and the CLOMR Process" row be changed to the following: "The number of CLOMR impacted jurisdictions for the Project and NAA alignments are the same."

Executive Order 11988

The FSDD explained that MDNR would evaluate the requirements of EO 11988. FSDD at 2. EO 11988 was also the subject of considerable commentary at the Public Meeting. See the Public Meeting Transcript at 34-36, 70. The DEIS appropriately does not analyze compliance with EO 11988, presumably for the reasons noted below, but a brief explanation in the FEIS may be helpful.

First, as USACE notes, EO 11988 is applicable only to federal executive agencies and is not applicable to the State of Minnesota. Second, and more importantly, as applied to the Project EO 11988 has been superseded by the Water Resources Reform and Development Act of 2014 ("WRRDA"). Executive Orders are not binding upon Congress, and federal executive agencies do not have the authority to depart from the express provisions of federal statutes. In authorizing that the USACE implement the Project in substantial accordance with the Report of the Chief of Engineers, Congress has thus constrained USACE, and supplanted EO 11988 in the context of this Project.

MDNR therefore most properly declined to evaluate EO 11988 in the DEIS. Nevertheless, given MDNR's earlier statement in the FSDD that it would analyze EO 11988, and the prominence EO 11988 has had in public comments, a brief explanation in the FEIS as to the reasons why such analysis was unnecessary would be appropriate.

Recommended Changes: MDNR should state in the FEIS that EO 11988 does not apply to the State of Minnesota, and further, explain EO 11988 as related to the Project has been superseded by WRRDA.

Discussion of Economic Considerations and Socioeconomic Impacts in Relation to Minnesota Law

The DEIS repeatedly quotes the provision of MEPA that provides that "economic considerations alone" are not a basis to dismiss an alternative. See e.g., DEIS at § 5.3. However, it is important not to

Author: Medopera Subject: Highlight Date: 12/4/2015 2:16:38 PM -06'00'
Comment ID: 4g cont.

Author: Medopera Subject: Highlight Date: 4/20/2016 10:00:51 AM
Comment ID: 4h
Topic: FEMA, CLOMR

Author: Medopera Subject: Highlight Date: 4/20/2016 10:00:55 AM
Comment ID: 4i
Topic: FEMA, 11988

Author: Medopera Subject: Highlight Date: 4/20/2016 4:15:47 PM
Comment ID: 4j
Topic: Socioeconomics, Economics

confuse "economic considerations" with the broader concept of "socioeconomics." The FEIS should explain this distinction specifically as it relates to the effects of a flood control project. The Project definitely "costs less" than the NAA, but the great majority of this cost difference relates to the additional home and high-value property acquisition associated with the NAA. Over and above the baseline "dollars" associated with such home and property acquisition, these acquisitions directly relate to flood risks and life disruption, which are effects that are fully cognizable under Minnesota law as bases to choose one alternative over another. The Diversion Authority is concerned that the public may conflate the concepts of "economic considerations" as stated in MEPA with "socioeconomics" more generally, and misunderstand what are appropriate criteria for the choice between alternatives. Simply put, the Project exposes 274 fewer structures to flooding than the NAA. DEIS at Table 5.1, 5-23. This difference is a legitimate and indeed very important rationale for selecting the Project.

Recommended Change: Section 3.16 of the DEIS should contain a short discussion explaining the difference between "economic considerations" as stated in MEPA and the broader concept of "socioeconomics" as articulated in Section 3.16, so as to make clear that a differential impact to homes, business activity, and property is a legitimate criterion for environmental review and permitting decisions.

Comstock Ring Levee

Section 2.2.2.2.11, page 2-26, states the city of Comstock, MN would not be directly impacted by the NAA. While the flood extent during Project operation is reduced for the NAA vs. the Proposed Project Alternative, water still backs up into the north end of the community as shown in the attached Figure. In addition, the city of Comstock does have an overland flood risk from Wolverton Creek. The attached aerial from the 2009 flood, which was approximately a 50-year event, shows water encroaching on the south end of the community). Given the encroachment of project flooding from the north and an existing overland flooding risk, the community may still desire to have a ring levee under the NAA.

Recommended Change: References to the need for the Comstock Levee under the NAA should be modified to indicate that it is undetermined at this time whether the Comstock Ring Levee would be necessary or prudent.

Impacts to Organic Farms

The Diversion Authority sincerely appreciates the MDNR's extensive investigation of claims that incremental flooding in the staging area associated with either alternative will affect the ability of organic farms to retain their organic certification. As detailed in Appendix K, however, the applicable USDA regulations do not distinguish between natural and induced flooding, and there is no evidence that flooding has ever resulted in the loss of organic certification in the Red River Valley (or elsewhere). The DEIS also makes clear that impacts to organic operations will nevertheless be carefully monitored and compensated where appropriate.

Ultimately, organic farming is a management decision made by farmers just like any other cropping decision. Farmers can raise sugar beets, wheat, corn, soybeans, organic wheat, alfalfa, non-GMO soybeans, GMO soybeans, etc. Farmers can use organic, no-till, minimum till, conventional, biodynamic, strip till, ridge till, or other methods for crop farming. The singular focus in the DEIS on impacts to organic farming is out of place.

Author: Medopera Subject: Highlight Date: 12/4/2015 2:23:06 PM -06'00'
Comment ID: 4j cont.

Author: Medopera Subject: Highlight Date: 4/20/2016 10:01:13 AM
Comment ID: 4k
Topic: Northern Alignment Alternative, Comstock Ring Levee

Author: Medopera Subject: Highlight Date: 12/4/2015 2:32:51 PM -06'00'

Author: Medopera Subject: Highlight Date: 4/20/2016 10:01:21 AM
Comment ID: 4l
Topic: Socioeconomics, Organic Farms

For these reasons, the Diversion Authority believes it is inappropriate to identify any differential inundation to organic acreage as a difference worth noting in the DEIS. See Table 5.1 at 5-25 to 5-26.

Recommended Changes: The text of the DEIS Section 3.16.2.4.6 should make clear that there is no present evidence that any organic operation in the Red River Valley has had its organic certification impaired by flooding. The bullets detailing the difference in organic acreage effects between the Project and NAA should be deleted.

NDSU Agricultural Study

In their continuing effort to ensure that impacts associated with the Project are fully identified and mitigated as appropriate, the Diversion Authority contracted with the North Dakota State University's Department of Agribusiness and Applied Economics to help evaluate the impacts on farming revenues due to operation of the Diversion Project. The Department presented its findings to the Diversion Authority's Agricultural Policy Sub-Committee on September 29 and to the Diversion Authority Board on October 8. We expect their study to be completed in the near future and will be made publicly available at that time.

The presentation given concluded the following:

- 85% chance that the Diversion will not operate in any given year
- Effects of flooding will be over for a majority of lands approximately the same time regional planting starts.
- During a 25-yr or larger flood event, high probability (60% chance) of modest (\$1 to \$25/acre average within a storage area) revenue losses due to planting delays
- During a 25-yr or larger flood event, low probability (10% chance) of greater losses (\$25 to \$75 per acre)


Author: Medopera Subject: Highlight Date: 12/4/2015 2:37:41 PM -06'00'
Comment ID: 4l cont.

Author: Medopera Subject: Highlight Date: 4/25/2016 11:05:55 AM
Comment ID: 4m
Topic: Socioeconomics, NDSU Initial Agricultural Impact Study

Conclusion

Thank you again for your work. The DEIS is an impressive document, and subject to the comments herein, which are mostly clarifications of points over which there does not appear to be any genuine difference of opinion, one which sufficiently and adequately addresses the requirements of Minnesota law and of the public's interest. We also trust that you understand the Diversion Authority's keen interest in moving the process forward as expeditiously as possible so that the metro area does not have to continue to suffer the anxiety and fear each spring as flood season approaches. Let us work together to implement the only project that has been proven to meet the need, the FM Area Diversion Project as proposed.

Sincerely,


By direction of
Darrell Vanyo
Diversion Authority Chair

Enclosures:

2009FloodImage.pdf
DEIS comment spreadsheet

CC:

Fargo-Moorhead Flood Diversion Board of Authority

This page contains no comments

Written Comments

Comment on the DRIS for the proposed Fargo-Moorhead Flood Risk Management Project.
*Please note that any information provided to the MNDNR is public data. While you are not required to provide your contact information, doing so allows us to mail you our response to your comment.

Name: Debbie Foster (Deborah.) Representing:	Mailing Address: 15605 County Road A Walcott, WA 58077 Email: debbiemargaret@gmail.com
---	--

I grew up in Hudson - one of the communities that used to flood and "protected" by a ring dam. My 42 year old metal steel lines that had rust underneath broke. Getting inside a "toilet bowl" is necessary to inspect a safe. If there is a leak what happens? How are ambulances to get in during a flood? Who maintains the pumps in a town? Is there a "down pour"? If there is a flood and houses, what if it was on the side of a hill? Of a lake and we get a bad case of several inches of water? Hudson is the largest pumped to who pays for the maintenance of these pumps and many questions.

Written Comments

Comment on the DRIS for the proposed Fargo-Moorhead Flood Risk Management Project.
 *Please note that any information provided to the MNDNR is public data. While you are not required to provide your contact information, doing so allows us to mail you our response to your comment.

Name:	Mailing Address:
Lebbie (new con) (Lebbie)	15605 CR 2, Decorah, MN 58017
Representing:	Email:
	lebbie.margaret@gmail.com

A major concern I have is the total cost of this project. At what point is the cost to transfer state ownership of the project to the local government? I have heard of 8 Billion but that number has not changed in years. It seems the Fargo Moorhead area is being treated as far less important than other areas. This is very unfair. They have a lot of their own local services and are not getting the same treatment.

Author: Medopera Subject: Sticky Note Date: 3/30/2016 4:17:24 PM
 Comment ID: 5c
 Topic: Socioeconomic, Project Cost

Author: Medopera Subject: Sticky Note Date: 4/20/2016 10:28:18 AM
 Comment ID: 5d
 Topic: Proposed Project Description, OHB
 Unsubstantive

Commenter 6

Testimony regarding the Fargo -Moorhead Risk Management DEIS. 10/14/15

Contact Info: Lyle E.Hovland
1353 310th Ave.
Rothsay,Minnesota 56579. Home:218-867-2563
Cell: 218-329-6460

I am Lyle Hovland,Wilkin County, District Three Commissioner and current Vice Chair for the Richland/Wilkin Joint Powers Authority. We stand in opposition to the FM Diversion project as it is currently proposed. We are not opposed to proper flood protection for Fargo/Moorhead. We do feel strongly that the building of the Dam which creates the staging area would place a great social and economic harm and impact on the citizens and communities of this area. These impacts have not been adequately addressed. The project sponsors would have us believe that impacts are short term and only in times of flooding and that life would go on as it normally would after flood events. The reality is that Dams and easements are forever and the greater likelihood is the creation of an economic dead zone where no future development and growth is allowed. The the creation of a fifty square mile protected area for Fargo's future development, currently in a flood plain, at the expense of area that is not flood plain, seems unwise and unfair. We feel there are alternatives. The Red River Basin Commission, long noted for looking for flood solutions, has studies that indicate a Twenty percent reduction in peak flood flows is doable by implimentation of upstream retention projects. Some significant projects managed by local watershed districts are now in place or nearing completion. Easy or Cheap? No! But neither is a Dam, and thirtyfive mile long ,two Billion dollar diversion project. Again the project sponsors and the Army Corps prefer not to look at alternatives and consider only the "Locally Perferred Plan".

Another specific area of concern is the Wolverton Creek-Comstock Coulee area. This is a one hundred and four square mile,sixty seven thousand acre water shed area that would be locked behind the proposed dam. The flows of natural drains and judicial ditches would most certainly be impacted and to date there is no study done. This is a prime agricultural area and extended retaining of waters would be detrimental. Attached here is a map of that shed, its drains and an e-mail from the Buffalo Red Watershed Administrator noting that no study of impacts has been done. This should be addressed.

I do wish to thank the Minnesota DNR and Staff that have worked diligently on the Draft EIS and for your consideration of coments here tonight and those you will receive in the next days ahead. Thankyou!

Summary of Comments on RichlandWilkinJPA_LyleHovland_Commenter6a- c_CommentBox1.pdf

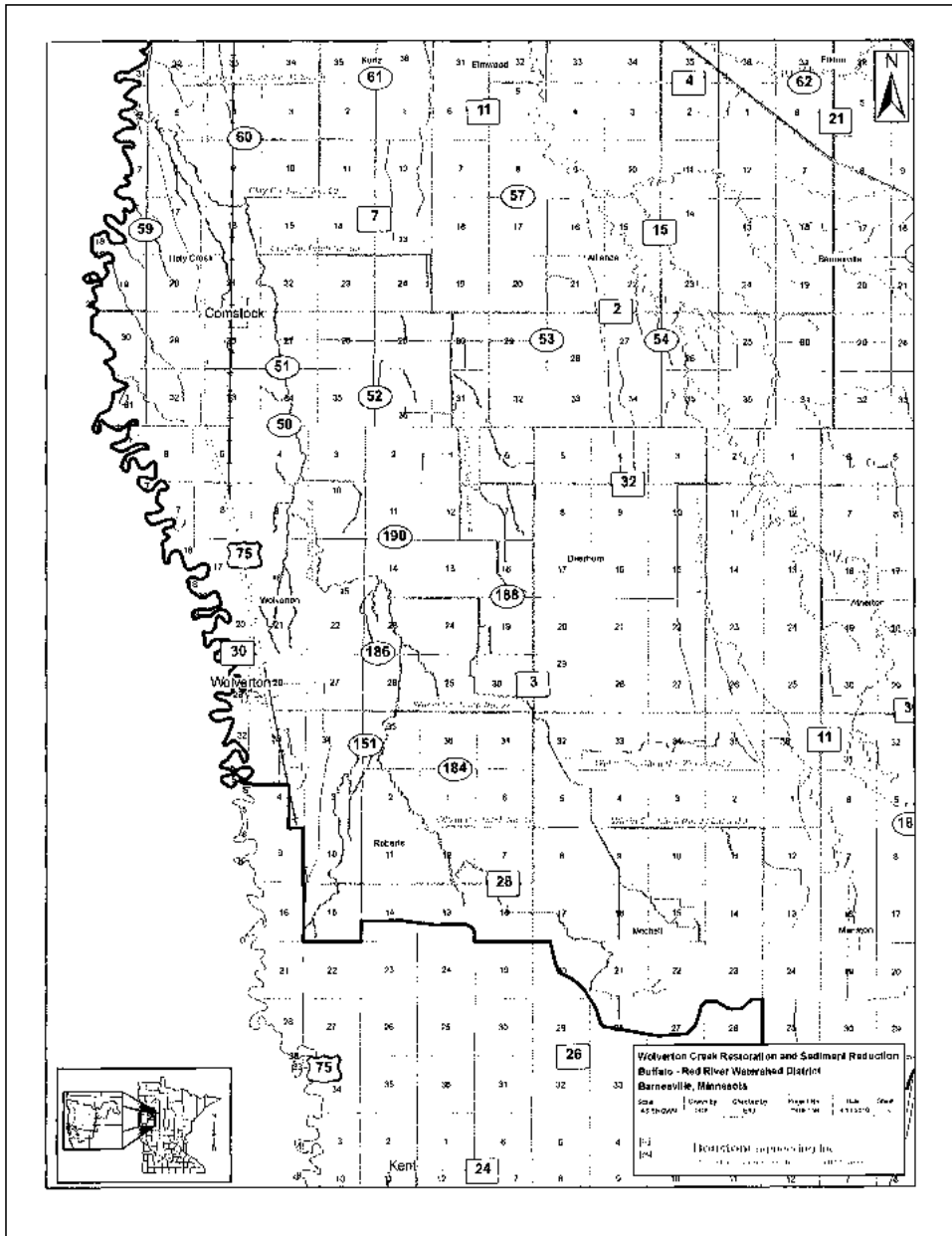
Page: 1

Author: Medopera Subject: Text Box Date: 11/2/2015 1:52:22 PM -06'00'
Commenter 6

Author: Medopera Subject: Highlight Date: 4/21/2016 8:20:14 AM
Comment ID: 6a
Topic: Socioeconomics, Wells and Groundwater Quality

Author: Medopera Subject: Highlight Date: 3/31/2016 9:18:39 AM
Comment ID: 6b
Topic: Alternatives, Alternative:Basin-Wide Approach

Author: Medopera Subject: Highlight Date: 4/19/2016 2:30:35 PM
Comment ID: 6c
Topic: Hydrology and Hydraulics, Wolverton Creek and Comstock Coulee



This page contains no comments

Lyle & Diane

From: "Bruce Albright" <BAlbright@brwd.org>
Date: Monday, October 12, 2015 10:33 AM
To: "Tim Fox" <TFox@co.wilkin.mn.us>
Cc: <ldkhovland@riehel.net>; "Frik Jones" <ejones@houstoneng.com>; <vanambur@gforia.cord.edu>
Attach: Wolverton Creek 2011 CWF Location Map 9-15-10.pdf
Subject: RE: Wolverton Creek

The attached map shows the drainage area and the various legal county district systems that use the Centre as an outlet. We have not studied the potential impacts from the 3rd MD Division Dam for this area.

Bruce L. Albright, Office Administrator
Buffalo-Bad River Watershed District
1703 7th Avenue NE
Brainerd, MN 56514-0341
Telephone (218) 854-7710
Fax (218) 854-7503
E-mail address: BAlbright@brwd.org
Website Address: www.brwd.org

From: Tim Fox [mailto:TFox@co.wilkin.mn.us]
Sent: Monday, October 12, 2015 9:07 AM
To: Bruce Albright
Subject: Wolverton Creek

Do you have a map of the Drainage area for Wolverton Creek? Have any studies been conducted to determine the impact of the Dam/Staging area on the Wolverton Creek?

Timothy E. J. Fox
Wilkin County Attorney
P.O. Box 214
Breckenridge, MN 56520
218 643 8950

10/14/2015

This page contains no comments

Commenter 7

Summary of Comments on MarcusLarson_Commenter7a_CommentBox1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/2/2015 2:12:20 PM -06'00'
Commenter 7

Author: Medopera Subject: Highlight Date: 4/19/2016 12:46:27 PM
Comment ID: 7a
Topic: Hydrology and Hydraulics, Expert Opinion Evaluation Panel

October 14, 2015

Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
560 Lafayette Road
St. Paul, Minnesota, 55155-4025

RI: Fargo Moorhead Flood Risk Management Project DEIS

On September 28-29, 2009, the USACE conducted an expert opinion elicitation (EOE).

"Page 9 Appendix A1b - EOE: To prepare for the EOE, expert panel members and observers were sent a read-ahead package following recommendations in the Technical guide. The EOE began with a description of the EOE process and a review of the goals to be accomplished."

The entire Fargo Dam and FM Diversion project relies on "theoretical assumptions" contained within the EOE (expert opinion elicitation) to justify its scale, scope, and stated level of desired protection and relocation of flood impacts.

The EOE has been used to conceal significant impacts both upstream and downstream by obfuscating historical FEMA benchmarks with "theoretical assumptions" presented within the EOE which breaks the period of record (POR) into two portions, resulting in generally defining the dry period as 1901-1941 and the wet period as 1942-2009 and were instructed to weight the probability of wet conditions at 0.8, and dry conditions at 0.2.

These "theoretical assumptions" rely heavily on stream flow discharge records that are limited and precipitation records that were divided into "preferential sets" to return results that compliment the stated project purpose but have failed to quantify the total effects of natural flood plain encroachment and flood reduction benefit provided by the natural flood plains upstream of the F-M area.

Basing the EOE primarily upon stream flow discharge without equally quantifying and integrating natural flood plain reduction and precipitation records upstream of the F-M area, suggests the credibility and objectivity of the EOE is compromised and biased towards the goals of the USACE and non-federal local sponsor.

Further complicating confidence in the EOE "theoretical assumptions" is the Fargo USGS gage, which has had six different locations since May 27, 1901 which contains a disparity of 10.35 feet, according to the USGS, and does not appear to be noted in the EOE study.

Review of precipitation records for the Fargo Moorhead area from 1881-2014 represents findings contrary to "theoretical assumptions" of a "wet cycle" postulated by the EOE, USACE and local sponsors.

The 134 period of precipitation records contains an average annual precipitation of 21.41 inches.

- 73 of 134 years were "below average" years
- 45 of those below average years have been since 1942 (during alleged "wet cycle")

The greatest precipitation year from 1881-2014 was year 2000 at 34.75 inches. Which was a summer crest (22.82 feet) with a peak stream flow nearly 22,000 cfs LOWER than the 2009 event. This suggests that higher precipitation does not necessarily mean a flood event will occur with any predicted certainty, however, without precipitation it is difficult to manifest flooding.

This page contains no comments

The key disconnects within the EOE and USACE assumptions are:

- a failure to provide a credible basis of how the F-M area would achieve stream flows capable of manifesting the theorized flood events without significant precipitation input.
- a failure to consider the possibility of the F-M area having reached an apex event.
- a failure to include FEMA decision makers in the EOE process.

The EOE is based upon imperfect data sets, assembled by proxy for a goal oriented "best guess". Remarkably, revision 8 of hydraulic modeling on the overall project is being finalized, yet, the EOE was concluded within 2 days without the benefit of the revisions to modeling, and we are expected to accept the EOE at face value?

I sincerely urge the Minnesota DNR to take a close look at disconnects created by the EOE, the quantified disparity to historical records and FEMA benchmarks which have been ignored and will invariably result as impacts to MN interests.

Sincerely,



Marcus E. Larson
513 7th ST
Hickson, ND 58047
701-588-4412

This page contains no comments

05054000 RED RIVER OF THE NORTH AT FARGO, ND

LOCATION - Lat 46°51'40", long 96°47'00" referenced to North American Datum of 1927, in NW 1/4 NE 1/4 sec.18, T.139 N., R.48 W., Cass County, ND, Hydrologic Unit 09020104, 0.7 mi upstream of Midtown Dam, 25 mi upstream from mouth of Sheyenne River, and at mile 453.
DRAINAGE AREA - 6,800 mi², approximately.

SURFACE-WATER RECORDS

PERIOD OF RECORD - DAILY DISCHARGE--June 1901 to current year. Published as "at Moorhead, MN.", 1901. Monthly discharge only for some periods, published in WSP 1308.

PERIOD OF RECORD--DAILY GAGE-HEIGHT--October 2000 to current year.

REVISED RECORDS - WSP 1308: 1902-4, 1906-7, 1910-14, 1916, 1918, 1924. WSP 1388: 1905-6, 1917-20(M), 1935(M), 1938-39(M), 1943.

GAGE - Water-stage recorder and concrete control from October 1, 1962 to present, datum of gage is 861.8 ft above National Geodetic Vertical Datum of 1929. Previous locations and datums are as follows:

Staff gage on timber breakwater of old Front Street bridge (now Main Avenue) 1.8 mi downstream from May 27, 1901 to August 31, 1914. Datum was 860.75 ft above NGVD of 1929.

Staff gage on trees above former dam 1.0 mile downstream from September 1, 1914 to July 31, 1928. Datum was 871.1 ft above NGVD of 1929.

Staff gage in vicinity of Fargo Municipal Water Plant 1.0 mile downstream from August 1, 1928 to April 11, 1959. Datum was 867.4 ft above NGVD of 1929.

Continuous recorder in concrete stilling well on downstream side of Interstate 94 bridge 2.0 mile upstream from April 12, 1959 to September 30, 1960. Datum was 867.4 ft above NGVD of 1929.

Continuous recorder in Fargo Municipal Water Plant at current location from October 1, 1960 to September 30, 1962. Datum was 867.4 ft above NGVD of 1929.

REMARKS - 10/01/13-09/30/14: Records good except for estimated daily discharges, which are poor.

REGULATION.--Flow regulated by: Orwell Reservoir, flood storage capacity, 13,300 acre-ft at elevation 1,070 ft above mean sea level, adjustment of 1912; Mud Lake, flood storage capacity, 78,600 acre-ft at elevation 981 ft above mean sea level, adjustment of 1912; Lake Traverse, flood storage capacity, 75,100 acre-ft at elevation 981 ft above mean sea level, adjustment of 1912; and numerous other controlled lakes, ponds and several powerplants.

DIVERSIONS.--Figures of daily discharge do not include diversions to cities of Fargo and Moorhead, MN, from the Sheyenne River

This page contains no comments

build the levee and floodwall system that was supposed to protect the city — but clearly did not. Ongoing operation of Corps projects can also lead to devastating results. A U.S. District Court recently ruled that the Corps' "gross negligence" in maintaining the Mississippi River Gulf Outlet, a Corps-built navigation channel, also played a major role in the breaching of many New Orleans area levees during Hurricane Katrina.

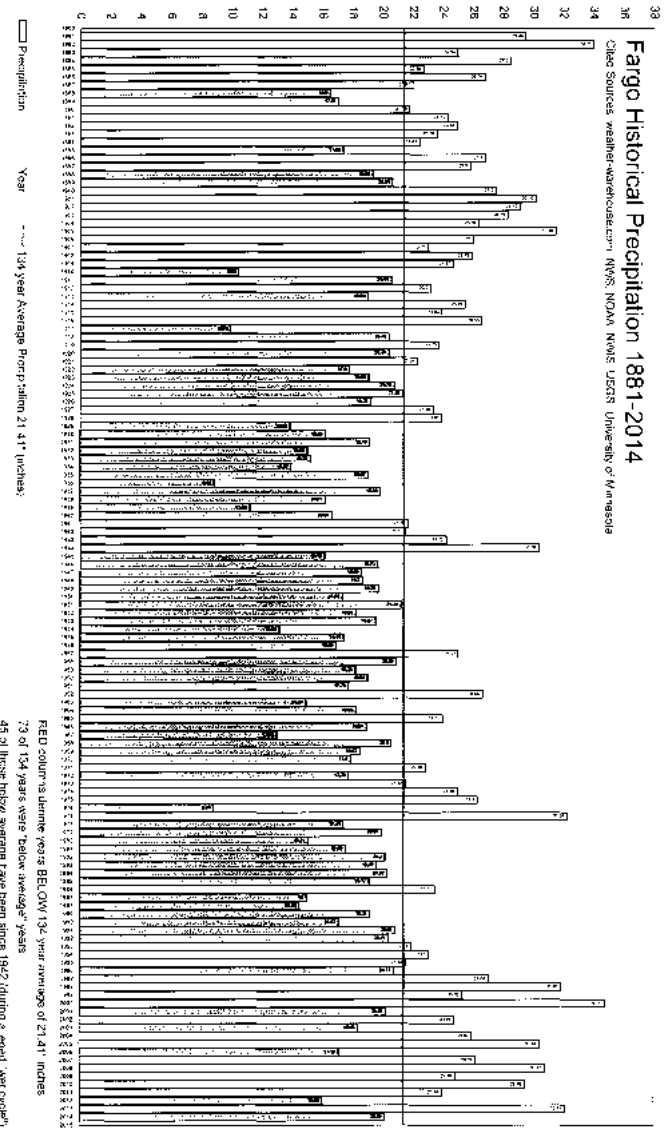
During the past decade, the National Academy of Sciences, the Government Accountability Office, the Army Inspector General, federal agencies, and independent experts have issued a flood of studies highlighting a pattern of stunning flaws in Corps project planning and urging substantial changes to the Corps' planning process. Two National Academy of Sciences panels and the Department of the Army Inspector General concluded that the Corps has an institutional bias for approving large and environmentally damaging structural projects, and that its planning process lacks adequate environmental safeguards. Less environmentally damaging, less costly, nonstructural measures that would result in the same or better outcomes are routinely ignored or given short shrift. This results in projects that are unnecessarily destructive, costly, and, in many cases, simply not needed.

In 2006, the Government Accountability Office told Congress that recent Corps studies were "fraught with errors, mistakes, and miscalculations, and used invalid assumptions and outdated data." The problems were so pervasive that the studies "did not provide a reasonable basis for decision-making." The Government Accountability Office also told Congress that the problems at the Corps were "systemic in nature" and "prevalent throughout the Corps' Civil Works portfolio."

In 2007, Congress enacted important Corps Reform legislation designed to address some of these problems. These reforms, which require modernization of the Corps' planning guidelines, impose strict mitigation requirements on Corps projects and require outside independent peer review of costly or controversial Corps projects are discussed at length in Chapter 2. Insuring strict compliance with the Corps Reform provisions and with the environmental protection laws and policies discussed in Chapters 5 and 6 will do much to improve Corps projects and permits.

As communities and wildlife suffer the floods, droughts, storms, and increasing sea levels fueled by climate change, it is more important than ever to improve Corps projects and permitting decisions. The Corps must begin immediately to aggressively protect and restore the nation's rivers, wetlands, and coastlines — resources that provide the first line of defense against flooding, improve water quality, recharge groundwater, provide outstanding recreational opportunities, provide vital habitat for fish and wildlife, and are essential for making our communities more resilient to the effects of climate change.

This page contains no comments



Commenter 8

Written Comments

Comment on the DRIS for the proposed Fargo-Moorhead Flood Risk Management Project.
*Please note that any information provided to the MNDNR is public data. While you are not required to provide your contact information, doing so allows us to mail you our response to your comment.

Name: Mark Waltz	Mailing Address: 309 Plum Tree Rd Hickson, ND 58047
Representing: me	
	Email: m.waltz@co.kotaweb.com

Why did you not consider the option of No Dam.
Build Diversion but No dam
Using the wetlands etc.

1. Holding water in each section of land with controlled releases as the water drops
2. Diking those lowlands in the wetlands area.
3. Facilitate expansion of retention areas.
4. Fargo installing its own dikes to protect itself to top of land plus.
 - A. Fargo builds its own dikes.
 - B. As developers want to expand they are responsible to build their own FEMA approved dikes, thereby building a redundant system of dikes in Fargo.
 - C. This ~~option~~ allows Fargo to expand with out the Dam.
 - D. Allows expansion past the location of the dam.
5. Fargo mandates better dikes & releases lot size by 1/3

The continuation of the Oxbow Ring Dike will result in my Burke Development being filled with snow in the winter & then flooding with in when the snow melts in the spring

in the water parcel

Summary of Comments on MarkWaltz_Commenter8a-d_CommentBox1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/2/2015 2:28:17 PM -06'00'

Commenter 8

Author: Medopera Subject: Sticky Note Date: 3/31/2016 9:25:12 AM
Comment ID: 8a
Topic: Alternatives, Alternative: Diversion no Dam

Author: Medopera Subject: Sticky Note Date: 3/31/2016 9:26:18 AM
Comment ID: 8b
Topic: Alternatives, Alternative: DSA

Author: Medopera Subject: Sticky Note Date: 4/20/2016 10:29:18 AM
Comment ID: 8c
Topic: Proposed Project Description, OHB Ring Levee

Written Comments

Comment on the DEIS for the proposed Fargo-Moorhead Flood Risk Management Project.
*Please note that any information provided to the MNDNR is public data. While you are not required to provide your contact information, doing so allows us to mail you our response to your comment.

Name: MARK LUETT	Mailing Address:
Representing: 	Email: m.luetz55@hotmail.com

The oxbow golf course extends into the
natural flood way of the Red River will
it be allowed to stay

From Timothy Leiseth, 12630 40th St So Moorhead
MND
P.O. Box 4th Corn Harbor with son on the way

To Will Touhey
Project manager

Commenter 9

Summary of Comments on TimothyLeiseth_Commenter9a-h_CommentBox1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/2/2015 2:40:51 PM -06'00'
Commenter 9

Author: Medopera Subject: Sticky Note Date: 4/19/2016 12:47:57 PM
Comment ID: 9a
Topic: Hydrology and Hydraulics, Expert Opinion Evaluation Panel

Author: Medopera Subject: Sticky Note Date: 4/20/2016 11:26:13 AM
Comment ID: 9b
Topic: Proposed Project Purpose and Need, Questions Project Purpose

Author: Medopera Subject: Sticky Note Date: 3/31/2016 9:52:32 AM
Comment ID: 9c
Topic: Socioeconomics, Minnesota and North Dakota

Author: Medopera Subject: Sticky Note Date: 4/19/2016 12:48:10 PM
Comment ID: 9d
Topic: Hydrology and Hydraulics, General

Author: Medopera Subject: Sticky Note Date: 4/19/2016 12:48:30 PM
Comment ID: 9e
Topic: Hydrology and Hydraulics, Fargo's Levees and Floodwalls

Author: Medopera Subject: Sticky Note Date: 3/31/2016 10:02:09 AM
Comment ID: 9f
Topic: Socioeconomics, Agriculture Impacts on Local Economy

Author: Medopera Subject: Sticky Note Date: 4/19/2016 2:48:38 PM
Comment ID: 9g
Topic: Infrastructure and Public Services, Flood Impacts to Roadways, Ditches and Culverts

Author: Medopera Subject: Sticky Note Date: 4/20/2016 3:13:47 PM
Comment ID: 9h
Topic: Project Proposer, MNDNR Should Not Develop Natural Resources

(1) The core of Engineers are using inflated
projected flood numbers

(2) Fargo is using the project for more development
on wetland

(3) They want to sink water on minnesota land for
there development

(4) The Army Corps does not utilize the ~~Trusts~~
Trusts because they already have

(5) Fargo can take there city! They choose
not to. So they can start my farms land
and take my farm stand + yard

6. Our farm will lose 5 quarters of farmland
and will be out of business if this goes through

7. Highway business systems and roads will be destroyed!

8. The DNR should protect the Natural
Resources! Not Develop Them!

Timothy Leiseth

Commenter 10

- My name is: Tom Kenville
- I am ~~been~~ representing: St. Benedicts Catholic Church
- History: St. Benedicts was first established in 1870 and the Church itself is more than 100 years old.
- I would like to comment on the Northern Alignment Alternative that is analyzed in the DNR's EIS.
- The Northern Alignment would place our church under almost 10 feet of water.
- The Northern Alignment would require the removal and destruction of this historic church.
- EMOTIONAL ties to community.
- We understand the pros and cons of the Diversion Project itself, but if there must be a project, please do not put forward the Northern Alignment Alternative and destroy St. Benedicts.

* FRENCH FUR TRADERS' TO CURRENT CHURCH MEMBERS ARE IN OUR CEMETARY CO-LOCATED INSIDE OUR DIKE

TOM KENVILLE
6819 SUNNYSIDE DR
HORACE ND 58047

TOMK@ROLLRAMP.COM
701-793-2748

Summary of Comments on TomKenville_Commenter10a_e_CommentBox1.pdf

Page: 1

Author: Medopera	Subject: Text Box	Date: 11/2/2015 3:07:30 PM -06'00'
Commenter 10		
Author: Medopera	Subject: Sticky Note	Date: 3/31/2016 10:14:43 AM
Comment ID: 10a	Topic: Northern Alignment Alternative, General Opposition	
Author: Medopera	Subject: Sticky Note	Date: 3/31/2016 10:16:55 AM
Comment ID: 10c	Topic: Socioeconomics, Social Impacts	
Author: Medopera	Subject: Sticky Note	Date: 3/31/2016 10:16:34 AM
Comment ID: 10b	Topic: Northern Alignment Alternative, General Opposition	
Unsubstantial		
Author: Medopera	Subject: Sticky Note	Date: 3/31/2016 10:18:46 AM
Comment ID: 10d	Topic: Northern Alignment Alternative, General Opposition	
Unsubstantial		
Author: Medopera	Subject: Sticky Note	Date: 3/31/2016 10:19:40 AM
Comment ID: 10e	Topic: Northern Alignment Alternative, General Opposition	
Unsubstantial		



Home Builders Association of Fargo-Moorhead

1802 32nd Avenue South · Fargo, ND 58103 · (701) 232-5846 · Fax (701) 280-1108
info@hbafm.com · www.hbafm.com

Commenter 11

Summary of Comments on HomeBuildersAssociationFM_ClayDietrich_Commenter11a_e_CommentBox1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/3/2015 9:42:36 AM -06'00'

Commenter 11

Author: Medopera Subject: Highlight Date: 3/31/2016 10:21:41 AM

Comment ID: 11a
Topic: Permitting Approval, Approve the Project
Unsubstantial

Author: Medopera Subject: Highlight Date: 3/31/2016 10:22:53 AM

Comment ID: 11b
Topic: Base No Action with Emergency Measure, Existing Conditions
Unsubstantial

Author: Medopera Subject: Highlight Date: 3/31/2016 10:23:38 AM

Comment ID: 11c
Topic: Proposed Project, General Support
Unsubstantial

Author: Medopera Subject: Highlight Date: 11/3/2015 9:54:44 AM -06'00'

Comment ID: 11b cont.

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APR 14 2015



October 14, 2015

Jill Townley
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division
Department of Natural Resources
500 Lafayette Rd
St. Paul, MN 55155-4025

Dear Ms. Townley,

On behalf of the Home Builders Association of Fargo-Moorhead and our over 800 member companies, we respectfully request that the Fargo-Moorhead Flood Risk Management Project be approved by the State of Minnesota. It should move ahead in part because it has already been approved by Congress and the U.S. Army Corps of Engineers, in part because it will qualify substantial portions of the Fargo-Moorhead Metropolitan area for 100-year flood accreditation, and mostly because it will provide permanent flood protection to residents of the metro area.

I have been a Moorhead resident for 32 years and served with the Moorhead Fire Department from 1983 - 2009. During the flood of 2009, I was an assistant fire chief for Moorhead. Our fire department managed construction of the city-long sandbag levee and I was appointed operations chief of the project. We had a department of 36 and had over 100 other fire fighters helping, along with DNR employees and thousands of volunteers, to beat that flood. We won the fight, but we all knew that the city of Moorhead couldn't accomplish this feat year after year. Our city leaders asked the legislature for funds to build up our levees and facilitate home buyouts to assist us with Moorhead's flooding problems. We thank the Minnesota Department of Natural Resources and our legislature for funding the projects necessary to complete our in-town levee system. However, the job isn't complete, and the final piece of the puzzle is building the F-M Area Diversion.

I think we can all agree that reducing flood risk, flood damage, and protection costs is a worthy and important goal for the region. This project, as proposed and thoroughly evaluated by the USACOE, will best achieve that goal. The project, by impounding flood waters upstream and then diverting them around the metro area, will provide the most environmentally responsible and cost efficient means of protecting the lives and property of Fargo-Moorhead residents. Given the increased risk and frequency of potentially devastating floods in the area, I think it is clear how necessary this project is.

Doing nothing will leave us in a position of relying on heroic efforts by local citizens during a major flood event. While the levees constructed and the sandbagging efforts we are known for have worked in the past, they hardly represent a permanent solution.

Time is of the essence on this project. Senator John Hoover hosted a meeting with FEMA's Deputy Associate Administrator for Mitigation Roy Wright in April, where he stated FEMA redraws its flood maps every five years. If this project is not approved, that remapping could very well result in the 100-year flood level being set higher, which will impact more homes, businesses and farm structures, reducing property values and sending insurance premiums skyrocketing.

Author: Medopera Subject: Highlight Date: 3/31/2016 10:23:58 AM
Comment ID: 11d
Topic: FEMA, FEMA Map Revisions

Moorhead recently had one of the levees it constructed certified, and continues to do so with other levee work that was funded by the DNR and the state legislature. While many Moorhead residents have enjoyed the benefits of a certified levee, they may be placed back into the floodplain if FEMA remaps, if the levees that Moorhead's residents rely on are no longer certified, they may be forced to buy flood insurance that they have not budgeted for and cannot afford. The results of this would have a long-lasting negative impact on the economic vitality of Moorhead businesses and its residents. FEMA raising the 100-year flood level would also force the city of Moorhead, Minnesota's legislature and the DNR to re-evaluate Moorhead's levee system and invest more funds to raise that levee system back to a certified level. This may not be possible depending on the height of the new flood level set by FEMA.

Author: Medopera Subject: Highlight Date: 3/31/2016 10:25:22 AM
Comment ID: 11e
Topic: Adequacy Determination, Approve the Project

For all these reasons, the HBA of F-M and I encourage the DNR to adopt a Statement of Adequacy in this Draft Environmental Impact Statement, which supports approval of the proposed Fargo-Moorhead Flood Risk Management Project.

Sincerely,



Clay Dietrich
Dietrich Homes
HBA of F-M President



Bryce Johnson
HBA of F-M Executive Vice President

October 26, 2015

Jill Townley
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Rd
St. Paul, MN 55155-4025

RE: Fargo-Moorhead Flood Risk Management Project

Dear Ms. Townley:

I would like to thank you and the Minnesota Department of National Resources for providing the option to comment on the Fargo-Moorhead Flood Risk Management Project.

As president of the Greater Fargo Moorhead Economic Development Corporation (EDC), we represent both Clay County, Minnesota and Cass County, North Dakota as their official economic development organization. It is our mission to grow and diversify the economics of our SMSA by attracting, retaining and expanding business. As such the FM Flood Risk Management Project is critical for our community to sustain and grow our economy. In a Regional Workforce Study completed in June of 2015, it states our labor shed is part of an 11 county region. Four of the 11 counties are in Minnesota. Clay, Becker, Ottertail and Wilken counties are major partners in our SMSA. The four Minnesota counties had a combined average unemployment rate of 2.6% compared to the state of Minnesota at 3.2% and a national average of 5.5%. The study shows that Minnesota commuter flows account for over 40% of job holders crossing into North Dakota. We believe the Minnesota DNR did a great job on their socio economic impact analysis, but with our current data we feel it is a bit low.

I have attached a copy of the Regional Workforce Study, dated June 2015 for your review and evaluation. The study clearly shows this is a regional economy, co-dependent on one another for its growth and prosperity. Our region cannot be defined by state boundaries. The fact remains the actual border is a River which has the potential of crippling this dynamic economy and we cannot let that happen.

Without permanent flood protection for everyone in our region, we face certain economic crisis. We ask for your support in keeping Western Minnesota an economic leader alongside Eastern North Dakota. Together they create one regional economy that supports growth and prosperity for its residents who live, work and play on both sides of the river.

Sincerely,

James P. Garth
President
Greater Fargo Moorhead Economic Development Corporation

Commenter 12 cont.

OCT 29 2015

Summary of Comments on GreaterFargoMoorheadEconomicDevelopmentCorporation _JamesGartin_Commenter12c_Mail1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 4/8/2016 4:24:43 PM
Commenter 12 cont.

Author: Medopera Subject: Sticky Note Date: 4/8/2016 4:23:46 PM
Comment ID: 12c
Topic: Socioeconomics, Economics

REGIONAL WORKFORCE STUDY

GREATER FARGO/MOORHEAD REGION



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ACKNOWLEDGEMENTS

TIP Strategies would like to thank the many individuals who participated in the creation of this Regional Workforce Strategy. We are especially grateful to the Steering Committee who generously gave their time and input. Their expertise contributed immensely to our understanding of and our recommendations for the Fargo-Moorhead region. We would also like to thank the leadership and investor members for their critical input and support throughout the development of this plan.

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INTRODUCTION

Over the last decade, the Fargo-Moorhead region has been booming. Between 2004 and 2014, employment in the region grew 24 percent, from 119,367 jobs to 148,313 jobs. Over this same time period, the US economy grew by only 5 percent. Even during the Great Recession, when the rest of the nation saw employment contract by more than 6 percent, the Fargo-Moorhead region's employment base contracted by less than 1 percent and had fully recovered by 2010.

FIGURE 1. EMPLOYMENT GROWTH, 2004 - 2014

Geography	2004 Jobs	2014 Jobs	# Change	% Change
US	146,163,720	153,804,968	7,641,249	5.2
North Dakota	384,888	518,761	133,873	34.8
Minnesota	2,929,086	3,063,217	134,132	4.6
Fargo-Moorhead MSA	119,367	148,313	28,947	24.2
11-County Laborshed	241,081	276,609	35,528	14.7

Source: EMSI 2015.1 Class of Worker (QCEW Employees, Non-QCEW Employees & Self-Employed)

Healthcare and education were primary economic engines over the last decade, adding almost 8,000 jobs to the economy. In fact, these sectors were responsible for more than a quarter of all employment growth in the metro region.

In addition, five other sectors, including management of companies and enterprises, administrative and support services, professional and technical services, transportation and warehousing, and finance and insurance, experienced above average growth. Together, these sectors added about 8,200 jobs, which accounted for another 29 percent of the region's employment increase over the last decade.

Even the manufacturing sector grew more than 12 percent, adding more than 1,000 jobs. Considering the US manufacturing sector contracted almost 15 percent during the time period, this manufacturing employment increase is extraordinary.

With this employment expansion, the region's population increased almost 20 percent from 186,000 in 2004 to 223,500 in 2013. The additional population has also spurred growth in the construction, accommodation and food services, and retail trade sectors. These three sectors added 6,700 jobs between 2004 and 2014.

Over the past decade, Fargo-Moorhead's unemployment rate has remained below 4 percent, except at the height of the recession when it reached a peak of 4.3 percent. Most economists consider full employment to be between 5 and 5.5 percent, thus the region is well beyond full employment. In November 2014, the unemployment rate fell to 2.2 percent. Furthermore, the metro area's labor force participation rate is 75 percent, which is 11 percentage points above the national labor force participation rate and one of the highest in the country.

These strong economics are expected to continue. The regional economy is projected to grow another 7.6 percent over the next five years, reaching an employment base of almost 159,000 by 2019.

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FIGURE 2. EMPLOYMENT BY INDUSTRY, 2004 - 2014

NAICS	Description	2004 Jobs	2014 Jobs	# Change
72	Health Care and Social Assistance	14,371	20,135	5,764
9026/36	Construction	7,653	10,434	2,781
31	Accommodation and Food Services	10,035	12,417	2,382
56	Wholesale Trade	7,181	9,478	2,297
61	Education and Hospitals (State & Local Government)	8,992	11,126	2,134
44	Finance and Insurance	6,640	8,459	1,818
42	Administrative and Support Services	4,810	6,617	1,807
62	Management of Companies and Enterprises	1,649	3,390	1,741
55	Professional, Scientific, and Technical Services	5,285	6,952	1,667
9012	Retail Trade	14,480	15,967	1,486
54	Transportation and Warehousing	3,991	5,166	1,175
9029/39	Manufacturing	9,030	10,177	1,146
52	Educational Services	2,473	3,336	863
9011	Other Services (except Public Administration)	5,917	6,453	535
71	Government, Excluding Education and Hospitals	4,005	4,505	499
48	Arts, Entertainment, and Recreation	1,430	1,776	346
81	Federal Government, Military	1,220	1,397	177
53	Federal Government, Civilian	2,321	2,456	134
51	Real Estate and Rental and Leasing	1,909	2,011	103
21	Information	3,272	3,308	36
23	Mining, Quarrying, and Oil and Gas Extraction	38	68	30
11	Utilities	190	153	-37
22	Crop and Animal Production	2,470	2,212	-259

Source: EMSI 2015.1 Class of Worker (OCEW Employees, Non-OCEW Employees & Self-Employed)

WORKFORCE CHALLENGES

With this economic growth, workforce has emerged as a key challenge for the region as businesses struggle to find the talent they need to grow. In fact, over the last several years, workforce has been cited as one of the primary concerns of businesses in the Fargo-Moorhead region. As a result, the Greater Fargo-Moorhead Economic Development Corporation (GFMEDC) has led the initiative of recruiting, retaining, and developing talent to support business growth in the region. In GFMEDC's most recent five-year strategic plan, workforce attraction is the first priority.

Understanding the region's labor market challenges provides insight into why workforce is at the top of business and civic leaders' minds.

Many jobs to fill. The Fargo-Moorhead region currently has over 6,700 job openings, and the 11-county laborshed has more than 11,000 job openings. Over the next five years, the region is projected to have more than 30,000 openings, and the laborshed is projected to have 55,000 openings. These job openings include both new jobs and replacement jobs, which are open due to natural turnover in the workplace.

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Mismatch in skills. Employers across the region are already having difficulty securing the talent they need. Some of this difficulty is consistent with challenges employers across the United States are facing—the mismatch between the skills available workers have and the skills employers need. This is known as the skills gap.

Tight local labor market. In the Fargo-Moorhead region, however, the workforce challenges are further complicated by the low unemployment rate and the high labor force participation rate. There are not enough workers in the region to fill these job openings.

THE PROJECT

In the face of these challenges, the GFMEDC, the Fargo Moorhead West Fargo Chamber of Commerce (the Chamber), United Way of Cass-Clay, the Fargo-Moorhead Convention and Visitor's Bureau (the CVB), and the FM Area Foundation came together to spearhead the development of a regional workforce study and comprehensive strategy. The group hired TIP Strategies, an economic and workforce development strategy consultancy, to assist in conducting a detailed labor study and in developing a regional workforce strategy with deep dives into three of the region's key economic drivers—healthcare, manufacturing, and information technology.

Over the course of the last six months, the project team visited with stakeholders across the region and across industry sectors. We gathered input through one-on-one interviews, employer and educator roundtable discussions, an employer survey, an employee survey, and a series of community conversations with high school and college students. We also conducted a comprehensive analysis of the region's labor force, factors driving demand, and an examination of the alignment between educational output and industry requirements. For each of the three industries, we developed detailed profiles that include staffing patterns, regional labor supply, job posting analytics, relevant educational output, and regional resources.

THE NATIONAL SKILLS GAP

A number of reasons for the skills gap have been suggested by researchers investigating the issue. These reasons include:

- ◆ **Changing Skills.** With heightened automation, changes in technology, and evolving processes, the skills required of the workers have evolved. Many workers often find themselves with skill sets that have not kept pace with current needs. In addition, training programs are not always as dynamic as the workplace and may not be teaching the skills needed by the employers.
- ◆ **Demographics.** The aging of the Baby Boomers has resulted in a wave of retirements that is looming large, particularly in many of the middle-skills occupations—machinists, craft trades, utility linemen, and many others. The talent pipeline is not currently robust enough to fill the openings left by those retirements.
- ◆ **Policies and Priorities.** The focus on four-year degrees may have had the unintended consequence of siphoning students from vocational and technical training.
- ◆ **Culture.** Many young people today are not interested in pursuing careers in the occupations that are difficult to fill. In a recent survey by Nuts, Bolts, and Thingamajigs, The Foundation of the Fabricators & Manufacturers Association, 52 percent of teenagers ages 13 to 17 had little to no interest in manufacturing. Parents and their children often hold negative perceptions of manufacturing and trade jobs. Others are simply unaware of the opportunities in these careers.
- ◆ **Field of Study Choice.** Students often choose their field of study based on personal interest, rather than labor market information. This contributes to a mismatch between the supply of and demand for graduates of post-secondary education programs.

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The report that follows outlines the recommended response in a four-part strategy. These strategies focus not only on workforce development, retention, and recruitment but also on building a stronger framework for financial self-sufficiency and an emphasis on innovation to solve some of the workforce-related challenges. The regional strategy is summarized in Figure 3. The appendices include a detailed labor analysis, industry-specific workforce profiles, as well as the results of the employer and employee surveys.

FIGURE 3. REGIONAL STRATEGY SUMMARY

Vision. The Fargo-Moorhead region is an economically diverse employment center with a strong pipeline of talent to support current and future employers.

Goal. To strengthen the regional workforce system to support regional employers and to address the gap between available positions and qualified workers.

Strategic Framework and Priority Projects:

1. **CULTIVATE:** Strengthen the pipeline of local talent to support employers in the region.
 - 1 Community 101 for College Students
 - 2 TinyPulse for Talent Insights
 - 3 Winter Festival to "Embrace the Cold"
2. **ATTRACT:** Enhance and coordinate efforts to bring new talent to the region.
 - 1 Friends & Family Campaign
 - 2 Talent Recruitment Services
 - 3 Trailing Spouse Network
3. **BUILD:** Develop a framework for financial self-sufficiency and upward mobility for workers in low-wage and basic-skill jobs.
 - 1 Nonprofit Collaborative
 - 2 Affordable Housing Advocacy
 - 3 Employer-Led Childcare
4. **INNOVATE:** Encourage the development of innovative solutions to address the region's workforce-related challenges.
 - 1 Technology Hackathon
 - 2 Social Innovation Challenge

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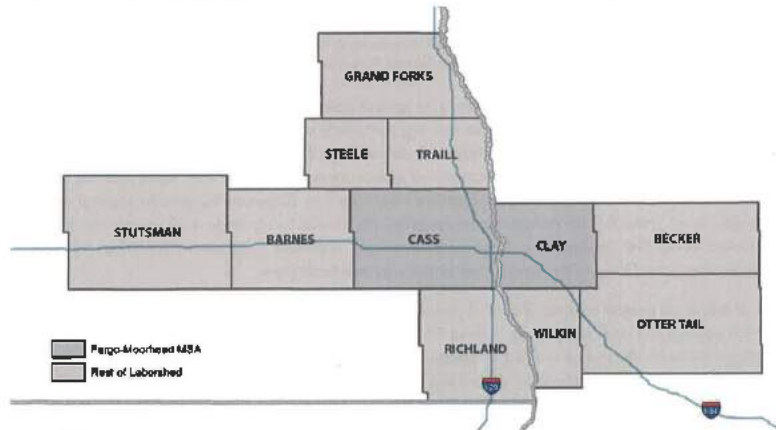
SUMMARY OF FINDINGS

As part of the project, an analysis of the regional labor market was conducted. This quantitative analysis was validated, informed, and augmented by interviews and group discussions with employers, education providers, students, nonprofit organizations, and workforce development officials. In addition, a survey of employers and employees was used to provide additional insights into the quantitative data. The key findings from this research is summarize on the following pages.

The laborshed has a civilian workforce of over 240,000. The laborshed of the Fargo-Moorhead Metropolitan Statistical Area (MSA) extends to an 11-county area that includes Grand Forks, Steele, Traill, Stutsman, Barnes, Becker, Richland, Wilkin, and Otter Tail counties in addition to the core counties of Cass and Clay. While the MSA has a civilian workforce of 125,000, the region that employers in the MSA draw from encompasses a civilian workforce of more than 240,000. Cass and Clay counties are significant employment centers in this laborshed as are Grand Forks and Otter Tail.

Most of the respondents to the employer reported that they largely recruit from the local workforce to fill their positions. Yet, commuting patterns reveal that many workers from the full 11-county region are willing to commute into the MSA for work. Furthermore, the labor force participation rates in some of the outlying counties are much lower than the MSA, which signifies that there is more slack in the labor markets in outlying counties. Tapping into the full laborshed could be an opportunity for regional employers.

FIGURE 4. FARGO MSA 11-COUNTY LABORSHED
BASED ON SHARE OF COMMUTING FLOWS AND RELATIONSHIP TO TRANSPORTATION NETWORK



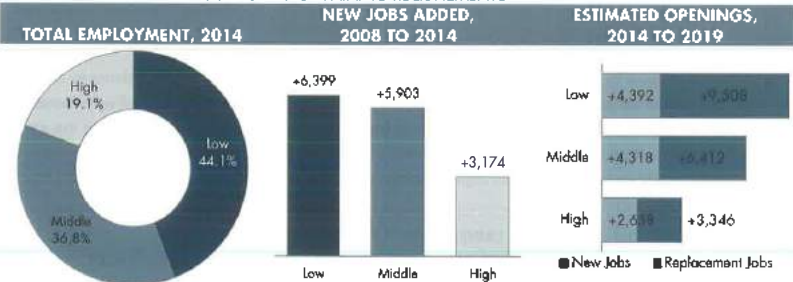
Source: TIP Strategies

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Low-skill jobs have been and are the fastest growing segment. As mentioned earlier, the Fargo-Moorhead MSA is projected to have more than 30,000 job openings between 2014 and 2019. More than 45 percent of these openings are considered low-skill. The average median hourly wage for the low skill occupations is \$12.98, which is well below the regional average. At the current cost of living, wages in these low skill occupations are not high enough to sustain a household with children without another working adult, which in many cases necessitates childcare. This also makes attracting talent to the region to fill these positions very challenging.

Employers who participated in the roundtable discussions as part of the project indicated that low-skill jobs are currently some of the hardest positions to fill. They described the situation as highly competitive and price sensitive with a lot a churn.

FIGURE 5. JOBS BY SKILL LEVEL
 BASED ON ENTRY-LEVEL EDUCATION AND TRAINING REQUIREMENTS



Source: EMSI 2014.3 Class of Worker (QCEW Employees, Non-QCEW Employees & Self-Employed) Note: Skill levels determined for individual occupations based on typical entry-level education and training requirements. "Openings" reflect new growth and replacement demand.

Regional wages are lower than the nation's. In spite of past and anticipated employment growth and the tight labor market, the region's wages still lag the nation's, particularly in more skilled occupational categories. The regional median hourly earnings is \$18.10, which is 10 percent lower than the national median hourly earnings of \$20.06. As shown in Figure 6, lower wage occupational groups are more on par or even higher than the national median. However, many of the higher wage occupations earn more than 20 percent less than the national median. For example, in the computer and mathematical occupations, the median hourly wage is 27 percent less than that of the United States. The median hourly wage for scientists and engineers is 23 percent less. Even taking into account the lower cost of living in the region, these wages are considerably low.

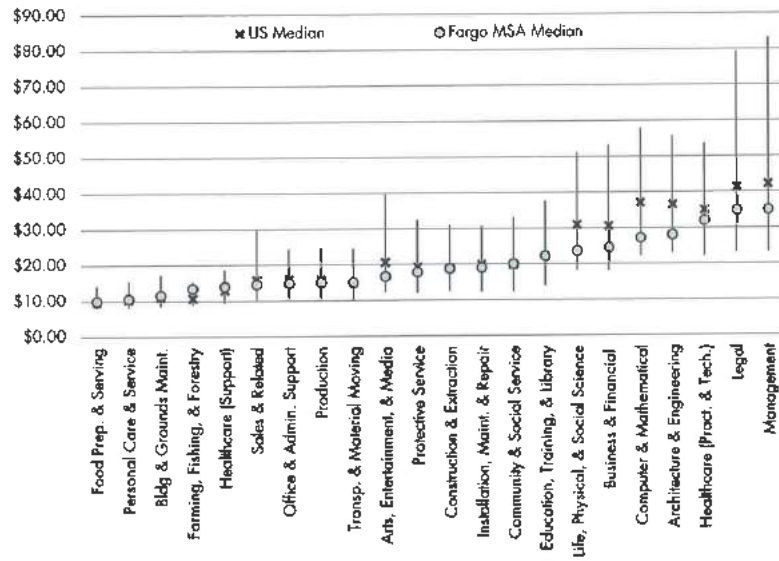
A look at online job posting analytics (Figure 7) reveals discrepancies in salaries by industry as well. Among all current job postings, the local salary range is about 90 percent of the national salary range. For healthcare-related job postings, the local salary range is about 14 percent higher than the national average. For manufacturing-related job postings, the local salary range is 34 percent less than the national average, and for information technology-related job postings, the local salary range is 40 percent less.

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FIGURE 6. MEDIAN HOURLY WAGE RATES BY MAJOR OCCUPATIONAL GROUP

FARGO MSA WAGES PRESENTED IN THE CONTEXT OF US WAGE RANGE

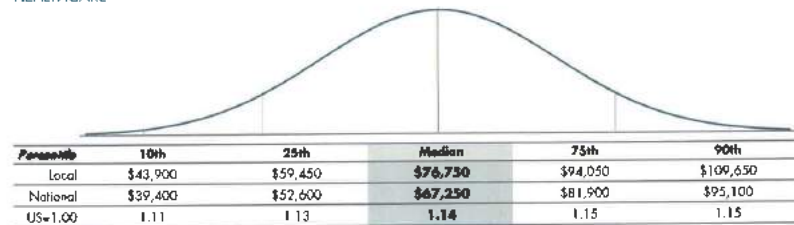
Line = US wage range from 10th to 90th percentile; Markers = Median hourly wage rates for US (x) and Fargo MSA (o)



Source: EMSI 2014.3 Class of Worker [QCEW Employees, Non-QCEW Employees & Self-Employed]

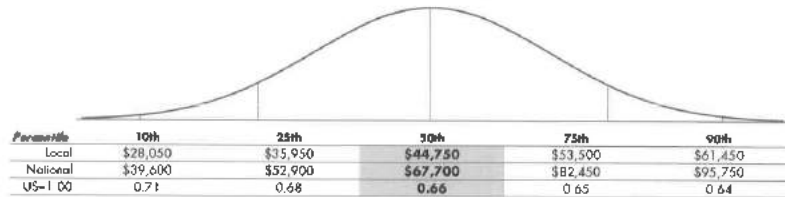
FIGURE 7. SALARY RANGES BY INDUSTRY

HEALTHCARE

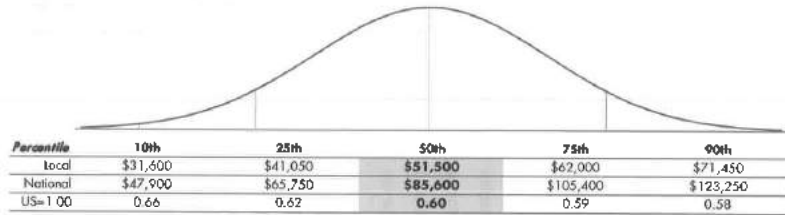


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MANUFACTURING



INFORMATION TECHNOLOGY



Source: Wanted Analytics

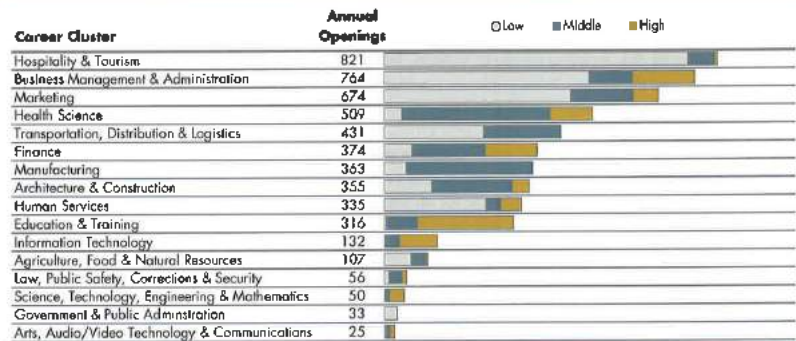
Students in the region, in many cases, are not choosing education programs that match with high demand occupations. The occupational clusters that are in highest demand are hospitality and tourism, business management and administration, and marketing. Within these clusters, most of the openings require a high school degree or less. Of the occupational clusters that require postsecondary education, health science, transportation, finance, and manufacturing top the list. Within these clusters, the training required is, for the most part, less than a four-year degree. In comparison, the list of the top 25 fields of study that graduates in the region are choosing are four-year degrees or above and are in fields such as registered nursing, business administration and management, elementary education, psychology, biology, accounting, and criminal justice. There are few graduates with degrees related to manufacturing, with the exception of mechanical and electrical engineering. There are also few graduates in health science other than registered nursing, licensed practical nursing, and medical technician.

In focus groups, representatives from the regional postsecondary institutions noted that the problem is not the absence of programs related to the high demand occupations. The programs are available, but few students are choosing these programs.

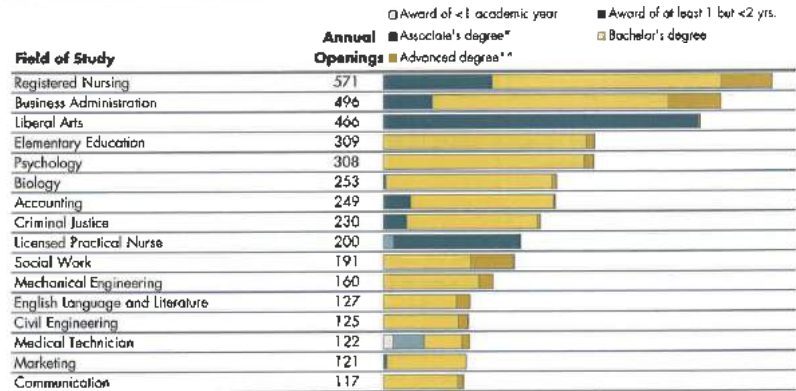
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FIGURE 8. HIGH DEMAND CAREER CLUSTERS VS TOP FIELDS OF STUDY

ANNUAL OPENINGS BY CAREER CLUSTER & SKILL LEVEL



DEGREE AWARDS BY FIELD OF STUDY & AWARD LEVEL



Source: EMSI 2014.3 Class of Worker (QCEW Employees, Non-QCEW Employees & Self-Employed); Natl. Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS). Note: IPEDS data include only schools eligible to participate in federal financial aid programs. Figures shown include first and second majors. *Associate's degree level completions include awards categorized by IPEDS as "Award of at least two but less than four academic years." **Advanced level completions represent all awards above the bachelor's-degree level.

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Employers report that retaining talent from other areas of the country is difficult. In multiple roundtable discussions with employers across many different industries, employers discussed what they were doing to recruit talent to the region to fill open jobs. Some are using third-party recruiters, others are recruiting heavily at specific colleges or in specific areas of the country. One common thread that we heard was that employers can attract talent to the region, but retaining outside talent past two or three years is very difficult. A wide range of reasons were given for this, including the desire to return “home,” relocating to a larger city, the pursuit of higher wages elsewhere, and the climate. These employers reported that talent that had previously lived in the region or had a connection to the region was more likely to stay.

In a separate employee survey, the almost 400 respondents can provide some insights into who stays in the region. Of the respondents that were not born in the region, most came to the region for college and then stayed. Of the respondents that came to the region specifically for an employment opportunity and stayed, the overwhelming majority came from other parts of Minnesota and North Dakota.

The new American population offers opportunities, but needs more educational support. In many different roundtable discussions over the course of this project, participants recognized that the new American population offers a resource for employers seeking to fill certain jobs. About 1,100 refugees have been resettled in the Fargo/West Fargo area over the past three years. Employers who have hired these new Americans had positive things to say about their work ethic. They did, however, note the need for English language acquisition and orientation to culture in the work place.

For many workers, affordable housing, childcare, and transportation are significant barriers to employment. Finding affordable housing is out of reach for many low-wage workers in the Fargo-Moorhead region. A 2012 study found that the number of homeless adults more than doubled between 2000 and 2012, with a total homeless population of 874 persons. The study also found that about one-third of the homeless persons interviewed had a job with around 10 percent working full-time. Of those not working, a lack of transportation was the most common barrier to employment.

Another barrier to work is the availability of high quality and affordable childcare. According to the most recent capacity snapshot of Child Care Aware North Dakota, Cass County has enough licensed childcare seats to meet only about 54 percent of the identified demand and the average cost accounted for about 9 percent of the median income for families with children. Furthermore, for many of the workers that need childcare, healthcare workers in particular, it is very difficult to find childcare with hours that match their shift work.

Transportation was also often cited as a barrier to employment. Affording a car was an obstacle to many, and public transportation focuses its coverage on high-density and high-traffic areas, which can leave out many of the residents that need it most. The hours of public transportation also did not serve the needs of those who work shifts.

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CONCLUSION

The economics of the region are expected to remain strong, and employment and population growth will continue to stretch the regional labor market. To meet the region's current and future workforce needs, employers, education and training institutions, nonprofit organizations, workforce and economic organizations must come together to strengthen the region's talent pipeline.

The strategy that follows offers a framework for cultivating and developing local talent, attracting new talent to the region, building a strong path towards financial stability for those who need it, and encouraging innovation to maximize efficiencies in the region's use of human capital. With the diligent implementation of the strategies over the next three to five years and careful evaluation of its progress, the region will move towards its goal of a demand-driven workforce system that supports business growth.

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REGIONAL WORKFORCE STRATEGY

The regional workforce strategy provides a playbook to help the Fargo-Moorhead region strengthen its internal and external talent pipeline to support its current and future employers. This will better position employers in the region to fill the more-than-30,000 openings that are projected over the next five years.

VISION

Establishing a common vision provides direction for the many stakeholders who participate in and contribute to the Fargo-Moorhead workforce development system. For this reason, the regional strategy begins with a vision statement:

**The Fargo-Moorhead region is
an economically diverse employment center
with a strong pipeline of talent to support current and future employers.**

The vision statement focuses on the region's long-standing role as an employment center and recognizes that workforce is a critical element of the region's ongoing economic success. It also highlights the importance of economic diversity and the evolving roster of employers in the regional economy.

GOAL

With this vision in mind, the primary goal of the regional workforce strategy becomes clear:

**To strengthen the regional workforce system
to support regional employers and
to address the gap between available positions and qualified workers.**

FRAMEWORK

Over the course of the project, four distinct themes emerged as necessary components of the regional workforce strategy. These are:

1. **CULTIVATE:** Strengthen the pipeline of local talent to support employers in the region.
2. **ATTRACT:** Enhance and coordinate efforts to bring new talent to the region.
3. **BUILD:** Develop a framework for financial self-sufficiency and upward mobility for workers in low-wage and basic-skill jobs.
4. **INNOVATE:** Encourage the development of innovative solutions to address the region's workforce-related challenges.

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CULTIVATE.

Strengthen the pipeline of local talent to support employers in the region.

The large number of projected openings coupled with the tight labor market offer great economic opportunity for the region's local workforce. To the degree possible, efforts should be made to align the region's talent base with the needs of its employers. This will require increasing the region's retention of graduates and employees from outside the region as well as creating more opportunities for connection between employers and employment-ready residents.

PRIORITY PROJECTS

- 1 Community 101 for College Students
- 2 TinyPulse for Talent Insights
- 3 Winter Festival to "Embrace the Cold"

1. Retain more graduates from regional high schools

Currently, the region's high schools and colleges graduate about 12,000 students annually. This pool of talent represents a rich resource for employers seeking entry-level workers. Our focus groups with area high school and colleges students revealed that their connection to and their perception of the community could be strengthened. It also revealed that students do have access to a wide array of career exploration opportunities, but their level of career awareness and knowledge of regional employers could be enhanced. Building awareness of regional career opportunities and strengthening students' connection to the community and to specific employers can help the region retain a larger portion of this talent pool.

- a. Raise awareness of career opportunities in the region among high school and college students and their parents, school counselors, and career centers.
 - Continue events such as Manufacturing Day and the Health, Tech & Trades Career Expo to provide hands-on opportunities for career exploration and to feature regional employers. Work with the IT Sector Council to plan an IT-specific event.
 - Partner with Junior Achievement, who reaches more than 7,000 K-12 students, to incorporate real careers at real employers in the region so that K-12 students are exposed to this information in their financial literacy training.
 - Work with the regional colleges' career centers to plan workshops that present students with information on high-demand careers, the skills these require, and the programs of study that support them. Also, provide students with a list of employers by sector.
- b. Forge stronger connections between students and local employers.
 - Continue to work with employers to develop internship, job shadowing, apprenticeship, and scholarship programs that provide students with opportunities to explore different workplaces and provide employers

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opportunities to find entry-level talent. Maintain an inventory of these programs and distribute it to career counselors at high schools, college career centers, and through CareerFM. (See *Strategy 1.4.c.* on page 19).

- Partner with employers to get involved with student activity clubs such as DECA to establish connections and build awareness. Plant or workplace tours, hands-on projects, and technology demonstrations could be good activities to engage students involved in these clubs.
- c. Actively work to integrate college students into the community.
- Create a Fargo-Moorhead Community 101 course that could be part of a student orientation that highlights the community and region's key assets and provides students with information on how to find activities that match their interests.
 - Bring knowledge of community events to them by ensuring local publications such as High Plains Reader and Fargo Monthly are distributed on campus and that students know about these resources and seek them out.
 - Invite college students to seek internships, take leadership courses, and participate in community service and recreation clubs.

2. Work closely with employers to retain talent in the region.

Employers in the region report that attracting talent to the Fargo-Moorhead region is not as difficult as retaining experienced talent past two or three years. The reasons reported by employers were various, but many reported that most employees leaving the region moved back home or pursuing opportunities in a bigger city. For example, employers report that many nurses move to the Minneapolis-Saint Paul area for higher pay and bigger city amenities after working for two to three years in the Fargo-Moorhead region. Employers also commonly cite the climate as a barrier to retention.

- a. Support employers in matching workers from outside the region with local hosts to help new residents build roots in the community and find what they like to do.
- Expand SmartConnections to include a community ambassadors program of individuals and families willing to serve as hosts and resources to new residents who have moved to the region to work.
 - Continue to develop and refine the SmartMove resource guide for ambassadors and new arrivals to use to find what they like to do.
 - Continue to hold SmartConnections events for new arrivals and their hosts to attend and socialize.
- b. Survey employees and residents to understand their quality of place preferences, identify projects that could improve their lives in Fargo-Moorhead, and set priorities for investments in quality of place initiatives.

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- Use an innovative tool such as Tiny Pulse that makes the survey-taking fun, short, and useful.
 - Continue to conduct in-depth market research, such as that done for the IT sector group, with a focus on different sectors and age cohorts.
 - Convene relevant stakeholders to report results and make a plan to move quality of place projects forward.
- c. Create an initiative aimed at “embracing the cold” and changing the internal and external negative perceptions of the regional weather.
- Plan a community-wide celebration of winter such as Winnipeg’s Festival de Voyageur.
 - Create a positive messaging campaign about winter months aimed at changing internal perceptions about the cold.
 - Ensure that community marketing materials include pictures of people enjoying winter activities.

3. Encourage more of the existing population to enter the workforce.

The labor force participation rate of the Fargo-Moorhead region is extremely high—75 percent versus 64 percent for the United States. However, there are pockets of residents who are willing and able to work if the right opportunity is available. Engaging the existing population is important for two primary reasons. First, about 45 percent of the openings over the next five years are for low-skill jobs, most of which are fairly low wage. Importing labor to fill these positions is problematic because the jobs do not pay wages that can support a family, which creates a greater demand for social services. In contrast, students and secondary income earners can fill these jobs and are less likely to need additional social support. Second, the strong economy can provide greater possibilities of connecting low-income residents with greater economic opportunity. However, a deliberate effort must be made to ensure this population is positioned to take advantage of the opportunities. Ensuring that employment-ready clients of local nonprofits are trained for high-demand, living wage jobs is the first step. Building a direct bridge between employers and trained, employment-ready residents is the second.

- a. Work with schools and colleges to encourage students to get part-time or full-time jobs to learn customer service skills and other basic employability skills.
- Partner with schools and colleges to create for-credit and/or work-study programs that would encourage students to seek employment.
 - Identify or develop a strong curriculum for basic employability skills that could be incorporated these programs.
- b. Make channels of re-entry easier for residents who have been out of the workforce (e.g. stay-at-home moms, caretakers, retirees, and ex-offenders).

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- Create targeted awareness campaigns to reach these residents.
 - Partner with employers to make the application process friendlier to these populations.
 - Create job-seeker resources specifically targeted at them (e.g. resume writing, interview skills, basic computer skills, job fair, etc.)
 - Work with employers to understand the needs of these populations and to make modifications to the workplace and work schedule where appropriate.
- c. Partner with the nonprofit community to connect clients who are work-ready to living wage jobs.

WORKFORCE EMPLOYER RESOURCE COLLABORATIVE (WERC)

Chicago, IL

The Workforce Employer Resource Collaborative (WERC) matches employers with quality individuals, assists people in finding living wage jobs, and customizes strategies to enhance recruitment and retention. WERC includes more than 35 nonprofit organizations who are committed to meeting employers human resource needs. It is coordinated by Inspiration Corporation, one of the nonprofit members.

The WERC coordinator cultivates employer relationships and identifies job openings. The coordinator then works with the nonprofit network to identify top candidates to fill those jobs. Once candidates are hired, the WERC network provides employers and employees support that improves retention rates. The collaborative provides these services at no cost to the employer.

- Designate a connector that can work with employers and the nonprofit network to match candidates with available job openings.
- Assemble a network of local nonprofits who work with residents to alleviate barriers to employment and provide training.
- Reach out to employers to inform them of this matching service and collect information on any openings they have that could be good fits for work-ready clients.
- When information on job openings has been collected, send a notice to the network of nonprofits to have them submit the resumes of candidates they think would be a good match for the job. Screen the resumes carefully and provide a list of top candidates back to the employer. The success of the network is dependent on the employers finding high-quality candidates.

4. Improve the alignment of student career choices, training resources, and industry needs.

A comparison of high-demand occupations and the top 25 fields of study chosen by regional graduates reveals a mismatch. The demand for workers in many career clusters outstrips the supply of graduates. This imbalance is evident in finance, manufacturing, construction, and information technology. Even within healthcare, business, and education, there is a mismatch, with students overwhelmingly choosing one particular field—registered nursing, business administration, and elementary education—while occupations require more skill diversity. Furthermore, a comparison of the educational requirements of the occupations and the types of degrees awarded by field of study reveals another mismatch. Many of the high-demand occupations require technical education (a two-year degree or less) while most of the region's students are pursuing a four-year degree. This mismatch is not because of a lack

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of programs aligned with industry needs. The region's higher education providers offer the classes, but the students, in many cases, are not choosing the programs that are aligned with high-demand careers.

- a. Partner with Minnesota State Community and Technical College (M State) and North Dakota State College of Sciences (NDSCS) to develop a train-to-hire model as a tool to directly align incumbent worker training and adult worker training with specific employers openings.
 - Convene customized workforce training leaders from each college to discuss possible models. [Skills for Chicagoland's Future](#) and [WorkAmerica](#) provide examples of models.
 - Identify an industry sector or talent cluster to pilot the program with first. Possible sectors could include the healthcare, manufacturing, and construction. Possible talent clusters could include skilled trades, information technology, and direct care.
 - Work with the appropriate sector group to identify common openings, develop a list of common skills and requirements, and design a basic training module that meets those common skills and requirements. Then, work with individual employers to determine their customized training needs related to these openings and design a more advanced module to prepare employees specifically for their openings.
 - Design and launch a targeted recruitment campaign to identify candidates for the training program. Job Service North Dakota, the Moorhead WorkForce Center, and local nonprofits would be good places to start.
 - With a strong roster of training candidates and employers with related openings to fill, conduct training and place the candidates at participating employers. Help employers access any relevant training grants.
 - Conduct follow-up interviews with employers to gather feedback and insights as to how the training and candidates fit their needs.
- b. Utilize sector councils to provide a channel for interaction between industry & education.

EXXONMOBIL COMMUNITY COLLEGE PETROCHEMICAL INITIATIVE

In 2013, ExxonMobil initiated a workforce training program to enable the Greater Houston Region's nine community colleges to collaborate more closely in an effort to prepare local residents for jobs in the petrochemical sector. The initiative brought together the community colleges to identify occupations critical to the industry, inventory training resources available to support those occupations, document the skills and certifications required for the critical occupations, ascertain training gaps, and share expertise and curricula to fill the training gaps.

The Community College Petrochemical Initiative has evolved into EnergizeHouston in partnership with the Greater Houston Partnership's Upskill Houston and with additional support from ExxonMobil. EnergizeHouston has expanded its collaboration to include school districts in the region as well as scholarships to support training in the key occupations. In addition, the initiative provides in-service training and curriculum development assistance for all instructors that support critical occupations in the community colleges. In both spring and fall, they hold a Career and Technical Education Conference for school counselors, career and technical education directors, and teachers of career and technical education courses.

For more information, visit:
www.gulfcoastcc.org/ccpi.php

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- Continue to ensure the relevancy of K-12 and post-secondary curricula through events such as industry summits and Minnesota State University Moorhead's sector breakfasts.
 - Continue convening the Manufacturing Committee and participating in the IT Sector Group. Create a permanent Healthcare Committee that continues the work started during this workforce study. (See Sector-Specific Strategies on page 31.)
 - Engage employers through the sector councils in the education process by jointly discussing and developing more work-based learning opportunities for both K-12 and postsecondary students.
- c.** Create a database of tools that education and training providers can use to educate students on career pathways and local career opportunities.
- Include information on high-demand careers, work-based learning opportunities, job shadowing, plant tours, internships, summer learning opportunities, etc.
 - Distribute this database to education and training providers in the region and make it available to students through CareerFM.
 - Conduct outreach to employers to list or create opportunities to be included in the database. Reach out to career counselors, career centers, and students to distribute the database and drive traffic to it.
- d.** Continue to promote, develop, and refine the Education that Works initiative.
- Through the sector councils, provide a forum for the business community to engage with the school districts and voice their specific needs and observations as they pertain to 21st Century skills and career readiness.
 - Create a working group focused on dual-credit and early college programs to work on identifying and removing obstacles (legislative and administrative) to create more opportunities for high school students to graduate with post-secondary credentials.
 - Collaborate with regional public school districts and regional universities on teacher training and certification to ensure that new teachers are prepared for teaching 21st Century skills.
 - Continue to provide professional development opportunities for educators through the Educators-in-Industry as well as programs such as InSourced and EdVentures to promote curriculum relevancy.
 - Continue to create and promote both curricular and extracurricular experiences for students to be immersed in project-based learning.

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2

ATTRACT.

Enhance and coordinate efforts to bring new talent to the region.

Though retaining talent in the region and bringing more residents into the workforce will enlarge the region's pool of available talent, it will only add a few hundred workers, not the thousands of workers needed to fill the anticipated openings. Growing the labor pool through the in-migration of new workers is imperative to meet the staffing needs of regional employers.

PRIORITY PROJECT

- 1 Friends & Family Campaign
- 2 Talent Recruitment Services
- 3 Trailing Spouse Network

Yet, many employers spoke of the challenges of recruiting talent to the region. Reinforcing their efforts with strong community messaging, supportive materials, and a set of tools can help facilitate the attraction of new talent to the region.

Employers did note, however, that recruiting people with connections to the region is considerably easier. For this reason, a key aspect of this talent attraction strategy is establishing ties and greater access to the network of Fargo-Moorhead's friends and family.

1. Launch a campaign to build awareness of the opportunities in Fargo.

Reaching out strategically to key talent pools can help the region position itself as a talent magnet, not only in the Great Plains region, but also in distinct markets across the United States. Social media has created valuable distribution channels for targeting talent. Developing clear messages and consistent content about opportunities in the Fargo-Moorhead region and leveraging social networks to distribute this information can be a highly effective means of reaching talent that has a high propensity to consider moving to the region.

- a. Reinforce the North of Normal branding campaign in activities promoting Fargo to the young, professional, creative audience.
 - Marry the North of Normal Campaign with the SmartMove Campaign and develop co-marketing collateral to "sell" the community to potential new residents. Tailor the information to make it inclusive and appealing to a range of demographic groups and skill levels.
 - Leverage social media tools to engage target audiences in games or contests that promote the brand and raise awareness of the region.
 - Create a digital ambassadors program as a channel to push positive messages out about the Fargo-Moorhead region. Social Toaster is a common tool for managing this program.

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- b. Design a friends and family campaign to inform alumni, who live in other areas, of the opportunities and great quality of life in Fargo-Moorhead.
- Assemble a network of local alumni associations—both high school and college—that are willing to push content out to their alumni network.
 - Organize a committee that includes influential alumni as well as young professionals to be champions for the network, act as a sounding board, provide content for the online network hubs, and assist in planning events. Make a goal of creating a committee of 20 members who would each recruit 100 individuals to the network.
 - Through this network of alumni associations, committee members, and other social media outlets (LinkedIn, Facebook, Twitter), invite individuals to join the Fargo-Moorhead North of Normal network. Use a tool such as ProudCrowd to manage the network.
 - Post current information on initiatives and events that may be of interest to the alumni network.
 - Invite alumni interested in moving back to the Fargo-Moorhead region to post their resumes on CareerFM and encourage more regional employers to post job openings.
 - Set up a mentoring program that will connect young alumni with more experienced alumni in their current city of residence to assist young alumni with professional development and career advancement.
 - Hold regular networking events in metro areas with high concentrations of Fargo-Moorhead region alumni.
 - Hold an annual alumni event in Fargo, possibly in conjunction with the Winter Festival or another local event/festival.
 - Create online forums where alumni can interact with one another.
- c. in partnership with Emerging Prairie, develop residents as community advocates to spread positive messages about the region and strengthen community pride.
- Organize and hold regular community events that celebrate what makes Fargo “North of Normal” and recognize individuals who are actively making the region a better community.
 - Create a series of Sonic IDs to promote community pride.

SONIC IDs

Atlantic Public Media pioneered the **Sonic ID**, which has been replicated across the country. These short sound bites feature residents telling stories and anecdotes about things that they love about the region and what makes the region unique. The 30 to 60 second spots help to create a local voice and a distinct sense of place as they are woven throughout a broadcast during interstitial time.

While Sonic IDs have most often been used during public radio broadcasts, there is no reason that they couldn't be used on other radio stations and on television broadcasts.

For more information on their program and examples, visit: www.atlantic.org/local/the-sonic-ids

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- Use the digital ambassador network to push positive content out to Fargo-Moorhead residents to help establish a more positive perception of their community.

2. Support employers with recruitment tools that many can access and use.

All employers seeking to fill job openings with talent from outside the region are actively marketing the region. Supporting these employers' efforts with common community marketing materials and tools can help reduce employers' marketing costs and help ensure consistent messaging. In addition, leading coordinated efforts to recruit targeted populations can also provide employers greater access to talent pools they might not be able to reach on their own.

a. Create a suite of services to support employer recruitment efforts.

- Share community marketing collateral (Strategy 2.1.a.) with employers to support their recruiting efforts.
- Continue to provide out-of-state recruits with community tours.
- Ensure the resume database on CareerFM is populated with Fargo-Moorhead region alumni (See Strategy 2.1.b.) and accessible to employers.
- For high-demand jobs, use a tool such as Wanted Analytics to identify target markets for recruitment and organize out-of-market trips to promote career opportunities in Fargo-Moorhead.
- Organize joint recruiting trips where multiple employers can present their opportunities for work in the Fargo-Moorhead region. Not only can these trips spread costs across multiple employers, but they can demonstrate to potential recruits that there are clusters of companies in Fargo that provide a rich array of career opportunities.

BATON ROUGE AREA CHAMBER - TALENT INITIATIVE

The Baton Rouge Area Chamber of Commerce (BRAC) launched its Talent Development Program in 2011 as part of its five-year strategic plan. The program focuses on talent retention and talent attraction. The program consists of a talent database, regional relocation resources (RJ), and the Baton Rouge Area Intern Network (BRAIN).

The talent database is a catalog of resumes of professionals who are seeking to further their careers in the Baton Rouge Area. To populate the database, BRAC works closely with the alumni associations from the region's universities and high schools.

RJ assists area employers with their talent attraction efforts by connecting them with out-of-market candidates, creating tailor-made regional awareness presentations to aid in talent recruitment, leading tours of the region for recruits, and making out-of-market recruitment trips.

BRAIN works to increase the number of internships available to students in the area by providing resources to support the employers that create them and the students that are seeking them. An internship job board is one of the resources provided.

Additionally, BRAC recently launched the website www.livecapitalized.com, designed to be a resource for newcomers to connect and grow roots in the community.

For more information, visit:

www.brac.org/ecacomp/talentdev.asp

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- b. Organize alumni events in areas where there are high concentrations of Fargo-Moorhead alumni to inform them of the opportunities to move home.
- Request zip codes of alumni's addresses from the alumni network partners and create a map that identifies concentrations of Fargo-Moorhead alumni.
 - Create a video that features residents who have moved back to the region who can talk about why they moved back, what they love about the region, and how it has changed
 - In the top three to five markets, plan an alumni event that features fun Fargo-made products, North of Normal product giveaways, an update on what is going on in Fargo-Moorhead (from people like the mayors), the video described above, an orientation of the CareerFM tools that could help the alumni find opportunities, and an invitation to come see for themselves how great the region is. These could be held before the annual alumni event (See 2.1.b).
- c. Formalize the use of a network of employers to identify employment opportunities for trailing spouses.
- Conduct interviews with trailing spouses to understand their experience, skills, and interests.
 - Invite trailing spouses to post their resumes on CareerFM.
 - Circulate trailing spouses' resumes among Fargo-Moorhead employers that might be a good fit.
 - Where possible, introduce the trailing spouses to potential employers.
- d. Explore avenues for promoting temporary immigration to fill critical openings through temporary work programs.
- Organize a group of employers interested in seeking temporary foreign workers to fulfill short-term staffing needs and create a working group by which these employers can share resources and collaborate on ideas.
 - Identify an existing designated sponsor to

FORMALIZING A TEMPORARY WORK PROGRAM

The United States has two types of visas that support temporary work: the **H-2B Visa** for temporary non-agricultural workers and the **J-1 Visa** for exchange visitors. Both of these programs offer employers a short-term and temporary solution to meet their staffing needs as the region works to develop and attract talent.

The H-2B Visa program can assist employers in meeting seasonal, intermittent, or peak-load staffing needs. The worker may stay in the United States for increments of up to 1 year. The program is currently capped at 66,000 visas. In Fiscal Year 2015, this cap was reached by March, and no more petitions will be accepted until October 1.

The J-1 Visa supports a variety of different cultural exchange programs. The intern, trainee, and specialist programs allow employers opportunities to bring in foreign workers for cultural exchange and professional development. Program participants apply through a designated sponsor, who places them. There is no cap on this program.

Bringing employers and universities together to create a joint international exchange program will allow the region to better meet its short-term staffing needs. By developing expertise in navigating these programs, the region will be better positioned to take advantage of these visa programs and create a pipeline of international talent.

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support J-1 Visa programs or create a sponsoring organization.

- Help employers identify possible housing solutions for temporary workers. For workers without families, a network of local host families could be organized to provide temporary housing and opportunities for cultural exchange. For workers with families, short-term rentals or possibly second homes could be identified and offered as solutions.
- Work with regional college offices that assist international students to create information resources for international workers and to identify local resources that could help connect international workers with needed assistance.

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3

BUILD.

Develop a framework for financial independence and upward mobility for workers in low-wage and basic-skill jobs.

As mentioned earlier, about 45 percent of the openings between 2014 and 2019 have been and will continue to be in low-skill occupations. Many of these openings are in hospitality, food service, and retail, which are important contributors to the region's quality of place. Other openings include occupations that are vital supports for families, including child care workers and nursing assistants. Valuable skills can be gained in each of these occupations, but a strong framework for financial independence and upward mobility must be developed to support these workers. Having such a framework in place can help to ensure that the region's economic growth is inclusive and that low-income residents are in positions to take advantage of economic opportunities.

1. Create a more formal collaborative of nonprofits working with low-income clients around income stability.

Working with nonprofit partners to establish a regional framework for financial independence and stability can strengthen the regional support network and wraparound services available to low-income residents. Such a collaboration can provide nonprofit partners with a common set of goals and opportunities to share information, best practices, and lessons learned. It also helps build connections between nonprofits and formalize referral networks and shared services. This holistic approach, in turn, enhances the capacity of the nonprofit network to offer comprehensive and bundled services to the benefit of their low-income clients.

a. Establish a common set of goals.

- Convene nonprofits that provide services for low-income residents.
- Define a common set of long-term goals and desired outcomes for the network.

PRIORITY PROJECT

- 1 Nonprofit Collaborative
- 2 Affordable Housing Advocacy
- 3 Employed Childcare

UNITED WAY THRIVE

Houston, TX

In July 2008, United Way of Greater Houston launched its THRIVE program, which is a collaboration of 21 nonprofits that provide comprehensive services to help families find the path to financial stability.

The initiative grew out of a community study that pinpointed financial instability as a leading issue for families. United Way found that while many programs were addressing pieces of the problem, there was a need for a more coordinated effort, so it pulled together elements of the various programs to create a more holistic approach.

THRIVE seeks to enable families to reach their financial goals in three ways: by increasing income, building savings, and acquiring assets. It does this through its network of nonprofits and by partnering with community colleges, workforce development offices, financial institutions, and employers.

Since its launch, the program has reached 52,000 families.

For more information, visit www.unitedwayhouston.org/our-work/family-stability/united-way-thrive

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- Collaborate to integrate these goals into the individual missions of each nonprofit.
- Identify any gaps in the support network that could be barriers to reach these goals.
- Identify and secure key partnerships outside of the nonprofit network that will help to fill these gaps.

b. Facilitate collaboration and information sharing.

- Convene nonprofit partners in quarterly workshops to share information, discuss challenges, and brainstorm solutions.
- Create a set of shared resources and make them accessible to partners. An example of a shared resource is a list of high-demand jobs and related education and training programs. This list should include the occupation, related program of study, duration of training, cost of program, related scholarships, etc.

c. Collect, aggregate, and report the results.

- Request that partners submit a common list of output and outcome measures.
- Aggregate these measures and report them back to the network of partners and funders.
- Work with the partner network to analyze the results and make strategic and programmatic changes where needed.

2. Increase access to and the supply of affordable housing.

Housing stability is one of the critical components of financial stability. Yet, access to affordable housing for low-income workers is low in the region. A low vacancy rate and high rental rates make affordable housing out of reach for many low-income individuals.

- a.** Expand the FM Coalition for Homeless Persons' Landlord Risk Mitigation Fund with employer support to improve access to housing for their employees who are considered "high-risk."
- Work with members of the Coalition to define how the program could be managed to support employers who are struggling to fill low-skill, low-wage positions.
 - Invite employers who employ low-wage workers to make a contribution to the Fund based on a percentage of the number of low-wage workers in need of housing support and their risk of rent default.
 - Assist employers in identifying employees in need of housing assistance and connecting them with the program.
- b.** Advocate for making rental units and housing available for low-income working families, particularly adjacent to major employment centers.

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- Work with the cities of Fargo, West Fargo, and Moorhead to identify their primary employment centers, affordable housing units, and transportation routes. Evaluate their existing affordable housing policies from a regional supply standpoint and provide assistance/guidance in helping them make any needed policy modification.
- Based on this analysis and the state Housing Needs Assessment, identify where affordable housing units are needed and define appropriate partners for ensuring the housing units are built or made available.
- Meet with the owners of older multifamily rental units to discuss the possibility of dedicating those units to affordable housing.

3. Increase the number of childcare spots available for low-income, working families.

For working families with young children, finding reliable, high quality childcare is essential. In interviews and roundtable discussions, employers and other stakeholders agreed that the regional shortage of childcare is a big challenge for all working families in the region and for low-income working families in particular. This shortage of childcare is a major barrier to employment for parents who are willing and able to work.

- Help interested employers establish near-site child care centers. These centers could be placed in clusters of employer partners and shared among those partners' workers.
 - Invite employers to express interest in participating in the program.
 - Connect interested employers who are in close proximity to each other and facilitate a discussion of how the employers' childcare needs could be met collaboratively. Note, cooperative models can reduce the cost (making it more accessible) and reduce staffing needs, which are key advantages to meeting this community need.
- Explore creative solutions for meeting childcare needs among low-wage workers, such as co-operative models, intergenerational care models, or innovative subsidies.
 - See Strategy 4.2.b.

EMPLOYEE MODEL COOPERATIVE: GEOKIDS

GeoKids is an employee-model cooperative child care center located in Menlo Park, CA on the campus of the US Geological Survey (USGS). The center opened its doors in 1987 and serves USGS employees as well as employees at surrounding companies.

A parent-elected board of directors governs the cooperative and includes parents, the program director, and employer representatives. Parents contribute "co-op hours" based on the number of hours their child is at the center. "Co-op hours" include helping with the care of children and other support activities, such as weekend workdays. Parents also participate in four hours of training each year.

The center currently serves almost 70 children ages 3 months through pre-kindergarten.

For more information on cooperative models, visit: www.reic.uwcc.wisc.edu/childcare

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4. Improve access to public transportation for low-income families.

For many low-income workers, car ownership is out of reach. Even for those that do own cars, break-downs and repairs can keep their vehicles off the roads for extended periods of time. As a result, many low-income workers must rely on public transportation to get to work. However, the routes and hours often do not match with the employment opportunities. As such, the lack of access to reliable transportation serves as a major barrier to employment for many low-income individuals.

a. Ensure public transportation connects low-income areas with locations where low-income residents are likely to find jobs or be employed.

- In partnership with large employers, conduct a survey of transportation needs to identify clusters of individuals that rely on public transportation or that have unreliable transportation. Collect information on the individuals' work schedules.

- Work with city officials and businesses to identify new transportation routes and schedules according to where clusters of employees without transportation live and what their work schedules are.

b. Explore creative solutions for meeting transportation needs, including ride share programs, van pools, and carpool matching.

- See Strategy 4.2.b.

RIDESHARE*Central Virginia*

RideShare is a program of the Thomas Jefferson Planning District Commission and Shenandoah Planning District Commission. The program works to increase mobility and reduce traffic congestion throughout Central Virginia.

The program offers a variety of services including carpool matching and vanpool coordination. For employers, RideShare works to analyze the transportation patterns of employees, identify opportunities for corporate involvement, and develop a customized transportation plan.

For more information, visit:
www.rideshareinfo.org

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4

INNOVATE.

Encourage the development of innovative solutions to address the region's workforce-related challenges.

As stated previously, the Fargo-Moorhead region's workforce demand cannot be met with the existing population. Yet, bringing new talent into the region creates more demand for services—retail, hospitality, food, and personal services—and the jobs that support those services, which are often low-skill, low-wage jobs. Demand in this segment of jobs is already one of the most challenging segments to fulfill.

PRIORITY PROJECTS

- 1 Technology Hackathon
- 2 Social Innovation Challenge

Furthermore, the region's low-income workforce faces significant barriers to employment. The primary challenges include access to affordable housing, high quality childcare, and reliable transportation.

The Fargo-Moorhead region is not alone in its struggle to meet the demand for low-wage work. Across the country, communities struggle with the rapid growth of low-wage/low-skill jobs, the demand for social services that these types of jobs create, and the barriers to employment that low-income families often face. Innovative technology solutions to meet the demand for these service jobs and reduce barriers to employment could put the region at the forefront of an economy where growth is led by middle and high-skill occupations and where individuals have greater access to these opportunities.

1. Foster the development and adoption of technology-based solutions to meet the demand for low-wage jobs.

- a. Sponsor a hackathon in partnership with the NDSU Technology Incubator focused on process automation and the use of technology.
 - With representatives from employers and the incubator, define specific topics or areas that will be targeted for innovative solutions.
 - Around each topic, hold a hackathon that brings together multidisciplinary teams of product designers, developers, engineers, and entrepreneurs to develop products that would automate processes in the region's service industry.
 - Match winning solutions to regional business expertise and mentors to assist in accelerating the ideas to market.
- b. Develop an outreach partnership that would work with service industry businesses who are having difficulty finding workers to examine processes and look for staffing efficiencies.

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- Work with Impact Dakota to understand which of their existing programs could be applied to the service industry.
- Organize a series of workshops on lean concepts as applicable to the service sector (retail, hospital, food and personal services) and on possible technology solutions that are available.
- Enlist panels of experts to serve as consulting teams to assist these service businesses in examining their processes, assessing their needs, and making recommendations.
- Create and manage a loan fund that could assist businesses with investing in the capital required to implement some of the recommended changes.

2. Engage local social entrepreneurs in resolving transportation, housing, and childcare challenges.

- a. Invite local nonprofits and stakeholders to discuss the issues at the social innovators forum before 1 Million Cups.
 - Organize a panel of local and national experts to explore the regional issues of transportation, housing, and childcare as barriers to employment.
 - Present innovative case studies of solutions as they have been applied to address the challenges in other areas. If possible, invite representatives who are knowledgeable of the cases to present and answer questions.
 - Brainstorm possible solutions for the Fargo-Moorhead region with audience members.
- b. Organize a social innovation challenge around transportation, housing, and childcare.
 - Invite teams to register ideas about how to address the challenges through social enterprise.
 - Hold a pitch competition for these ideas, judged by a panel of experts, to choose winners in each of the three areas.
 - Award grants to idea winners to be used to accelerate their ideas to market. Connect these teams to incubator space and other entrepreneurial support resources.

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INDUSTRY-SPECIFIC INITIATIVES

Through a series of industry-specific meetings, each of the three sector groups identified one to two initiatives to undertake. The initiatives are described below:

HEALTHCARE

- 1 The sector participants decided that it would be most beneficial to conduct targeted work around critical occupations. The first occupation identified is nursing assistants/personal care aides that do not need a formal certification. The idea is to provide basic training (25-30 hours) that would provide aides with building blocks that all employers need. Then each employer could provide any specific training on top of this. The program would support home health as well as facilities.
- 2 Another area of critical need for the healthcare employers is childcare that meets the scheduling needs of shift-work. The sector participants wish to explore the idea of a joint childcare facility that would be structured around the types of shift work that healthcare workers typically have.

MANUFACTURING

- 1 Sector participants felt that jointly working on a certification program aimed at attracting high school students into manufacturing. The basic manufacturing certification is a program that would be offered to high school students. Upon completion of the coursework, the student would earn a certificate while concurrently earning a high school diploma. The program would cover basic manufacturing processes and soft skills. It could also have a core of modules and electives that would be more employer specific.
- 2 The manufacturing committee has coordinated an annual Manufacturing Day event in prior years. In 2014, the event exposed 170 high school students to regional manufacturers. The committee plans to coordinate this event again in 2015.

INFORMATION TECHNOLOGY

- 1 The IT sector group would like to plan an IT specific event like the Health, Tech & Trades Career Expo. This event would expose students to IT careers and to IT employers. It would provide students with opportunities to for hands-on learning and build awareness of the types of employers and careers in the Fargo-Moorhead region.
- 2 Sector participants also felt that the IT community in the Fargo-Moorhead region lacked a center of gravity. The participants felt that developing a mechanism to build a stronger community of tech talent in the Greater Fargo region is necessary. This mechanism would also be instrumental in attracting tech talent to the region. The sector group has completed a first phase of market research and is now working on defining what the best mechanism would be.

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APPENDIX A: LABOR MARKET PROFILE

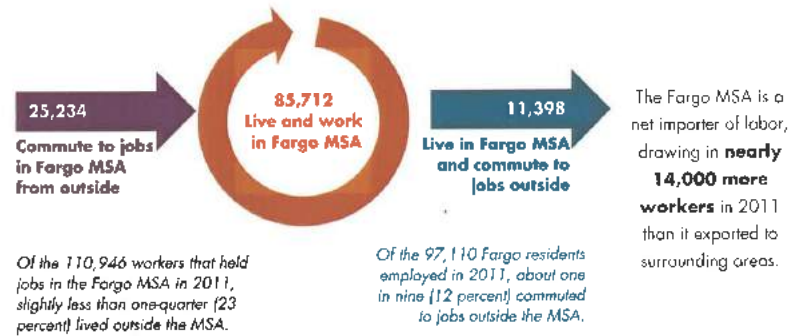
This section will provide an overview of the local labor market, with comparisons to the state and the United States. Topics addressed in this section include commuting patterns, unemployment rates, population trends, educational attainment, and domestic migration flows. The quantitative analysis is supplemented by findings from a survey of Fargo-area employers and employees, as well as insights gleaned from roundtables and interviews with others knowledgeable about the local workforce. Additional details regarding the surveys are presented as Appendices C and D.

LABORSHED DEFINITION

To document the Fargo laborshed, commuting patterns data were compiled from the US Census Bureau's Local Employment Dynamics (LED) program. This state-federal partnership combines data from state administrative records with federal data products, such as censuses and surveys, to provide a comprehensive picture of the labor force.

REGIONAL EMPLOYMENT CENTER. A look at commuting flows (Figure 9) reveals that more than three-quarters of the jobs in the Fargo MSA (77 percent) were filled by local residents in 2011, the most recent year for which data were available at the time of analysis. In addition, the metropolitan area "imports" more workers than it "exports" with slightly more than 25,000 people commuting to work from communities outside the MSA, compared with roughly 11,400 Fargo residents commuting to jobs outside the two counties. These findings point to Fargo's role as an employment hub for residents of the MSA as well as workers living in the surrounding area.

FIGURE 9. INFLOW/OUTFLOW FOR FARGO ND-MN, 2011
FLOW OF WORKERS TO/FROM THE TWO-COUNTY MSA



Source: US Census Bureau, Local Employment Dynamics

Note: Overlay arrows are for illustrative purposes and do not indicate directionality of worker flow between home and employment locations.

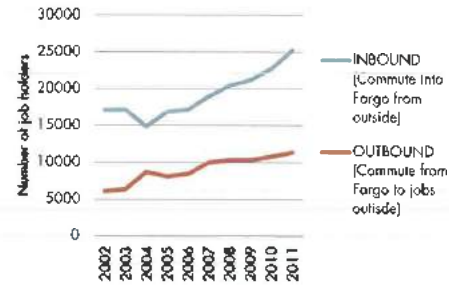
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A look at long-term trends (Figure 10) confirms that the two-county MSA has consistently drawn workers to the area, with the number of inbound commuters exceeding those outbound in each of the years for which data are available. After narrowing considerably in the first half of the decade, the gap widened sharply later, with the number of inbound commuters nearly double the outbound figure by 2011.

DISTANCE & DIRECTION Because the majority of people who are employed within the Fargo MSA live within its boundaries, commute distances are minimal. Most workers (70 percent) traveled less than 10 miles between work and home in 2011 (Figure 11). This figure has dropped slightly from 2002. During the same period, the share of workers who commute much greater distances—50 miles or more each way—has risen slightly, from 15 percent of the MSA’s workforce in 2002 to 18 percent in 2011.

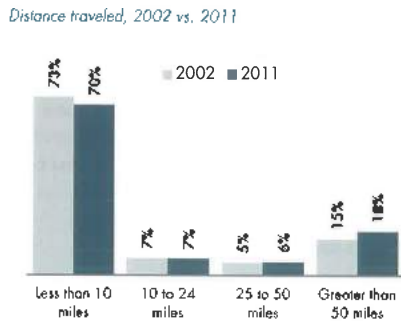
Figure 11 also shows the direction traveled. The MSA’s workforce is relatively evenly distributed on this variable, although workers are slightly more likely to live south of their place of employment, with the fewest number traveling from northern compass points. However, workers traveling more than 50 miles were significantly more likely to live to the west or southeast of their job, reflecting the path of Interstate 94.

FIGURE 10. COMMUTING FLOWS, 2002 TO 2011
FARGO DRAWS IN MORE WORKERS THAN IT “EXPORTS”

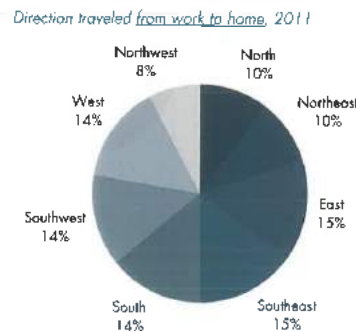


Source: US Census Bureau, Local Employment Dynamics

FIGURE 11. DISTANCE & DIRECTION TRAVELED
SHARE OF JOB HOLDERS THAT WORK IN THE FARGO MSA



Source: US Census Bureau, Local Employment Dynamics



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WHERE WORKERS LIVE. Two out of five people employed in the Fargo MSA lived in the city of Fargo in 2011, representing roughly 41 percent of the total workforce (Figure 12). Among the top 10 cities, only three were located in counties other than Cass and Clay. Together, these three communities accounted for just over 3 percent of the MSA's workforce.

A look at selected economic and demographic characteristics (Figure 13) shows several differences between those who live and work in the Fargo MSA (identified as "internal job holders") and its inbound and outbound commuters. Both inbound commuters (those commuting to jobs in the metro area from outside the two-county region) and outbound commuters (those living in the MSA but working elsewhere) were more likely to be younger and to earn less than \$1,250 per month. Both groups were also less likely than internal job holders to work in service industries.

FIGURE 12. PLACE OF RESIDENCE, 2011

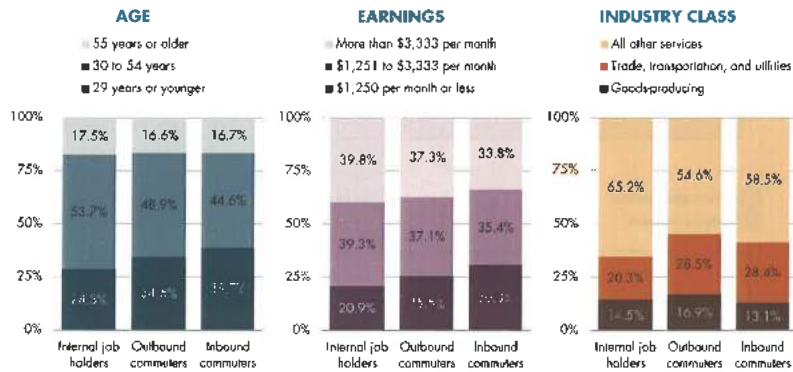
TOP 10 CITIES WHERE FARGO MSA'S WORKFORCE LIVES

City	County	Count	Share
1 Fargo, ND	Cass	45,384	40.9%
2 Moorhead, MN	Clay	13,636	12.3%
3 West Fargo, ND	Cass	12,134	10.9%
4 Dilworth, MN	Clay	1,481	1.3%
5 Grand Forks, ND	Grand Forks	1,454	1.3%
6 Bismarck, ND	Burleigh	1,192	1.1%
7 Horace, ND	Cass	1,135	1.0%
8 Barnesville, MN	Clay	940	0.8%
9 Casselton, ND	Cass	807	0.7%
10 Jamestown, ND	Stutsman	727	0.7%
All Other Locations		32,056	28.9%
Total Fargo MSA		110,946	100.0%

Source: US Census Bureau, Local Employment Dynamics

FIGURE 13. SELECTED JOBHOLDER CHARACTERISTICS, 2011

SHARE OF WORKERS BY TYPE OF COMMUTING FLOW (INTERNAL, OUTBOUND, INBOUND)



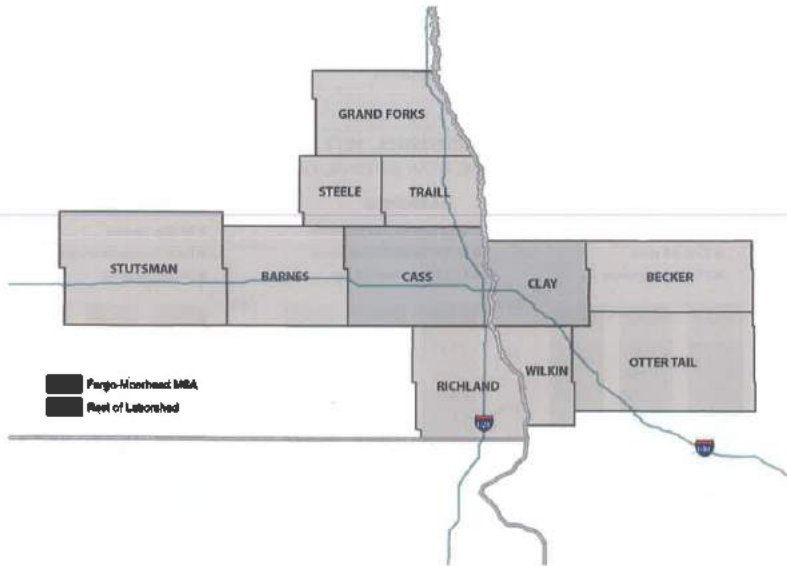
Source: US Census Bureau, Local Employment Dynamics

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DEFINING THE LABORSHED. Based on the commuting patterns data, the laborshed for this study was defined as the two-county metropolitan area, plus nine additional counties: six counties in North Dakota (Barnes, Grand Forks, Richland, Steele, Stutsman, and Traill) and three in Minnesota (Becker, Otter Tail, and Wilkin). These counties were selected because of the circulation of workers, their proximity to the MSA, and the relationship to the transportation network; all but two of the nine counties are transected by Interstate 29 or Interstate 94.

Figure 15 (page 37) shows the annual net flow of workers between the Fargo MSA and each of the other laborshed counties. Net flows represent the difference between the number of workers the specified county sends to the Fargo MSA (inbound) and the number of metro area residents that travel to the specified county for work (outbound). Fargo has the largest net inflows from Richland, Becker, and Otter Tail Counties. Although the flows have been uneven over the past decade, particularly between Becker and Otter Tail, each of the three counties sends between 1,000 and 1,500 more workers to the MSA than it receives. Among the laborshed counties, only Grand Forks has a negative net flow. Although the gap closed rapidly during the last five years of the analysis, the Fargo MSA continues to send more workers out to Grand Forks County than commute in to either Cass or Clay Counties.

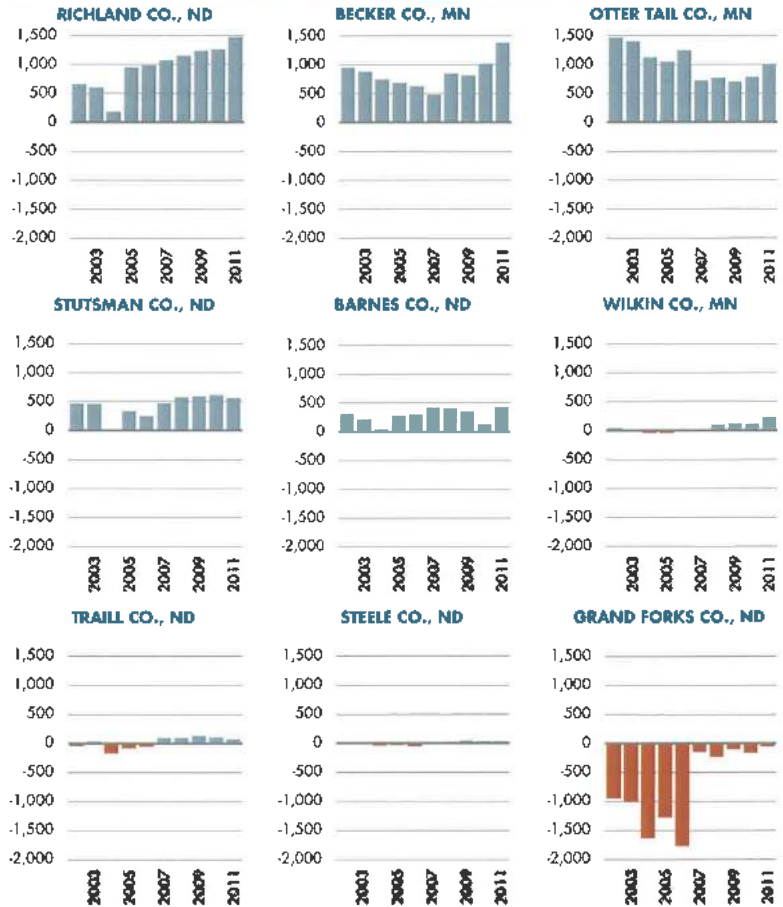
FIGURE 14. FARGO MSA 11-COUNTY LABORSHED
 BASED ON SHARE OF COMMUTING FLOWS AND RELATIONSHIP TO TRANSPORTATION NETWORK



Source: TIP Strategies

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FIGURE 15. NET COMMUTER FLOWS BETWEEN FARGO MSA AND SURROUNDING LABORSHED
 NET = THE DIFFERENCE BETWEEN **INBOUND** AND **OUTBOUND** COMMUTER FLOWS



Source: US Census Bureau, Local Employment Dynamics.

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LABOR FORCE CHARACTERISTICS

Within the 11-county laborshed, employers have access to a pool of nearly 250,000 workers, roughly one-half of which (51 percent) are located in the Fargo MSA. Within the MSA, Cass County, ND, accounts for the largest share of the workforce, with a civilian labor force of nearly 89,000 in November 2014.

A TIGHT LABOR MARKET. The Fargo MSA has consistently outpaced the United States in terms of its labor market performance, as have the states of North Dakota and Minnesota. In November

FIGURE 16. AVERAGE ANNUAL UNEMPLOYMENT RATES

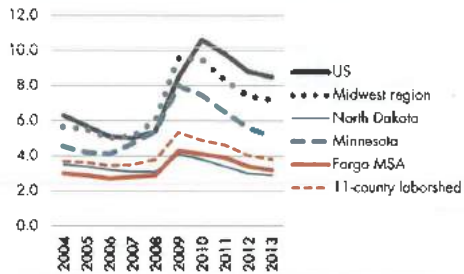


FIGURE 17. LABOR MARKET OVERVIEW
AS OF NOVEMBER 2014

Geography	Civilian labor force	Employed	Unemployed	Unemployment rate
United States	156,297,000	147,666,000	8,630,000	5.5
North Dakota	414,274	404,517	9,757	2.4
Minnesota	2,989,326	2,894,122	95,204	3.2
Fargo MSA	124,586	121,844	2,742	2.2
11-County Laborshed	243,882	237,711	6,171	2.5
Barnes County, ND	5,776	5,639	137	2.4
Becker County, MN	17,956	17,299	657	3.7
Cass County, ND	88,751	86,791	1,960	2.2
Clay County, MN	35,835	35,053	782	2.2
Grand Forks County, ND	36,384	35,513	871	2.4
Other Tail County, MN	30,954	29,900	1,054	3.4
Richland County, ND	8,221	7,994	227	2.8
Steele County, ND	1,095	1,072	23	2.1
Shutsman County, ND	11,208	10,953	255	2.3
Trail County, ND	3,803	3,694	109	2.9
Wilkin County, MN	3,899	3,803	96	2.5

Source (both figures): US Bureau of Labor Statistics, Local Area Unemployment Statistics (state and county labor market data), US Census Bureau, Current Population Survey (national labor market data) Note: State and local figures for November 2014 are preliminary.

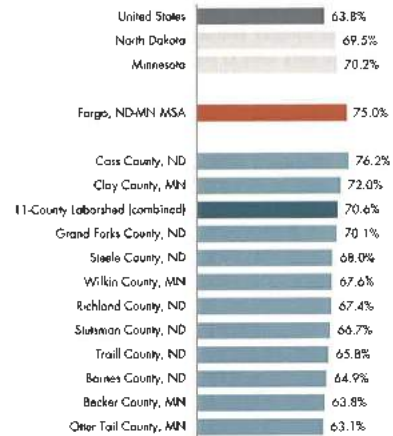
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2014, the most recent period for which data were available at the time of this analysis, unemployment in the metropolitan area was 2.2 percent, compared with 5.5 nationally (Figure 17). Rates within the 11-county laborshed varied only slightly, with Steele County reporting the lowest rate (2.1 percent) and Becker County having the highest rate (3.7 percent).

With few exceptions, labor force participation rates (LFPRs) in the region are well above the US average. These rates are typically influenced by a number of factors, including socioeconomic characteristics of the population and unemployment rates. A low LFPR can be an indicator that pools of available labor remain in an area. Both North Dakota and Minnesota have above-average rates, with roughly 70 percent of the population age 16 years and over participating in the civilian labor force (a figure which includes both employed workers and those actively looking for work). The Fargo MSA has an unusually high LFPR, suggesting that few sources of untapped workers remain.

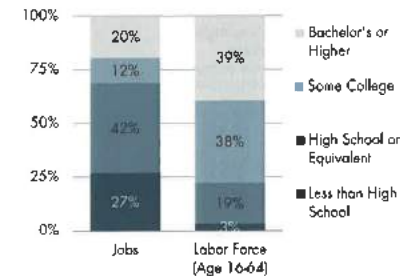
EVIDENCE OF UNDEREMPLOYMENT? A comparison of the educational requirements of the MSA's job base and the educational attainment of the civilian labor force (defined here as those between the ages of 25 and 64) suggests a mismatch. Though 39 percent of the population has a bachelor's degree or higher, only 20 percent of the jobs typically require a four-year degree. This type of mismatch can be an indicator of underemployment. It suggests that, while the supply of labor is stretched, there is a significant segment of the Fargo MSA labor force that is underutilized.

FIGURE 18. LABOR FORCE PARTICIPATION RATES
SHARE OF POPULATION AGE 16 YEARS AND OVER



Source: Rough estimates calculated by TIP Strategies using 2009-2013 American Community Survey 5-Year Estimates (DP03)

FIGURE 19. COMPARISON: JOBS VS. LABOR FORCE
TYPICAL EDUCATION REQUIREMENTS OF FARGO MSA JOBS COMPARED TO EDUCATIONAL ATTAINMENT OF POP. 16-64

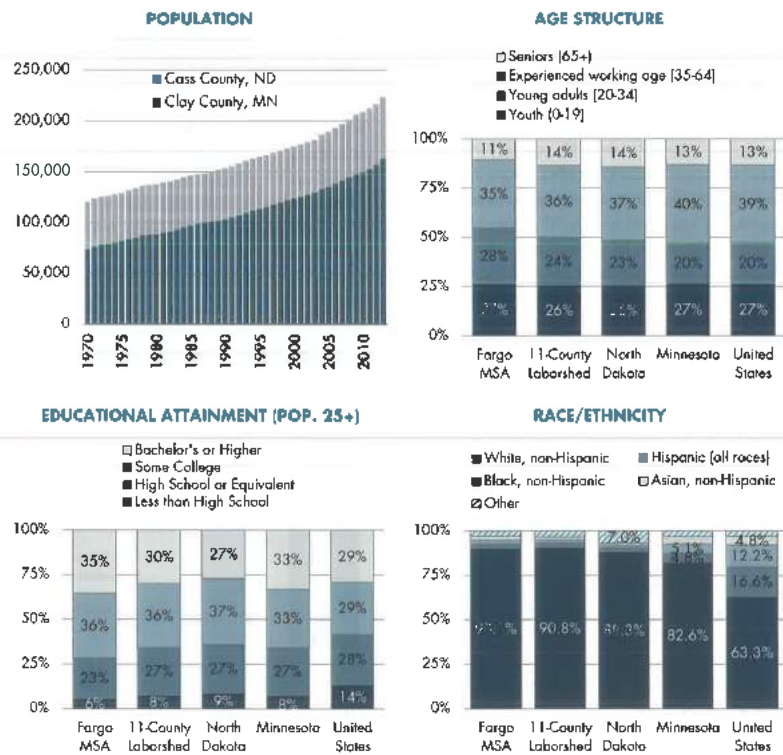


Source: (jobs) EMSI 2014.3 - QCEW Employees, Non-QCEW, and Self-Employed; (labor force) 2009-2013 American Community Survey 5-Year Est.

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A YOUNG, EDUCATED WORKFORCE. Fargo's population has increased steadily over the past several decades, with the total population of the two-county metropolitan area approaching 225,000 in 2013 according to US Census Bureau estimates. The MSA has an above-average share of young adults, with 28 percent of the population in this category (defined here as ages 20 to 34), compared with just 20 percent nationally. Fargo residents are also more likely to have attended college, with more than one-third (35 percent) of residents age 25 years or older having at least a four-year degree. Nationally this figure is 29 percent.

FIGURE 20. DEMOGRAPHIC SNAPSHOT, FARGO MSA



Source: (population) US Census Bureau, Population Estimates Program. Figures represent sum of population for Cass County, ND, and Clay County, MN; (age, educational attainment, race/ethnicity) 2009-2013 American Community Survey 5-Year Estimates

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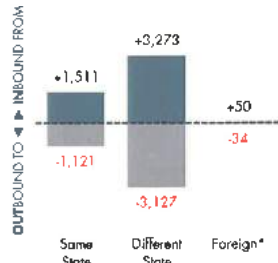
MIGRATION PATTERNS. Data compiled by the Internal Revenue Service from year-over-year address changes on federal tax returns provides important information about the movement of the US population. Figure 21 shows migration flows of tax returns (which are used as a proxy for households) averaged over a three-year period for Cass and Clay Counties. Not surprisingly, the highest level of migration is between the two counties. Over the period analyzed, the two counties have exchanged an average of roughly 700 households annually. Within this exchange, Clay County has had a slight edge, drawing roughly a dozen more households from Cass County than it sends across the border. Beyond the intra-metropolitan-area circulation, counties in the state of North Dakota and Minnesota comprise the 10 largest flows. Within the top 10, the two counties share several common "trading partners": Grand Forks County, ND, and three counties in Minnesota [Becker, Hennepin, and Otter Tail]. The region's cross-state circulation contributes to the larger number of flows recorded as movers to a "different state."

FIGURE 21. HOUSEHOLD MIGRATION PATTERNS, THREE-YEAR AVERAGE

CASS COUNTY, ND (Avg. household flows: inbound = 4,830; outbound = 4,283; non-migrants = 56,204)

Gross migration flows

Circulation with Clay County, MN and top 10 non-MSA counties

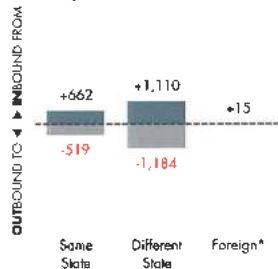


County	State	Inbound		Net Loss/Gain
		from	to	
Clay County	MN	715	728	-13
Grand Forks County	ND	238	148	+90
Burleigh County	ND	185	189	-3
Richland County	ND	161	102	+60
Hennepin County	MN	159	196	-37
Otter Tail County	MN	142	92	+50
Becker County	MN	107	87	+20
Stutsman County	ND	91	71	+20
Ward County	ND	84	80	+4
Barnes County	ND	79	61	+17
Traill County	ND	62	35	+27

CLAY COUNTY, MN (Avg. household flows: inbound = 1,783; outbound = 1,703; non-migrants = 19,642)

Gross migration flows

Circulation with Cass County, ND and top 10 non-MSA counties



County	State	Inbound		Net Loss/Gain
		from	to	
Cass County	ND	728	715	+13
Otter Tail County	MN	99	63	+36
Becker County	MN	78	74	+4
Hennepin County	MN	52	85	-33
Polk County	MN	33	20	+13
Norman County	MN	29	24	+5
Grand Forks County	ND	23	22	+1
Douglas County	MN	21	10	+11
Ramsey County	MN	19	23	-4
Stearns County	MN	18	15	+3
St Louis County	MN	17	15	+2

Source: Internal Revenue Service, County-to-County Migration Data; TIP Strategies. Figures represent three-year average of data for Cass and Clay Counties for the three most recent years available (2008-2009, 2009-2010, 2010-2011). *Foreign migration was significantly higher in the initial year of the analysis. Figures reflect the effect of averaging across subsequent years where data were suppressed and/or no migration was shown.

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INDUSTRY & WORKFORCE ALIGNMENT

While the prior section examined characteristics of the labor force, this section looks at the occupational and industrial composition of the Fargo MSA economy, with comparisons where applicable to the 11-county laborshed, the states of North Dakota and Minnesota, and the United States. This analysis, coupled with findings from the employer survey (see Appendix C: Employer Survey), forms the basis for the identification of key occupations that will be required to support Fargo’s existing and future employers. This section relies on three federal classification systems—the North American Industrial Classification System (NAICS), the Standard Occupational Classification System (SOC), and the Classification of Instructional Programs (CIP)—which are described in Appendix D: Data & Methodology.

DISTRIBUTION & CONCENTRATION

Like the state and the United States, healthcare and social assistance is the largest source of employment in the Fargo MSA, accounting for nearly 14 percent of the total. Jobs in retail trade and lodging and restaurants round out the top three, further highlighting Fargo’s role as a regional center.

FIGURE 22. DISTRIBUTION OF EMPLOYMENT BY INDUSTRY, 2014

SHARE OF TOTAL EMPLOYMENT BY MAJOR SECTOR

Shading indicates three largest sectors for each geography

NAICS Code & Description	Fargo MSA	11-County Laborshed	North Dakota	Minnesota	US
62 Healthcare & social assistance	13.6%	13.8%	11.4%	13.0%	12.4%
44-45 Retail trade	11.0%	11.6%	10.5%	9.7%	10.5%
72 Lodging, restaurants, & bars	8.3%	8.0%	7.3%	7.1%	8.3%
31-33 Manufacturing	7.1%	8.4%	5.0%	10.8%	8.0%
23 Construction	6.9%	6.5%	7.7%	4.6%	5.1%
42 Wholesale trade	6.3%	5.0%	5.6%	4.5%	3.9%
903 Local govt. (incl. pub. ed. & hospitals)	6.0%	7.6%	7.9%	8.7%	9.2%
52 Finance & insurance	5.8%	4.3%	3.7%	4.8%	4.0%
56 Administrative & support services	4.8%	3.8%	3.3%	4.9%	6.3%
902 State govt. (incl. higher ed./hospitals)	4.7%	5.7%	4.6%	3.3%	3.4%
54 Professional services	4.6%	3.6%	3.5%	5.2%	6.3%
81 Personal & other services	4.4%	4.3%	3.8%	4.7%	4.8%
48-49 Transportation & warehousing	3.3%	3.2%	5.1%	2.9%	3.2%
55 Corporate & regional offices	2.4%	1.4%	1.0%	2.6%	1.4%
51 Information	2.2%	1.6%	1.4%	1.8%	1.8%
61 Educational services (private)	2.0%	1.5%	0.9%	2.5%	2.5%
9011 Federal govt., civilian	1.6%	1.6%	1.8%	1.0%	1.9%
11 Agriculture & forestry	1.5%	3.8%	4.2%	1.8%	1.2%
53 Property sales & leasing	1.4%	1.1%	1.3%	1.6%	1.7%
71 Arts, entertainment, & recreation	1.1%	1.1%	0.9%	1.6%	1.7%
22 Utilities	0.1%	0.4%	0.7%	0.4%	0.4%
21 Mining (incl. oil & gas)	0.0%	0.1%	6.1%	0.2%	0.6%

Source: EMSI 2014.3 Class of Worker (QCEW Employees, Non-QCEW Employees & Self-Employed)
 Note: Figures for the 11-county laborshed include Cass and Clay Counties which comprise the Fargo MSA.

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INDUSTRY STRENGTHS. A look at location quotients reveals strengths in several important sectors, most notably corporate and regional offices. This sector includes holding companies, headquarters operations, and regional offices and is typically a source of well-paying jobs. Likewise, the MSA has an above-average concentration of employment in finance- and insurance-related activities. The high LQ for construction in Fargo, and in North Dakota more broadly, reflects the impact of oil and gas exploration in the state.

Although it falls just below the 1.25 threshold used for this analysis, the region also exhibits above-average employment in the information sector. This sector, which includes data processing, hosting, and related services, plays an important supporting role in a range of industries.

ABOUT LOCATION QUOTIENTS (LQs)

Location quotient analysis is a statistical technique used to suggest areas of relative advantage based on a region's employment base. LQs are calculated as an industry's share of total local employment divided by the same industry's share of employment at the national level:

$$\frac{\text{(local employment in industry x / total local employment - all industries)}}{\text{(national employment in industry x / total national employment - all industries)}}$$

If the local industry and national industry are perfectly proportional, the LQ will be 1.00. LQs greater than 1.25 are presumed to indicate a comparative advantage; those below 0.75 suggest areas of weakness but also point to opportunities for expansion or attraction.

FIGURE 23. CONCENTRATION OF EMPLOYMENT BY INDUSTRY, 2014 [US = 1.00]
 LOCATION QUOTIENTS (LQs) OF 1.25 OR GREATER (SHADED) SUGGEST AREAS OF RELATIVE ADVANTAGE

NAICS Code & Description	11-County				US
	Fargo MSA	Laborshed	North Dakota	Minnesota	
55 Corporate & regional offices	1.74	1.03	0.72	1.86	1.00
42 Wholesale trade	1.61	1.27	1.42	1.14	1.00
52 Finance & insurance	1.45	1.06	0.93	1.20	1.00
23 Construction	1.34	1.26	1.51	0.89	1.00
11 Agriculture & forestry	1.22	3.10	3.43	1.45	1.00
51 Information	1.22	0.88	0.75	0.98	1.00
62 Healthcare & social assistance	1.10	1.11	0.92	1.21	1.00
44-45 Retail trade	1.05	1.11	1.00	0.93	1.00
48-49 Transportation & warehousing	1.01	0.99	1.56	0.90	1.00
72 Lodging, restaurants, & bars	0.99	0.97	0.88	0.85	1.00
81 Personal & other services	0.91	0.91	0.79	0.98	1.00
31-33 Manufacturing	0.88	1.05	0.63	1.30	1.00
53 Property sales & leasing	0.83	0.67	0.78	0.95	1.00
61 Educational services (private)	0.79	0.62	0.35	1.01	1.00
56 Administrative & support services	0.76	0.60	0.52	0.77	1.00
54 Professional services	0.73	0.58	0.56	0.82	1.00
71 Arts, entertainment, & recreation	0.65	0.67	0.56	0.99	1.00
22 Utilities	0.27	1.07	1.95	1.21	1.00
21 Mining (incl. oil & gas)	0.08	0.23	10.72	0.37	1.00

Source: EMSI 2014.3 Class of Worker (QCEW Employees, Non-QCEW Employees & Self-Employed)
 Note: Figures exclude government and unclassified employment. LQs of 1.25 or greater are highlighted and are suggestive of a competitive advantage relative to the US.

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Fargo's occupational structure generally mirrors the United States, with office and administrative support jobs accounting for the largest share of total employment (15.9 percent), followed by sales-related positions which represent 11 percent of the MSA's job base. The dominance of these two major occupational groups is in keeping with the concentrations of industry employment found in Figure 23 (page 43). All three of the MSA's top-ranking sectors—corporate management, wholesale trade, and financial services and insurance-related industries—employ workers that fall into these groups, including general office clerks, secretaries, business analysts, customer service workers, and sales representatives.

THE INFLUENCE OF OIL & GAS. Of the geographies shown in Figure 24, North Dakota's occupational distribution exhibits the greatest variance from the national pattern, due primarily to distortions related to oil and gas exploration in the state. Construction and extraction occupations accounted for 1 in 10 jobs in 2014 (compared with 1 in 20 just 10 years earlier). This occupational group encompasses two important pieces of employment tied to oil and gas exploration: the extraction workers that perform drilling and related activities and the trades workers needed to support the associated construction. The state's above-average share of transportation workers is also likely to be related to oil and gas exploration, as trucking plays a significant role in the movement of oil produced by drilling and in the delivery of needed equipment and services to support drilling operations.

FIGURE 24. DISTRIBUTION OF EMPLOYMENT BY OCCUPATIONAL GROUP, 2014

SHARE OF TOTAL EMPLOYMENT BY MAJOR OCCUPATIONAL GROUP

Shading indicates three largest sectors for each geography

SOC Code & Description	Fargo MSA	11-County Laborshed	North Dakota	Minnesota	US
43-0000 Office & Administrative Support	15.9%	14.7%	13.2%	14.6%	15.3%
41-0000 Sales & Related	11.0%	10.4%	9.9%	9.9%	10.3%
35-0000 Food Prep. & Serving Related	8.1%	8.2%	7.2%	7.6%	8.2%
53-0000 Transportation & Material Moving	7.0%	7.1%	9.1%	5.8%	6.4%
51-0000 Production	5.7%	6.3%	5.0%	7.3%	6.0%
47-0000 Construction & Extraction	5.6%	5.4%	10.4%	3.8%	4.4%
29-0000 Healthcare Practitioners & Technical	5.5%	5.4%	4.7%	5.4%	5.4%
11-0000 Management	5.3%	6.7%	7.3%	6.9%	5.3%
25-0000 Education, Training, & Library	5.3%	5.5%	4.7%	5.3%	5.8%
13-0000 Business & Financial Operations	4.9%	4.0%	3.5%	5.5%	4.9%
39-0000 Personal Care & Service	4.7%	4.5%	3.4%	5.0%	3.9%
49-0000 Installation, Maintenance, & Repair	3.9%	4.1%	4.9%	3.4%	3.8%
37-0000 Building/Grounds Cleaning & Maint.	3.9%	4.1%	3.7%	3.4%	3.8%
31-0000 Healthcare Support	2.6%	3.0%	2.3%	3.3%	2.8%
15-0000 Computer & Mathematical	2.3%	1.7%	1.4%	2.9%	2.6%
17-0000 Architecture & Engineering	1.4%	1.3%	1.4%	1.7%	1.7%
27-0000 Arts, Entertainment, & Media	1.4%	1.2%	1.1%	1.8%	1.7%
21-0000 Community & Social Service	1.4%	1.4%	1.2%	2.0%	1.6%
33-0000 Protective Service	1.3%	1.3%	1.3%	1.5%	2.3%
19-0000 Life, Physical, & Social Science	0.7%	0.7%	0.7%	0.9%	0.8%
45-0000 Farming, Fishing, & Forestry	0.6%	1.0%	1.0%	0.6%	0.6%
23-0000 Legal	0.5%	0.4%	0.4%	0.7%	0.8%

Source: EMSI 2014,3 Class of Worker (OCEW Employees, Non-OCEW Employees & Self-Employed) Note: Figures exclude military and unclassified employment

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The influence of the oil and gas industry in North Dakota can also be seen from an industry perspective, both in terms of the share the mining sector comprises of total employment (Figure 22, page 42) and its concentration relative to expected norms, as evidenced by the high location quotient shown in Figure 23 (page 43).

When viewed in terms of each occupational group's relative concentration, few occupational groups have significantly higher concentrations than would be expected. Within the two-county Fargo MSA, only construction and extraction workers are more concentrated than national norms, as shown by the occupational group's LQ of 1.29—still well below the state's LQ of 2.36. Within the 11-county laborshed, agricultural and forestry workers have the highest LQ, followed by management occupations. While these two groups might seem an unlikely pair, the concentration in management occupations is likely to have a direct connection to the region's agricultural base: under the federal occupational classification system, farmers and ranchers are categorized as management positions. (For additional information on the Standard Occupational Classification System, see Appendix D: Data & Methodology.)

FIGURE 25. CONCENTRATION OF EMPLOYMENT BY OCCUPATIONAL GROUP, 2014 (US = 1.00)
 LOCATION QUOTIENTS (LQs) OF 1.25 OR GREATER (SHADED) SUGGEST AREAS OF RELATIVE ADVANTAGE

SOC Code & Description	11-County North				US
	Fargo MSA	Laborshed	Dakota	Minnesota	
47-0000 Construction & Extraction	1.29	1.23	2.36	0.86	1.00
39-0000 Personal Care & Service	1.20	1.15	0.88	1.29	1.00
53-0000 Transportation & Material Moving	1.09	1.10	1.41	0.91	1.00
41-0000 Sales & Related	1.05	1.00	0.92	0.94	1.00
43-0000 Office & Administrative Support	1.04	0.96	0.86	0.95	1.00
49-0000 Installation, Maintenance, & Repair	1.04	1.09	1.28	0.90	1.00
29-0000 Healthcare Practitioners & Technical	1.02	1.01	0.88	1.00	1.00
37-0000 Building/Grounds Cleaning & Maint.	1.01	1.06	0.96	0.87	1.00
11-0000 Management	1.01	1.26	1.39	1.29	1.00
13-0000 Business & Financial Operations	1.00	0.82	0.72	1.13	1.00
35-0000 Food Prep. & Serving Related	0.99	1.01	0.88	0.93	1.00
51-0000 Production	0.94	1.05	0.84	1.22	1.00
25-0000 Education, Training, & Library	0.92	0.96	0.82	0.93	1.00
31-0000 Healthcare Support	0.91	1.06	0.90	1.17	1.00
15-0000 Computer & Mathematical	0.88	0.63	0.52	1.11	1.00
17-0000 Architecture & Engineering	0.87	0.76	0.84	1.02	1.00
21-0000 Community & Social Service	0.86	0.87	0.73	1.27	1.00
19-0000 Life, Physical, & Social Science	0.86	0.81	0.87	1.04	1.00
27-0000 Arts, Entertainment, & Media	0.83	0.72	0.61	1.03	1.00
45-0000 Farming, Fishing, & Forestry	0.74	1.39	1.27	0.86	1.00
33-0000 Protective Service	0.57	0.57	0.58	0.69	1.00
23-0000 Legal	0.56	0.51	0.51	0.85	1.00

Source: EMSI 2014.3 Class of Worker (QCEW Employees, Non-QCEW Employees & Self-Employed) Note: Figures exclude military and unclassified employment. LQs of 1.25 or greater are highlighted and are suggestive of a competitive advantage relative to the US.

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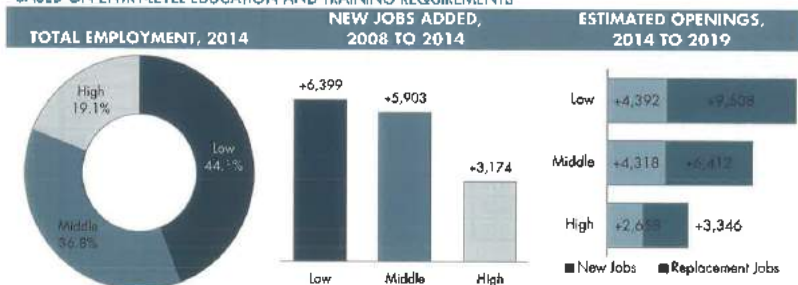
TRENDS BY SKILL LEVEL. Education and training requirements can provide an indication of skill levels found within a given occupation. Data on entry-level requirements by occupation prepared by the US Bureau of Labor Statistics were used to categorize Fargo's employment by skill level using the following categories:

- **Low-skill jobs.** Positions requiring a high school diploma or less and minimal or no training
- **Middle-skill jobs.** Positions requiring more than a high school diploma but less than a four-year degree
- **High-skill jobs.** Positions requiring a four-year degree or above.

Using this framework, 44 percent of the MSA's job base is comprised of low-skill jobs (Figure 26), a figure that mirrors the national rate. In numeric terms, low-skill occupations represented the largest share of the MSA's employment growth since the recession, with roughly 6,400 new jobs added between 2008 and 2014. The MSA saw similar gains in the number of middle-skill positions—a group of workers that has garnered significant attention in recent years due to the role these jobs play in supporting a wide range of industries—adding approximately 5,900 jobs. By comparison, slightly less than 3,200 jobs requiring a bachelor's or higher were added during the same period.

Openings represent the anticipated demand for workers resulting from both new jobs and the replacement of existing workers (i.e., the number of openings expected from workers exiting the occupation due to retirement, career advancement, general turnover, etc.). The Fargo-Moorhead MSA is expected to have just over 30,000 openings between 2014 and 2019. Low-skill jobs are expected to account for the greatest number of openings, with nearly 14,000 openings anticipated. Demand for high-skill jobs is expected to be lower, with slightly more than 6,000 openings projected. Almost two-thirds of the total openings between 2014 and 2019 are replacement jobs. While some of the 19,000 replacement jobs will be general churn and not require a new worker, many of the replacement jobs, particularly in the middle- and high-skill positions, are due to retirements and will require additional workers.

FIGURE 26. JOBS BY SKILL LEVEL
BASED ON ENTRY-LEVEL EDUCATION AND TRAINING REQUIREMENTS



Source: EMSI 2014.3 Class of Worker (QCEW Employees, Non-QCEW Employees & Self-Employed) Note: Skill levels determined for individual occupations based on typical entry-level education and training requirements. "Openings" reflect new growth and replacement demand.

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“TOP” OCCUPATIONS. While the prior figures have illustrated the region’s occupational structure by major occupational group, the next group of figures present data at the detailed occupation level. In Figure 27 (page 47), top occupations among those typically requiring some college, but less than a four-year degree, were ranked based on size (number of jobs in 2014), growth since 2008 (in both numeric and percentage terms), and wages. Figure 28 (page 48) ranks occupations requiring a bachelor’s degree or higher on the same indicators.

FIGURE 27. TOP OCCUPATIONS TYPICALLY REQUIRING SOME COLLEGE, LESS THAN FOUR YEARS
TOP 10 OCCUPATIONS RANKED ON FACTOR SHOWN

Jobs, 2014	← LARGEST	Median hourly earnings
2,806	Heavy and Tractor-Trailer Truck Drivers	\$18.24
2,566	Registered Nurses	\$27.42
1,591	Nursing Assistants	\$13.31
926	Licensed Practical and Licensed Vocational Nurses	\$18.26
926	Teacher Assistants	\$12.64
833	Computer User Support Specialists	\$22.95
5	First-Line Supervisors of Production and Operating Workers	\$21.22
5	Hairdressers, Hairstylists, and Cosmetologists	\$11.15
3	Preschool Teachers, Except Special Education	\$11.18
3	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	\$18.95

Net change	← FASTEST-GROWING, 2008-2014 (#)	Median hourly earnings
+332	Licensed Practical and Licensed Vocational Nurses	\$18.26
+277	Heavy and Tractor-Trailer Truck Drivers	\$18.24
	Registered Nurses	\$27.42
-	Nursing Assistants	\$13.31
+	Computer User Support Specialists	\$22.95
+	Teacher Assistants	\$12.64
+5	Medical Records and Health Information Technicians	\$15.94
+5	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	\$18.95
+4	Massage Therapists	\$19.87
+4	First-Line Supervisors of Production and Operating Workers	\$21.22

% change	← FASTEST-GROWING, 2008-2014 (%)	Median hourly earnings
+109%	Insurance Appraisers, Auto Damage	\$21.05
	Massage Therapists	\$19.87
	Web Developers	\$20.15
	Veterinary Technologists and Technicians	\$13.86
	Licensed Practical and Licensed Vocational Nurses	\$18.26
	Civil Engineering Technicians	\$20.35
+34%	Medical Records and Health Information Technicians	\$15.94
	Medical Transcriptionists	\$15.06
+33%	Manicurists and Pedicurists	\$8.74
+30%	Industrial Engineering Technicians	\$18.71

Source: EMSI 2014.3 Class of Worker [OCEW Employees, Non-OCEW Employees & Self-Employed]
 Note: Based on typical entry-level education and training requirements for the occupation as determined by the US Bureau of Labor Statistics.

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FIGURE 28. TOP OCCUPATIONS TYPICALLY REQUIRING FOUR-YEAR DEGREE OR ABOVE
TOP 10 OCCUPATIONS RANKED ON FACTOR SHOWN

Jobs, 2014	↓ LARGEST	Median hourly earnings
2,315	Postsecondary Teachers	\$26.97
1,991	General and Operations Managers	\$42.17
1,492	Accountants and Auditors	\$24.11
1,401	Elementary School Teachers, Except Special Education	\$23.79
784	Secondary School Teachers, Except Special and Career/Tech. Education	\$23.28
660	Software Developers, Applications	\$27.54
644	Personal Financial Advisors	\$28.68
492	Software Developers, Systems Software	\$29.86
424	Sales Managers	\$42.39
421	Human Resources Specialists	\$24.22

Net change	↓ FASTEST-GROWING, 2008-2014 (#)	Median hourly earnings
	Accountants and Auditors	\$24.11
	General and Operations Managers	\$42.17
+232	Elementary School Teachers, Except Special Education	\$23.79
+130	Nurse Practitioners	\$38.94
+1	Postsecondary Teachers	\$26.97
+92	Civil Engineers	\$32.80
+8	Personal Financial Advisors	\$28.68
+7	Secondary School Teachers, Except Special and Career/Tech. Education	\$23.28
+74	Family and General Practitioners	\$78.00
+59	Market Research Analysts and Marketing Specialists	\$22.90

% change	↓ FASTEST-GROWING, 2008-2014 (%)	Median hourly earnings
+83%	Mental Health Counselors	\$19.51
+74%	Nurse Practitioners	\$38.94
+70%	Surgeons	\$91.73
+70%	Nurse Anesthetists	\$78.14
+65%	Physician Assistants	\$44.74
+56%	Family and General Practitioners	\$78.00
+54%	Mental Health and Substance Abuse Social Workers	\$19.87
+51%	Marriage and Family Therapists	\$20.23
+43%	Civil Engineers	\$32.80
+38%	Physical Therapists	\$33.62

Source: EMSI 2014.3 Class of Worker (OCEW Employees, Non-OCEW Employees & Self-Employed)

Note: Based on a typical entry-level education and training requirements for the occupation as determined by the US Bureau of Labor Statistics.

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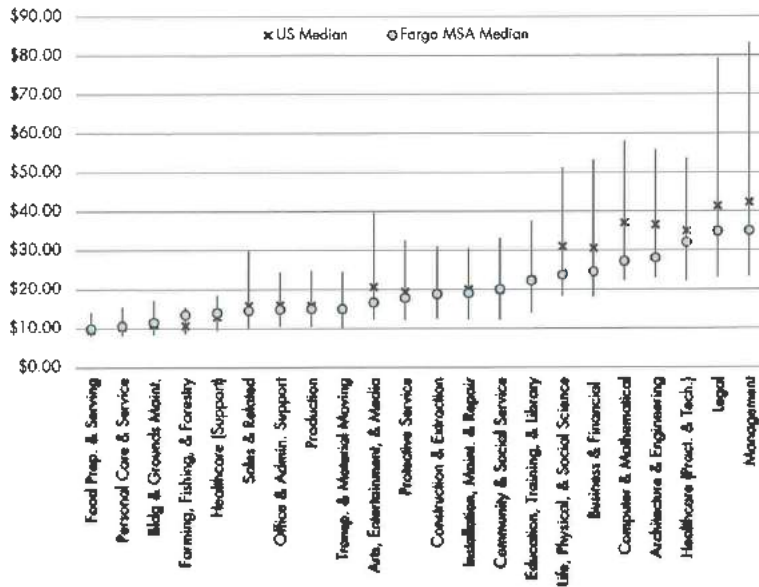
WAGE RATES. Figure 29 compares wage rates for major occupational groups in Fargo with US rates. The line shows the outer ends of the national distribution (the 10th and 90th percentiles) while the marker shows the median or mid-point. In the majority of cases, median wages are below the national median and are in the lower end of the range. Many of the largest gaps appear in the STEM occupations—science, technology, engineering, and mathematics. The latter category also includes computer-related occupations. As a group, median wage rates for these occupations are roughly three-quarters of the national median. While lower wage rates can be a boon for employers, they can be an obstacle to employee recruitment.

At the other end of the spectrum, a number of service-related occupational groups in Fargo have median wage rates that are slightly above the US median. These include personal care occupations, building maintenance and grounds workers, healthcare support, and food preparation and serving workers. For agricultural workers, the MSA’s median wage rate is roughly 25 percent above the national rate [\$13.49 compared with the US median of \$10.68]. This wage pressure suggests that workers in these positions are hard to find and/or retain.

FIGURE 29. MEDIAN HOURLY WAGE RATES BY MAJOR OCCUPATIONAL GROUP

FARGO MSA WAGES PRESENTED IN THE CONTEXT OF US WAGE RANGE

Line = US wage range from 10th to 90th percentile; Markers = Median hourly wage rates for US (x) and Fargo MSA (dot)



Source: EMSI 2014.3 Class of Worker (QCEW Employees, Non-QCEW Employees & Self-Employed)

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HIGH-DEMAND OCCUPATIONS

Along with documenting leading occupations within the targeted sectors, we also identified Fargo's high-demand occupations. This analysis considered a range of factors, including anticipated demand (from both new growth and replacement needs), wage rates relative to the United States (as an indication of wage pressure), and the occupation's role in supporting the retention and attraction of the target sectors.

First, industry staffing patterns were used to understand how Fargo's workforce aligns with its broad economic development targets: **healthcare, manufacturing, and information technology**. Staffing patterns data are compiled by EMSI from the National Employment Matrix prepared by the US Bureau of Labor Statistics every other year as part of its ongoing Employment Projections program. The most recent matrix shows US employment levels for 2012 and projected employment for 2022 for approximately 300 detailed industries and 750 occupations. The matrix can be used to conduct analyses by occupation (identifying all industries in which plumbers are employed, for example) or by industry (identifying the detailed occupations employed in the construction industry).

The top 25 occupations resulting from this analysis are shown in Figure 30 [page 51]. The occupations were ranked based on their share of employment in multiple sectors, as well as their average employment across sectors. Only office clerks (SOC 43-9061) comprised at least 1 percent of total employment in all three sectors. With more than 3,600 jobs in the MSA in 2014, it was also the largest of the top occupations. Several other administrative and management occupations reached the 1 percent employment threshold for two of the three sectors, including customer service representatives (SOC 43-4051) and general managers (SOC 11-1021). With a median hourly wage of \$42.17, the latter was among the highest paying occupations in the group, second only to computer and information system managers (SOC 11-3021). Profiles of each target sector are provided as Appendix B: Industry Profiles.

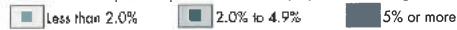
Next, occupations with 100 jobs or more were analyzed to identify areas likely to be in demand over the next five years. Occupations were identified that have a large number of projected openings over the next five years, a high wage premium, and a high percentage of workers older than 55 years of age. The results are presented by skill level on pages 52 to 54.

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FIGURE 30. TOP 25 OCCUPATIONS IN TARGET SECTORS

RANKED BY NUMBER OF SECTORS WHERE OCCUPATION COMPRISES 1 PERCENT OR MORE OF TOTAL EMPLOYMENT AND BY AVERAGE SHARE OF EMPLOYMENT ACROSS TARGET SECTORS

LEGEND: Share each occupation represents of total employment in the target sector:



SOC Code	Description	2014 Jobs	Median Hourly Wage	Healthcare	IT Services	Manufacturing	# of Targets Where Occupation ≥ 1.0%	Average Share of Total Emp.
43-9061	Office Clerks, General	3,629	\$12.33	■	■	■	3	1.90%
43-4051	Customer Service Representatives	2,661	\$14.00	■	■	■	2	2.05%
11-1021	General & Operations Managers	1,991	\$42.17	■	■	■	2	1.71%
43-3031	Bookkeeping, Accounting, & Auditing Clerks	2,580	\$16.74	■	■	■	2	1.44%
41-4012	Sales Reps., Whls. & Mfg., Exc. Tech. & Scientific	1,889	\$23.20	■	■	■	2	1.09%
43-6014	Secretaries/Admin. Asst., Exc. Legal, Med., & Exec.	2,098	\$15.45	■	■	■	2	0.93%
43-1011	First-Line Supvrs., Office & Admin. Support	1,327	\$21.76	■	■	■	2	0.84%
29-1141	Registered Nurses	2,566	\$27.42	■	■	■	1	4.53%
51-2092	Team Assemblers	1,463	\$13.20	■	■	■	1	3.57%
15-1132	Software Developers, Applications	560	\$27.54	■	■	■	1	3.09%
15-1151	Computer User Support Specialists	833	\$22.95	■	■	■	1	3.04%
31-1014	Nursing Assistants	1,591	\$13.31	■	■	■	1	3.00%
15-1133	Software Developers, Systems Software	452	\$29.86	■	■	■	1	2.33%
29-2061	Licensed Practical/Vocational Nurses	1,249	\$18.26	■	■	■	1	2.26%
43-4171	Receptionists & Information Clerks	1,304	\$12.73	■	■	■	1	1.55%
51-4121	Welders, Cutters, Solderers, & Brazers	660	\$16.51	■	■	■	1	1.41%
41-3099	Sales Reps., Services, All Other	715	\$17.65	■	■	■	1	1.40%
39-9021	Personal Care Aides	1,864	\$11.64	■	■	■	1	1.38%
51-1011	First-Line Supvrs., Production & Operating Workers	586	\$21.22	■	■	■	1	1.35%
13-2011	Accountants & Auditors	1,492	\$24.11	■	■	■	1	1.23%
15-1121	Computer Systems Analysts	281	\$29.30	■	■	■	1	1.20%
15-1131	Computer Programmers	192	\$23.50	■	■	■	1	1.08%
51-2022	Electrical & Electronic Equip. Assemblers	381	\$11.97	■	■	■	1	1.02%
11-3021	Computer & Info. Systems Managers	248	\$47.54	■	■	■	1	0.87%
15-1152	Computer Network Support Specialists	236	\$27.13	■	■	■	1	0.84%

Source: EMSI 2014.3 Class of Worker (QCEW Employees, Non-QCEW Employees & Self-Employed); TIP Strategies

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FIGURE 31. HIGH-DEMAND OCCUPATIONS: HIGH SKILL*

LEGEND: Median hourly earnings: ● Within +/- 10% of US median ● 10% below US ● <12.5% of workforce
 % of workers >55 years old: ● Between 12.5% and 25% ● 10% above US ● >25% of workforce

SOC Code & Description	2014 Jobs	Annual Openings thru 2019	New Growth	Replacement	% of openings due to:		Median Hourly Earnings	% of Workers >55
					New growth	Replacement		
25-1099 Teachers, Postsecondary	2,315	69	32	37	47%	53%	\$26.97	28%
11-1021 General & Operations Managers	1,991	78	38	40	49%	51%	\$42.17	12%
13-2011 Accountants & Auditors	1,492	68	21	46	31%	69%	\$24.11	19%
25-2021 Teachers, Elementary (Except Special Ed.)	1,401	51	18	33	36%	64%	\$23.79	27%
25-2031 Teachers, Secondary (Exc. Special Ed. & CTE)	785	28	6	23	29%	71%	\$23.28	27%
15-1132 Software Developers, Applications	560	27	19	8	70%	30%	\$27.54	10%
15-1133 Software Developers, Systems Software	452	21	15	6	70%	30%	\$29.86	10%
13-1161 Market Research Analysts & Mktg. Specialists	402	19	13	6	68%	32%	\$22.90	16%
13-1111 Management Analysts	402	13	5	8	37%	63%	\$26.75	19%
25-2022 Teachers, Middle School (Exc. Spec. Ed. & CTE)	320	13	5	8	41%	59%	\$23.78	27%
29-1171 Nurse Practitioners	306	18	11	7	61%	39%	\$38.94	19%
15-1121 Computer Systems Analysts	281	19	14	5	74%	26%	\$29.90	13%
41-4011 Sales Reps., Whls. & Mfg., Tech. & Scientific	273	12	6	6	50%	50%	\$36.64	16%
25-2052 Special Educ. Teachers, Kinder & Elementary	257	6	2	5	39%	61%	\$23.88	26%
11-3021 Computer & Info. Systems Managers	248	11	7	4	63%	37%	\$47.54	14%
15-1142 Network & Computer Systems Admin.	241	10	6	4	60%	40%	\$21.98	14%
21-1021 Child, Family, & School Social Workers	207	9	4	5	43%	57%	\$22.71	20%
15-1131 Computer Programmers	192	13	7	6	52%	48%	\$23.50	11%
21-2011 Clergy	168	5	2	4	36%	64%	\$20.24	38%
29-1069 Physicians & Surgeons, All Other	158	15	10	5	69%	31%	\$106.95	20%
25-2054 Special Educ. Teachers, Secondary School	128	3	1	2	33%	67%	\$25.09	25%
11-9033 Education Administrators, Postsecondary	102	4	1	3	34%	66%	\$41.10	27%

Source: EMSI 2014.3 Class of Worker (OCEW Employees, Non-OCEW Employees & Self-Employed); TIP Strategies *See definition page 46.

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FIGURE 32. HIGH-DEMAND OCCUPATIONS: MIDDLE SKILL*

LEGEND: Median hourly earnings: Within +/- 10% of US median 10% below US <12.5% of workforce
 % of workers >55 years old: Between 12.5% and 25% 10% above US >25% of workforce

SOC Code & Description	2014 Jobs	Annual Openings thru 2019	New Growth	Replacement	% of openings due to:		Median Hourly Earnings	% of Workers >55
					New growth	Replacement		
53-3032 Heavy & Tractor-Trailer Truck Drivers	2,806	94	43	51	47%	54%	\$18.24	25%
43-3031 Bookkeeping, Accounting, & Auditing Clerks	2,580	61	37	25	40%	40%	\$16.74	20%
29-1141 Registered Nurses	2,566	91	39	52	43%	50%	\$27.42	18%
41-4012 Sales Reps., Whls. & Mfg., Exc. Tech. & Sci	1,889	64	25	39	40%	40%	\$23.20	20%
31-1014 Nursing Assistants	1,591	59	22	37	37%	43%	\$13.31	17%
51-2092 Team Assemblers	1,463	63	38	25	40%	40%	\$13.20	16%
11-9013 Farmers, Ranchers, & Other Agricultural Mgrs.	1,451	21	(40)	62			\$14.97	26%
43-1011 First-Line Supv'rs., Office & Adm'n. Support	1,327	61	27	34	44%	34%	\$21.76	18%
29-2061 Licensed Practical/Vocational Nurses	1,249	62	29	33	47%	33%	\$18.26	20%
49-9071 Maintenance & Repair Workers, General	1,036	37	16	21	44%	34%	\$15.84	23%
15-1151 Computer User Support Specialists	833	31	17	14	55%	40%	\$22.95	14%
43-601 Exec. Secretaries/Admin. Assistants	785	13	3	10	70%	40%	\$20.69	20%
51-4121 Welders, Cutters, Solderers, & Brazers	660	32	15	18	46%	34%	\$16.51	13%
51-1011 First-Line Supv'rs., Production & Operating Workers	586	17	9	9	30%	30%	\$21.22	17%
41-9022 Real Estate Sales Agents	550	15	10	6	43%	37%	\$14.10	30%
43-5051 Production, Planning, & Expediting Clerks	370	14	4	9	30%	30%	\$17.33	17%
33-3051 Police & Sheriff's Patrol Officers	362	15	4	12	24%	78%	\$28.17	27%
51-9111 Packaging & Filling Machine Workers	343	9	0	9		90%	\$11.45	16%
43-6013 Medical Secretaries	306	25	20	5	85%	31%	\$14.30	21%
37-1011 First-Line Supv'rs., Housekeeping & Janitorial	291	12	5	7	30%	40%	\$18.51	18%
31-9097 Phlebotomists	273	10	4	6	44%	36%	\$13.55	15%
31-9091 Dental Assistants	271	12	6	6	30%	30%	\$19.12	15%
51-2099 Assemblers & Fabricators, All Other	268	12	8	5	63%	37%	\$14.67	14%
51-4041 Machinists	253	15	8	7	53%	43%	\$17.50	17%
15-1152 Computer Network Support Specialists	236	6	3	4	41%	30%	\$27.13	14%
11-9051 Food Service Managers	219	6	0	6		70%	\$23.98	9%
51-4331 Cutting, Punching, & Press Machine, Metal/Plastic	206	5	3	2	60%	37%	\$15.93	16%
49-2011 Computer, A/M, & Office Machine Repairers	191	7	2	4	30%	34%	\$18.33	16%
49-3041 Farm Equip. Mechanics & Service Technicians	188	11	5	6	44%	36%	\$19.17	20%
47-4051 Highway Maintenance Workers	160	4	1	2	33%	40%	\$21.14	24%
51-9199 Production Workers, All Other	158	8	4	4	43%	33%	\$16.29	16%
13-1022 Wholesale & Retail Buyers, Except Farm Prods.	152	7	3	4	40%	40%	\$27.34	18%
31-9011 Massage Therapists	148	8	6	2	79%	21%	\$19.87	11%
11-9141 Property, Real Estate, & Community Assoc. Mgrs.	147	7	3	3	49%	31%	\$19.06	28%
15-1134 Web Developers	138	8	6	3	69%	31%	\$20.15	14%
33-2011 Firefighters	137	6	2	4	29%	71%	\$18.48	25%
49-9052 Telecomm. Line Installers & Repairers	132	3	(1)	4		40%	\$23.09	14%
49-9098 Helpers-Install./Maint./Repair Workers	111	6	2	4	37%	40%	\$14.38	18%
51-2091 Fiberglass Laminators & Fabricators	102	3	1	2	33%	40%	\$15.62	16%
25-4031 Library Technicians	102	7	1	6	11%	62%	\$14.42	26%

Source: EMSI 2014.3 Class of Worker (CEW Employees, Non-CEW Employees & Self-Employed); TIP Strategies *See definition page 46.

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FIGURE 33. HIGH-DEMAND OCCUPATIONS: LOW SKILL*

LEGEND: Median hourly earnings: ● Within +/- 10% of US median ● 10% below US ● <12.5% of workforce
 % of workers >55 years old: ● Between 12.5% and 25% ● 10% above US ● >25% of workforce

SOC Code & Description	2014 Jobs	Annual Openings thru 2019	New Growth	Replacement	% of openings due to:		Median Hourly Earnings	% of Workers >55
					■ New growth	■ Replacement		
41-2031 Retail Salespersons	4,608	204	41	163	47%	60%	\$10.81	15%
43-9061 Office Clerks, General	3,629	115	36	79	32%	68%	\$12.33	21%
41-2011 Cashiers	3,465	167	14	153	1%	91%	\$8.77	14%
37-2011 Janitors & Cleaners, Exc. Maids & Housekeepers	2,877	98	41	57	46%	38%	\$11.66	21%
35-3031 Waiters & Waitresses	2,813	154	12	142	1%	92%	\$9.10	5%
43-4051 Customer Service Representatives	2,661	92	18	74	19%	80%	\$14.00	16%
35-3021 Combined Food Prep. & Servers, Incl. Fast Food	2,351	142	46	96	32%	68%	\$8.70	6%
53-7062 Laborers/Freight, Stock, & Material Movers, Hand	2,248	109	35	73	31%	64%	\$11.57	18%
43-6014 Secretaries/Admin. Asst., Exc. Legal, Med., & Exec	2,098	66	39	27	39%	41%	\$15.45	22%
39-9011 Childcare Workers	2,006	116	52	64	45%	59%	\$8.49	12%
39-9021 Personal Care Aides	1,864	72	57	15	79%	1%	\$11.64	16%
43-5081 Stock Clerks & Order Fillers	1,735	55	1	54	1%	98%	\$11.01	17%
37-2012 Maids & Housekeepers	1,631	63	28	34	44%	55%	\$9.45	18%
43-4171 Receptionists & Information Clerks	1,304	68	30	38	44%	58%	\$12.73	19%
35-2021 Food Preparation Workers	969	32	4	28	1%	99%	\$11.49	10%
41-3099 Sales Reps., Services, All Other	715	31	11	21	34%	66%	\$17.65	15%
13-1199 Business Operations Specialists, All Other	694	21	11	10	52%	48%	\$26.21	20%
43-3021 Billing & Posting Clerks	659	31	18	13	37%	63%	\$15.16	19%
43-5071 Shipping, Receiving, & Traffic Clerks	634	26	8	17	30%	70%	\$14.50	17%
53-3031 Driver/Sales Workers	526	14	5	9	36%	64%	\$14.28	16%
35-3041 Food Servers, Nonrestaurant	518	22	3	19	1%	99%	\$9.63	15%
53-3022 Bus Drivers, School or Special Client	393	15	7	8	49%	51%	\$15.89	36%
51-2022 Electrical & Electronic Equip. Assemblers	381	13	8	5	61%	39%	\$11.97	13%
31-1011 Home Health Aides	361	28	18	9	64%	34%	\$11.19	16%
41-2022 Parts Salespersons	356	14	5	9	36%	64%	\$16.71	21%
35-2012 Cooks, Institution & Cafeteria	355	13	3	10	22%	78%	\$13.41	19%
51-9198 Helpers-Production Workers	316	14	8	6	57%	43%	\$11.63	14%
43-5052 Postal Service Mail Carriers	229	8	4	11	10%	90%	\$25.89	27%
51-7042 Woodworking Machine, Except Sawing	171	8	7	1	88%	12%	\$13.43	17%
41-9099 Sales & Related Workers, All Other	152	6	3	3	48%	52%	\$15.28	29%
39-9099 Personal Care & Service Workers, All Other	123	7	3	4	43%	57%	\$11.91	15%
51-6031 Sewing Machine Operators	117	4	3	1	75%	25%	\$11.93	20%
45-2091 Agricultural Equipment Operators	117	4	0	4	1%	99%	\$18.50	21%

Source: EMSI 2014.3 Class of Worker (QCEW Employees, Non-QCEW Employees & Self-Employed); TIP Strategies * See definition page 46.

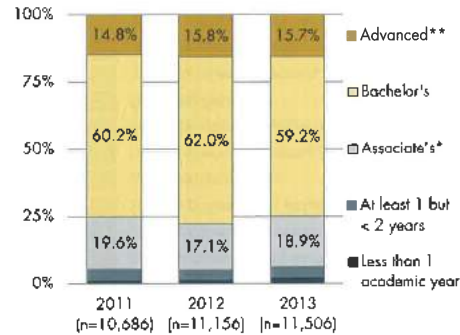
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EDUCATION AND TRAINING

To understand the supply of potential graduates in the region, data on for-credit completions were compiled from the National Center for Education Statistics' Integrated Postsecondary Data System (IPEDS) for all schools in the 11-county laborshed. For more information on IPEDS and this analysis, see Appendix E.

The 12 institutions included in the analysis conferred an average of slightly more than 11,000 for-credit awards annually during the three-year period analyzed. The majority of these awards (roughly three-quarters) were issued at the four-year level or above (Figure 34), reflecting the relatively large number of four-year institutions in the region. The top 25 fields of study (based on the Classification of Instructional Program code) in which these awards were made are shown in Figure 36 (page 56). Data for selected occupations is presented as part of the profiles in Appendix B.

FIGURE 34. COMPLETIONS BY YEAR AND AWARD LEVEL
SHARE OF DEGREES/AWARDS CONFERRED BY REGIONAL INSTITUTIONS, 2011-2013



Source: Natl. Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS). Note: IPEDS data include only schools eligible to participate in federal financial aid programs. Figures shown include first and second majors. *Associate's-degree level completions include awards categorized by IPEDS as "Award of at least two but less than four academic years." **Advanced-level completions represent all awards above the bachelor's-degree level.

FIGURE 35. SCHOOLS INCLUDED IN THE ANALYSIS

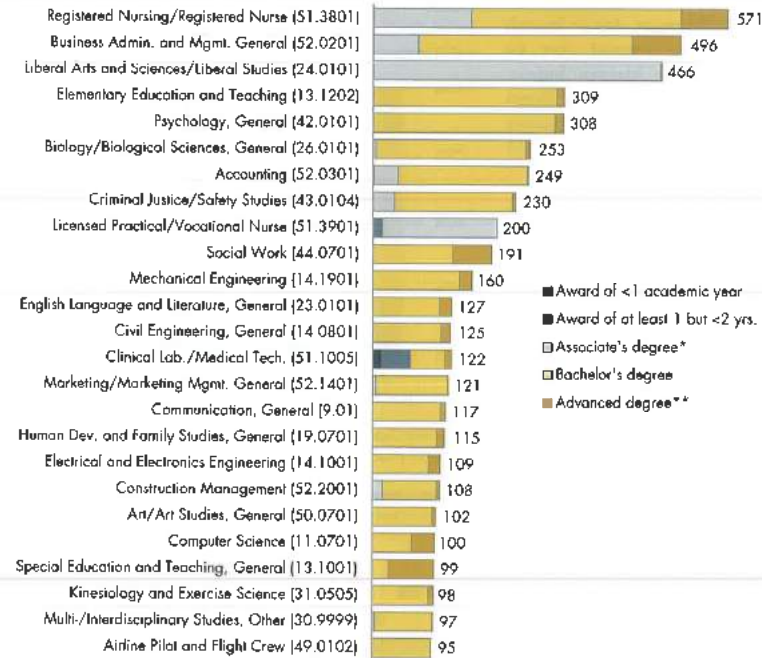
School	City	State	Type	Level
Concordia College at Moorhead	Moorhead	MIN	Private not-for-profit	4-year or above
Minnesota State Community and Tech. College	Fergus Falls	MIN	Public	2-year
Minnesota State University Moorhead	Moorhead	MIN	Public	4-year or above
Rasmussen College-North Dakota	Fargo	ND	Private for-profit	4-year or above
University of Jamestown	Jamestown	ND	Private not-for-profit	4-year or above
Mayville State University	Mayville	ND	Public	4-year or above
University of North Dakota	Grand Forks	ND	Public	4-year or above
North Dakota State College of Science	Wahpeton	ND	Public	2-year
North Dakota State University-Main Campus	Fargo	ND	Public	4-year or above
Valley City State University	Valley City	ND	Public	4-year or above
Minnesota School of Business-Moorhead	Moorhead	MIN	Private for-profit	4-year or above
Lynnes Welding Training	Fargo	ND	Private for-profit	less than 2-year

Source: National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS); TIP Strategies

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FIGURE 36. TOP 25 FIELDS OF STUDY (CIP CODES) BY AWARD LEVEL

AVERAGE ANNUAL AWARDS/DEGREES CONFERRED FOR CREDIT BY REGIONAL INSTITUTIONS, 2011-2013



Source: Natl. Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS). Note: IPEDS data include only schools eligible to participate in federal financial aid programs. Figures shown include first and second majors. *Associate's degree-level completions include awards categorized by IPEDS as "Award of at least two but less than four academic years." **Advanced-level completions represent all awards above the bachelor's degree level.

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APPENDIX B: INDUSTRY PROFILES

Organizing around industry sectors has proven to be one of the most effective ways to address workforce challenges. Three sectors in the Fargo-Moorhead region have been identified as primary economic drivers for the region. Organizing around these sectors will provide the region with a mechanism to facilitate employer engagement as well as provide a vehicle for interfacing with the region's workforce training intermediaries, community colleges, school districts, and the many community-based organizations that offer workforce services. This structure can help the region better align its workforce and education assets with industry needs.

The priority sectors identified for this work are:



HEALTHCARE



MANUFACTURING



IT (SOFTWARE)

The industry profiles that follow provide a base of knowledge and a common language to support a sector-based approach. Each profile includes a description of how the sector is defined, an overview of employment trends, a list of major employers in the region, key occupations and staffing patterns, demographics (age), regional education and training programs, and regional initiatives and resources.

In addition, real-time labor market information was compiled for each sector and for selected occupations. This labor market information provides insight into the types of job openings that employers are seeking to fill through online recruitment tools. This section documents the top employers posting in the region, the top occupations, the top skills, and the top certifications.

In order to supplement our quantitative analysis, we worked with the project team to conduct an online survey of regional employers. The survey asked questions about current head count, hiring and training needs, and impressions of the regional workforce. In each of the profiles that follow, we present relevant survey data for that industry. The employer survey is presented in more detail in Appendix C.

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HEALTHCARE

OVERVIEW. The healthcare industry employed about 30,000 workers in 2014 in the 11-county laborshed. The sector is composed of three primary categories—ambulatory health care services, hospitals, and nursing and residential care facilities—each of which account for about one-third of the overall employment. Sanford Health and Essentia, which are regional hospital systems, serve as the anchors of the sector.

Employment in the sector has increased 21 percent over the last 10 years. This growth has been driven by a rise in ambulatory health care services, which increased by 48 percent over this time period.

The 11-county healthcare sector outperformed the national and regional economy overall. It also outperformed the national healthcare sector slightly. The regional sector averaged 2.1 percent growth between 2004 and 2014 while the national healthcare sector averaged 2.0 percent.

FIGURE 37. EMPLOYMENT TRENDS, 2004 TO 2014

TOTAL EMPLOYMENT IN RELATED OCCUPATIONS



GAINS/LOSSES BY GROUP (2004 = 1.00)

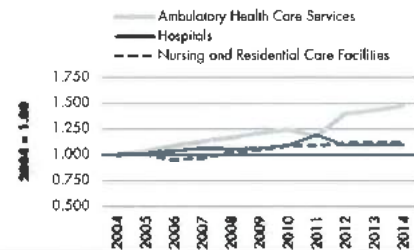
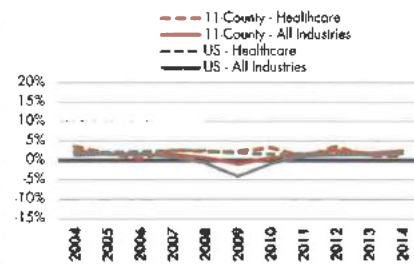


FIGURE 38. SELECTED EMPLOYERS

Organization/Company
Bethany Retirement Living
Catholic Health Initiatives
DaVita
Essentia Health
Eventide Senior Living Communities
Fargo VA Medical Center
Lake Region Healthcare
Perham Health
Prairie St. Johns
Sanford Health

GAINS/LOSSES: REGION VERSUS US (2004 - 14)



Source: EMSI 2014 4 - QCEW Employees, Non-QCEW Employees, and Self Employed

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HEALTHCARE CONT.

KEY OCCUPATIONS. Figure 39 provides an overview of the occupations that support the regional healthcare industry. Registered nursing accounts for the largest healthcare-related occupational group across the sub-sectors, particularly in hospitals. Nursing assistants, LVNs, and personal care aides play more vital roles in the residential care sector.

FIGURE 39. SHARE OF EMPLOYMENT IN SELECTED INDUSTRIES – HEALTHCARE OCCUPATIONS
INCLUDES 2014 LOCATION QUOTIENT (LQ) AND WAGE RATE COMPARISON RELATIVE TO US

SOC Code	Description	Jobs (11-county labor shed)	LQ	Median Hourly Earnings (US=1.00)	Relative to US (US=1.00)	Occupation's share of total employment in selected industry		
						Outpatient Services NAICS 621	Hospitals NAICS 622	Residential Care NAICS 623
✓ 29-1141	Registered Nurses	4,707	0.95	27.67	0.87	8.1%	31.5%	4.9%
✓ 31-1014	Nursing Assistants	3,771	1.49	12.63	1.06	1.3%	7.3%	24.9%
✓ 29-2061	Licensed Practical/Vocational Nurses	2,454	1.83	17.89	0.89	6.1%	3.8%	10.7%
✓ 39-9021	Personal Care Aides	3,289	1.13	11.49	1.19	1.5%	0.2%	19.7%
✓ 43-4171	Receptionists & Information Clerks	1,958	1.03	12.74	1.00	8.0%	0.7%	0.6%
✓ 37-2012	Maids & Housekeepers	3,262	1.20	9.63	1.03	0.2%	3.0%	3.7%
✓ 35-3041	Food Servers, Nonrestaurant	866	1.93	10.01	1.04	0.0%	1.9%	5.0%
✓ 43-9061	Office Clerks, General	6,828	1.16	12.06	0.89	3.4%	1.3%	0.6%
39-9041	Residential Advisors	574	2.00	11.95	1.01	0.0%	0.1%	4.7%
✓ 31-1011	Home Health Aides	1,329	0.76	11.52	1.15	0.8%	0.1%	3.8%
✓ 31-9097	Phlebotomists	331	1.68	13.44	0.93	2.6%	1.9%	0.0%
✓ 29-1171	Nurse Practitioners	388	1.81	39.55	0.89	3.3%	0.9%	0.1%
✓ 43-3021	Billing & Posting Clerks	974	1.02	15.28	0.93	3.5%	0.7%	0.1%
✓ 43-6013	Medical Secretaries	476	0.49	14.56	0.95	3.2%	0.6%	0.1%
✓ 31-9091	Dental Assistants	479	0.83	18.20	1.08	3.4%	0.0%	0.0%
11-9111	Medical & Health Services Managers	500	0.87	36.99	0.86	1.2%	1.6%	0.6%
✓ 37-2011	Janitors & Cleaners, Exc. Maids & Housekeepers	5,308	1.15	11.51	1.05	0.8%	1.5%	1.0%
29-2021	Dental Hygienists	391	1.09	30.04	0.87	3.2%	0.0%	0.0%
29-2071	Medical Records & Health Info. Technicians	424	1.25	16.22	0.96	1.5%	1.2%	0.3%
✓ 43-1011	First-Line Supvrs., Office & Admin. Support	2,101	0.81	21.10	0.87	2.0%	0.5%	0.2%
✓ 43-6014	Secretaries/Admin. Asst., Exc. Legal, Med., & Exec.	3,841	0.81	15.59	0.99	1.5%	0.8%	0.3%
✓ 43-3031	Bookkeeping, Accounting, & Auditing Clerks	4,827	1.49	15.98	0.93	1.5%	0.5%	0.4%
✓ 11-1021	General & Operations Managers	3,512	0.93	40.02	0.87	0.6%	0.2%	0.5%
✓ 49-9071	Maintenance & Repair Workers, General	1,977	0.78	16.33	0.95	0.1%	0.5%	0.7%
✓ 43-4051	Customer Service Representatives	4,073	0.90	13.84	0.93	0.7%	0.6%	0.0%

Source: EMSI 2014.4 – QCEW Employees, Non-QCEW Employees, and Self-Employed
 Notes: ✓ Indicates occupation was identified as a high demand occupation (HDO), see page 52. [LQ] greater than 1.25 are highlighted, as are wage rates above the regional average (\$17.57). Marker indicates median hourly wages ≥110% of US (●) or ≤80% of US (✖)

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HEALTHCARE CONT.

DEMAND. Figure 40 details occupational demand and selected demographic characteristics for each of the key occupations that support the healthcare sector. Among the health-related professions, registered nurses, nursing assistants, personal care aides, and LVNs are the highest in demand with more than 500 openings expected annually. Among professional occupations, office clerks, customer service representatives, and operations managers will be in high demand. Janitors, housekeepers, and maintenance workers will be the facilities support occupations in highest demand.

FIGURE 40. DEMAND FACTORS & DEMOGRAPHICS – HEALTHCARE OCCUPATIONS
INCLUDES ESTIMATED ANNUAL OPENINGS, 2014 TO 2019

SOC Code	Description	Jobs (11-county laborshed)	Est. Annual Openings (2014-2019)	% of openings due		% of the workforce:	
				Net change	Replacement	Age 55+ Years	Age 65+ Years
✓ 43-9061	Office Clerks, General	6,828	203	26%	74%	23% ◀	5% ◀
✓ 29-1141	Registered Nurses	4,707	198	50%	50%	22% ◀	3%
✓ 37-2011	Janitors & Cleaners, Exc. Maids & Housekeepers	5,308	175	39%	61%	23% ◀	6% ◀
✓ 43-4051	Customer Service Representatives	4,073	159	28%	72%	17%	3%
✓ 11-1021	General & Operations Managers	3,512	132	47%	53%	20%	4%
✓ 37-2012	Maids & Housekeepers	3,262	130	45%	55%	19%	5% ◀
✓ 31-1014	Nursing Assistants	3,771	128	34%	66%	21% ◀	5% ◀
✓ 39-9021	Personal Care Aides	3,289	117	76%	24%	20%	6% ◀
✓ 29-2061	Licensed Practical/Vocational Nurses	2,454	113	43%	57%	23% ◀	4%
✓ 43-6014	Secretaries/Admin. Asst., Exc. Legal, Med., & Exec.	3,841	109	53%	47%	24% ◀	6% ◀
✓ 43-3031	Bookkeeping, Accounting, & Auditing Clerks	4,827	108	57%	43%	23% ◀	5% ◀
✓ 43-1011	First-Line Supvrs., Office & Admin. Support	2,101	95	44%	56%	20% ◀	4%
✓ 43-4171	Receptionists & Information Clerks	1,958	93	39%	61%	21% ◀	4%
✓ 31-1011	Home Health Aides	1,329	80	59%	41%	21% ◀	5% ◀
✓ 49-9071	Maintenance & Repair Workers, General	1,977	71	43%	57%	25% ◀	6% ◀
✓ 43-3021	Billing & Posting Clerks	974	44	56%	44%	20% ◀	3%
✓ 35-3041	Food Servers, Nonrestaurant	866	40	26%	74%	17%	4%
39-9041	Residential Advisors	574	39	31%	69%	19%	5% ◀
✓ 43-6013	Medical Secretaries	476	34	73%	21%	24% ◀	4%
11-9111	Medical & Health Services Managers	500	26	48%	52%	23% ◀	4%
29-2071	Medical Records & Health Info. Technicians	424	22	45%	55%	22% ◀	4%
✓ 29-1171	Nurse Practitioners	388	22	61%	39%	21% ◀	3%
✓ 31-9091	Dental Assistants	479	20	43%	57%	16%	1%
29-2021	Dental Hygienists	391	20	42%	58%	17%	1%
✓ 31-9097	Phlebotomists	331	13	48%	52%	15%	2%

Source: EMSI 2014.4 – QCEW Employees, Non-QCEW Employees, and Self-Employed
 Notes: * Indicates occupation was identified as a high demand occupation (HDO), see page 52. Annual openings are an estimate of job openings due to **replacements** in employment and **replacement** needs (e.g., turnover, retirement). ◀ Indicates significant share of workforce is reaching retirement age (defined here as ≥ 25% age 55+ and/or ≥ 5% age 65+).

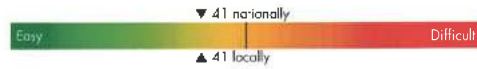
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HEALTHCARE CONT.

REAL-TIME LABOR MARKET INFORMATION. Figure 41 shows a summary of online job postings in the region. Currently, there are 1,005 unique job postings for the healthcare industry posted by 101 employers. Essentia is the top employer with over 1,000 postings over the last three months. It should be noted that the postings by employer reflect both demand and differences in recruiting practices. For example, Sanford has 4 postings for LPNs but Essentia has 105 postings for LPNs.

FIGURE 41. SUMMARY FOR JOB POSTINGS IN HEALTHCARE SECTOR

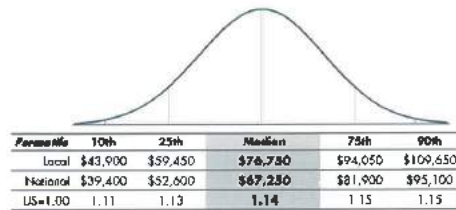
HIRING SCALE



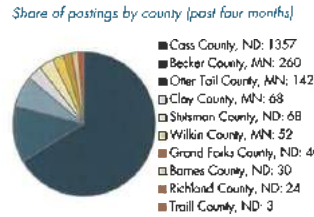
OPENINGS

Current job openings: 1,005
Direct employers competing: 101
Average posting duration (in days): 46

SALARY RANGE



GEOGRAPHIC DISTRIBUTION



TOP 10 COUNTS (based 2,499 postings past three months)

Employers	# postings
Essentia Health	1,182
Catholic Health Initiatives	214
SMDC Health System	111
Sanford Health	101
PRAIRIE ST. JOHN'S	69
lake Region Healthcare	54
Senior Living Communities	48
Lutheran Social Services	45
White Earth Tribal Council	38
Department of Veterans Affairs	37

Occupations	# postings
Registered Nurses	529
Social and Human Service Assistants	207
Licensed Practical and Licensed Vocational Nurses	159
Nursing Assistants	103
Physician Assistants	73
Physicians and Surgeons, All Other	68
Maids and Housekeeping Cleaners	55
Medical Secretaries	49
Personal Care Aides	42
Medical and Health Services Managers	40

Hard skills	# postings
Pediatrics	150
Geriatrics	123
Critical Care	105
Behavioral health	81
Quality Assurance	67
Quality Control	58
Food Preparation	57
Presentation Software	48
Instrumentation	44
Patient Electronic Medical Record	27

Certifications	# postings
Certified Registered Nurse	672
Basic Life Support	340
Driver's License	287
Licensed Practical Nurse	257
Certification in Cardiopulmonary Resuscitation	216
Advanced Cardiac Life Support	141
Certified in Nursing Administration	122
Pediatric Advanced Life Support	86
Certified Practical Nurse, Long-term care	70
Patient Care Technician	54

Source: Wanted Analytics; TIP Strategies

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HEALTHCARE CONT.

FIGURE 42. REAL-TIME LMI, SELECTED HEALTHCARE OCCUPATIONS

29-1141 REGISTERED NURSES

HIRING SCALE

▼ 46 nationally
▲ 36 locally

SALARY RANGE

Percentile	10th	25th	50th	75th	90th
Local	\$54,440	\$60,250	\$66,750	\$73,200	\$79,050
National	\$58,550	\$64,750	\$71,700	\$78,600	\$84,800
US=1.00	0.93	0.93	0.93	0.93	0.93

OPENINGS

Current job openings: 397
Direct employers competing: 70
Average posting duration (in days): 46

TOP SKILLS

Pediatrics | Critical care | Geriatrics | Behavioral health | Patient EMR | Medical information | 20/20 software | Cath lab | Epic software | Quality assurance

21-1093 SOCIAL AND HUMAN SERVICE ASSISTANTS

HIRING SCALE

63 nationally ▼
▲ 64 locally

SALARY RANGE

Percentile	10th	25th	50th	75th	90th
Local	\$20,800	\$23,700	\$26,850	\$30,050	\$32,950
National	\$22,050	\$26,100	\$30,600	\$35,100	\$39,150
US=1.00	0.94	0.91	0.88	0.86	0.84

OPENINGS

Current job openings: 127
Direct employers competing: 52
Average posting duration (in days): 41

TOP SKILLS

Food preparation | Ability to measure | Service design | Crisis intervention techniques | Autism spectrum disorders | Behavioral health | Administering medication | Pediatrics

29-2061 LICENSED PRACTICAL AND LICENSED VOCATIONAL NURSES

HIRING SCALE

▼ 20 nationally
▲ 29 locally

SALARY RANGE

Percentile	10th	25th	50th	75th	90th
Local	\$31,600	\$35,850	\$40,600	\$45,350	\$49,600
National	\$37,000	\$41,050	\$45,600	\$50,100	\$54,150
US=1.00	0.85	0.87	0.89	0.91	0.92

OPENINGS

Current job openings: 144
Direct employers competing: 47
Average posting duration (in days): 52

TOP SKILLS

Geriatrics | ICD-10/ICD-9 | Pediatrics | Presentation software | IV Therapy | Quality assurance | Patient EMR | Sterilization

31-1014 NURSING ASSISTANTS

HIRING SCALE

▼ 9 nationally
▲ 6 locally

SALARY RANGE

Percentile	10th	25th	50th	75th	90th
Local	\$22,450	\$23,650	\$25,000	\$26,350	\$27,600
National	\$20,400	\$22,650	\$25,100	\$27,550	\$29,800
US=1.00	1.10	1.04	1.00	0.96	0.93

OPENINGS

Current job openings: 102
Direct employers competing: 38
Average posting duration (in days): 42

TOP SKILLS

Geriatrics | Food preparation | Pediatrics | Ambulatory surgery | Optical character recognition | Video teleconferencing | Electronic health record | Patient EMR

Source: Worked Analytics, TIP Strategies

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HEALTHCARE CONT.

SURVEY. Seven healthcare employers participated in the employer survey. These employers employ almost 10,000 full-time and part-time workers in the region. Of these participants, six plan to hire additional employees over the next two years. These employers estimated that they will add 176 workers. The majority of these workers will be in professional/technical and unskilled positions.

Respondents indicated that most positions are filled within three months. Management positions take four to six months for some employers.

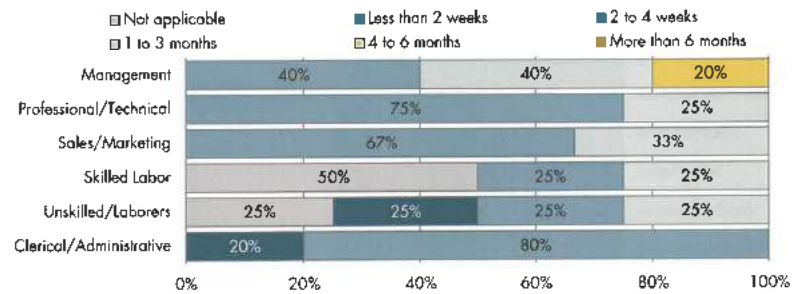
FIGURE 43. FINDINGS FROM EMPLOYER SURVEY – HEALTHCARE FIRMS

Do you plan to hire additional employees at your Fargo-Moorhead location(s) in the next 12 to 24 months?

If you plan to hire additional employees in the Fargo-Moorhead region in the next 12 to 24 months, approximately how many workers do you plan to add in each of the following categories?



Approximately how long does it typically take to fill a vacancy for each of the following classifications of workers?



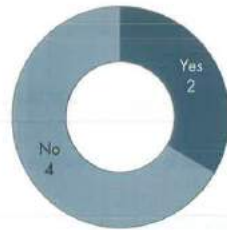
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HEALTHCARE CONT.

FIGURE 44. FINDINGS FROM EMPLOYER SURVEY- HEALTHCARE FIRMS

Two respondents indicated that there have been specific positions that they have been unable to fill at all, but they did not indicate what the positions were. Overall, respondents listed various occupations that are difficult to recruit for. More than one employer listed coding specialists, environmental services, licensed practical nurse, nursing assistant, and registered nurse.

Are there specific positions which you have been unable to fill at all?

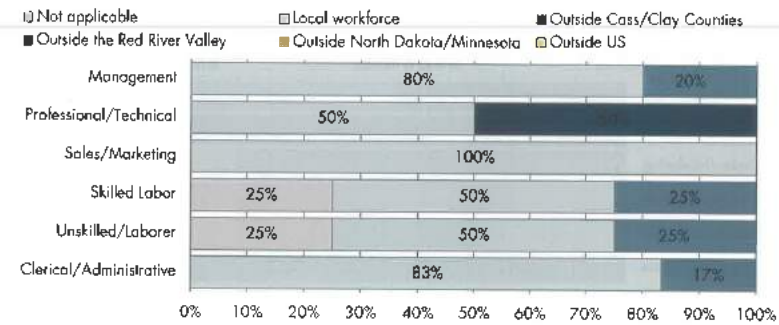


The respondents indicated that they can fill most of their positions from the local labor pool. Some respondents reported extending their search outside of Cass and Clay Counties when searching for management, skilled labor, unskilled labor, and clerical/administrative positions. Half of the respondents reported recruiting outside of the Red River Valley for professional/technical positions.

Which occupations are difficult to recruit in your industry?

Coding Specialist	Massage Therapist
Environmental Services	Medical Laboratory Technician
LPN	Pharmacist
Nurse Assistant	Registration
Registered Nurse	Respiratory Therapist
Histo Techs	Xray Techs
IT	

When hiring, which geographic area is typically used to recruit workers?



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HEALTHCARE CONT.

EDUCATION & TRAINING. Figure 45 shows the wages and the typical requirements for entry into specific occupations.

Most of the occupations that support the healthcare industry require at least a high school diploma. Of those, the allied health and administrative support occupations require the full range of postsecondary award levels, from a non-degree award to an advanced degree. This occupational structure offers opportunities to individuals with a wide range of skill levels.

FIGURE 45. EDUCATION & TRAINING REQUIREMENTS – HEALTHCARE OCCUPATIONS
WITH HOURLY EARNINGS FOR SELECTED PERCENTILES, INCLUDING MEDIAN (50TH)

SOC Code	Description	Hourly Earnings (percentiles)			Typical requirements for entry into occupation:		Training Required For Competency
		10th	50th	90th	Edu.	Exp.	
✓ 43-9061	Office Clerks, General	\$8.34	\$9.62	\$17.40	HS or equiv.	None	Short-term OJT
✓ 29-1141	Registered Nurses	\$21.51	\$24.31	\$36.01	Associate's	None	None
✓ 37-2011	Janitors & Cleaners, Exc. Maids & Housekeepers	\$8.49	\$9.78	\$17.21	Less than HS	None	Short-term OJT
✓ 43-4051	Customer Service Representatives	\$10.19	\$12.06	\$21.13	HS or equiv.	None	Short-term OJT
✓ 11-1021	General & Operations Managers	\$23.75	\$30.17	\$75.83	Bachelor's	< 5 yrs.	None
✓ 37-2012	Maids & Housekeepers	\$7.91	\$8.61	\$13.04	Less than HS	None	Short-term OJT
✓ 31-1014	Nursing Assistants	\$10.11	\$11.24	\$16.36	Non-deg. award	None	None
✓ 39-9021	Personal Care Aides	\$9.23	\$10.26	\$15.05	Less than HS	None	Short-term OJT
✓ 29-2061	Licensed Practical/Vocational Nurses	\$14.15	\$15.73	\$22.18	Non-deg. award	None	None
✓ 43-6014	Secretaries/Admin. Asst., Exc. Legal, Med., & Exec.	\$11.44	\$13.17	\$21.59	HS or equiv.	None	Short-term OJT
✓ 43-3031	Bookkeeping, Accounting, & Auditing Clerks	\$11.04	\$13.17	\$22.62	HS or equiv.	None	Medium-term OJT
✓ 43-1011	First-Line Supvr., Office & Admin. Support	\$13.68	\$16.85	\$34.19	HS or equiv.	< 5 yrs.	None
✓ 43-4171	Receptionists & Information Clerks	\$8.85	\$10.43	\$17.39	HS or equiv.	None	Short-term OJT
✓ 31-1011	Home Health Aides	\$9.00	\$10.22	\$15.02	Less than HS	None	Short-term OJT
✓ 49-9071	Maintenance & Repair Workers, General	\$10.63	\$13.20	\$24.80	HS or equiv.	None	Long-term OJT
✓ 43-3021	Billing & Posting Clerks	\$11.55	\$13.15	\$20.79	HS or equiv.	None	Short-term OJT
✓ 35-3041	Food Servers, Nonrestaurant	\$8.06	\$8.95	\$12.97	Less than HS	None	Short-term OJT
✓ 39-9041	Residential Advisors	\$8.43	\$9.89	\$22.49	HS or equiv.	None	Short-term OJT
✓ 43-6013	Medical Secretaries	\$11.36	\$12.82	\$19.21	HS or equiv.	None	Medium-term OJT
11-9111	Medical & Health Services Managers	\$24.30	\$30.40	\$56.45	Bachelor's	None	None
29-2071	Medical Records & Health Info. Technicians	\$11.40	\$13.28	\$21.97	Non-deg. award	None	None
✓ 29-1171	Nurse Practitioners	\$31.24	\$34.38	\$54.25	Advanced degree	None	None
✓ 31-9091	Dental Assistants	\$14.53	\$16.11	\$26.11	Non-deg. award	None	None
29-2021	Dental Hygienists	\$23.14	\$26.18	\$36.11	Associate's	None	None
✓ 31-9097	Phlebotomists	\$10.32	\$11.45	\$18.88	Non-deg. award	None	None

Source: TIP Strategies

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HEALTHCARE CONT.

Figure 46 shows the for credit completions from regional postsecondary institutions in fields of study relevant to the healthcare industry's key occupations. More than 500 students, on average, are awarded a degree in registered nursing, and 200 students earn a LVN. In programs related to medical coding, health information technician, and medical secretary, more than 40 students graduate on average. Other programs offered in the region that graduate students include dental hygiene, dental assisting, medical office assistant, health services administration, hospitals facilities administration, family practice nursing, and medical office management.

FIGURE 46. RELEVANT COMPLETIONS – HEALTHCARE OCCUPATIONS
THREE-YEAR ANNUAL AVERAGE OF DEGREES/AWARDS CONFERRED, 2011-2013

CIP Code	Field of Study	Degrees/awards by level					Annual average degrees/awards conferred (all levels)
		Certificate < 1 year	Certificate (≥ 1 yr., < 2 yr.)	Associate's*	Bachelor's	Advanced**	
51.3801	Registered Nursing/Registered Nurse	0	0	159	338	74	571
52.0201	Business Admin. & Mgmt., General	0	0	73	346	77	496
51.3901	Licensed Practical/Voc. Nurse Training	0	15	185	0	0	200
52.0801	Finance, General	0	0	0	82	0	82
52.0701	Entrepreneurship/Entrepreneurial Studies	25	4	5	27	0	60
51.0713	Med. Insurance Coding Specialist/Coder	8	42	0	0	0	50
52.0302	Acc. Tech./Technician & Bookkeeping	22	4	21	0	0	47
51.0707	Health Info./Records Tech./Technician	0	5	41	0	0	46
52.0402	Executive Ass./Executive Secretary	37	8	0	0	0	45
51.0716	Med. Admin./Exec. Asst. & Med. Sec.	0	0	42	0	0	43
51.0602	Dental Hygiene/Hygienist	0	0	40	0	0	40
51.0601	Dental Assisting/Asst.	0	22	10	0	0	32
44.0401	Public Admin.	0	0	0	5	23	29
52.0401	Admin. Asst. & Secretarial Science, General	1	5	20	0	0	26
51.071	Med. Office Asst./Specialist	0	16	0	0	0	16
51.2211	Health Services Admin.	0	0	0	15	0	15
51.0702	Hosp. & Health Facilities Admin./Mgmt.	0	0	0	15	0	15
52.0204	Office Mgmt. & Supervision	0	0	13	1	0	14
52.0101	Business/Commerce, General	0	0	13	0	0	13
51.3805	Family Practice Nurse/Nursing	0	0	0	0	11	11
51.0705	Med. Office Mgmt./Admin.	0	0	11	0	0	11

Source: National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS) surveys; National Crosswalk Service Center; TIP Strategies. IPEDS data include only schools eligible to participate in federal financial aid programs. Figures shown include first and second majors. *Associate's-degree-level completions include awards categorized by IPEDS as "Award of at least two but less than four academic years." **Advanced-level completions represent all awards above the bachelor's-degree level.

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HEALTHCARE CONT.

RESOURCES. The resources listed below support the regional healthcare industry.

North Dakota Long Term Care Association (NDLTCA). NDLTCA is an advocacy organization for assisted living, basic care, and nursing facilities in North Dakota. The Association represents not-for-profit and proprietary facilities that care for approximately 14,000 elderly and disabled individuals. Along with acting as an advocate, the organization enhances the lives of people they serve through collaboration and education.

LeadingAge Minnesota. LeadingAge Minnesota is the state affiliate of the Assisted Living Federation of America. The organization works to support caregivers and service providers in providing high quality care to aging citizens. In June 2015, the group is hosting the LeadingAge Minnesota Workforce Solutions Conference to zero in on the recruitment, retention, and development of the sector's workforce.

North Dakota Hospital Association (NDHA) and Minnesota Hospital Association (MHA). NDHA and MHA have acted as an advocate for public policy on behalf of North Dakota's and Minnesota's licensed hospitals and health-related organizations. The organization's aim is to promote public health and the development of strong, healthy communities. Along with policy and advocacy, member resources include information and tools to help with collections, education programming, group purchasing, peer reviewing, and recruitment.

Community HealthCare Association of the Dakotas (CHAD). CHAD serves as the Primary Care Association for North and South Dakota, supporting Community Health Centers (CHCs) through training and technical assistance. They also provide public policy advocacy at the state and federal level and work with community leaders to find solutions to health care access for vulnerable populations and high need areas of the Dakotas, with the mission of enhancing access to quality primary care through services to members.

Minnesota Association of Community Health Centers (MNACHC). MNACHC works on behalf of its members and their patients to promote the cost-effective delivery of affordable, quality primary health care services. The organization provides training and education programs, formal and informal networking opportunities, team mentoring, telephone assistance, and quality improvement data aggregation and reporting.

Sector Breakfasts (Minnesota State University Moorhead). For the past five years, MSUM and the Greater Fargo-Moorhead Economic Development Corporation have hosted breakfasts to provide business leaders an opportunity to network and collaborate about preparing graduates for the workforce. The breakfasts are centered on specific sectors, such as healthcare, finance, technology, manufacturing, STEM, and K-12 education.

Health, Tech, and Trades Career Expo. This expo provides students interested in the fields of health, technology, and trades an opportunity to take part in hands-on demonstrations and be exposed to career opportunities. The event is targeted to 9th graders in Fargo, Moorhead, West Fargo, and area rural, public and private schools, although older students are also invited.

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MANUFACTURING

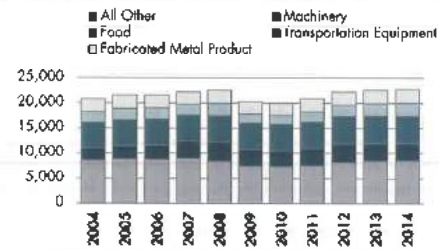
OVERVIEW. The manufacturing industry in the 11-county laborshed employed just over 20,000 workers in 2014. The largest segments of the industry are food manufacturing, machinery manufacturing, fabricated metal product manufacturing, and transportation equipment. Together, these four segments accounted for 63 percent of the regional manufacturing industry.

The manufacturing sector, as a whole, grew almost 9 percent between 2004 and 2014. This strong growth was led by the machinery manufacturing segment, which grew 49 percent over the 10 year period. Though the metal products and transportation equipment segments suffered during the recession, these segments have since recovered and shown strong growth.

Employment in the national manufacturing sector has declined for years, with the exception of a recent resurgence. In the Fargo-Moorhead laborshed, however, the sector has consistently gained employment. Even during the recession, the sector only shed employment for two years.

FIGURE 47. EMPLOYMENT TRENDS, 2004 TO 2014

TOTAL EMPLOYMENT IN RELATED OCCUPATIONS



GAINS/LOSSES BY GROUP (2004 = 1.00)

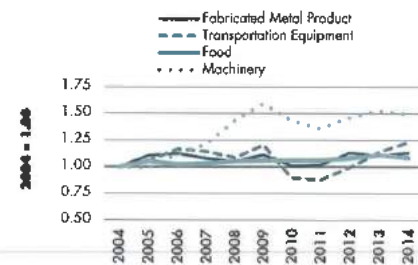
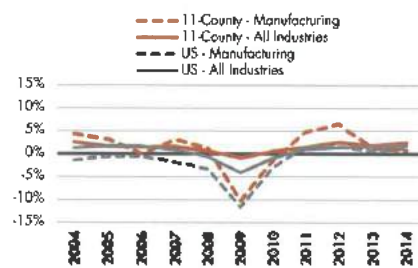


FIGURE 48. SELECTED EMPLOYERS

Organization/Company
American Crystal Sugar Company
Caterpillar Reman Drivetrain
Cardinal IG Company
Case New Holland
Crary Industries
Fargo Assembly Company
Integrity Windows by Marvin
John Deere Electronic Solutions
MidAmerica Steel
Tecton Products

GAINS/LOSSES: REGION VERSUS US (2004 = 1.4)



Source: EMSI 2014.4 - GCEW Employees, Non-GCEW Employees, and Self Employed

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MANUFACTURING CONT.

KEY OCCUPATIONS. Figure 49 provides an overview of the occupations that support the regional manufacturing industry. Team assemblers are the largest occupational group in terms of share of total employment across the region's key manufacturing segments. Welders hold the next-highest share of employment. First-line supervisors, packaging and filling machine workers, and machinists are also important occupations to the industry.

FIGURE 49. SHARE OF EMPLOYMENT IN SELECTED INDUSTRIES – MANUFACTURING OCCUPATIONS

INCLUDES 2014 LOCATION QUOTIENT (LQ) AND WAGE RATE COMPARISON RELATIVE TO US

SOC Code	Description	Jobs (11-county labor shed)	LQ	Median Hourly Earnings (US=1.00)	Relative to US (US=1.00)	Occupation's share of total employment in selected industry segments			
						Food NAICS 311	Fabricated Metals NAICS 332	Machinery NAICS 33	Transportation Equipment NAICS 336
✓ 51-2092	Team Assemblers	2,158	1.08	14.06	1.04	1.9%	7.3%	16.0%	25.4%
✓ 51-4121	Welders, Cutters, Solderers, & Brazers	1,336	1.90	16.95	0.96	0.0%	14.0%	1.7%	5.1%
✓ 51-1011	First-Line Super., Production & Operating Workers	1,123	1.03	22.40	0.86	4.3%	4.6%	3.4%	3.6%
✓ 51-9111	Packaging & Filling Machine Workers	825	1.19	13.20	1.04	9.7%	0.8%	0.0%	0.4%
✓ 51-4041	Machinists	544	0.74	18.00	0.95	0.1%	3.7%	4.4%	2.3%
✓ 51-4031	Cutting, Punching, & Press Machine, Metal/Plastic	551	1.60	15.77	1.10	0.0%	4.2%	2.4%	3.0%
✓ 53-7062	Laborers/Freight, Stock, & Material Movers, Hand	4,051	0.92	12.11	1.05	3.0%	1.8%	2.1%	2.3%
✓ 51-9198	Helpers-Production Workers	622	0.78	12.75	1.15	3.3%	2.6%	1.0%	1.3%
49-9041	Industrial Machinery Mechanics	627	1.05	21.27	0.93	2.4%	1.5%	2.2%	1.3%
✓ 41-4012	Sales Reprs., Whls & Mfg., Exc. Tech. & Scientific	2,657	0.97	23.51	0.91	1.0%	2.0%	2.1%	1.1%
51-2031	Engine & Other Machine Assemblers	198	2.69	18.42	1.03	0.0%	0.1%	3.4%	2.4%
51-3011	Bakers	284	0.87	12.23	1.11	5.7%	0.0%	0.0%	0.0%
✓ 11-1021	General & Operations Managers	3,512	0.93	40.02	0.87	1.3%	1.9%	1.4%	1.0%
51-2041	Structural Metal Fabricators & Fitters	115	0.80	16.48	0.94	0.0%	3.7%	1.1%	0.6%
✓ 43-5071	Shipping, Receiving, & Traffic Clerks	1,111	0.88	14.22	1.01	1.1%	1.3%	1.3%	1.6%
✓ 49-9071	Maintenance & Repair Workers, General	1,977	0.78	16.33	0.95	1.7%	1.2%	0.9%	1.2%
51-4122	Welding, Soldering, & Brazing Machine	144	1.46	17.58	1.07	0.0%	1.6%	1.8%	1.6%
17-2112	Industrial Engineers	354	0.83	31.90	0.83	0.5%	0.7%	1.7%	2.0%
✓ 51-2022	Electrical & Electronic Equip. Assemblers	479	1.30	12.17	0.87	0.0%	0.1%	1.6%	3.0%
17-2141	Mechanical Engineers	355	0.73	34.59	0.88	0.0%	0.9%	2.3%	1.4%
✓ 51-2099	Assemblers & Fabricators, All Other	592	1.22	14.16	1.14	0.0%	0.9%	1.3%	2.4%
51-3092	Food Batchmakers	299	1.18	15.26	1.19	4.6%	0.0%	0.0%	0.0%
47-2211	Sheet Metal Workers	436	1.68	17.07	0.82	0.0%	3.8%	0.4%	0.3%
53-7051	Industrial Truck & Tractor Operators	762	0.80	15.53	1.05	1.4%	0.8%	1.1%	1.1%
53-7064	Packers & Packagers, Hand	837	0.65	9.72	1.01	3.6%	0.4%	0.2%	0.3%

Source: EMSI 2014.4 – QCEW Employees, Non-QCEW Employees, and Self-Employed

Notes: ✓ Indicates occupation was identified as a high demand occupation (HDO), see page 52. [Red box] greater than 1.25 are highlighted, as are wage rates above the regional average (\$17.57). Marker indicates median hourly wages ≥110% of US [●] or ≤80% of US [✖].

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MANUFACTURING CONT.

DEMAND. Figure 50 details occupational demand and selected demographic characteristics for each of the key occupations that support the manufacturing sector. Note that many of the occupations are components of other industries as well; thus, the number of annual openings is for that occupation across all industries, not just in manufacturing. The high replacement needs of these occupations, particularly in the low-wage positions, reflect the tight labor market and high rates of turnover. Sales representatives, maintenance and repair workers, and industrial machinery mechanics have particularly high shares of their workforce aged 55 and older.

FIGURE 50. DEMAND FACTORS & DEMOGRAPHICS – MANUFACTURING OCCUPATIONS

INCLUDES ESTIMATED ANNUAL OPENINGS, 2014 TO 2019

HDO	SOC Code	Description	Jobs (11-county laborshed)	Est. annual openings (2014-2019)	% of openings due to:		% of the workforce:	
					Net change	Replacement	Age 55+ Years	Age 65+ Years
✓	53-7062	Laborers/Freight, Stock, & Material Movers, Hand	4,051	194	32%	68%	19%	4%
✓	11-1021	General & Operations Managers	3,512	132	47%	53%	20%	4%
✓	41-4012	Sales Reps., Whls. & Mfg., Exc. Tech. & Scientific	2,657	94	42%	58%	20%	4%
✓	51-2092	Team Assemblers	2,158	90	56%	44%	17%	2%
✓	49-9071	Maintenance & Repair Workers, General	1,977	71	43%	57%	25%	6%
✓	51-4121	Welders, Cutters, Solderers, & Brazers	1,336	61	38%	62%	17%	2%
✓	43-5071	Shipping, Receiving, & Traffic Clerks	1,111	49	36%	64%	18%	3%
	49-9041	Industrial Machinery Mechanics	627	40	50%	50%	21%	3%
	53-7064	Packers & Packagers, Hand	837	36	36%	64%	18%	4%
✓	51-1011	First-Line Supvrs., Production & Operating Workers	1,123	34	49%	51%	19%	3%
✓	51-4041	Machinists	544	30	54%	46%	19%	3%
	53-7051	Industrial Truck & Tractor Operators	762	26	30%	70%	19%	3%
✓	51-9198	Helpers-Production Workers	622	25	54%	46%	16%	3%
✓	51-9111	Packaging & Filling Machine Workers	825	25	11%	89%	20%	3%
	17-2141	Mechanical Engineers	355	24	45%	55%	17%	1%
✓	51-2099	Assemblers & Fabricators, All Other	592	21	50%	50%	17%	3%
	17-2112	Industrial Engineers	354	20	45%	55%	19%	1%
✓	51-2022	Electrical & Electronic Equip. Assemblers	479	15	47%	53%	16%	4%
	47-2211	Sheet Metal Workers	436	13	30%	70%	13%	1%
✓	51-4031	Cutting, Punching, & Press Machine, Metal/Plastic	551	12	57%	43%	14%	1%
	51-3092	Food Batchmakers	299	11	1%	99%	19%	2%
	51-4122	Welding, Soldering, & Brazing Machine	144	10	59%	41%	18%	3%
	51-3011	Bakers	284	10	7%	93%	17%	4%
	51-2041	Structural Metal Fabricators & Fitters	115	9	41%	59%	19%	4%
	51-2031	Engine & Other Machine Assemblers	198	8	55%	45%	17%	3%

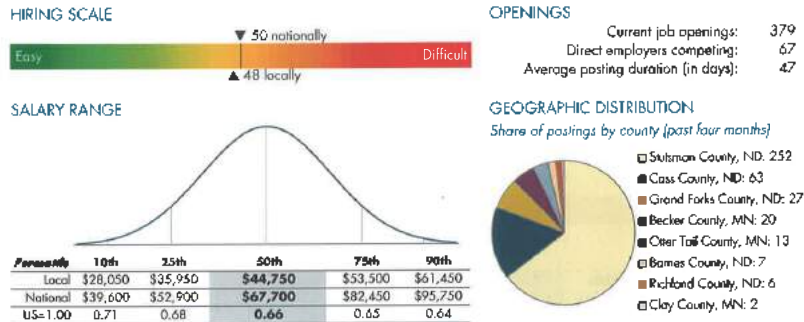
Source: EMSI 2014.4 – QCEW Employees, Non-QCEW Employees, and Self-Employed
 Notes: * Indicates occupation was identified as a high demand occupation (HDO), see page 52. Annual openings are an estimate of job openings due to net change in employment and replacement needs (e.g., turnover, retirement). ◀ Indicates significant share of workforce is reaching retirement age (defined here as ≥ 25% age 55+ and/or ≥ 5% age 65+).

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MANUFACTURING CONT.

REAL-TIME LABOR MARKET INFORMATION. Figure 51 shows a summary of online job postings in the region. Currently, there are 379 unique job postings for the manufacturing industry posted by 67 employers. The majority are for production workers in Sitsman. The average salary posted is 66 percent of the US average.

FIGURE 51. SUMMARY FOR JOB POSTINGS IN MANUFACTURING SECTOR



TOP 10 COUNTS (based on 891 postings past three months)

Employers	# postings	Occupations	# postings
United Technologies	158	First-Line Supervisors of Production Workers	75
UTC Corporation	89	Industrial Engineers	59
American Crystal Sugar Company	47	Heavy and Tractor-Trailer Truck Drivers	32
Appareo Systems	46	Stock Clerks and Order Fillers	31
Aggregate Industries	44	Laborers and Freight, Stock, and Material Movers	28
Pepsico	41	Mechanical Engineers	26
TrueNorth Steel	23	Maintenance and Repair Workers, General	23
Fabricators Unlimited	19	Team Assemblers	21
Advanced Drainage Systems, Inc.	18	Driver/Sales Workers	21
Philadelphia Macaroni Company	17	Machinists	20
Hard skills	# postings	Certifications	# postings
Computer Aided Design	40	Driver's License	76
Software Development	38	Commercial Driver's License	61
Technical Support	37	DOT Medical Card	35
Quality Control	26	OSHA Certification	21
Instrumentation	25	HAZMAT	17
Quality Assurance	25	Food Safety Programs	12
Design Verification	25	Project Management Professional	10
Work Order	24	EPA Certification	9
Preventive Maintenance Inspections	24	American Society of Mechanical Engineers	7
Preventive Maintenance	20	Mining Safety & Health Administration Certification	5

Source: Wanted Analytics; TIP Strategies

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MANUFACTURING CONT.

FIGURE 52. REAL-TIME LMI, SELECTED MANUFACTURING OCCUPATIONS

51-1011 FIRST-LINE SUPERVISORS OF PRODUCTION WORKERS

HIRING SCALE						OPENINGS	
						Current job openings: 39 Direct employers competing: 16 Average posting duration (in days): 44	
SALARY RANGE						TOP SKILLS	
Percentile	10th	25th	50th	75th	90th	Quality systems Inventory control systems Lean manufacturing Good manufacturing practice Environmental safety Quality control Plant maintenance	
Local	\$33,650	\$37,650	\$42,150	\$46,600	\$50,650		
National	\$34,550	\$45,350	\$57,300	\$69,300	\$80,100		
US=1.00	0.97	0.83	0.74	0.67	0.63		

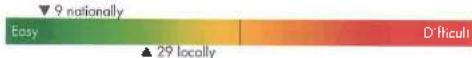
17-2112 INDUSTRIAL ENGINEERS

HIRING SCALE						OPENINGS	
						Current job openings: 17 Direct employers competing: 8 Average posting duration (in days): 47	
SALARY RANGE						TOP SKILLS	
Percentile	10th	25th	50th	75th	90th	Geometric dimensioning and tolerancing Work order Siemens Teamcenter Quality assurance Technical support CAD Quality management system	
Local	\$35,800	\$48,400	\$61,900	\$75,350	\$87,950		
National	\$58,400	\$67,350	\$77,300	\$87,250	\$96,200		
US=1.00	0.61	0.72	0.80	0.86	0.91		

53-3032 HEAVY AND TRACTOR-TRAILER TRUCK DRIVERS

HIRING SCALE						OPENINGS	
						Current job openings: 14 Direct employers competing: 6 Average posting duration (in days): 59	
SALARY RANGE						TOP SKILLS	
Percentile	10th	25th	50th	75th	90th	Commercial driver's license DOT medical card Tanker and HAZMAT endorsement HAZMAT	
Local	\$29,000	\$32,000	\$45,900	\$54,000	\$61,300		
National	\$30,550	\$37,800	\$35,850	\$42,550	\$48,550		
US=1.00	0.95	0.85	1.28	1.27	1.26		

43-5081 STOCK CLERKS AND ORDER FILLERS

HIRING SCALE						OPENINGS	
						Current job openings: 14 Direct employers competing: 10 Average posting duration (in days): 49	
SALARY RANGE						TOP SKILLS	
Percentile	10th	25th	50th	75th	90th	Production control Security administration ERP software Cost accounting Work order	
Local	\$21,650	\$22,400	\$23,200	\$24,000	\$24,750		
National	\$20,450	\$21,800	\$23,300	\$24,850	\$26,200		
US=1.00	1.06	1.03	1.00	0.97	0.94		

Source: Wanted Analytics, TIP Strategies

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MANUFACTURING CONT.

SURVEY. Twenty-eight manufacturers participated in the survey. These participants employ more than 4,000 full-time workers. Of these participants, 17 plan to hire additional employees over the next two years. These employers estimated that they will add about 300 workers. The majority of these workers (76 percent) will be in unskilled and skilled occupations.

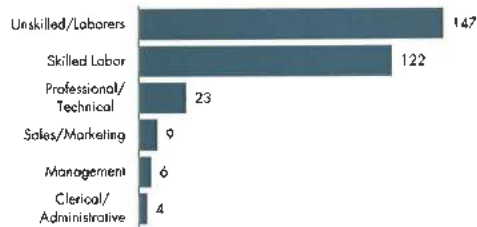
Respondents indicated that most positions can be filled within three months. Management and skilled labor positions take the longest to fill. Some respondents reported taking more than six months to fill positions in all categories except clerical.

FIGURE 53. FINDINGS FROM EMPLOYER SURVEY - MANUFACTURING FIRMS

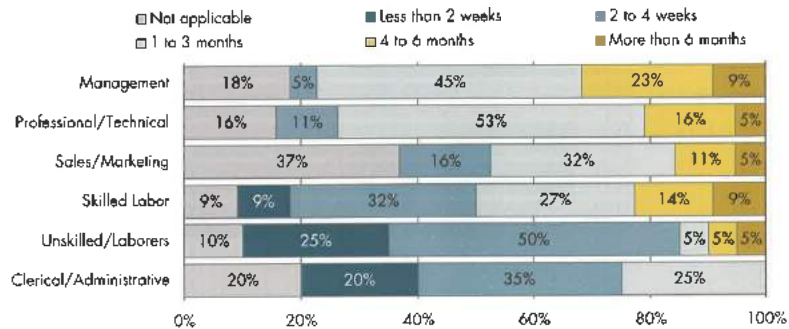
Do you plan to hire additional employees at your Fargo-Moorhead location(s) in the next 12 to 24 months?



If you plan to hire additional employees in the Fargo-Moorhead region in the next 12 to 24 months, approximately how many workers do you plan to add in each of the following categories?



Approximately how long does it typically take to fill a vacancy for each of the following classifications of workers?



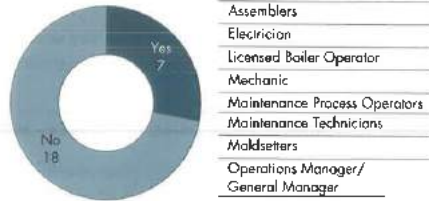
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MANUFACTURING CONT.

FIGURE 54. FINDINGS FROM EMPLOYER SURVEY- MANUFACTURING FIRMS

Seven respondents had positions that they could not fill. These positions ranged from assemblers to operations managers.

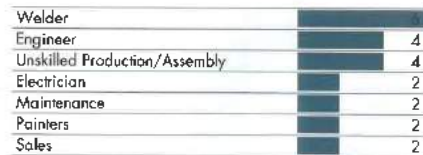
Are there specific positions which you have been unable to fill at all?



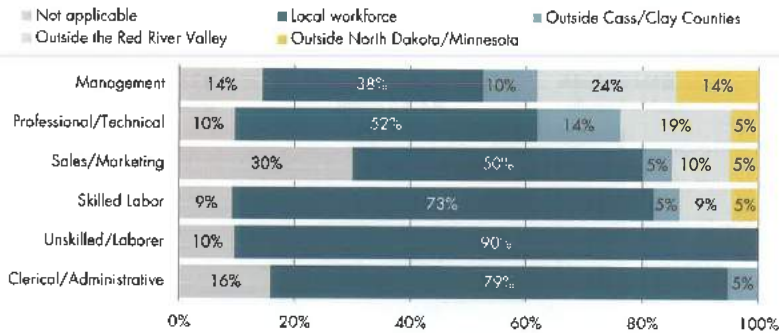
Most respondents reported difficulty recruiting for certain occupations. Welders, engineers, and assembly workers were most commonly cited.

Respondents report that they most often rely on the local workforce for recruiting workers across skill levels. More respondents indicated recruiting outside of the region for management positions than any other type of position. Some respondents reported recruiting outside the state for professional/technical, sales/marketing, and skilled labor. Unskilled and clerical positions are largely filled with workers from the region, though a few employers reported looking outside the metro area for clerical/administrative workers.

Which occupations are difficult to recruit in your industry?



When hiring, which geographic area is typically used to recruit workers?



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MANUFACTURING CONT.

EDUCATION & TRAINING. Figure 55 shows the wages and the typical requirements for entry into specific occupations. Occupations that support the manufacturing industry are, for the most part, relatively low-wage occupations, with the majority of occupations with hourly earnings below the regional average of \$17.57. Most of these are considered to be middle- or high-skill occupations. Middle-skill occupations are those that require a high school diploma and some training but less than a bachelor's degree. High-skill occupations require a bachelor's degree or higher. Even those jobs that do not require a high school diploma require on-the-job training.

FIGURE 55. EDUCATION & TRAINING REQUIREMENTS – MANUFACTURING OCCUPATIONS
WITH HOURLY EARNINGS FOR SELECTED PERCENTILES, INCLUDING MEDIAN (50TH)

SOC Code	Description	Hourly Earnings (percentiles)			Typical requirements for entry into occupation:		Training required for competency
		10th	50th	90th	Edu.	Exp.	
✓ 53-7062	Laborers/Freight, Stock, & Material Movers, Hand	\$8.52	\$9.90	\$18.73	Less than HS	None	Short-term OJT
✓ 11-1021	General & Operations Managers	\$23.75	\$30.17	\$75.83	Bachelor's	< 5 yrs.	None
✓ 41-4012	Sales Reprs., Whls. & Mfg., Exc. Tech & Scientific	\$14.82	\$18.31	\$42.33	HS or equiv.	None	Mod-term OJT
✓ 51-2092	Team Assemblers	\$10.49	\$12.04	\$18.14	HS or equiv.	None	Mod-term OJT
✓ 49-9071	Maintenance & Repair Workers, General	\$10.63	\$13.20	\$24.80	HS or equiv.	None	Long-term OJT
✓ 51-4121	Welders, Cutters, Solderers, & Brazers	\$12.61	\$14.62	\$24.23	HS or equiv.	None	Mod-term OJT
✓ 51-1011	First-Line Supvs., Production & Operating Workers	\$14.83	\$18.40	\$36.73	Non-deg. award	< 5 yrs.	None
✓ 43-5071	Shipping, Receiving, & Traffic Clerks	\$10.09	\$12.01	\$20.39	HS or equiv.	None	Short-term OJT
53-7064	Packers & Packagers, Hand	\$7.92	\$8.70	\$13.02	Less than HS	None	Short-term OJT
✓ 51-9111	Packaging & Filling Machine Workers	\$10.00	\$11.35	\$18.28	HS or equiv.	None	Mod-term OJT
53-7051	Industrial Truck & Tractor Operators	\$11.81	\$13.32	\$21.03	Less than HS	None	Short-term OJT
49-9041	Industrial Machinery Mechanics	\$15.15	\$17.42	\$29.67	HS or equiv.	None	Long-term OJT
✓ 51-9198	Helpers-Production Workers	\$9.16	\$10.65	\$16.90	Less than HS	None	Short-term OJT
✓ 51-2099	Assemblers & Fabricators, All Other	\$9.88	\$11.49	\$19.11	HS or equiv.	None	Mod-term OJT
✓ 51-4031	Cutting, Punching, & Press Machine, Metal/Plastic	\$11.37	\$13.26	\$20.15	HS or equiv.	None	Mod-term OJT
✓ 51-4041	Machinists	\$13.28	\$15.62	\$25.07	HS or equiv.	None	Long-term OJT
✓ 51-2022	Electrical & Electronic Equip. Assemblers	\$8.35	\$9.57	\$18.95	HS or equiv.	None	Short-term OJT
47-2211	Sheet Metal Workers	\$11.53	\$13.28	\$25.42	HS or equiv.	None	Apprenticeship
17-2141	Mechanical Engineers	\$24.20	\$29.18	\$50.77	Bachelor's	None	None
17-2112	Industrial Engineers	\$20.03	\$25.09	\$46.53	Bachelor's	None	None
51-3092	Food Batchmakers	\$9.61	\$12.56	\$21.65	HS or equiv.	None	Mod-term OJT
51-3011	Bakers	\$8.82	\$10.18	\$19.89	Less than HS	None	Long-term OJT
51-2031	Engine & Other Machine Assemblers	\$12.92	\$15.75	\$25.12	HS or equiv.	None	Short-term OJT
51-4122	Welding, Soldering, & Brazing Machine	\$13.25	\$15.18	\$21.72	HS or equiv.	None	Mod-term OJT
51-2041	Structural Metal Fabricators & Fitters	\$12.70	\$14.09	\$24.70	HS or equiv.	None	Mod-term OJT

Source: TIP Strategies

MANUFACTURING CONT.

Figure 56 shows the for-credit completions from regional postsecondary institutions in fields of study relevant to the manufacturing industry's key occupations. Regional postsecondary institutions are graduating students with a range of awards in fields of study that support the manufacturing industry. Engineering fields of study include mechanical, industrial, and manufacturing. On the technical training side, students graduated with certificates and associate's degrees in welding as well as machine tool technicians/machinist. General business, finance, sales, and management courses support business and operations functions in the manufacturing sector.

FIGURE 56. RELEVANT COMPLETIONS – MANUFACTURING OCCUPATIONS
THREE-YEAR ANNUAL AVERAGE OF DEGREES/AWARDS CONFERRED, 2011-2013

CIP Code	Field of Study	Degrees/awards by level					Annual average degrees/awards conferred (all levels)
		Certificate <1 year	Certificate ≥ 1 yr., <2 yr.	Associate's*	Bachelor's	Advanced**	
52.0201	Business Admin./Mgmt., Gen.	0	0	73	345	77	496
14.1901	Mechanical Engineering	0	0	0	140	20	160
48.0508	Welding Tech./Welder	54	36	13	0	0	103
52.0801	Finance, General	0	0	0	82	0	82
52.0701	E-ship/Entrepreneurial Studies	25	4	5	27	0	60
52.1801	Sales & Marketing Operations, Gen.	0	2	39	0	0	41
14.3501	Industrial Engineering	0	0	0	34	6	40
52.0205	Operations Mgmt. & Supervision	0	0	0	30	0	30
48.0501	Machine Tool Tech./Machinist	0	13	9	0	0	22
52.0101	Business/Commerce, General	0	0	13	0	0	13
14.3601	Manufacturing Engineering	0	0	0	10	0	10

Source: National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS) surveys; National Crosswalk Service Center; TIP Strategies. IPEDS data include only schools eligible to participate in federal financial aid programs. Figures shown include first and second majors. *Associate's-degree-level completions include awards categorized by IPEDS as "Award of at least two but less than four academic years." **Advanced-level completions represent all awards above the bachelor's-degree level.

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MANUFACTURING CONT.

RESOURCES. The resources listed below support the regional manufacturing industry.

Minn-Dak Manufacturers. The Minn-Dak Manufacturers Association (MDMA) represents a variety of regional manufacturing companies and service bureaus. The organization's mission is to contribute to the growth and prosperity of regional manufacturing. It provides members an opportunity to network as well as share information, tools, and techniques.

Impact Dakota/Dakota Manufacturers Extension Program. Impact Dakota partners with manufacturers to act as an advocate on their behalf. The organization's areas of focus are providing members with public and private resources, helping them improve processes and productivity as well as helping them develop their leadership capabilities and a skilled workforce. Since 2001, they have been involved in more than 675 improvement projects and contributed to \$118 million in new investments.

Enterprise Minnesota. Enterprise Minnesota acts as an advocate on behalf of the manufacturing industry and is 1 of 60 federal Manufacturing Extension Partnerships (MEP) organizations. MEPs were chartered to help medium and small manufacturers compete and grow. Enterprise Minnesota is also part of a coalition of industry leaders, economic development entities, policy-makers, and grant organizations, which support the interests of manufacturers.

GFMEDC's Manufacturing Committee. The Manufacturing Committee is comprised of business leaders and representatives from K-12 education, higher education, and Job Service ND. The committee focuses on manufacturing trends and issues within manufacturing. The committee has planned annual Manufacturing Day tours since 2013. This event has allowed high school students to tour a diverse group of manufacturing companies in the region. The event also exposes students to the educational opportunities connected with manufacturing careers.

Sector Breakfasts (Minnesota State University Moorhead). For the past five years, MSUM and the Greater Fargo-Moorhead Economic Development Corporation have hosted breakfasts to provide business leaders an opportunity to network and collaborate about preparing graduates for the workforce. The breakfasts are centered on specific sectors, such as healthcare, finance, technology, manufacturing, STEM, and K-12 education.

Health, Tech, and Trades Career Expo. This expo provides students interested in the fields of health, technology, and trades an opportunity to take part in hands-on demonstrations and be exposed to career opportunities. The event is targeted to 9th graders in Fargo, Moorhead, West Fargo, and area rural, public and private schools, although older students are also invited.

Minnesota High Tech Association (MHTA). MHTA offers programs, educational opportunities, and events that bring together technology professionals and students to help them network and advance their careers. Their over 350 member companies, organizations, educational institutions, and government agencies represent the IT, advanced manufacturing, bio and life sciences, and clean/green/edutech sectors. Their mission is to make Minnesota one of the country's top-five technology states.

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INFORMATION TECHNOLOGY

OVERVIEW. The information technology sector in the 11-county laborshed employed just under 5,000 in 2014. The sector includes two subsectors—a software and computer-related services segment and a telecommunications segment. The software segment accounts for 84 percent of the total sector.

The information technology sector grew 32 percent between 2004 and 2014. This increase was largely driven by explosive growth (51 percent) in the software sector. In contrast, the telecommunications sector contracted by almost 20 percent.

Between 2004 and 2014, the 11-county region's IT sector outperformed the regional and national economy with an average growth rate of 3.3 percent annually. The sector lagged the US IT sector, which averaged an annual growth rate of 4.2 percent annually.

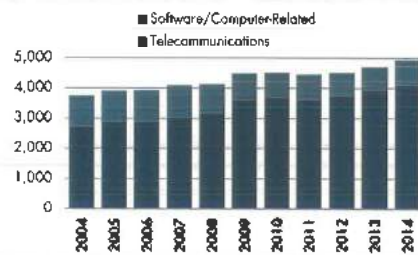
The region's IT sector is anchored by Microsoft's third largest campus and includes a range of companies from healthcare IT to embedded systems.

FIGURE 58. SELECTED EMPLOYERS

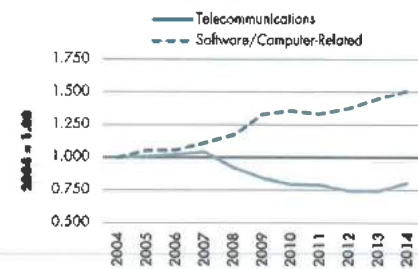
Organization/Company
Appareo Systems
CoreLink Administrative Solutions
Evolution I
FBS Data Systems
Intelligent InSites
Microsoft
Myriad Mobile
Nokia HERE
Sundog
Tech Mahindra Americas

FIGURE 57. EMPLOYMENT TRENDS, 2004 TO 2014

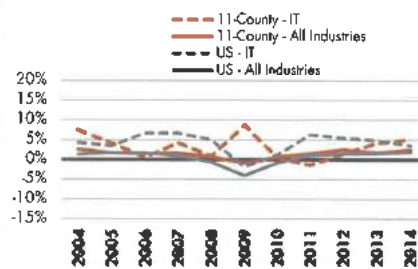
TOTAL EMPLOYMENT IN RELATED OCCUPATIONS



GAINS/LOSSES BY GROUP (2004 = 1.00)



GAINS/LOSSES: REGION VERSUS US (2004 - 14)



Source: EMSI 2014.4 - QCEW Employees, Non-QCEW Employees, and Self-Employed.

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INFORMATION TECHNOLOGY CONT.

KEY OCCUPATIONS. Figure 59 provides an overview of the occupations that support the regional information technology industry. Customer service representatives, computer user support specialists, and applications developers are the occupations with the largest share of employment in the IT sector. All but five of the occupations have median hourly earnings above the regional average.

FIGURE 59. SHARE OF EMPLOYMENT IN SELECTED INDUSTRIES – IT OCCUPATIONS
INCLUDES 2014 LOCATION QUOTIENT (LQ) AND WAGE RATE COMPARISON RELATIVE TO US

Occupation's share of total employment in selected industry segments

SOC Code	Description	Jobs (11-county labor shed)	LQ (US=1.00)	Median Hourly Earnings (US=1.00)	Relative to US (US=1.00)	Publishing NAICS 511	Telecom NAICS 517	Data Mgmt. NAICS 518	Computer Systems Design NAICS 5415
✓ 43-4051	Customer Service Representatives	4,073	0.90	13.84	0.93	3.1%	1.3%	1.6%	2.7%
✓ 15-1151	Computer User Support Specialists	1,115	0.99	22.20	0.99	7.6%	2.1%	5.5%	9.1%
✓ 15-1132	Software Developers, Applications	675	0.55	27.96	0.63 *	9.5%	0.7%	4.1%	8.9%
✓ 41-3099	Sales Reps., Services, All Other	990	0.62	18.17	0.75 *	1.7%	9.1%	4.6%	3.9%
✓ 15-1133	Software Developers, Systems Software	517	0.72	30.36	0.63 *	5.2%	1.4%	3.3%	7.5%
✓ 49-9052	Telecomm. Line Installers & Repairers	246	1.07	20.50	0.82	0.0%	15.0%	0.0%	0.1%
✓ 11-1021	General & Operations Managers	3,312	0.93	40.02	0.87	2.8%	1.4%	2.6%	3.3%
✓ 15-1121	Computer Systems Analysts	379	0.38	30.72	0.78 *	1.3%	0.4%	3.2%	5.4%
✓ 43-9061	Office Clerks, General	6,828	1.16	12.06	0.89	2.2%	1.6%	3.2%	2.9%
✓ 15-1152	Computer Network Support Specialists	314	0.95	26.39	0.91	1.1%	2.9%	2.6%	2.7%
✓ 43-3031	Bookkeeping, Accounting, & Auditing Clerks	4,827	0.46	15.98	0.93	2.1%	1.8%	2.6%	2.3%
49-2022	Telecomm. Equip. Install./Repair, Exc. Line Install.	149	0.37	25.22	0.96	0.0%	8.3%	0.0%	0.1%
✓ 13-2011	Accountants & Auditors	2,284	0.94	24.26	0.79 *	3.4%	1.3%	1.8%	1.8%
✓ 15-1131	Computer Programmers	299	0.49	25.26	0.70 *	2.3%	0.1%	1.1%	4.4%
✓ 15-1142	Network & Computer Systems Admin.	365	0.53	30.97	0.87	1.0%	1.6%	2.6%	2.7%
43-9021	Data Entry Keyers	456	1.12	13.65	0.96	0.3%	0.1%	5.5%	0.6%
✓ 11-3021	Computer & Info. Systems Managers	345	0.56	46.08	0.78 *	1.9%	0.6%	1.9%	2.7%
✓ 13-1199	Business Operations Specialists, All Other	1,281	0.72	25.53	0.80 *	1.2%	2.8%	1.5%	1.3%
✓ 15-1134	Web Developers	194	0.71	19.37	0.70 *	0.8%	0.1%	1.7%	3.1%
✓ 43-1011	First-Line Supvr., Office & Admin. Support	2,101	0.81	21.10	0.87	0.9%	1.5%	2.5%	0.7%
✓ 13-1161	Market Research Analysts & Mktg. Specialists	548	0.64	22.66	0.78 *	2.3%	0.7%	1.0%	1.4%
✓ 43-6014	Secretaries/Admin. Asst., Exc. Legal, Med., & Exec.	3,841	0.81	15.59	0.99	1.2%	0.8%	1.2%	1.5%
✓ 41-4011	Sales Reps., Whls. & Mfg., Tech. & Scientific	377	0.54	35.10	0.99	2.3%	0.4%	0.6%	1.4%
✓ 43-5061	Production, Planning, & Expediting Clerks	547	1.02	18.01	0.84	0.6%	1.7%	1.7%	0.4%
✓ 13-1111	Management Analysts	579	0.43	27.81	0.76 *	1.3%	0.5%	1.2%	1.4%

Source: EMSI 2014.4 – GCEW Employees, Non-GCEW Employees, and Self-Employed Nates. ✓ Indicates occupation was identified as a high demand occupation (HDO), see page 52. [] greater than 1.25 are highlighted, as are wage rates above the regional average (\$17.57). Marker indicates median hourly wages ≥ 10% of US (#) or ≤ 80% of US (*).

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INFORMATION TECHNOLOGY CONT.

DEMAND. Figure 60 details occupational demand and selected demographic characteristics for each of the key occupations that support the IT sector. The IT-specific occupations that are highest in demand are computer user support specialists, applications software developers, computer systems analysts, systems software developers, and computer programmers. None of the IT-specific occupations are facing the issue of an aging workforce. However, the business and operations occupations that support the sector are in high demand and many are facing an aging workforce.

FIGURE 60. DEMAND FACTORS & DEMOGRAPHICS – IT OCCUPATIONS

INCLUDES ESTIMATED ANNUAL OPENINGS, 2014 TO 2019

HDO	SOC Code	Description	Jobs (11-county laborshed)	Est. Annual Openings (2014- 2019)	% of openings due to:		% of the workforce:	
					Net change	Replacement	Age 55+ Years	Age 65+ Years
✓	43-9061	Office Clerks, General	6,828	203	26%	74%	23%	5%
✓	43-4051	Customer Service Representatives	4,073	159	28%	72%	17%	3%
✓	11-1021	General & Operations Managers	3,512	132	47%	53%	20%	4%
✓	43-6014	Secretaries/Admin. Asst., Exc. Legal, Med., & Exec.	3,841	109	53%	47%	24%	6%
✓	43-3031	Bookkeeping, Accounting, & Auditing Clerks	4,827	108	57%	43%	23%	5%
✓	13-2011	Accountants & Auditors	2,284	105	31%	69%	21%	4%
✓	43-1011	First-Line Supvsr., Office & Admin. Support	2,101	95	44%	56%	20%	4%
✓	41-3099	Sales Reps., Services, All Other	990	46	37%	63%	16%	3%
✓	15-1151	Computer User Support Specialists	1,115	41	54%	46%	16%	3%
✓	13-1199	Business Operations Specialists, All Other	1,281	37	50%	50%	23%	4%
✓	15-1132	Software Developers, Applications	675	34	71%	29%	11%	2%
✓	13-1161	Market Research Analysts & Mktng. Specialists	548	27	69%	31%	16%	3%
✓	15-1121	Computer Systems Analysts	379	25	73%	27%	14%	1%
✓	15-1133	Software Developers, Systems Software	517	25	70%	30%	11%	1%
✓	43-5061	Production, Planning, & Expediting Clerks	547	22	35%	65%	19%	3%
✓	13-1111	Management Analysts	579	20	39%	61%	20%	4%
✓	15-1131	Computer Programmers	299	18	52%	48%	12%	2%
✓	41-4011	Sales Reps., Whls. & Mfg., Tech. & Scientific	377	18	53%	47%	17%	3%
✓	11-3021	Computer & Info. Systems Managers	345	15	65%	35%	15%	1%
✓	15-1142	Network & Computer Systems Admin.	365	15	57%	43%	15%	1%
✓	15-1134	Web Developers	194	12	71%	29%	13%	3%
✓	49-9052	Telecomm. Line Installers & Repairers	246	9	25%	75%	14%	2%
✓	15-1152	Computer Network Support Specialists	314	9	38%	62%	15%	2%
	43-9021	Data Entry Keyers	456	5	-	100%	18%	3%
	49-2022	Telecomm. Equip. Install./Repair, Exc. Line Install.	149	4	39%	61%	20%	3%

Source: EMSI 2014.4 - QCEW Employees, Non-QCEW Employees, and Self-Employed
 Notes: * Indicates occupation was identified as a high demand occupation (HDO), see page 52. Annual openings are an estimate of job openings due to net change in employment and replacement needs (e.g., turnover, retirement). ◀ Indicates significant share of workforce is reaching retirement age (defined here as ≥ 25% age 55+ and/or ≥ 5% age 65+).

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INFORMATION TECHNOLOGY CONT.

REAL-TIME LABOR MARKET INFORMATION. Figure 61 shows a summary of online job postings in the region for information technology jobs. Currently, there are 68 unique job postings for the industry posted by 21 employers. The vast majority are for engineering jobs in Cass County. The average salary posted is 60 percent of the US average. Structured Query Language, technical support, and quality assurance are the top skills listed.

FIGURE 61. SUMMARY FOR INFORMATION TECHNOLOGY JOB POSTINGS

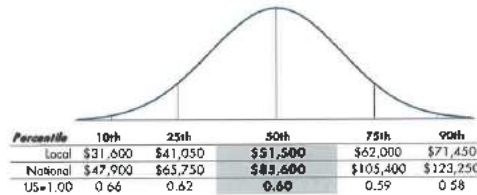
HIRING SCALE



OPENINGS

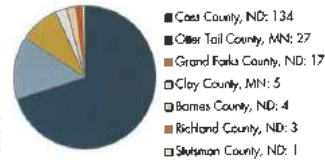
Current job openings: 68
Direct employers competing: 21
Average posting duration (in days): 51

SALARY RANGE



GEOGRAPHIC DISTRIBUTION

Share of postings by county (past three months)



TOP 10 COUNTS (based 191 postings past three months)

Employers	# postings	Occupations (SOC-code based)	# postings
Microsoft	31	Retail Salespersons	20
Avrig Enterprises	23	Computer User Support Specialists	18
Evaluation I	21	Software Developers, Applications	18
Verizon	20	Network and Computer Systems Administrators	13
Midcontinent Communications	15	Computer Occupations, All Other	12
Kronas	14	Customer Service Representatives	11
CoreLink Administrative Solutions	9	Computer Systems Analysts	11
NAVTEG	7	First-Line Supv. of Office & Admin. Support Workers	6
SEI	5	Computer and Information Systems Managers	5
Eagle Creek Software Services	4	General and Operations Managers	4
Hard skills	# postings	Certifications	# postings
Structured Query Language	30	Driver's License	10
Technical Support	27	Microsoft Certified Systems Engineer	6
Quality Assurance	17	Microsoft Certified Professional Developer	3
C-Sharp	16	Telecommunications	3
Software Development	15	ITIL Foundation Certification (v3)	2
Microsoft .NET Framework	13	Society of Cable Telecommunication Engineers	2
Microsoft SQL Server	13	OSHA Certification	2
Application Development	11	Cisco CCDA	1
Java	10	Cisco Certified Network Associate	1
Management Information Systems	10	Microsoft Certified Professional	1

Source: Wanted Analytics; TIP Strategies

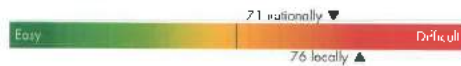
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INFORMATION TECHNOLOGY CONT.

FIGURE 62. REAL-TIME LMI, SELECTED IT OCCUPATIONS

15-1151 COMPUTER USER SUPPORT SPECIALISTS

HIRING SCALE



SALARY RANGE

Percentile	10th	25th	50th	75th	90th
Local	\$22,450	\$28,200	\$34,650	\$41,050	\$46,850
National	\$27,150	\$34,700	\$43,050	\$51,450	\$59,000
US=1.00	0.83	0.81	0.80	0.80	0.79

OPENINGS

Current job openings:	163
Direct employers competing:	71
Average posting duration (in days):	44

TOP SKILLS

Technical support | Preventative maintenance inspections | Structured query language | WordPress | Firewall | File transfer protocol | Adobe LifeCycle ES | Linux | PHP

15-1132 SOFTWARE DEVELOPERS, APPLICATIONS

HIRING SCALE



SALARY RANGE

Percentile	10th	25th	50th	75th	90th
Local	\$60,950	\$70,700	\$81,550	\$92,350	\$102,150
National	\$80,650	\$93,050	\$106,850	\$120,600	\$133,050
US=1.00	0.76	0.76	0.76	0.77	0.77

OPENINGS

Current job openings:	53
Direct employers competing:	21
Average posting duration (in days):	51

TOP SKILLS

Structured query language | Software development | Relational database management system | Linux | Application development | Python | Java EE | SDLC | Hadoop

15-1142 NETWORK AND COMPUTER SYSTEMS ADMINISTRATORS

HIRING SCALE



SALARY RANGE

Percentile	10th	25th	50th	75th	90th
Local	\$43,800	\$50,800	\$58,650	\$66,450	\$73,500
National	\$57,900	\$70,250	\$83,950	\$97,700	\$110,050
US=1.00	0.76	0.72	0.70	0.68	0.67

OPENINGS

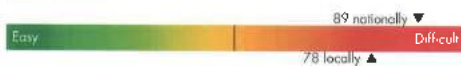
Current job openings:	52
Direct employers competing:	31
Average posting duration (in days):	47

TOP SKILLS

UNIX | Transmission Control Protocol | Network engineering | Firewall | Dynamic Host Configuration Protocol | VMware | Network security | Wireshark | Network routing protocol

15-1199 COMPUTER OCCUPATIONS, ALL OTHER

HIRING SCALE



SALARY RANGE

Percentile	10th	25th	50th	75th	90th
Local	\$59,700	\$70,000	\$81,400	\$92,850	\$103,100
National	\$72,850	\$87,850	\$104,500	\$121,150	\$136,150
US=1.00	0.82	0.80	0.78	0.77	0.76

OPENINGS

Current job openings:	93
Direct employers competing:	27
Average posting duration (in days):	41

TOP SKILLS

Enterprise resource planning software | Management information systems | Multilingual | Epicor | Web services | Service-oriented architecture | Project management lifecycle

Source: Wanted Analytics; TIP Strategies

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INFORMATION TECHNOLOGY CONT.

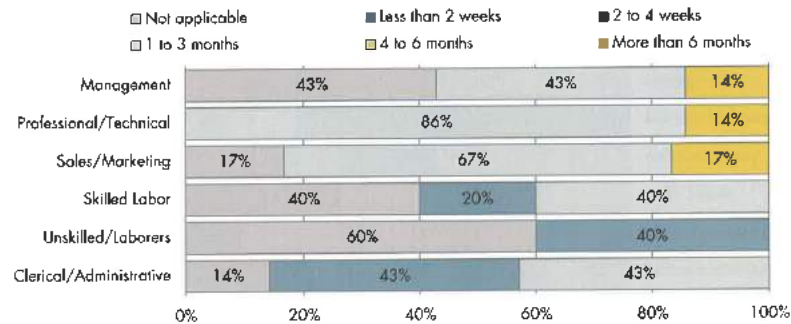
SURVEY. Seven information technology firms participated in the survey. These employers reported about 2,100 full-time and contract employees. Of these participants, four plan to hire additional employees over the next two years. These employers estimated that they will add about 24 workers total. Most respondents reported being able to fill positions within three months, though sales/marketing, professional/technical, and management take four to six months for some employers.

FIGURE 63. FINDINGS FROM EMPLOYER SURVEY – IT FIRMS

Do you plan to hire additional employees at your Fargo-Moorhead location(s) in the next 12 to 24 months? *If you plan to hire additional employees in the Fargo-Moorhead region in the next 12 to 24 months, approximately how many workers do you plan to add in each of the following categories?*



Approximately how long does it typically take to fill a vacancy for each of the following classifications of workers?



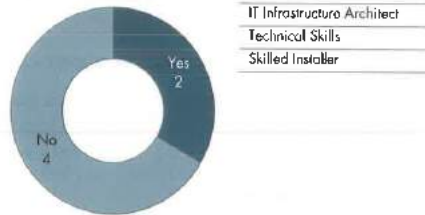
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INFORMATION TECHNOLOGY CONT.

FIGURE 64. FINDINGS FROM EMPLOYER SURVEY- INFORMATION TECHNOLOGY FIRMS

Four respondents had positions that they could not fill. These positions included an IT infrastructure architect, skilled installers, and general technical skills.

Are there specific positions which you have been unable to fill at all?



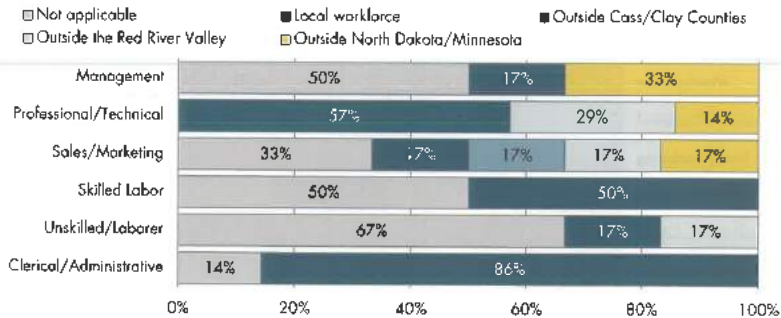
Most respondents reported difficulty recruiting for certain occupations. These occupations included various sales positions, middle management positions, and technical skills such as Cobol, Ruby on Rails, and Web Systems.

Respondents report that they most often rely on the local workforce for recruiting workers for clerical and skilled labor positions. For management positions, most respondents recruit outside of the state. For professional/technical positions, most employers can find the talent they need locally, but one-third reported recruiting outside of the metro area.

Which occupations are difficult to recruit in your industry?

Account Managers/Sales	Principal Solutions Engineer
Cobol Developers	Project Managers
Engineering Managers	Sales/Technical
Engineering Systems Designers	Software: Ruby on Rails
Experienced Installation & Support Engineers	Software: Web Systems
Outside Sales	Technician/Communications

When hiring, which geographic area is typically used to recruit workers?



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INFORMATION TECHNOLOGY CONT.

EDUCATION & TRAINING. Figure 65 shows the wages, and the typical requirements for entry into specific occupations. For the most part, occupations that support the IT industry are relatively high wage, with even the bottom 10th percentile making hourly earnings more than the regional median of \$17.57. Almost all of these are considered to be middle- or high-skill occupations. Middle-skill occupations are those that require a high school diploma and some training but less than a bachelor's degree. High-skill occupations require a bachelor's degree or higher. Even those jobs that do not require a high school diploma require short to moderate-term on-the-job training.

FIGURE 65. EDUCATION & TRAINING REQUIREMENTS – IT OCCUPATIONS
WITH HOURLY EARNINGS FOR SELECTED PERCENTILES, INCLUDING MEDIAN (50TH)

SOC Code	Description	Hourly Earnings (percentiles)			Typical requirements for entry into occupation:		
		10th	50th	90th	Edu.	Exp.	Training Required For Competency
✓ 43-9061	Office Clerks, General	\$8.34	\$9.62	\$17.40	HS or equiv.	None	Short-term OJT
✓ 43-4051	Customer Service Representatives	\$10.19	\$12.06	\$21.13	HS or equiv.	None	Short-term OJT
✓ 11-1021	General & Operations Managers	\$23.75	\$30.17	\$75.83	Bachelor's	< 5 yrs.	None
✓ 43-6014	Secretaries/Admin. Asst., Exc. Legal, Med., & Exec.	\$11.44	\$13.17	\$21.59	HS or equiv.	None	Short-term OJT
✓ 43-3031	Bookkeeping, Accounting, & Auditing Clerks	\$11.04	\$13.17	\$22.62	HS or equiv.	None	Mod-term OJT
✓ 13-2011	Accountants & Auditors	\$16.31	\$19.57	\$37.80	Bachelor's	None	None
✓ 43-1011	First-Line Supvrs., Office & Admin. Support	\$13.68	\$16.85	\$34.19	HS or equiv.	< 5 yrs.	None
✓ 41-3099	Sales Reps., Services, All Other	\$11.79	\$13.43	\$38.54	HS or equiv.	None	Short-term OJT
✓ 15-1151	Computer User Support Specialists	\$15.51	\$18.31	\$30.79	Some college	None	Mod-term OJT
✓ 13-1199	Business Operations Specialists, All Other	\$15.39	\$20.09	\$40.34	HS or equiv.	None	None
✓ 15-1132	Software Developers, Applications	\$19.93	\$23.67	\$43.21	Bachelor's	None	None
✓ 13-1161	Market Research Analysts & Mktg. Specialists	\$14.67	\$18.41	\$35.09	Bachelor's	None	None
✓ 15-1121	Computer Systems Analysts	\$22.52	\$25.90	\$42.48	Bachelor's	None	None
✓ 15-1133	Software Developers, Systems Software	\$16.84	\$24.77	\$43.38	Bachelor's	None	None
✓ 43-5061	Production, Planning, & Expediting Clerks	\$11.30	\$15.25	\$26.35	HS or equiv.	None	Mod-term OJT
✓ 13-1111	Management Analysts	\$19.69	\$23.46	\$41.53	Bachelor's	< 5 yrs.	None
✓ 15-1131	Computer Programmers	\$17.76	\$20.98	\$35.46	Bachelor's	None	None
✓ 41-4011	Sales Reps., Whls. & Mfg., Tech. & Scientific	\$17.58	\$24.58	\$64.16	Bachelor's	None	Mod-term OJT
✓ 11-3021	Computer & Info. Systems Managers	\$32.60	\$38.58	\$71.15	Bachelor's	5+ yrs.	None
✓ 15-1142	Network & Computer Systems Admin.	\$21.72	\$25.67	\$43.47	Bachelor's	None	None
✓ 15-1134	Web Developers	\$14.23	\$16.47	\$31.45	Associate's	None	None
✓ 49-9052	Telecomm. Line Installers & Repairers	\$14.28	\$16.95	\$30.92	HS or equiv.	None	Long-term OJT
✓ 15-1152	Computer Network Support Specialists	\$16.59	\$19.89	\$38.08	Associate's	None	None
43-9021	Data Entry Keyers	\$9.93	\$11.48	\$19.53	HS or equiv.	None	Mod-term OJT
49-2022	Telecomm. Equip. Install./Repair, Exc. Line Install.	\$17.07	\$20.58	\$31.35	Non-deg. award	None	Mod-term OJT

Source: TIP Strategies

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INFORMATION TECHNOLOGY CONT.

Figure 66 shows the for-credit completions from regional postsecondary institutions in fields of study relevant to the IT industry's key occupations. Among the IT-specific fields of study, computer science is the most popular, with 100 students, on average, earning a bachelor's or advanced degree in the field. Just over 40 students graduate on average with an associate's or bachelor's degree in general computer and information sciences. About 30 students, on average, graduate with a certificate or associate's degree in computer systems networking and telecommunications. Less than 20 students, on average, graduate from programs in information technology, web design, computer software engineering, information sciences, and general computer engineering.

FIGURE 66. RELEVANT COMPLETIONS – IT OCCUPATIONS

THREE-YEAR ANNUAL AVERAGE OF DEGREES/AWARDS CONFERRED, 2011-2013

CIP Code	Field of Study	Degrees/awards by level					Annual average degrees/awards conferred (all levels)
		Certificate <1 year	Certificate (≥ 1 yr., <2 yr.)	Associate's*	Bachelor's	Advanced**	
52.0201	Business Admin. & Mgmt., General	0	0	73	346	77	496
52.0301	Accounting	0	1	39	208	2	251
52.1401	Marketing/Marketing Mgmt., General	0	1	4	117	0	122
11.0701	Computer Science	0	0	0	63	37	100
52.0801	Finance, General	0	0	0	82	0	82
52.0701	E-ship/Entrepreneurial Studies	25	4	5	27	0	60
52.1201	Mgmt. Info. Systems, General	3	1	14	37	0	55
52.0302	Acct. Tech./Technician & Bookkeeping	22	4	21	0	0	47
52.0402	Executive Asst./Executive Secretary	37	8	0	0	0	45
11.0101	Computer & Info. Sciences, General	2	2	11	26	0	41
11.0901	Comp. Systems Networking & Telecomms.	17	4	10	0	0	31
52.0205	Operations Mgmt. & Supervision	0	0	0	30	0	30
44.0401	Public Admin.	0	0	0	5	23	29
52.0401	Adm. Asst. & Secretarial Science, General	1	5	20	0	0	26
11.0103	Info. Tech.	0	0	20	5	0	25
11.0801	Web & Digital/Multimedia & Info. Design	0	8	17	0	0	25
14.0903	Computer Software Engineering	0	0	0	0	16	16
11.0401	Info. Science/Studies	0	0	0	15	0	15
52.0204	Office Mgmt. & Supervision	0	0	13	1	0	14
52.0101	Business/Commerce, General	0	0	13	0	0	13
51.0705	Medical Office Mgmt./Admin.	0	0	11	0	0	11
14.0901	Computer Engineering, General	0	0	0	11	0	11

Source: National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS) surveys; National Crosswalk Service Center; TIP Strategies. IPEDS data include only schools eligible to participate in federal financial aid programs. Figures shown include first and second majors. *Associate's-degree-level completions include awards categorized by IPEDS as "Award of at least two but less than four academic years." **Advanced-level-completions represent all awards above the bachelor's-degree level.

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INFORMATION TECHNOLOGY CONT.

RESOURCES. The resources listed below support the regional information technology industry.

Information Technology Council of North Dakota (ITCND). Founded in 2000, the ITCND was created by business, government, and education leaders with the goal of improving the use, growth, and development of information technology in the state. The Council represents nearly 100 IT-related software developers, telecommunications companies, Internet providers and content developers, systems integrators, educational institutions, state agencies, and manufacturers. ITCND is the leading advocate for the information technology sector in the state. They promote the sector through industry publications and career awareness efforts, working with economic development professionals and government leaders, and providing networking opportunities.

Heartland Technology Alliance (HTA). HTA is a resource to business, chambers, nonprofits, consumers, and policy makers. The Alliance focuses on technology-related issues, particularly as they relate to job creation, innovation, educational opportunities, entrepreneurship, and the business climate. HTA's area of focus is the Upper Midwest, working on behalf of 11 million citizens in five states: North Dakota; South Dakota; Nebraska; Minnesota; and Iowa.

Minnesota High Tech Association (MHTA). MHTA offers programs, educational opportunities, and events that bring together technology professionals and students to help them network and advance their careers. Their over 350 member companies, organizations, educational institutions, and government agencies represent the IT, advanced manufacturing, bio and life sciences, and clean/green/edutech sectors. Their mission is to make Minnesota one of the country's top-five technology states.

Emerging Prairie. Emerging Prairie provides entrepreneurs with news, editorials, resources, and events via digital media, focusing on the greater Fargo, North Dakota area. Their online platform provides resources to help entrepreneurs grow and their events are geared toward using connectivity and creativity to strengthen the community.

Sector Breakfasts (Minnesota State University Moorhead). For the past five years, MSUM and the Greater Fargo-Moorhead Economic Development Corporation have hosted breakfasts to provide business leaders an opportunity to network and collaborate about preparing graduates for the workforce. The breakfasts are centered on specific sectors, such as healthcare, finance, technology, manufacturing, STEAM, and K-12 education.

Health, Tech, and Trades Career Expo. This expo provides students interested in the fields of health, technology, and trades an opportunity to take part in hands-on demonstrations and be exposed to career opportunities. The event is targeted to 9th graders in Fargo, Moorhead, West Fargo, and area rural, public and private schools, although older students are also invited.

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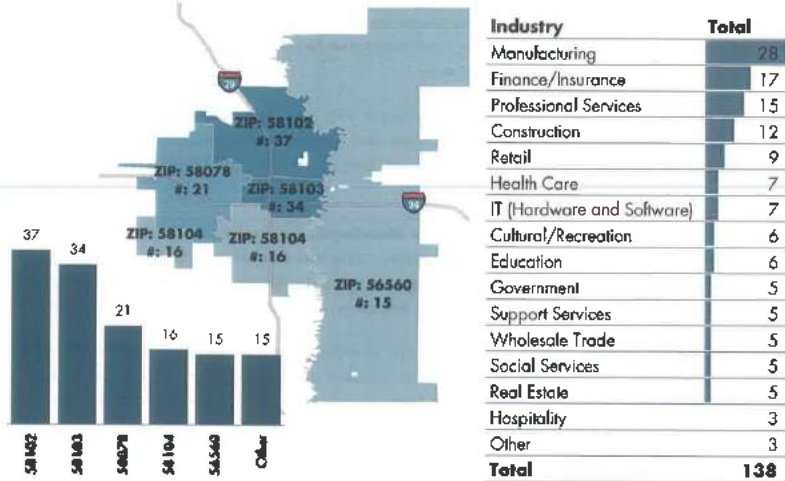
APPENDIX C: EMPLOYER SURVEY

In order to further understand employer’s hiring concerns, TIP conducted an online survey of the region’s employers in the spring of 2015. In all, 138 employers responded, representing over 30,000 workers. They were asked to describe their business and workforce, their hiring plans and recruiting methods, and their employee training sources. At the same time, they were also asked to provide feedback about the region’s talent pool and training programs.

RESPONDENT PROFILE, EMPLOYMENT, & WAGES. The majority of respondents (87) were from the primary zip codes in Fargo. However, 21 respondents were located in West Fargo and 15 in Moorhead. Fifteen respondents [other] were from outlying zip codes, with the most distant including one company each near Fergus Falls, Wahpeton, and Hunter. All respondents fell within the defined laborshed.

Over fifteen different industries were represented by respondents and over a fifth described themselves as manufacturers. The next highest represented industries were finance/insurance, professional services, and construction, making up around 10 percent of respondents each.

FIGURE 67. SURVEY RESPONDENTS BY ZIP CODE AND BY INDUSTRY



Source: TIP Strategies Employer Survey

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Of over 30,000 total employees, over 30 percent were employed in the healthcare sector and over half of those were reported by a single medical facility. Manufacturing represented over 20 percent of companies and 14 percent of workers. The finance/insurance and cultural/recreation industries each had workers representing more than 10 percent of the total.

Two industries, professional services and construction, had a relatively high number of firms (over 10) and a lower number of employees (between 500 and 1000); indicating a smaller average firm size. One support services organization specializing in providing temporary staff and contract labor reported 1,500 contract/temporary staff. IT (Hardware and Software) was another industry with a high level of contract/temporary workers (over 40 percent).

FIGURE 68. NUMBER OF WORKERS REPORTED

Industry	Companies	Full-time	Part-time	Contract/ Temporary	Employees
Healthcare	7	7,720	2,240	39	9,999
Manufacturing	28	4,064	159	183	4,406
Finance/Insurance	17	2,661	206	278	3,145
Cultural/Recreation	6	354	2,780	6	3,140
IT (Hardware and Software)	7	1,275	3	882	2,160
Government	5	1,326	105	124	1,555
Hospitality	3	231	1,320	-	1,551
Support Services	5	45	5	1,500	1,550
Education	6	727	309	200	1,236
Professional Services	15	737	32	197	966
Construction	12	538	23	1	562
Wholesale Trade	5	300	68	30	398
Retail	9	247	60	12	319
Utilities	1	86	4	5	95
Social Services	5	39	15	-	54
Real Estate	5	32	13	-	45
Other	2	38	2	-	40
Total	138	20,420	7,344	3,457	31,221

Source: TIP Strategies Employer Survey

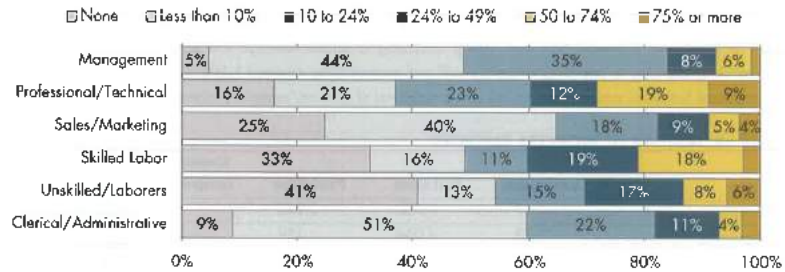
The employment categories most represented are professional/technical and skilled labor. Almost a third of respondents described at least half of their workforce as being represented by the professional/technical category.

Almost half of respondents described at least a quarter of their workforce as being management staff. Management staff were more likely to be represented by a lower share of the workforce, although 95 percent of companies reported having at least some management positions. The sales/marketing, clerical/administrative and unskilled labor categories were less prevalently reported. Over 60 percent of firms reported that less than a tenth of their

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workforce was in sales/marketing, and the same applied to clerical/administration. Forty-one percent of firms reported having no unskilled/laborer employees.

FIGURE 69. EMPLOYMENT CATEGORIES

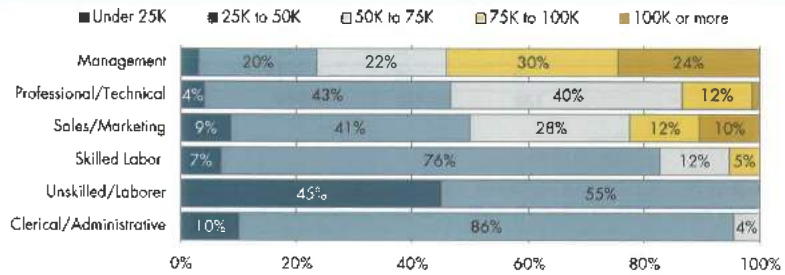


Source: TIP Strategies Employer Survey

Respondents were more likely to report management and sales/marketing staff as having the highest salaries, with over half of firms stating that their management staff earned over \$75,000 per year. Professional/technical and sales/marketing were similar, in that over half of firms reported salary levels of at least \$50,000 per year.

A large majority of respondents (over 95 percent) put labor [skilled and unskilled] and clerical/administrative salaries as under \$75,000 per year. Salary levels were most likely to be lowest for unskilled/laborer positions.

FIGURE 70. AVERAGE SALARIES PAID BY CLASSIFICATION

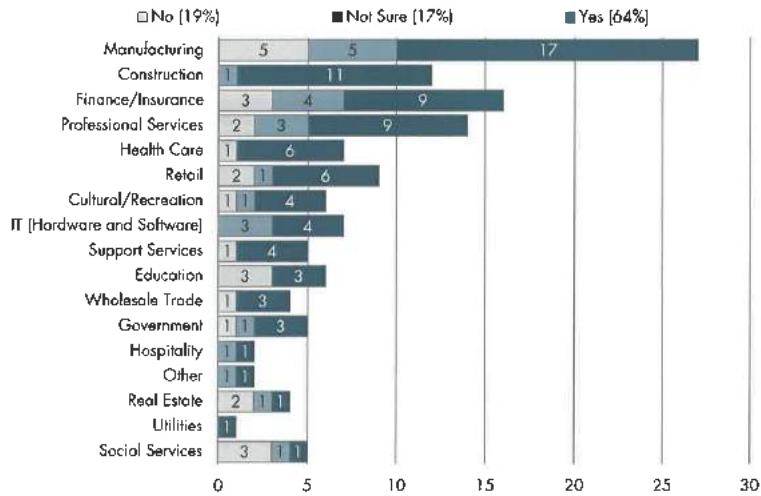


Source: TIP Strategies Employer Survey

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RECRUITING & HIRING. Nearly two-thirds of firms planned on hiring additional employees in the next 12 to 24 months, a trend that was largely consistent across the industries. Sectors which indicated otherwise include construction and healthcare, for which all but a single respondent planned to hire additional employees. Overall, about a fourth of respondents did not plan on hiring additional employees.

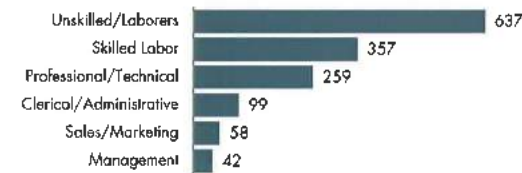
FIGURE 71. HIRING PLANS FOR NEXT 12 TO 24 MONTHS



Source: TIP Strategies Employer Survey

When asked about the total number of staff respondents planned on hiring, the two categories with the highest anticipated future demand were unskilled/laborer and skilled labor positions. The third classification with at least 100 anticipated future hires was professional/technical.

FIGURE 72. NEW HIRE WORKER COUNT BY CATEGORY

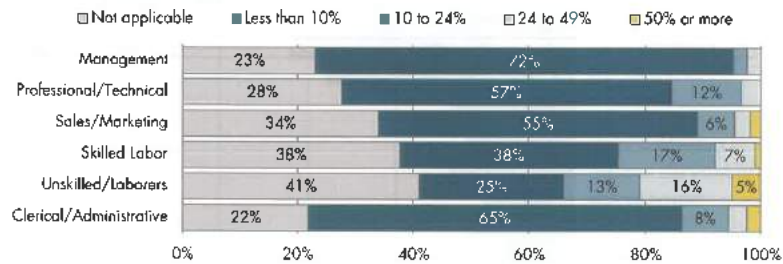


Source: TIP Strategies Employer Survey

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Turnover is defined as the number of total workers who leave divided by the average annual employment. This can help pinpoint areas which have a less stable workforce. This may contribute to higher employee demand, therefore contributing to a more competitive job market. Unskilled/laborer is one classification for which a third of respondents reported an average annual turnover of more than 24 percent. This is also the classification for which firms anticipated requiring the most new hires in the next 12 to 24 months. Otherwise, half of respondents reported less than 10 percent turnover in the remaining categories.

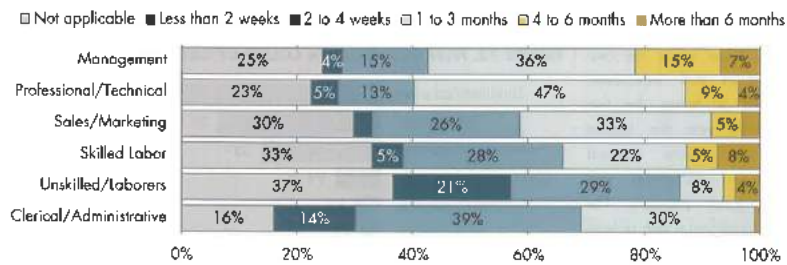
FIGURE 73. AVERAGE ANNUAL TURNOVER



Source: TIP Strategies Employer Survey

The time it takes for firms to fill vacancies may also indicate classifications that have worker shortages. In this case, the higher-wage roles (which typically require higher levels of education) in the management and professional/technical categories were described as being the most difficult to fill. Most respondents considered unskilled/laborer and clerical/administrative positions as easiest to fill.

FIGURE 74. TIME TO FILL VACANCIES

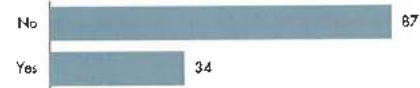


Source: TIP Strategies Employer Survey

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Over two-thirds of respondents had positions that they had been unable to fill. When asked to describe the positions, vacancy period, and reason, a variety of positions were described with many indicating vacancy periods of longer than six months and the lack of applications and/or the quality of applications as the reason.

FIGURE 75. HAVE THERE BEEN SPECIFIC POSITIONS RESPONDENTS HAVE BEEN UNABLE TO FILL



Source: TIP Strategies Employer Survey

FIGURE 76. SPECIFIC POSITIONS RESPONDENTS HAVE BEEN UNABLE TO FILL

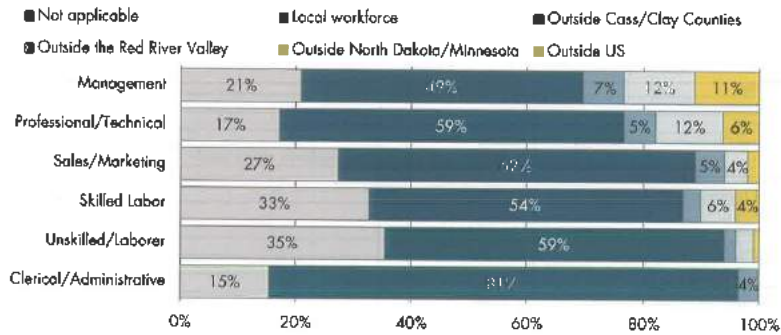
Position	Length of Vacancy	Reason
Assemblers		
Assembly	Years	No applicants
Concrete Construction Crew Laborers	Months	
Cooks	6 Months	Few applicants of poor quality
Designer/Technical Director		
Diesel Mechanic, CNC Machinists		
Electrician	6 to 12 Months	
Mechanic	6 to 12 Months	
Licensed Boiler Operator	6 to 12 Months	
Carpenters, framers, electricians, plumbers		
IT Infrastructure Architect	12 Months	
Lead Custodian (nights)	3 Weeks	
Laf Specialist	3 Months	Few applicants
Quality Control	5 Months	Few applicants
Drivers		Few applicants that pass background checks and drug tests
Maintenance Process Operators		
Maintenance Technicians		
Moldsetters		Poor quality of applicants
Office Assistant	4 Weeks	Poor quality of applicants
Operations Manager/General Manager		
Production Workers	12 Months +	Few applicants, many of which are poor quality
Professional and Skilled Labor Positions	12 Months +	Cannot get qualified applicants
Programmer		Applicants not interested in location
Writers		Poor quality of applicants
Project Manager/Estimator	12 Months	No qualified applicants
Rethread Tire Technicians	4 Weeks	Poor quality applicants that can't pass drug tests
Seasoned Commercial Lender		
Shelter Advocates	4 Months	Few applicants of poor quality
Skilled labor		
Skilled labor	Years	High turnover of people in position
Substitute Licensed and Non-Licensed Staff		
Technical Sales	3 Months +	
Skilled Installer	3 Months +	
Veterinarian	3 Months +	Applicants do not have enough experience
Customer service		Not enough applicants
Web Developer	12 Months	Applicants do not have enough experience or skill
Child care	12 Months	
CPA	6 Months	

Source: TIP Strategies Employer Survey

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Recruiters were more likely to look outside the local workforce for higher-wage positions, such as those in the management and professional/technical categories; a fourth of respondents said they would look outside the Red River Valley for management staff. For the remainder of classifications, at least half of respondents filled positions from within the local workforce. Clerical/administrative staff was always filled from within the Red River Valley and no respondents considered international recruitment for any category.

FIGURE 77. GEOGRAPHIES FOR RECRUITMENT



Source: TIP Strategies Employer Survey

Referrals were the most likely to be utilized for recruitment, as well as being the highest-rated tool, with an average rating of 3.66 out of 5. Online job boards had the next-highest rating for effectiveness which, when combined with social media and Craigslist, indicates the popularity of internet-based recruitment.

FIGURE 78. EFFECTIVE RESOURCES FOR IDENTIFYING QUALITY CANDIDATES
WHERE "1" IS THE LEAST EFFECTIVE RESOURCE AND "5" IS THE MOST EFFECTIVE.

Resource	% use	Average rating	OTHER:
Referrals/word-of-mouth	98%	3.66	• Social media - LinkedIn, etc. (5)
Colleges/trade schools	82%	3.05	• Craigslist (4)
Internet job boards [e.g., Indeed, Monster]	82%	3.32	• Head hunter
Newspaper advertising	76%	2.35	• Help wanted sign
Local jobs center	68%	2.30	• Marquee Sign
Staffing/temp agency	64%	2.90	• Radio (2)
Professional publications	58%	2.41	• Required to hire from MN Merit System

Source: TIP Strategies Employer Survey

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Respondents were asked to provide specific occupations or skills they found difficult to recruit. Those that came up more than once included: engineers, sales staff, web developers, carpenters, electrical workers, maintenance technicians, and CDL or truck drivers. These occupations/skills (out of almost 200 provided) were then categorized in Figure 79. Skilled trades/technicians was one area that was commonly listed as hard to recruit and that respondents anticipated needing in the future.

FIGURE 79. OCCUPATIONS/SKILLS NEEDS

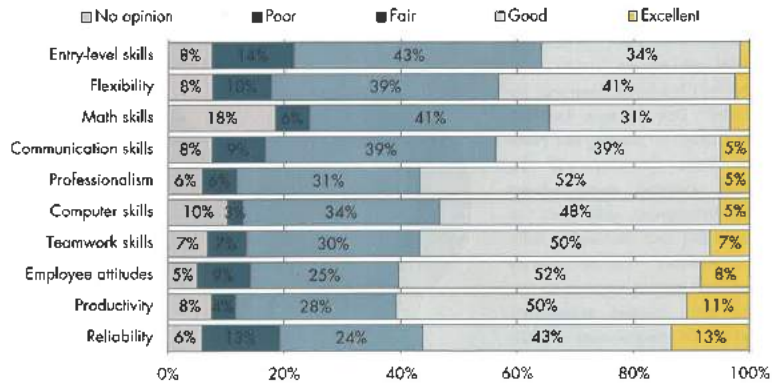
Occupations/skills	Hard to recruit	Future skills req.
Skilled Trades/Technicians	30%	26%
Engineering/Science	10%	8%
Creative/Hospitality	9%	3%
Finance/Business/Legal	9%	4%
Unskilled Labor	8%	13%
IT	7%	13%
Sales/Marketing/Cust. Support	7%	9%
Healthcare	5%	4%
Management/Supervision	5%	6%
Business Support/Administration	4%	8%
Education/Public Sector	4%	4%
Transportation	3%	3%

Source: TIP Strategies Employer Survey

JOB TRAINING

Respondents were asked to provide their opinion of the region's workforce based on selected characteristics. Many characteristics received strong ratings with at least half of respondents giving them a Good or Excellent rating. Characteristics that received lower ratings were entry-level skills, flexibility, math skills, and communication skills. Half of respondents rated the region's workforce as Fair or Poor in regards to those characteristics.

FIGURE 80. EMPLOYER RATING OF REGIONAL WORKFORCE ON SELECTED CHARACTERISTICS

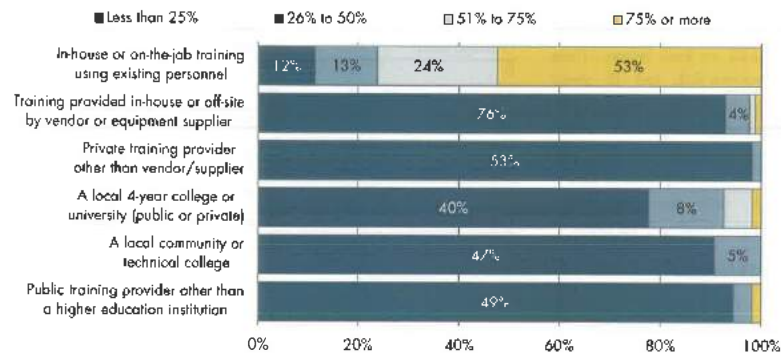


Source: TIP Strategies Employer Survey

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Respondents were significantly more likely to utilize in-house or on-the-job training than outside options. Twenty percent of respondents utilized four-year colleges or universities for at least a quarter or more of their training needs. The remaining training sources were unlikely to be used for more than 25 percent of the firms' employee training.

FIGURE 81. SOURCES FOR EMPLOYEE TRAINING



Source: TIP Strategies Employer Survey

Because most respondents conduct training in-house, they did not report training programs that were particularly useful or that were absent. Of those that did report useful training providers, they included the Chamber of Commerce, the Dakota MEP, Dale Carnegie, the North Dakota College of Science, and North Dakota State University. Of the suggested programs, many included general employment skills such as resume writing and interviewing skills, conflict resolution, cultural diversity training, and general customer service. Specific skills included maintenance technicians, PLC programming, COBOL, business analyst, blow moldings, welding, and purchasing.

FIGURE 82. ARE THERE TRAINING PROGRAMS IN THE AREA THAT HAVE BEEN PARTICULARLY HELPFUL?



Source: TIP Strategies Employer Survey

FIGURE 83. ARE THERE TRAINING PROGRAMS LACKING IN THE AREA THAT ARE CRITICAL TO YOUR TRAINING NEEDS?



Source: TIP Strategies Employer Survey

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APPENDIX D: DATA & METHODOLOGY

CLASSIFICATION SYSTEMS

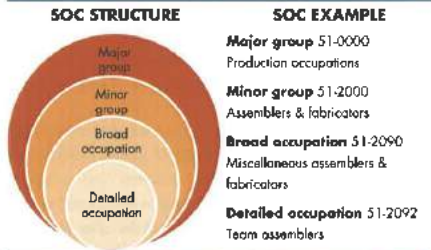
Much of the analysis presented in this report relies on three separate classification systems. A brief overview of each is presented below.

The **Standard Occupational Classification (SOC)** system is used by federal statistical agencies to classify workers into categories for the purpose of collecting, calculating, or disseminating data. This system groups all occupations in which work is performed for pay or profit according to the type of work performed and, in some cases, on the skills, education, or training needed to perform the work at a competent level. Under the 2010 SOC system, workers are classified into one of 840 detailed occupations, which are combined to form 461 broad occupations, 97 minor groups, and 23 major groups.

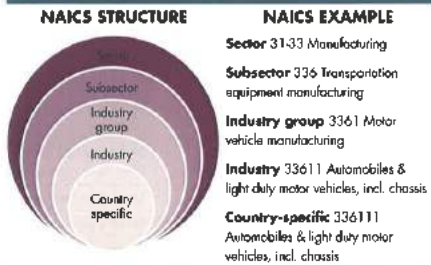
The **North American Industry Classification System (NAICS)**, pronounced *Nakes*, was developed under the direction and guidance of the Office of Management and Budget (OMB) as the standard for use by Federal statistical agencies in classifying business establishments for the collection, tabulation, presentation, and analysis of statistical data describing the US economy. The classification system was developed jointly with government agencies in Canada and Mexico to allow for a high level of comparability in business statistics among the North American countries.

The version of NAICS currently in wide use was released in 2007 and classifies industries into 20 sectors based on production processes. These sectors are broken into subsectors, industry groups, and individual industries. An additional level of detail is

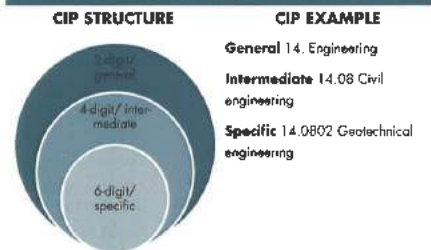
STANDARD OCCUPATIONAL CLASSIFICATION SYSTEM



NORTH AMERICAN INDUSTRIAL CLASS. SYSTEM



CLASSIFICATION OF INSTRUCTIONAL PROGRAMS



Source: US Bureau of Labor Statistics (SOC); US Census Bureau (NAICS); National Center for Education Statistics; TIP Strategies.

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provided to accommodate industry codes specific to the three countries. The classification system is updated every five years. The 2012 NAICS structure was finalized in August 2011. Federal statistical agencies were directed to begin using the new system for data published for reference years beginning on or after January 1, 2012.

The Classification of Instructional Programs (CIP) is the accepted federal government statistical standard on instructional program classifications. Developed in 1980 by the National Center for Education Statistics, the CIP is used by state agencies, national associations, academic institutions, and employment counseling services for collecting, reporting, and analyzing instructional program data.

The CIP titles and program descriptions are intended to be generic categories into which program completions data can be placed, and are not exact duplicates of specific major or field of study titles used by individual institutions. The vast majority of CIP titles correspond to academic and occupational instructional programs offered for credit at the postsecondary level. These programs result in recognized completion points and awards, including degrees, certificates, and other formal awards. The CIP also includes other types of instructional programs, such as residency programs in various dental, medical, podiatric, and veterinary specialties that may lead to advanced professional certification, personal improvement and leisure programs, and instructional programs that lead to diplomas and certificates at the secondary level only.

DATA SOURCES

EMPLOYMENT

The industry and occupational data presented in this report were prepared using EMSI's Complete Employment series. EMSI gathers and integrates economic, labor market, demographic, and education data from over 90 government and private-sector sources, creating a comprehensive and current database that includes both published data and detailed estimates with full coverage of the United States.

The company's core data consists of jobs (historical and projected) and earnings (current year) by industry and occupation for every ZIP code and county in the United States. EMSI data are annual averages of jobs (not workers); full- and part-time jobs

PRIMARY INDUSTRY/OCCUPATION DATA SOURCES			
MAXIMUM DATE USED FOR EMSI'S 2013.2 DATA RELEASE			
DATA SOURCE	ABBREV.	AGENCY	VERSION USED*
State Personal Income	SPI	BEA	2011
Local Area Personal Income	LPI	BEA	2010
Industry Economic Accounts	IEA	BEA	2002-2011
American Community Survey	ACS	Census	2005-2011
County Business Patterns	CBP	Census	2010
ZIP Code Business Patterns	ZBP	Census	2010
Nonemployer Statistics	NES	Census	2010
Quarterly Census of Employment and Wages	QCEW	BLS	2012 Q3
Current Employment Statistics	CES	BLS	Feb. 2013
Natl. Employment Projections (Industry Occupation Matrix)	EP	BLS	2010-2020
Occupational Employment Statistics	OES	BLS	2011
Railroad Retirement Board Tables, State/County	RRB	RRB	2012/2011
Equifax Business Data		Equifax	2013 Q1
Long-term state industry projections		Individual states	varies
LEHD/Quarterly Workforce Indicators	QWI	Census	varies

Source: EMSI data release notes * Indicates release date, not data reference period

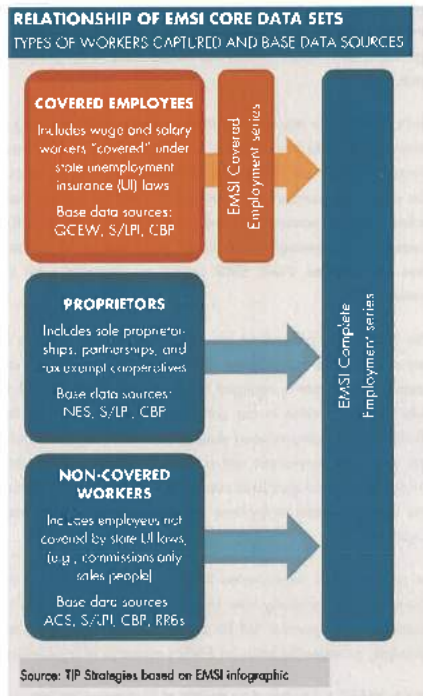
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are counted equally.

EMSI produces industry and occupation datasets with two different types of coverage. Coverage refers to the types of jobs counted.

EMSI Covered: This dataset primarily counts "payroll" jobs that are covered by unemployment insurance (UI); the primary source is the Quarterly Census of Employment and Wages (QCEW). But EMSI also includes some jobs excluded from QCEW, such as railroad jobs (which have their own UI program), all wage and salary agriculture jobs, and military. These additional categories are based on figures from State and Local Area Personal Income (S/LPI) reports produced by the Commerce Department's Bureau of Economic Analysis (BEA), and state and county railroad retirement boards (RRBs). Data from the Census-produced County Business Patterns (CBP) are also used.

EMSI Complete: This dataset includes all jobs in EMSI Covered, plus additional types of noncovered jobs, such as the self-employed (proprietors), commissions-only salespeople, and various types of non-UI-covered wage and salary workers. Major sources of self-employment data include Nonemployer Statistics (NES), the American Community Survey (ACS), and the S/LPI.



The relationship between EMSI Covered Employment and EMSI Complete Employment is diagrammed in the table above.

For each data set, EMSI creates long-term, 10-year industry projections starting from the current year. These projections are based on a combination of the following:

- Recent trends in all industries for every local geography,
- National industry projections produced by the US Bureau of Labor Statistics (BLS),
- State and sub-state regional projections produced by individual states.

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The company's methodology is designed to capture the expertise embodied in federal and state agencies. However, since official projections produced through the state-federal partnership typically have a base year that lags two to three years behind the current year, EMSI projections are also informed by the most recent data and trends available.

The first step in the process is to track recent local trends using a linear regression function. Taking into account the previous base data from 15, 10, and 5 years prior to the base year, EMSI's analysis plot a line as a function of year and employment. This line is dampened (flattened) to smooth out the effects of any volatility. Once this is done, state and local government industries (as well as the US Postal Service) are projected based on the growth or decline of local economies rather than projected through linear regression. Federal government and military, however, are projected through linear regression at the national level and their growth rate is then applied to the states and counties. Next, EMSI adjusts the projections for all counties so they sum to state- and national-level numbers.

After these initial projections are completed, EMSI's analysts begin a series of controls and adjustments to other data sources. The first of these is an adjustment to the BLS staffing patterns. Essentially the company's projected national growth rate is changed to match the growth rate of the BLS numbers. This adjusts the curve up or down while staying as close to our projected values as possible. Following this, county and state-level projections are adjusted to the state-produced state and sub-state regional projections. County values are controlled to the regional data and state projections are controlled to the reported state data. Once these adjustments and controls are completed, the final state-level numbers are aggregated to determine the final national projections. This causes EMSI data to match state projections very closely, but it also means EMSI projections can stray from the national projections.

The company has incorporated workforce demographics in the latest release of its analytical tools. This data is drawn from the relatively new Local Employment Household Dynamics series produced through a partnership of several federal agencies led by the US Census Bureau. One of its primary data sources, Quarterly Workforce Indicators, provides the basis for EMSI's estimates of occupations by age and gender.

REAL-TIME LABOR MARKET INFORMATION / JOB POSTING ANALYTICS

Data on real-time job postings used in this report was prepared by Wanted Technologies (Wanted). Since 2002, Wanted has maintained detailed data on online hiring demand. Wanted is the exclusive data provider for The Conference Board's Help-Wanted OnLine Data Series™, the monthly economic indicator of hiring demand in the United States. The company's database of more than one million unique job listings is accessible via Wanted Analytics, an online subscription service.

According to the company's website, more than 80 percent of job postings in their database have cities associated with them. This information is then used to filter postings within recognized geographies, including county, metropolitan statistical area, and state.

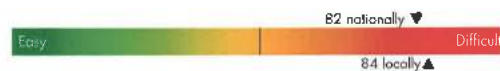
Industries are assigned based on the employer's name, which is matched to Dun & Bradstreet to obtain the associated NAICS code. As a result, only postings that include the employer's name are represented in the counts

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by NAICS code. The rest are listed as unclassified or unknown. The company estimates that 60 percent of postings in the Wanted Analytics database have been matched to a NAICS code.

Wanted's real-time data include a hiring scale which estimates the relative difficulty to fill a given position based on market conditions. This proprietary index considers a range of factors, including the number of postings (demand), the supply of workers in the occupation in the region, salaries, and unemployment rates.

In the example below for Industrial Engineers (SOC 17-2112), the **bottom** figure shows the relative ease or difficulty of hiring this position *in the local market* relative to the same job in the United States. When this indicator approaches the "Difficult" end of the scale it means hiring for this occupation will be more difficult in the chosen market than in the United States generally. The **top** figure provides an indicator of the ease or difficulty in hiring an Industrial Engineer *across the United States* relative to all other occupations nationally. A score approaching the "Difficult" side of the scale suggests the position is hard to fill generally and that hiring challenges extend beyond the local market.



For hiring scales where no specific occupation is listed, the figures show the relative ease of hiring more broadly. A higher score on the bottom indicates greater difficulty in the local market relative to national conditions.

EDUCATION & TRAINING

Under the Higher Education Act of 1965, every college, university, and vocational or technical institution that participates in federal financial student aid programs, such as Pell grants or federally backed student loans, is required to report annually to the US Department of Education [DOE] on a range of indicators. Data are collected through a system of interrelated surveys and are made available through the Integrated Postsecondary Education Data System (IPEDS).

Each fall, institutions report on the number of awards conferred for credit by field of study, by award level, and by the gender and race or ethnicity of the recipient. These data are referred to as "completions." Data on completions for the three most recent academic years available (2009-2010, 2010-2011, and 2011-2012) were downloaded from the IPEDS Data Center for all schools in the region that participate in IPEDS surveys, except for schools in which training was limited to cosmetology.

To help understand how education and training programs in the region align with the key occupations, we also compiled for-credit completions from the IPEDS analysis for key occupations in the talent clusters profiled in this report. This analysis was accomplished using three separate crosswalks that align occupational classifications (SOC codes) with subject matter areas (CIP codes). Specifically, we used the following crosswalks: (1) a 2011 crosswalk created by the National Center for Education Statistics in cooperation with the US Bureau of Labor Statistics (available from the National Crosswalk Service Center), (2) a crosswalk based on information downloaded from the Occupational Supply Demand System (OSDS) website formerly maintained by the Georgia Career Information

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Center at Georgia State University, and (3) Table 7 of the National Research Center for Career and Technical Education's Perkins Crosswalk Validation Project.

While the analysis provides a starting point for discussion, it has several technical limitations that prohibit its use as a strict measure of the "gap" or "surplus" between the supply and demand of labor. First, as mentioned previously, IPEDS data include only awards and degrees conferred for credit, that is, as part of a formal program of study leading to a degree. Noncredit coursework—which encompasses a wide range of instruction, including customized workforce training, professional development programs, and continuing education classes—is excluded. While this limitation is less problematic for positions that typically require an associate's degree or above, it can be challenging when trying to understand the pool of available labor for positions which require less formal, shorter-term awards.

The use of completions data as a proxy for the supply of workers also does not consider the level of training or experience employers require. As indicated in the prior analyses, demand for workers can be driven by new job growth and by the replacement of existing workers. In each case, employers may be seeking candidates with a particular credential or level of experience. Simply having a degree or post-secondary award in a subject area does not necessarily make an individual qualified for employment in that field.

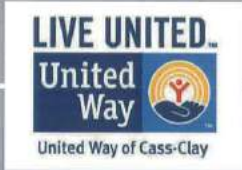
Beyond the issues with completions data generally, the use of a crosswalk also presents a number of limitations. The most fundamental of these is that a standardized crosswalk cannot capture the actual relationship between an individual's educational coursework and their ultimate choice of occupation. In other words, many people obtain their degree in one field and end up pursuing employment in another. In addition, the relationships identified in the crosswalks are inconsistent at best. Some occupations are matched to many broad fields of study, while others are only linked with highly specific CIP Codes.

Finally, in thinking about training "gaps," it is important to remember that education and workforce training is not a closed system. Students may attend college outside the region and return for employment; others may attend college locally and take a job elsewhere. Postsecondary education systems are also not closed in terms of time. While data collection efforts are designed to measure completion within a set period of time (two years, four years, six years), the path to graduation for individual students often does not fit these norms. This is particularly true of community colleges which are sometimes used by students to sample courses and "try out" career choices prior to making a larger investment.

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1 preferred plan.

2 Another specific area of concern is the
3 Walverton Creek/Conslock Coulee area. This
4 104-square mile 67,000 acre watershed area would be
5 locked behind the flow's dam. The flow's natural
6 drains and traditional ditches would most certainly be
7 impacted, and to date, there is no study done.

8 This is a prime agricultural area and
9 extended retaining of water would be detrimental.
10 Attached to my comments is a map of that shed, its
11 drains, and an e-mail from the Buffalo-Rod Watershed
12 administrator noting that no study of impacts has been
13 done. This should be addressed.

14 I do wish to thank the Minnesota DNR and
15 staff who have worked diligently on the draft EIS and
16 for your consideration of the comments here tonight
17 and those you will receive in the next eight days.
18 Thank you very much.

19 MR. DEEN: Thank you. Next up is
20 Jim Gartin, J-I-M, G-A-R-T-I-N.

21 Jir, your time starts now.

22 MR. GARTIN: Good evening. Thank
23 you very much to the Minnesota DNR for allowing us the
24 opportunity to speak.

25 I am Jim Gartin. I am the president of

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(952) 922-1955

Summary of Comments on OralGroup_Commenters12_35.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/3/2015 10:45:13 AM -06'00'

Commenter 12

1 the Greater Fargo-Moorhead Economic Development
2 Corporation, and from here on, we'll call it just the
3 EDC. It's quite a mouthful.

4 We represent both Clay County in Minnesota
5 and Cass County in North Dakota. Our organization is
6 the official economic development organization for
7 both counties, so we represent both counties on both
8 sides of the river.

9 It is our mission to grow and to diversify
10 the economies of our SMSA by attracting, retraining,
11 and expanding businesses. That recently completed
12 regional workforce study which was finished in
13 June of 2015, which I just learned I'll have to submit
14 by letter form, versus tonight.

15 I'd like to talk to you about some of the
16 things that we talked about and we learned from that
17 study. We did a very comprehensive labor shed
18 analysis that determined that there was an 11-county
19 area that supported our SMSA in relationship to
20 employment. Four of those are in Minnesota.

21 The four counties are obviously Clay,
22 Becker, Ottertail, and Wilkin, which, at that point in
23 June, had a combined unemployment rate of 2.6 percent.
24 In our SMSA, our unemployment rate was 2.2 percent,
25 compared to the state of Minnesota, which is 3.2, and

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1 The United States, at that point, which was 5.5.
2 The study showed that the Minnesota
3 commuter flows around the market and within our shed
4 accommodated -- about 43 percent of the job holders
5 crossing into Cass County were from Minnesota. This
6 is really an incredible opportunity. It really shows
7 the depth and breadth of our region.
8 Our strong regional economy and its
9 diversification -- diversified business sector
10 explains why our SMSA is one of the top performing
11 SMSAs in America, but at times, because of the lack of
12 permanent flood protection, we have difficulties.
13 I could go on with labor statistics from
14 the studied examples, but we do not have that time.
15 But it does show that our economy is a regional
16 economy codependent on each other, which can't be
17 defined by state borders. The fact remains that the
18 actual border itself is a river, and that river is
19 what could cause crippling economic impact to our
20 market.
21 Together, I think we have the obligation
22 to ensure this never happens to this really incredible
23 opportunity in this economic environment, so we ask
24 the Minnesota DNR to approve the US Army Corps of
25 Engineers' plan for a permanent flood protection for

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Author: Medopera Subject: Highlight Date: 11/3/2015 10:55:35 AM -06'00'
Comment: 12a cont.

Author: Medopera Subject: Highlight Date: 3/31/2016 11:29:45 AM
Comment ID: 12b
Topic: Permitting Approval, Approve the Project
Unsubstantial

1 our region. Thank you.

2 MS. DEHN: Tim Mahoney is next.

3 Tim, T-I-M, Mahoney, M-A-H-O-N-E-Y.

4 MR. MAHONEY: You don't like

5 doctor's writing?

6 Good evening. I'm the mayor of the city
7 of Fargo, Tim Mahoney, and I thank you for this
8 opportunity to talk to you tonight.

9 The EIS frequently points out that the Red
10 River basin has a long history of flooding due to the
11 unique hydrology of our area. In fact, the Red River
12 has flooded the communities of Fargo-Moorhead 50 of
13 the last 111 years, including 8 of 16 major flood
14 events on record since 2000.

15 But for as long as the Red River has
16 flooded us in an effort to divide and conquer, our two
17 great states have found ways to come together to
18 persevere and face our persistent threat.

19 I'm pleased today again to come together
20 to put forth yet another detailed document that has
21 confirmed a solution to this century-old problem.
22 Together we can implement the Fargo-Moorhead Diversion
23 and put all the anxiety, stress, and fear of flooding
24 behind us.

25 I often think back to the flood of 2009.

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Page: 4

Author: Medopera Subject: Text Box Date: 11/3/2015 10:58:12 AM -06'00'
Commenter 13

Author: Medopera Subject: Highlight Date: 3/31/2016 11:32:13 AM
Comment ID: 13a
Topic: Base No Action with Emergency Measures, Existing Conditions
Unsubstantial

Author: Medopera Subject: Highlight Date: 4/20/2016 3:35:56 PM
Comment ID: 13b
Topic: Proposed Project, Environmental Impact Statement Concludes

1 With local leadership and the help of both Minnesota
2 and the North Dakota governors, federal delegations,
3 and state agencies like the DNR, we successfully
4 recruited a voluntary workforce of over 100,000 of our
5 best sandbaggers we could find, and we won the fight.

6 This joint effort was nothing short of
7 remarkable. Over 7 million sandbags helped us build
8 over 57 miles of temporary levees, and thanks to the
9 grace of God and a little bit of luck, our cities
10 stayed relatively dry.

11 While we were left with quite a story of
12 hard work and heroics, frankly, it's getting a bit
13 tiresome to tell and relive every spring. Sandbagging
14 is not permanent flood protection, and our citizens
15 are getting tired. We can do better.

16 As Deputy Mayor at the time of the 2009
17 flood, I've never been prouder of my city, my
18 community, our partners in Minnesota who helped us
19 narrowly save us that spring.

20 While it has taken us the better part of
21 six years to get to where we are today with a plan to
22 protect the communities from flooding, we owe it to
23 those 80,000 workers, like the former mayor, Denny
24 Walaker, who is no longer with us today, to find a
25 permanent answer to the problem.

1 I think the draft EIS before us today,
 2 like the US Army Corps of Engineers' EIS before it,
 3 has found that answer, and there's only one: the
 4 Fargo-Moorhead Diversion.

5 Without the implementation of the
 6 Fargo-Moorhead Diversion, our project can only provide
 7 certifiable flood protection. The DEIS says 17,714
 8 structures would be left unprotected.

9 The DEIS also estimates that the average
 10 flood insurance policy of \$50, which results in an
 11 annual cost of 11 million a year in flood insurance
 12 premiums alone. Unfortunately, the average flood
 13 insurance has skyrocketed over the years and has
 14 increased and is likely to top at 18 percent a year.

15 With no signs of the increase slowing
 16 down, that 11 million a year will at least triple
 17 before the project can be implemented.

18 The economics of Fargo-Moorhead are
 19 affected as much by these premiums as it is from
 20 flooding. Our local communities understood the recent
 21 national housing downturn, but only left unchecked and
 22 unprotected, these leave nearly 18,000 structures that
 23 will crush our housing market and create a localized
 24 affordable pricing that will ripple across the sectors
 25 of our business and personal finance.

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Author: Medopera Subject: Highlight Date: 11/3/2015 11:10:22 AM -06'00'
 Comment ID: 13b cont.

Author: Medopera Subject: Highlight Date: 3/31/2016 11:34:33 AM
 Comment ID: 13c
 Topic: Need for the Project, General Support
 Unsubstantial

1 MS. DEHN: Time is up.

2 MR. MAHONEY: I want to just thank

3 the agency for working so hard on this project, and we

4 request that you continue to work hard to get it done.

5 Thank you.

6 MS. DEHN: Our next speaker is Tim

7 Fox, T-I-M, F-O-X.

8 MR. FOX: Thank you. Commissioner

9 Landwehr and DNR staff, thank you for coming.

10 While I have many concerns about the

11 project, I want to focus on a particular aspect of the

12 draft EIS that causes deep concern; namely, the

13 failure of the draft EIS to pay any attention or

14 serious attention to Executive Order 11988.

15 In the scoping process, the DNR promised

16 to consider the requirements of Executive Order 11988

17 in its analysis of the proposed project and its

18 alternatives to the project, yet the draft EIS failed

19 to comply with that commitment.

20 The document merely makes passing mention

21 of it, but actually misstates the directive of the

22 order.

23 The scoping decisions inaccurately assert

24 that Executive Order 11988 directs federal agencies to

25 consider impacts to existing floodplain and consider

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Author: Medopera Subject: Text Box Date: 11/3/2015 11:14:45 AM -06'00'
Commenter 14

Author: Medopera Subject: Highlight Date: 3/31/2016 11:37:11 AM
Comment ID: 14a
Topic: Federal Executive Order 11988, Not Addressed or Inadequately Addressed

1 alternatives to avoid adverse impacts in income
2 capital development of the floodplain.

3 Actually, Executive Order bars any federal
4 project from funding any project that directly or
5 indirectly reduces the development of the floodplain.
6 The order requires each federal agency to avoid direct
7 or indirect support of floodplain development whenever
8 there is a practical alternative.

9 The Draft EIS makes no effort to engage or
10 even examine these points. The draft EIS also seems
11 to be predicated upon the erroneous premise that
12 Executive Order 11988 merely requires the development
13 occur in a floodplain so long as the development is
14 appropriately protected from flooding under FEMA
15 standards.

16 This is a misinterpretation of the words
17 of the order and its purpose. Executive Order 11988
18 certainly seems to avoid construction of a floodplain;
19 however, secondarily, equally, it is important that
20 all construction in a floodplain be avoided.

21 It embodies sustainability principles
22 similar to those principles embodied in the Minnesota
23 Mediation Settlement Agreement. It prevents federal
24 projects from removing the floodplain storage capacity
25 of floodplains, because removing floodplain storage

1 has the unfortunate effect of moving floodwaters onto
2 other lands.

3 It prevents federal projects from simply
4 shifting the consequences of flooding from favored
5 landowners onto the less powerful, disfavored
6 landowners.

7 Executive Order 11988 must be considered
8 because it is environmental policy provisioned with
9 the force of law, and its violation is removing
10 floodplain storage.

11 In conclusion, I urge you to reconsider
12 and change the way in which the draft RIR approaches
13 Executive Order 11988.

14 MS. DRHH: Time is up. Our next
15 speaker is Tom Dawson, T-O-M, D-A-W-S-O-N.

16 MR. DAWSON: Thank you. My name is
17 Tom Dawson, and I am president of Dawson Insurance, a
18 company that has been serving our region for 98 years.
19 I'm also chairman of the Business Leaders Task Force
20 for Permanent Flood Protection, representing
21 businesses in Fargo and Moorhead and sponsored by the
22 Chamber.

23 There are 2100 members of our Chamber in
24 Fargo-Moorhead and West Fargo. The permanent flood
25 protection is the Chamber's number one priority.

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First, we are pleased with what we have seen in the Minnesota DNR's DFIS. This report and others continue to confirm that the current diversion plan, as recommended by the US Army Corps of Engineers, is the right one to protect our region.

We agree that the federally authorized project is the alternative that best provides permanent flood protection, the need for which is described by the Diversion Authority in the purpose and-needs statement developed for this EIS.

The federally authorized project includes an impoundment dam that fits the definition of a Class 1 dam and meets the safety standards for such a dam under both USACE standards and those established by the Minnesota Gas Safety rules.

The DNR review accurately recognizes that this project will have no impact on critical environmental resources, or issues such as water quality and supply, air emission, erosion, and visual impacts.

The federally authorized project includes detailed mitigations to limit impacts on cropland, wetlands, aquatic species, and birds, including site-specific environmental assessments on parcels identified for acquisition, reasonable compensation

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- T Author: Medopera Subject: Highlight Date: 4/20/2016 3:38:23 PM
 Comment ID: 15a
 Topic: Proposed Project, Environmental Impact Statement Concludes

- T Author: Medopera Subject: Highlight Date: 3/31/2016 12:32:32 PM
 Comment ID: 15b
 Topic: Dam Safety, Risk and Loss of Life Concerns

- T Author: Medopera Subject: Highlight Date: 4/20/2016 3:43:21 PM
 Comment ID: 15c
 Topic: Environmental Impacts, Environmental Impact Statement Concludes

- T Author: Medopera Subject: Highlight Date: 3/31/2016 12:34:20 PM
 Comment ID: 15d
 Topic: Environmental Impacts, Mitigation

1 for landowners, and intensive monitoring.

2 The Minnesota DNR is correct in that the

3 No Action Alternatives rely on the status quo, which,

4 at best, provides for temporary emergency measures.

5 Temporary emergency measures did not meet this

6 project's purpose and need.

7 The Northern Alternative has not been

8 reviewed or approved by the federal government. It

9 will also impact far more homes and cost millions of

10 dollars more. Although it meets the purpose and need,

11 selection of the Northern Alternative will result in

12 delay of permanent flood protection with more expense

13 and more impact.

14 We appreciate the hard work of the

15 Minnesota DNR. We agree the purpose and need is

16 permanent flood protection. The federally authorized

17 project achieves that goal. Thank you.

18 MS. DEHN: Next -- technology always

19 gets in the way. All right. Thumbs up row? We can

20 only hope.

21 I have been asked to instruct the speakers

22 to speak up louder or to move closer to the mic. So

23 for those of you, please make sure that you are up

24 close, and use your playground voice, as we say.

25 The next speaker is Steve Gehrtz.

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Author: Medopera Subject: Highlight Date: 3/31/2016 12:34:54 PM
Comment ID: 15e
Topic: Base No Action (with Emergency Measures), Existing Conditions

Author: Medopera Subject: Highlight Date: 3/31/2016 12:38:08 PM
Comment ID: 15f
Topic: Comparison of Alternatives, Northern Alignment Alternative Impacts
Unsubstantial

Author: Medopera Subject: Highlight Date: 3/31/2016 12:38:44 PM
Comment: 15g
Topic: Proposed Project, General Support
Unsubstantial

Author: Medopera Subject: Text Box Date: 11/3/2015 11:56:54 AM -06'00'
Commenter 16

1 S-T-I-V-E, G-E-H-R-T-Z. And your time starts now.

2 MR. GEHRTZ: My name is Steve
3 Gehrtz, and I serve as a single member -- or one of
4 the members of the Moorhead City Council, and I
5 represent and work for the City of Moorhead.

6 I'd like to start off by thanking the DNR
7 for the cooperative effort and support for our
8 community and that our community received from the
9 State of Minnesota to assist in our efforts to
10 construct permanent levees and protect its citizens.

11 I'd also like to thank the DNR for the
12 efforts and completing a thorough job in conducting
13 the EIS. The project is important to our community
14 because there are citizens in Moorhead that rely on
15 jobs in Fargo, and there are citizens in Fargo that
16 rely on jobs in Moorhead.

17 All we have to do is look to our neighbors
18 to the north and to the west in Grand Forks and Minot
19 to see how a catastrophic flood event will impact the
20 community as a whole. Unfortunately, both of these
21 communities had the misfortune of losing the flood
22 fight, and it has taken them years to recover.

23 While the communities are in two different
24 states, they are separated by a river, but we are
25 still one community. What happens in one community

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Author: Medopera Subject: Highlight Date: 3/31/2016 12:39:29 PM
Comment ID: 16a
Topic: Socioeconomics, Economics

Author: Medopera Subject: Highlight Date: 11/3/2015 12:00:24 PM -06'00'
Comment ID: 16a cont.

1 impacts the other.

2 I concur with the findings that the Base
3 No Action and No Action with Emergency Measures is not
4 the solution for flood protection. Our City staff has
5 been part of the review and analysis of the federally
6 authorized project. The Northern Alternative may be
7 easier to construct, but it has not gone through the
8 scrutiny that the federally authorized project has.

9 Furthermore, it is the more expensive
10 project, in perhaps numerous structures, than the
11 federally authorized plan. The Northern Alternative
12 extends the permanent flood protection solution four
13 or five years further down the road. If it had to go
14 through that study and be completed as the original
15 project, each year represents a 4 to 5 percent
16 increase in construction costs.

17 In closing, thank you again for the
18 thorough work in completing the EIS and your support
19 that you have given the city of Moorhead in your flood
20 protection.

21 MS. BRIN: Our next speaker is
22 Darrell Vanyo, D-A-R-R-E-L-L, V-A-N-Y-O. Your time
23 starts now.

24 MR. VANYO: Good evening. Thank you
25 for the opportunity to speak. As indicated, my name

Author: Medopera Subject: Highlight Date: 4/20/2016 9:58:19 AM
Comment ID: 16b
Topic: Base No Action Alternatives, Environmental Impact Statement Concludes

Author: Medopera Subject: Highlight Date: 3/31/2016 12:41:51 PM
Comment ID: 16c
Topic: Northern Alignment Alternative, Federal Authorization and Implementation
Unsubstantial

Author: Medopera Subject: Text Box Date: 11/5/2015 8:57:09 AM -06'00'
Commenter 4 (see Comment Box for duplicate with review notes)

This page contains no comments

1 is Darrell Warty. I am the former West Fargo
2 commissioner and Cass County commissioner.

3 I currently serve as the chairman of the
4 Diversion Authority Board. This is a joint entity
5 made up of three entities from both North Dakota and
6 Minnesota. They are the cities of Fargo-Moorhead,
7 Cass and Clay Counties, Buffalo Red watershed
8 District, and Cass County Joint Water District.

9 I have read the report in its entirety,
10 and it is clear to me that the DNR and the State of
11 Minnesota understand the purpose and need for the
12 project, along with the difficult and complex flooding
13 problems that we face.

14 It's also clear to me that through all the
15 study that has gone into solving the problem of
16 flooding, that there has been a pretty clear and
17 consistent answer that has continually risen to the
18 top, and that is the Diversion Project with upstream
19 stages.

20 Given the results of this draft RIS, there
21 are two identical diversion projects. I'd like to
22 focus my comments on the difference that we see
23 between the two.

24 The considerable amount of effort by the
25 Diversion Authority and others have gone into a number

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1 of changes and improvements to the design of the
2 project over the last three years through additional
3 design, valiant engineering efforts in order to limit
4 the impacts we will need to stage water, it remains an
5 overarching goal of the Diversion Authority to
6 continue to look for ways to limit these impacts.

7 I believe the DNR and others have a
8 similar goal: Our goal for how this project
9 ultimately gets implemented. With that in mind, the
10 Northern Alignment Alternative studied in this EIS
11 does not seem to fit this goal, and in fact, works
12 greatly in counter to this goal and all similar
13 efforts made to date to limit the impacts upstream.

14 In the past, the Diversion Authority and
15 the Corps evaluated a similar option to the Northern
16 Alignment. These were detailed conversations with
17 heavily -- and heavily discussed conclusions. What
18 our research found was similar to the results of the
19 draft EIS before us tonight.

20 The Northern Alignment requires a staging
21 area of similar size that impacts 274 additional
22 structures at the cost of \$81 million more than the
23 current proposed federally authorized project.
24 Without significant other variables that differ,
25 making the argument the Northern Alignment is adequate

1 or even a better suited alternative does not seem
2 practical. I would question how it could be, since it
3 impacts more farmland, impacts homes, impacts more
4 structures, more cost --

5 MS. DEHN: Time is up.

6 MR. VANYO: Thank you.

7 MS. DEHN: Next, we have Clay
8 Dietrich, C L A-Y, D-I-E-T-R-I-C-H. Your time starts
9 now.

10 MR. DIETRICH: Good evening,
11 Commissioner and members. My name is Clay Dietrich.
12 I am president of the Home Builders Association of
13 Fargo-Moorhead, and I am here tonight to discuss our
14 opinion on the Flood Diversion Project.

15 We have looked at this project for many,
16 many years, and we have been a supporter of it. The
17 reason is that it's the only way to get permanent
18 flood protection for our area.

19 I've been a Moorhead resident for
20 32 years, and I also served on the Moorhead Fire
21 Department from 1983 to 2009. In 2009, we had a huge
22 flood here, and I was the assistant chief of Moorhead
23 Fire, and we were asked to manage the city-long dike
24 that was built from one end of our city to the other.

25 We had 36 members of our department, along

1 with the hundred or so volunteer firefighters from
2 around the state, members of DNR up here manning pumps
3 for us, and thousands of volunteers to beat that
4 flood.

5 While we beat that flood, we recognized
6 that we were not going to be able to perform that
7 feat year after year, and so our city leaders asked
8 the legislature to find funds to build up our levees
9 and facilitate home buy-outs and help fix Moorhead's
10 levee problem.

11 We want to thank the Minnesota Department
12 of Natural Resources and the Minnesota legislature for
13 assisting Moorhead with that process and to help us
14 get our interim levee system completed; however, the
15 job isn't complete. The final piece of the puzzle is
16 the building the F-M Area Diversion.

17 I think we all can agree that reducing the
18 flood risk, flood damage, and protection costs is a
19 worthy and important role for the region. The project
20 as proposed and thoroughly evaluated by the US Army
21 Corps and Minnesota DNR will best achieve that goal.

22 The project, by impounding flood waters
23 upstream and then diverting them around the wetland
24 area, will provide the most environmentally
25 responsible and cost efficient means of protecting the

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1 lives and property of the Fargo-Moorhead residents.

2 Given the increased frequency and
3 propensity for devastating floods in the area, I think
4 it's clear how necessary this project is. Doing
5 nothing would leave us in a position of relying on
6 heroic efforts of local citizens during a major flood
7 event.

8 While the levee's construction and
9 sandbagging efforts to the north have worked in the
10 past, they hardly represent a permanent solution.
11 Time is of the essence on this project.

12 Senator Heeven proposed a meeting with
13 FEMA's deputy associate administrator for mitigation
14 rights in April, where he stated that FEMA redraws its
15 flood maps --

16 MS. DEHN: Ten seconds.

17 MR. DIETRICH: -- every five years.

18 If this project is not approved by then, the flood
19 level will go up another four and a half. At that
20 time, Moorhead started that levee --

21 MS. DEHN: Time is up.

22 MR. DIETRICH: -- and the DNR will
23 be back here spending more money again. Thank you.

24 MS. DEHN: Next, we have Diane Ista,
25 D-T-A-N-E, I-S-T-A.

1 MR. ISTA: My name is Diane Ista,
2 and I'm a former manager of the Wild Rice Watershed
3 District in Minnesota, which is made up of Norman,
4 Mahanomen, part of Clay, part of Becker, part of Polk,
5 and part of Clearwater. It's the second largest
6 watershed.

7 My written comments, already submitted,
8 will address the concerns I have with items I feel are
9 not addressed in the EIS. I decided to make a
10 comment -- oral comment about another issue that I
11 think is extremely important. I call it: New
12 information for consideration.

13 When the Wild Rice Watershed District met
14 with the DNR in 2009 about a retention site on the
15 Wild Rice watershed of Wild Rice River in Minnesota,
16 we had not submitted any matrix, or they didn't ask
17 for anything of that sort at all, but I do want to
18 comment that this project is in the WRWD bill and was
19 submitted in the WRWD bill and accepted.

20 The only thing we heard when we met with
21 the DNR -- and I do want to comment, I have lot of
22 respect for the DNR. You've had a very good open-door
23 policy, and you were very clear and helpful to us,
24 even though we didn't like your results.

25 The simple statement was: We do not

1 permit high-hazard dams, so there just was no reason.

2 I guess we were told to fill out a matrix or do a
3 mediation or anything of this process, so we dropped
4 it there, because it was -- seemed to be very clear.

5 I will request you not complete a
6 high-hazard dam EIS permit. The Wild Rice Watershed
7 was not allowed the matrix or mitigation. We were
8 told in no uncertain terms that no permits from the
9 DNR will be issued for a high-hazard dam.

10 What my concern is: Why will there even
11 be another EIS for permitting for a high-hazard dam
12 when the -- when we are looking at other issues that
13 the DNR has stated not even to look at?

14 I think it's a double-standard --

15 MS. DEHN: Ten seconds.

16 MS. ISFA: -- and I hope they'll
17 take another look at it. Thank you.

18 MS. DEHN: Mark Askegaard, M-A-R-K,
19 A-S-K-E-G-A-R-D.

20 MR. ASKEGAARD: Commissioner
21 Landwehr and DNR staff, I would like to raise a
22 concern about the failure of the draft EIS to consider
23 the National Economic Development Plan for the
24 Minnesota 35K Diversion.

25 The Corps' original screening determined

Author: Medopera Subject: Highlight Date: 11/5/2015 10:06:16 AM -06'00'
Comment ID: 17a cont.

Author: Medopera Subject: Text Box Date: 11/5/2015 10:06:22 AM -06'00'
Commenter: 18

Author: Medopera Subject: Highlight Date: 3/31/2016 12:48:35 PM
Comment ID: 18a
Topic: Alternatives, Alternative:NED Plan for the MN 35K

1 That only the Minnesota Diversion would provide
 2 benefits greater than the cost. Extensive study
 3 determining that the Minnesota 35K was not only the most
 4 cost-effective flood control project, but also
 5 provided the least environmental damage.

6 This determination was made in 2010 in the
 7 draft Federal EIS, and reaffirmed in the supplemental
 8 draft and Final EIS issued in July 2011. The Corps
 9 would not have chosen this plan if it did not meet the
 10 project purpose of providing flood control to the
 11 Fargo-Moorhead metro area.

12 Despite the determination of the Minnesota
 13 35K superior, Assistant Secretary Garza gave the
 14 Diversion Authority conditional approval to the
 15 locally preferred project, subject to the accuracy of
 16 poor estimates of downstream impacts. Those impacts
 17 turned out to be wildly inaccurate.

18 At this point, the Diversion Authority
 19 decided that fostering development of the
 20 50-square-miles of a floodplain outside of Fargo was
 21 so important that it would dump that water on those of
 22 us who live in the southern part of Clay and Cass
 23 counties and the northern parts of Wilkin and Richland
 24 counties. This project would modify and flood
 25 Minnesota, including Holy Cross Township, Comstock,

Author: Medopera Subject: Highlight Date: 11/5/2015 10:06:33 AM -06'00'
 Comment ID: 18a cont.

Author: Medopera Subject: Highlight Date: 3/31/2016 12:49:39 PM
 Comment ID: 18b
 Topic: Proposed Project, Project Description
 Unsubstantive

1 and northern Wilkin County.

2 When the Diversion Authority selected the
3 locally preferred project, the State of Minnesota sent
4 official objections. Those objections warned that the
5 Federal EIS fails to sustain the conclusion of the LPP
6 as ecologically sustainable, the least impact
7 solution, one which adverse effects can and will be
8 mitigated, and consistent with other standards,
9 ordinances, and resource plans of local and regional
10 governments.

11 This determination should have lead the
12 DNR to compare the LPP to MED. Instead, it appears
13 that the Diversion Authority simply instructed the
14 State of Minnesota that the purpose of the project
15 demanded that the State study only the LPP.

16 I think that is a perversion of the
17 purpose of the Environment Protection Law. If I had a
18 wetland on my farm, and I submitted a proposal to
19 bring that wetland to build a feedlot on my swampy
20 back 40 and told you that you must accept my proposal,
21 because the purpose of my project is to build a
22 feedlot in my swampy back 40, I don't believe that
23 Minnesota would grant me a permit and say,
24 Unfortunately, you cannot look at other locations for
25 your feedlot, because your project definition requires

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Author: Medopera Subject: Highlight Date: 11/5/2015 10:06:57 AM -06'00'
Comment ID: 18b cont.

Author: Medopera Subject: Highlight Date: 3/31/2016 12:50:02 PM
Comment ID: 18c
Topic: Federal EIS, MNDNR Comments

Author: Medopera Subject: Highlight Date: 4/20/2016 11:16:48 AM
Comment ID: 18d
Topic: Proposed Project Purpose and Need, Purpose and Need too Narrow and/or Excessive

Author: Medopera Subject: Highlight Date: 4/20/2016 11:07:21 AM
Comment ID: 18e
Topic: Proposed Project Purpose, Minnesota Environmental Protection Act

1 that you put your feedlot on your swampy back 40.
 2 I don't believe that the Diversion
 3 Authority should be able to prevent you from comparing
 4 an environmentally damaging proposal to a
 5 less-damaging proposal by narrowing the project
 6 purpose so that it rules out a cheaper, less-damaging
 7 project.
 8 MFEA says, and I quote, "Where a proposed
 9 action is likely to cause pollution, impairment, or
 10 destruction of water, land, or other natural resources
 11 within a state, they are prohibited, so long as there
 12 is a 'feasible and prudent alternative consistent with
 13 the reasonable requirements of the public health,
 14 safety, and welfare and the State's'" --
 15 MS. DEHN: Ten seconds.
 16 SPEAKER: "paramount concern for
 17 the protection of its water, land, and other natural
 18 resources from pollution, impairment, or
 19 destruction."
 20 The Diversion Authority has --
 21 MS. DEHN: Time is up.
 22 MR. ASKEGARD: Thank you.
 23 MS. DEHN: Marcus Larson. Marcus,
 24 spelled M-A-R-C-O-S, Larson, L-A-R-S-O-N. Your time
 25 starts now.

Author: Medopera Subject: Highlight Date: 11/5/2015 10:07:22 AM -06'00'
 Comment ID: 18e cont.

Author: Medopera Subject: Text Box Date: 11/5/2015 10:04:49 AM -06'00'
 Commenter 7 (see Comment Box for duplicate with review notes)

This page contains no comments

1 MR. LARSON: In 2006, the Government
2 Accountability Office told Congress that the recent
3 Corps project and studies were fraught with errors and
4 mistakes and miscalculations that used invalid
5 assumptions and outdated data.

6 September 28th and 29th of 2009, the US
7 Army Corps of Engineers conducted an Expert Opinion
8 Elicitation, an EOE. That EOE has been used to
9 conceal significant impacts, both upstream and
10 downstream, by obfuscating historical FEMA benchmarks
11 with theoretical assumptions presented within the EOE.

12 They broke the period into two different
13 records, and they weighted them differently. Now
14 those theoretical assumptions rely heavily on strings
15 of data and discharge that are limited and the
16 precipitation records that were provided in
17 preferential sets.

18 They returned results that complement the
19 stated project purpose, but failed to quantify the
20 total effects of natural floodplain encroachment and
21 flood reduction benefit provided by the natural
22 floodplains upstream in the Fargo-Moorhead area.

23 Basing the EOE primarily upon the stream
24 Corps discharge without quantifying and integrating
25 actual floodplain reduction and precipitation records

1 upstream of Fargo, suggests that the credibility and
 2 the objectivity of the EOE is compromised and biased
 3 towards the goals of the US Army Corps of Engineers
 4 and non-federal local sponsors.

5 Further complicating the EOE theoretical
 6 assumptions is the Fargo USGS gauge. It has had six
 7 different locations since May 27, 1901, which contains
 8 a disparity of up to 18.35 feet. According to the
 9 USGS, it does not appear to be noted in the EOE study.
 10 The EOE is based upon inverted data sets. Assembled
 11 by proxy, it's goal-oriented, best guess.

12 Remarkably, the revision of hydraulics --
 13 Revision 8 was really being unintelligible! with the
 14 US Army Corps of Engineers, and the EOE was not. It
 15 was completed in two days. They didn't have the
 16 benefit of six revisions to look at and base their
 17 assumptions on.

18 I sincerely urge the Minnesota DNR to take
 19 a closer look at the disconnects created by the EOE
 20 and the qualifying disparity in the historical
 21 records and FEMA benchmarks which have been ignored
 22 and will invariably result in impacts to Minnesota
 23 interests. Thank you.

24 MS. DRUM: Tom Kenville. Tom,
 25 spelled T-O-K, Kenville, K-E-N-V-I-L-L-E. Your time

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1 starts now.

2 MR. KERVILLE: My name is Tom
3 Kerville. I currently live in Horace, North Dakota
4 inside the Sheyenne Diversion, and I sleep well every
5 night in April.

6 I am also here as a member of the
7 St. Benedict's Catholic Church. The history of
8 St. Benedict's, which is in Stanley Township, was
9 established in 1870, and the church we now worship in
10 is more than 100 years old.

11 I'd like to comment on the Northern
12 Alignment Alternative that was analyzed in the DNR's
13 EIS. The Northern Alignment would place our church in
14 almost 10 feet of water.

15 I was instrumental in building a dike ten
16 years ago, which was built by our own parishioners at
17 our cost at a mean sea level of 913 feet. The Fargo
18 airport is 900 feet at touchdown.

19 The Northern Alignment would require the
20 removal and/or destruction of this historic church and
21 many more private property buyouts, increasing the
22 cost of the project.

23 There's a lot of emotion involved in this,
24 and we understand the pros and cons of the Diversion
25 Project. If there must be a project, please do not

1 put forward the Northern Alignment Alternative and
 2 destroy the second oldest church in the Dakota
 3 Territory. Thank you.

4 MS. DEHN: Jeff Lewis, Jeff,
 5 spelled J-E-F-F, Lewis, spelled L-E-W-I-S.

6 MR. LEWIS: Thank you, Commissioners
 7 and members of the DNR. My name is Jeff Lewis. I'm
 8 the executive director of the Red River Basin
 9 Commission.

10 Our organization, with the support from
 11 the State of Minnesota and North Dakota, finished in
 12 2011 a long-term flood solution plan that we put
 13 together for the basin. That plan basically asked for
 14 protection for major municipalities at a much greater
 15 level than had previously been done.

16 Our plan, that was endorsed and paid for
 17 by the State of Minnesota and the State of North
 18 Dakota, called for protection for the Fargo-Moorhead
 19 area for up to a 500-year event, and we implore the
 20 department in their consideration of the alternatives
 21 make sure they can evaluate that the plans put forward
 22 would provide a level of protection high enough to
 23 address floods of larger than the 100-year.

24 As most of you know, FEMA has recently
 25 raised the flood elevation that they consider for a

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Author: Medopera Subject: Text Box Date: 11/5/2015 10:10:33 AM -06'00'
 Commenter 19

Author: Medopera Subject: Highlight Date: 3/31/2016 12:53:13 PM
 Comment ID: 19a
 Topic: Purpose and Need, Support for Greater than 100-year Protection

1 100-year. There's already talk about them asking for
2 or revisiting that issue and increasing it even more,
3 which is just one more reason why we advocate for a
4 higher level protection on the 100-year.

5 On a personal note, I was involved in the
6 flood recovery effort in the city of East Grand Forks
7 as a State of Minnesota employee in the '97 flood, and
8 I would hope that we would do whatever we could to
9 make sure that that type of event doesn't happen here.
10 Thank you.

11 MS. DEHN: Toby Christensen. Toby,
12 T-O-B-Y, Christensen, C-H-R-I-S-T-E-N-S-E-N. Your
13 time starts now.

14 MR. CHRISTENSEN: Thanks for hearing
15 us. I'm Toby Christensen, a South Moorhead resident
16 and Moorhead small business owner, a 19-year partner
17 and a 29-year employee at Camrud Foss Concrete
18 Construction, a company that has been based out of
19 South Moorhead since 1988. We employ about 40
20 individuals.

21 I came to Moorhead to attend MSU in 1979,
22 and other than a couple of years right after that our
23 of town, I've been a resident since. My wife and I
24 have raised our four kids. I now have four grandkids
25 living in Moorhead. Our employees are about a 50-50

1 equal split between North Dakota and Minnesota
2 residents.

3 I understand part of the environmental
4 impact study is to consider the socioeconomic effects
5 of the project. I, as an individual, and my company
6 would help friends, neighbors, relatives, and our
7 community fight off the flooding Red River in both
8 1997 and 2009 and other less severe floods in other
9 years.

10 I have seen the impact of fighting back
11 the flood with temporary measures, sandbags, clay
12 banks in our streets, and I've seen the effect that's
13 had on our community and on individuals. Fighting off
14 these floods shut down our normal day to day
15 activities for many individuals and many businesses
16 for many days, sometimes weeks. It created crises in
17 many persons' lives.

18 Our backyard abuts a drainage ditch that
19 drains into the Red River. In 2009, we were told we
20 had nothing to worry about in our neighborhood, so we
21 were out helping others in other parts of Moorhead and
22 across the river in Fargo, North Dakota.

23 The projected flood crest elevation was
24 raised, and the fire department came to our doors
25 asking us to sandbag our backyards to protect from the

1 river backing up into the drainage ditch and flooding
2 our yards and porches, about 15 to 20 homes.

3 We, as a neighborhood, did that with the
4 help of many, many volunteers. A few days later we
5 were told we had to evacuate our homes, hundreds of
6 homes, within a matter of a few hours. I don't
7 remember if this was the result of another raised
8 projected crest, or the City thinks the sewer system
9 couldn't handle it, or some other reason.

10 What I know is that it sent many nervous
11 stressed-out residents into more crisis than they were
12 already in. The National Guard was patrolling our
13 streets.

14 This put some individuals through some
15 very tough psychological trauma. I can't imagine what
16 it did to some of our elderly residents and those that
17 were having to be moved out of elderly care facilities
18 and hospitals.

19 The temporary measures we've used in the
20 past are not adequate to fight back a catastrophic
21 flood that could come any given year. We need
22 permanent flood protection.

23 I encourage the Minnesota DNR to continue
24 to work in partnership with our local communities,
25 state agencies, US Corps of Engineers, and other

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Author: Medopera Subject: Highlight Date: 11/5/2015 10:24:42 AM -06'00'
Comment ID: 20a cont.

Author: Medopera Subject: Highlight Date: 3/31/2016 12:55:08 PM
Comment ID: 20b
Topic: Proposed Project, General Support
Unsubstantial

1 appropriate bodies to move this permanent flood
 2 protection project for both Minnesota and North
 3 Dakota --

4 MS. DEEN: Ten seconds.

5 MR. CHRISTENSEN: -- sooner rather
 6 than later. Thank you.

7 MS. DEEN: Shelley Lewis, Shelley,
 8 S-H-E-L-L-E-Y, Lewis, L-E-W-I-S. And your time starts
 9 now.

10 MS. LEWIS: I reside in rural
 11 Comstock. My house was built here to not experience
 12 flooding. Most people move to Comstock, Bakke, and
 13 Hickson areas because common sense told them, or those
 14 before, not to live or build where they may be
 15 flooded.

16 The Corps published a subjective map,
 17 which I ask you to remove from the EIS. In viewing
 18 the map showing areas where Corps claims people will
 19 build, it will certainly conclude that most people are
 20 not as foolish as the Corps suggests. No one with any
 21 common sense potentially builds a home in the
 22 floodplain.

23 Today, when people build on the
 24 floodplain, it's usually because local government
 25 foolishly grants permits allowing development in

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Author: Medopera Subject: Highlight Date: 11/5/2015 10:26:35 AM -06'00'
 Comment ID: 20b cont.

Author: Medopera Subject: Text Box Date: 11/5/2015 10:26:53 AM -06'00'
 Commenter 21

Author: Medopera Subject: Highlight Date: 3/31/2016 12:56:26 PM
 Comment ID: 21a
 Topic: Floodplain Development, Floodplain Development
 Unsubstantive

Author: Medopera Subject: Highlight Date: 4/19/2016 2:04:55 PM
 Comment ID: 21b
 Topic: Hydrology and Hydraulics, Mapping

Author: Medopera Subject: Highlight Date: 11/5/2015 10:36:17 AM -06'00'
 Comment ID: 21a cont.

1 places where no one should be building.

2 The Diversion Authority's proposal, which
3 subsidizes development in the floodplain, runs
4 completely counter to Fargo's own comprehensive and
5 growth plans.

6 The comprehensive plan states that Fargo's
7 downtown neighborhood and mixed-use areas have
8 potential to become more dense. Fargo will promote
9 infill development, increasing density within areas
10 already developed and protected by flood resiliency
11 strategy, and the City will improve land usage,
12 control the expansion of infrastructure, and fight
13 sprawl by developing within current city limits.

14 Fargo's growth plan admits that even at a
15 high rate of growth, the City could absorb all growth
16 within city limits until 2020. At a more moderate
17 rate, same growth at 2040.

18 The growth plan estimates 266 acres being
19 built on every year. At that rate, if all of
20 development took place in the floodplain south of
21 I-94, this new development would consume approximately
22 8 square acres.

23 The EIS appears to uncritically accept the
24 Corps' assumption that development would consume 50
25 square miles -- excuse me, it was 8 square miles, 50

Author: Medopera Subject: Highlight Date: 11/5/2015 10:37:17 AM -06'00'
Comment ID: 21a cont.

Author: Medopera Subject: Highlight Date: 3/31/2016 12:57:50 PM
Comment ID: 21c
Topic: Land Use, Fargo's Comprehensive Plan

1 square miles. So I request the EBR to research how
2 the Corps arrived at that figure.

3 This contrived development could happen
4 only if Fargo allows and encourages development to be
5 scattered throughout the floodplain in a manner
6 inconsistent with its own comprehensive plan.

7 My neighbors and I are going to ask if a
8 period of flooding of our homes and lands and farms
9 can foster development in the floodplain. Corps
10 officials assume taxpayers must fund a flood control
11 project that protects development in the floodplain.

12 However, in 2009 respected Major General
13 Walsh of the Corps testified before a Congressional
14 Committee hearing stating, "The first step in
15 minimizing future flood damage is to restrict
16 development in the floodplain."

17 We urge communities responsible for making
18 land use decisions to restrict development in areas
19 that are known to be high flood risk. If communities
20 limit development within the floodplain, the largest
21 and most extensive issue related to flood risk
22 management has been resolved before it ever has become
23 a problematic issue.

24 The Diversion Authority's attempt to
25 advance development in the floodplain violates these

1 fundamental principles for growth. Being a very low
 2 density city, Fargo does not need to develop in the
 3 floodplain. What this reckless development would
 4 do --

5 MS. DEHN: Ten seconds.

6 MS. LEWIS: -- is take time from
 7 other protection and give unnecessary -- create
 8 unnecessary tax burden. The Diversion Project would
 9 promote extensive subsidized development --

10 MS. DEHN: Time is up.

11 MS. LEWIS: -- and unnecessarily
 12 force floodwaters on the rest of us.

13 MS. DEHN: Senator Larry Lutck.
 14 Larry, spelled, L-A-R-R-Y, Lutck, L-U L C K. Your
 15 time starts now.

16 SENATOR LUTCK: My comment tonight
 17 doesn't focus on just one issue of the proposed
 18 project, but, rather, a broader overview of, maybe, a
 19 finished product.

20 I believe that each us has the
 21 responsibility to do what is best to improve ourselves
 22 and our natural surroundings and extended surroundings
 23 and treat others as we would like to be treated
 24 ourselves.

25 If we were all able to look back at this

Author: Medopera Subject: Highlight Date: 11/5/2015 10:47:52 AM -06'00'
 Comment ID: 21c cont.

Author: Medopera Subject: Text Box Date: 11/5/2015 10:48:13 AM -06'00'
 Commenter 22

Author: Medopera Subject: Highlight Date: 3/31/2016 12:58:46 PM
 Comment ID: 22a
 Topic: Alternatives, Alternative: General

1 project 50 or 100 years from now, would we be able to
2 honestly say that we did all that we could to make
3 this project work? And this is the best that we could
4 have done for this project?

5 At that point, we need to focus on some
6 simple questions: Does this project show that we care
7 about our natural resources? Did we use our God-given
8 talents to preserve what we have? And/or is this
9 project benefiting all of those that are sacrificing
10 or paying for it? Or does it just work in the best
11 way possible for all?

12 As I think about this current project, I
13 know that I would be rather disappointed if I was
14 given the opportunity to live that long, look back on
15 the current project, and had been given a part of the
16 decision-making process for the current plan.

17 The questions I had asked earlier, simple
18 questions, evaluate a person's character and morals.
19 The persons put in the position of authority need to
20 spend a lot of extra time thinking of all the
21 possibilities and making sure that they can answer the
22 after-the-fact questions with a clean conscience.

23 This is one of the reasons that input from
24 different opinions is imperative and that the
25 evaluation of all those possible options considered.

1 My comment today is to make sure people
 2 get a little bit stirred about themselves and think
 3 about how this project would look to them 50 or 100
 4 years from now.
 5 Today there are alternative ideas for
 6 water management practices that can drastically reduce
 7 the floodwater issues that we are facing. These
 8 alternatives have not been seriously, or even at all
 9 considered in this projected plan. This really needs
 10 to happen.
 11 My comment today, stated earlier, is not
 12 directed at any single specific item other than the
 13 need to focus our time and talent and dollars on a
 14 project that has more benefit to more communities and
 15 the protection of more property so that we can all
 16 look back at this finished product and say that we did
 17 do our best, and we are proud of the plan that is
 18 supported by more people of more communities.
 19 Thank you.
 20 MS. DEHN: I'm going to ask for
 21 forgiveness on this before I try to pronounce it.
 22 Cash Aaland. Cash, spelled C-A-S-H, Aaland, spelled
 23 A-A-L-A-N-D.
 24 MR. AALAND: Commissioner Landwehr,
 25 members of the Minnesota DNR, this comment is about.

- Author: Medopera Subject: Highlight Date: 11/5/2015 10:59:58 AM -06'00'
Comment ID: 22a cont.

- Author: Medopera Subject: Highlight Date: 3/31/2016 12:59:34 PM
Comment ID: 22b
Topic: Alternatives, Alternative: General

- Author: Medopera Subject: Highlight Date: 11/5/2015 11:01:39 AM -06'00'
Comment ID: 22a cont.

- Author: Medopera Subject: Text Box Date: 11/5/2015 11:02:22 AM -06'00'
Commenter 23

- Author: Medopera Subject: Highlight Date: 3/31/2016 1:00:40 PM
Comment ID: 23a
Topic: Alternatives, Alternative: 35K plus DSA plus NWRR

1 alternative analysis. There exists a less-impactful,
2 smaller footprint alternative to Fargo's current
3 proposal, and it is worth further study.

4 In 2013, noted Minnesota engineer and
5 hydrologist Charlie Anderson, of Widseth Smith
6 Nolting, was privately retained by the Mndak Upstream
7 Coalition to run an analysis on a smaller footprint
8 diversion.

9 Specifically, Anderson was retained to run
10 a simulation with the Army Corps' own HEC-RAS model,
11 using Army Corps assumptions. Specifically, Anderson
12 was asked to use this model to determine what would
13 result if the southern inlet to the diversion was
14 moved back north of the Wild Rice River confluence.

15 This was the initial location of the
16 southern inlet to the F-M Diversion in the Army Corps'
17 preferred plan, also known as the Minnesota 25K Plan,
18 now known as the National Economic Development Plan,
19 and alternatively distributed retention, as proposed
20 by the Red River Basin Commission, was implemented in
21 conjunction with this smaller footprint alternative.

22 What would the staging area look like
23 under these two circumstances, and what would the
24 water levels be in Bakke, North Dakota; Comstock,
25 Minnesota; Richland, North Dakota; and Clay and Wilkin

1 Counties, both with and without distributed upstream
2 retention?

3 Essentially, this proposal sought to
4 measure the value of using the existing floodplain for
5 temporary water storage. Fargo's current alignment,
6 the local preferred plan, eliminates a vast amount of
7 existing natural floodplain and is presently
8 undeveloped rural farmland.

9 Fargo's plan relocates this water behind a
10 dam upstream on higher elevation areas that are not
11 part of the regulatory floodplain. Most notably,
12 these higher areas to be flooded include: The
13 Minnesota town of Comstock, the North Dakota community
14 of Hickson-Bakke, and thousands of acres in rural Clay
15 and Wilkin Counties.

16 There exists a large undeveloped natural
17 floodplain beginning north of the city of Oxbow and
18 centering on the Wild Rice/Red River confluence. This
19 undeveloped floodplain should be preserved as a
20 natural water area, not destroyed for development
21 purposes.

22 I will submit more information in writing,
23 but essentially, if this is moved back north -- and I
24 would also point out that -- I'm rushing the clock,
25 here -- this is a different plan than the Northern

1 Alternative included in the EIS. It's also a
 2 different plan than north of the Wild Rice River that
 3 was modeled by the Army Corps.

4 Essentially, this plan would take
 5 advantage of the 83,000 acre feet of storage existing
 6 right now, and that --

7 MS. DEHN: Ten seconds.

8 MR. AATAND: -- the current plan
 9 would bring for development purposes. So I would ask
 10 the DNR to explore that alternative. Thank you.

11 MS. DEHN: Mark Vanyo. Mark,
 12 spelled M-A-R-K, V-A-N-Y-O. Your time starts now,
 13 Mark.

14 MR. VANYO: How's this? Mine is
 15 going to be rather simple, because I don't represent
 16 anybody. I've read the reports, and I'm familiar with
 17 the stuff. I'm speaking as a 65-year citizen of the
 18 state of Minnesota, 47 years in Koothead, 10 of those
 19 years living on the river.

20 When the house was first built, the
 21 levee -- the dike in the backyard was 32 feet. Floods
 22 came, it was moved to 36. Somebody else bought the
 23 house, it was move to 38.5, and then I bought the
 24 house, and I built it to 42 with 8,000 sandbags in my
 25 backyard.

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Author: Medopera Subject: Highlight Date: 11/5/2015 11:08:30 AM -06'00'
 Comment ID: 23a cont.

Author: Medopera Subject: Text Box Date: 11/5/2015 11:08:49 AM -06'00'
 Commenter 24

Author: Medopera Subject: Highlight Date: 3/31/2016 1:36:20 PM
 Comment ID: 24a
 Topic: Proposed Project, General Support
 Unsubstantial

1 I was too old for that, so I sold it to
2 the City, and I built another home in Moorhead, and
3 after I built the house and moved in, all of a sudden
4 I was surrounded by four levees. Every side. Every
5 place I looked, because we had to get the whole city
6 to 44 feet.

7 Why do I not feel comfortable? Because I
8 grew up on a farm north of East Grand Forks, and we
9 fought waters in the '60s. A little bit different, it
10 was neighbors helping neighbors, and some
11 neighbors braving the ditches being built.

12 But my brother, he had to build his own
13 levee around his farm. My father did the same thing.
14 And then we'd get in our cars and go to East Grand
15 Forks and walk the sandbag dikes.

16 And then East Grand Forks built a dike
17 that was never, ever, ever, ever, going to be
18 breached. We know what happened.

19 So complacency is not where we need to be,
20 and that's where I feel -- Moorhead is at 44, and in
21 the coffee circle, some of them are, "Isn't that
22 wonderful? We're at 44. Boy, we've got it," and
23 homes were taken out of the floodplain.

24 We don't know if that 100-year level -- if
25 we're going to get uncertified, more homes in the

1 Floodplain.

2 I'm proud of what people have done -- the

3 City, the State, the ENR, the Diversion Authority --

4 researching this, but then it was researched and

5 re-researched, and re-re-re-researched, and the same

6 results are coming up.

7 Now we're looking at more alternatives

8 here that are being suggested. It just seems like

9 everybody is comfortable. I think it's time to move

10 on and get something built so I can get up in the

11 morning and not look at levees -- or the levees will

12 stay, but I can have a comfort, because I had a

13 business in this town for 40 years and it was real

14 estate, and I saw what happened after floods and how

15 our business went down.

16 Let's move on, for the future of

17 businesses, homeowners, the state of Minnesota, Clay

18 County, Moorhead. And, yes, I get it, because I grew

19 up on a farm also, and I don't blame these people --

20 MS. DEHN: Time is up.

21 MR. VANYO: -- but we need to move

22 on.

23 MS. DEHN: Jonathan Wolf. Jonathan,

24 spelled J-O-N-A-T-H-A-N, Wolf, W-O-L-F, and your time

25 starts now.

Author: Medopera Subject: Highlight Date: 11/5/2015 11:13:49 AM -06'00'
 Comment ID: 24a cont.

Author: Medopera Subject: Text Box Date: 11/5/2015 11:15:20 AM -06'00'
 Commenter 25

1 MR. KOEPE: Wow. A lot of great
2 comments here already. I hate to follow those up.

3 I am just an attorney. I represent the
4 Joint Powers, all the upstream people, one of the
5 attorneys that represents them. I'm not an engineer.
6 I have tremendous respect for engineers. They build
7 things. I just argue about things.

8 But we have to keep in mind -- a great
9 American once said, "When all you have is a hammer,
10 every problem starts to look like a nail."

11 Engineers want to build things, you know?
12 I guess I listen to people, probably. Dr. Mahoney
13 probably wants to operate on people. I mean, there's
14 this great history of institutional bias in the big
15 water agencies, the Bureau of Reclamation, the Corps
16 of Engineers.

17 For years, that ran unchecked. How do we
18 address that now? We address that with the
19 environmental review process and the strong
20 environmental laws that we have -- that we're
21 fortunate to have in the state of Minnesota.

22 Now, I've read the DNR comments to the
23 federal EIS. I've read the letters that you've sent,
24 and they're great letters. You're saying, You haven't
25 shown that this is a least impact solution. You

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Author: Medopera Subject: Highlight Date: 3/31/2016 1:36:59 PM
Comment ID: 25a
Topic: Federal EIS, MNDNR Comments

Author: Medopera Subject: Highlight Date: 3/31/2016 1:37:38 PM
Comment ID: 25b
Topic: Federal EIS, MNDNR Comments

1 haven't shown that this plan is ecologically
 2 sustainable. You haven't shown that you've disclosed
 3 a massive Executive Order 11998 violation. That's the
 4 Floodplain Executive Order that's encouraging
 5 developing the floodplain. You haven't disclosed that
 6 to the city makers.

7 Now, I've read through the draft EIS.
 8 There's a lot of excellent work in there, and there's
 9 a lot of excellent information, but I don't see those
 10 issues resolved. I think the Corps promised that
 11 those would be resolved in their statement, and that's
 12 why they did not address them. I would love to see
 13 that.

14 And I'd like to make the point that I'm up
 15 here representing a lot of the good folks that you see
 16 behind me here today, the upstream interest. But more
 17 important even than that is I'm here representing the
 18 Minnesota process, I think, because it's not just
 19 about this project.

20 This process is going to be for our
 21 children, our children's children, for generations of
 22 Minnesotans into the future, and if we do not respect
 23 this process and fully explore every alternative,
 24 disclose every conflict, every violation of law that
 25 is being contemplated by this process, we're

Author: Medopera Subject: Highlight Date: 11/5/2015 11:22:13 AM -06'00'
 Comment ID: 25b cont.

Author: Medopera Subject: Highlight Date: 3/31/2016 1:57:17 PM
 Comment ID: 25c
 Topic: Federal Executive Order 11988, Violation

Author: Medopera Subject: Highlight Date: 11/5/2015 11:27:17 AM -06'00'
 Comment ID: 25c cont.

Author: Medopera Subject: Highlight Date: 3/31/2016 1:57:44 PM
 Comment ID: 25d
 Topic: Environmental Review, EIS Process

1 cheapening that process. We're cheapening that
2 process for every project that comes after that.

3 I just want to really encourage the DNR to
4 consider going back and looking at those comment
5 letters and addressing some of those things moving
6 forward.

7 Thank you for the work you've done so far.
8 Thank you for inviting us here to speak tonight.

9 MR. DEHN: Marty Johnson. Marty,
10 spelled M-A-R-T-Y, Johnson, J-O-H-N S-O-N. Your time
11 starts now.

12 MR. JOHNSON: This project
13 affects me -- completely takes my 5th-generation
14 farmstead out, that we've lived there for over -- the
15 house still stands that my great-grandfather built,
16 but two years before this Diversion Project came, the
17 Southeast Cass Water Board came to me and wanted me to
18 give them permanent -- I'd have to sign a deal that
19 would give them -- I could not destroy the ridge that
20 I'm sitting on. It had to stay intact, even if we
21 sold the land. They wanted it for flood protection.

22 Two years ago after that, the F-M
23 Diversion comes along, and they don't want to save
24 that dike anymore, they want to rip that thing wide
25 open a half a mile wide and about 75 feet deep.

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Author: Medopera Subject: Highlight Date: 11/5/2015 11:29:08 AM -06'00'
Comment ID: 25d cont.

Author: Medopera Subject: Highlight Date: 11/5/2015 11:29:29 AM -06'00'
Comment ID: 25c cont.

Author: Medopera Subject: Text Box Date: 11/5/2015 11:29:51 AM -06'00'
Commenter 26

Author: Medopera Subject: Highlight Date: 3/31/2016 1:58:52 PM
Comment ID: 26a
Topic: Alternatives, Alternatives: General

1 Now, you take two organizations that in
2 two years they completely flip-flopped on what they
3 were looking at. I believe Fargo-Moorhead should have
4 flood protection. The trouble is where my ridge sits,
5 my grandfather figured out you get 6 inches on sur-
6 property, 29 has got to be 4 and a half to 5 feet deep
7 of water. It's going to keep backing up.

8 After this diversion, 29 is dry, and I'm
9 sitting with 4 and a half feet, 5 feet behind my --
10 the diversion issue -- the holding structure.

11 So what the Good Lord couldn't do for
12 eternity, these people are going to rewrap history,
13 and I looked at them, and I said, You've got to look
14 at some of the other alternatives. You have to. You
15 can't put that much impact behind people west of
16 Walcott.

17 And I think the DNR is doing a great job
18 on what they're proposing -- or looking at, but it's
19 got to -- it's got to be right for everybody. I told
20 the diversion people -- they handpick their people, 12
21 people. I said, Why can't we have township people on
22 there? Why can't we have people who are a majority
23 all sitting at the table at the same time and working
24 for the best solution for everybody, not just one
25 city?

1 And you guys have the alternative to
2 protect the state of Minnesota. You make a deal with
3 these people, you know they're going to look out for
4 their best interest, and they're going to turn around
5 and flood your people and flood in that staging area.

6 They're not going to worry about Richland
7 County. They're not going to worry about Clay County.
8 They're not going to worry about Pleasant Township.
9 They're going to look out for their own interests.

10 If we're going to do this right, we should
11 have everybody -- everyone should be taking a risk
12 somewhere, not just spread it out to the county. They
13 have --

14 MS. DEHN: Ten seconds.

15 MR. JOHNSON: -- sham vote to get a
16 new ordinance set. / -- or 12 -- or 19 people made
17 the yes vote to pass that, compared to the rest of
18 us --

19 MS. DEHN: Time is up.

20 MR. JOHNSON: -- people. So thank
21 you for what you're doing.

22 MS. DEHN: At this time I'd just
23 like to announce that I have two speaker cards left,
24 so anyone else?

25 Next, we have Chad Olson. Chad, spee ted

1 C-N-A-D, Olson, O-T-R-O-N.

2 MR. OLSON: Thank you, ladies and
3 gentlemen. Quickly, I'm going to reference the
4 attorney's reference. As he says, "A surgeon likes to
5 operate, an attorney likes to sue, and carpenters like
6 to -- everything looks like a nail."

7 I guess, as a public servant, I'm here to
8 serve the people. After 20 years in the military,
9 I've fought every flood in the Fargo-Moorhead area
10 since 1997. I know what it's like to serve the
11 community and protect it from national disaster.

12 Going forward, as the mayor of Dilworth,
13 I've sat through diversion meetings since 2010. I've
14 had the opportunity to work with great engineers, to
15 work with people that can make magic out of math, and
16 I applaud that, and they do that -- they provide us
17 solutions to our problems. We may not understand it,
18 but we trust in the science behind it.

19 That being said, we vetted the 2010
20 National Economic Development Plan, and to our
21 standards in the greater Fargo-Moorhead area, that did
22 not meet the standard of protection. It was provided
23 to us from professionals, and it was decided amongst
24 us that this plan did not meet the needs in the
25 greater Fargo-Moorhead area, which led to a unanimous

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Author: Medopera Subject: Text Box Date: 11/5/2015 11:36:51 AM -06'00'
Committer: 27

Author: Medopera Subject: Highlight Date: 3/31/2016 1:59:55 PM
Comment ID: 27a
Topic: Proposed Project, General Support
Unsubstantive

1 decision by all political parties -- Cass County, Clay
2 County, the City of Dilworth, the City of Fargo, West
3 Fargo -- unanimously supporting the decision to
4 support the LEF plan -- and did I say that right, LEF?

5 That being said, this has been vetted.
6 It's gone through. It's been the last five and a half
7 years to get us to this point today to say, this is
8 the plan that provides the greatest protection to the
9 greater number of people in our region.

10 That is our moral obligation. Now, it's
11 not perfect to everybody. We know that. As humans,
12 it will never be perfect for everybody, but we
13 understand the greatest good for the greatest number
14 of people, and that's why the Corps is here today.
15 That is our obligation, as leaders.

16 We make this decision not easily, but we
17 spend countless hours contemplating options, listening
18 to every voice, and that has been done as we've gone
19 forward, and I applaud you, ladies and gentlemen, who
20 have done that and continue to do that to ensure that
21 we are doing the right thing as we serve our citizens.

22 I've sat and stood -- I have stood in
23 opposition to the NED plan, and I will do so again,
24 because that does not provide the greatest good to the
25 greatest number of people.

1 That has been proven to be insufficient
2 and harmful to my city, and if I need to again, I will
3 stand up against that NEU plan.

4 We have made great progress together. All
5 voices being heard bringing different voices and
6 different options -- all options to the table to
7 protect our region from natural disaster.

8 I think we're at a great stage where
9 progress needs to be done so the National Guard
10 doesn't have to be called out to protect
11 Fargo Moorhead and the greater region from natural
12 disaster.

13 We have an opportunity for greatness
14 before us. As we proceed, it needs to be handled --

15 MS. DEHN: Ten seconds.

16 MR. OLSON: -- in a very
17 professional and appropriate way to make sure that
18 this Diversion Project comes to a conclusion with the
19 structure being built.

20 Thank you, ladies and gentlemen.

21 MS. DEHN: Dave Ness. Dave, spelled
22 D-A-V-E, Ness, spelled N-E-S S.

23 MR. NESS: Okay. I'll take the
24 other side of that argument and, yes, something does
25 need to be done, because there's a lot of stress

1 caused in Fargo-Moorhead associated with flooding, but
 2 I'm here to give the other side of the coin.

3 I'm 4th generation along the river between
 4 Comstock and Overton. I grew up in Moorhead a block
 5 from the river. I live and pay taxes in Minnesota,
 6 and my farm will be newly inundated by the project.

7 So in Minnesota, we expect the DNR to look
 8 out for and preserve the natural resources on behalf
 9 of the citizens of Minnesota who are the owners of
 10 these resources, and the directive says that you're
 11 supposed to protect the environment, look at
 12 alternatives, and not make decisions based on
 13 economics, which a lot of the arguments from intown
 14 are about the economics.

15 The last time there was a meeting, I got
 16 up and talked about the family that goes fishing in
 17 this river and the beauty of the floodplained woods,
 18 which I've been in my whole life. They're the only
 19 areas approaching wilderness in the Red River Valley
 20 between Detroit Lakes and -- who knows? Montana,
 21 somewhere.

22 Looking through the EIS report, the DNR
 23 itself noted that this is a world-class fishing area,
 24 and it says there is significant potential for impacts
 25 to the bank structure of the river, the floodplain.

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Author: Medopera Subject: Highlight Date: 3/31/2016 2:00:42 PM
 Comment ID: 28a
 Topic: Dam Safety, Minnesota Rules Chapter 6115

Author: Medopera Subject: Highlight Date: 3/31/2016 2:01:16 PM
 Comment ID: 28b
 Topic: Environmental Impacts, Potentially Significant Impacts

1 Forests, the wildlife habitats, the fish and
 2 invertebrates, and marginal areas that will be flooded
 3 now.

4 Add the environmental section of this
 5 report is weak. It doesn't go into a lot of
 6 specifics. It depends a lot on data from the
 7 previous -- previous things that have been done by
 8 Fargo and the Corps of Engineers.

9 Lastly, the EIS does point out that this
 10 will effectively cause some stress to a different
 11 group of people, not only the people in town. The
 12 social and economic effects on the community out where
 13 my farm is will be huge. Those people have been there
 14 for a long time.

15 So they define us as the unbenefited area,
 16 but I am just going to say that I would propose that
 17 the entire state of Minnesota should be included in
 18 the definition of the unbenefited area, since not only
 19 will hundreds of citizens be displaced, its natural
 20 resources degraded -- and this is one of the three big
 21 river systems in this state. If this was Hudson,
 22 Wisconsin building a dam, it might.

23 MR. DEHN: Ten seconds.

24 MR. NESS: Okay. I'll just say we
 25 need a project design that will enhance the river

Author: Medopera Subject: Highlight Date: 11/5/2015 12:39:32 PM -06'00'
 Comment ID: 28b cont.

Author: Medopera Subject: Highlight Date: 3/31/2016 2:02:07 PM
 Comment ID: 28c
 Topic: Environmental Impacts, General Environmental Impacts

Author: Medopera Subject: Highlight Date: 3/31/2016 2:02:52 PM
 Comment ID: 28d
 Topic: Socioeconomics, Unbenefited Area
 Unsubstantive

Author: Medopera Subject: Highlight Date: 3/31/2016 2:03:18 PM
 Comment ID: 28e
 Topic: Socioeconomics, Minnesota and North Dakota

1 instead of degrade it, and thank you.

2 MS. DEHN: Mari Dailey. Mari,

3 spelled M-A-R-I, Dailey, spelled D-A-I-L-E-Y.

4 MS. DAILEY: I'm Mari Dailey,

5 representing Moorhead's north end, Ward 1, on the

6 Moorhead City Council.

7 Moorhead has increased our local flood

8 protection to a protective level of 42 feet or more

9 with the assistance of federal and state monies. As a

10 representative of many Moorhead voices, a concern that

11 has remained vaguely answered is the potential

12 financial impact to Moorhead's citizens, present and

13 future.

14 Unlike our western neighbors in North

15 Dakota, we do not have the option from any sales tax

16 or utilizing Bakker Benefits. Our Minnesota residents

17 outside of the Moorhead-Fargo area are being asked to

18 sacrifice their land, fertile farmland, for the

19 benefit of development that primarily benefits on the

20 west side of the Red River.

21 As we experienced global climate change,

22 the actual future of the Red River is uncertain.

23 Continued development and growth in the urban areas

24 can only lead to the need for future diversion

25 tactics.

Author: Medopera Subject: Highlight Date: 11/5/2015 12:48:24 PM -06'00'
Comment ID: 28e cont.

Author: Medopera Subject: Text Box Date: 11/5/2015 12:48:53 PM -06'00'
Commenter 29

Author: Medopera Subject: Highlight Date: 3/31/2016 2:04:20 PM
Comment ID: 29a
Topic: Socioeconomics, Minnesota and North Dakota

1 Construction of the proposed diversion
2 will permanently alter the ecosystem of the Red River
3 Valley, whereas the lesser-impact alternatives would
4 leave a lighter footprint.

5 To ask those south of the Moorhead-Fargo
6 metro to sacrifice their family lands and cemeteries,
7 and Minnesota residents to levy tax increases for
8 generations for the protection of a larger, wealthier,
9 and more powerful entity will only serve to put a
10 large number of people out to dry.

11 Points have been made that the dikes have
12 been raised over the years, and who's to say that
13 within the projected 20-year construction, it won't be
14 obsolete before it's paid for. Thank you.

15 MS. DEHN: Again, I'm going to
16 apologize before I announce this name. Bernie Dardis.
17 Bernie, spelled B-E-R-N-I-E, Dardis, D-A-R-D-I-S.

18 MR. DARDIS: Good evening,
19 Commissioner, and thank you for the opportunity.

20 My name is Bernie Dardis. I'm the CEO of
21 a custom manufacturing company here in town. We have
22 140 employees, and we also have two locations in
23 Minnesota. I am also the past chairman of the board
24 of the Fargo-Moorhead and West Fargo Chamber of
25 Commerce, so we thank you very much for coming to our

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Author: Medopera Subject: Highlight Date: 11/5/2015 12:54:22 PM -06'00'
Comment ID: 29a cont.

Author: Medopera Subject: Text Box Date: 11/5/2015 12:55:39 PM -06'00'
Commenter 30

1 communities this evening and being here with us.

2 I'd like to support the purpose of the

3 need for the F K Diversion, which is permanent flood

4 protection. With a home and business location in both

5 states, I'm in a bit of a unique position to

6 understand the importance of North Dakota and the

7 benefits to Minnesota.

8 I would like to emphasize that this is a

9 Minnesota project, also, and a Moorhead project,

10 despite how some people feel about it.

11 After reviewing the Minnesota EIS, I would

12 like to compliment the DNR on thorough evaluation of

13 the project. My understanding is the DNR is always

14 looking for ways to improve the document, and that

15 will be my focus of visiting with you tonight.

16 The Minnesota DNR has done a complete and

17 thorough review of the project. Tonight I will offer

18 one amendment to the EIS document, specifically in the

19 area of implementability.

20 The Minnesota DNR implies the Northern

21 Alternative is more implementable. The Northern

22 Alternative has not received a record of decision from

23 the Army Corps of Engineers, nor has it received

24 authorization from the United States Congress.

25 Because of that, the proposed alternative has both and

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Author: Medopera Subject: Highlight Date: 3/31/2016 2:05:17 PM
 Comment ID: 30a
 Topic: Proposed Project, General Support
 Unsubstantive

Author: Medopera Subject: Highlight Date: 4/21/2016 11:25:03 AM
 Comment ID: 30b
 Topic: Comparison of Alternatives, Northern Alignment Alternative More Implementable

1 is a viable option.

2 The EIS should reflect the record of

3 decision process alone is a 4- to 5-year decision,

4 should you make that change. This would argue the

5 Northern Alternative is not at all implementable.

6 On a personal note, as a businessman, I

7 came to this community in 1971. I have helped fight

8 floods since 1971 in this community, whether it was in

9 Moorhead for our employees, whether it was Fargo or

10 West Fargo.

11 I've stood with my employees in Grand

12 Forks when they lost the battle up there, calf-deep in

13 mud and trying to figure out how I'm going to help

14 these employees get back on their feet.

15 Three years ago, I stood in four

16 employees' homes in Minot, North Dakota. We were past

17 our knees in mud. Fourth-generation tables,

18 chandeliers that were there that were brought over by

19 their great-grandparents, all lost.

20 Ladies and gentlemen, there's a lot of

21 things to talk about, about the environment and

22 everything else --

23 MS. BEHN: Ten seconds.

24 MR. GARDIS: -- but there's

25 something to talk about in the emotion and the affect

Author: Medopera Subject: Highlight Date: 11/5/2015 1:07:16 PM -06'00'
Comment ID: 30b cont.

Author: Medopera Subject: Highlight Date: 4/22/2016 8:54:38 AM
Comment ID: 30c
Topic: Socioeconomics, Flood Fighting
Unsubstantive

1 it has on people who are continuously having to fight

2 fights, and if we should ever lose, God help us.

3 Thank you again for your time.

4 MS. DEHN: I have one speaker card
5 in my hand, so if someone else would like to come up
6 at this point to get in line?

7 Next, we have State Representative Paul
8 Marquart. Paul, spelled P A U L, Marquart,
9 M-A-R-Q-U-A-R-T, and your time begins now.

10 REPRESENTATIVE MARQUART: First of
11 all, thank you to the Commissioner and the DNR for
12 being here. Thank you for the work that you did on
13 this, and I just -- I'm not going to repeat what has
14 already been said tonight, but there's a couple of
15 points on the Executive Summary that I would like to
16 allude to.

17 On page 22, it's talking about the
18 flooding of agricultural land because of the
19 high-hazard dam, and it says, "It is anticipated that
20 for agricultural lands in most areas, farming could
21 continue without significant impacts."

22 And, I guess, the term "significant
23 impacts" and whether or not it's 1 inch or 12 inches
24 can make a huge difference on farmland, as far as the
25 duration and so forth, and I think you would have a

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Author: Medopera Subject: Highlight Date: 11/5/2015 1:13:16 PM -06'00'
Comment ID: 30c cont.

Author: Medopera Subject: Text Box Date: 11/5/2015 1:15:04 PM -06'00'
Commenter: 31

Author: Medopera Subject: Highlight Date: 3/31/2016 2:07:37 PM
Comment ID: 31a
Topic: Socioeconomics, Agriculture Impacts

1 number of farmers that could very much debate what
2 would be a significant impact.

3 And I would like to see the EIS final
4 draft to address what that means, but also to talk
5 with more farmers and folks in the staging area and
6 outside that staging area as to what those impacts
7 would be.

8 And the second point is Executive Summary,
9 page number 25, and it talks about looking at the
10 purpose and need of the project. And, you know, when
11 I look at the purpose of the EIS, nowhere does it talk
12 about the need, and, yet, need is mentioned a few
13 times in the EIS.

14 I guess the concern that I have there is
15 that I would not want anything in the EIS to somehow
16 preclude the governor and the Minnesota legislature
17 from saying whether or not this project is needed or
18 not, because I don't know if that was the purpose or
19 the scope of the EIS.

20 I would like that very clear that somehow
21 this document is not endorsing the need for that.

22 So thank you, and thank you for being
23 here.

24 MR. DEHN: Mark Anderson. Mark,
25 spelled M-A-R-K, Anderson, A N D-E-R-S-O-N.

Author: Medopera Subject: Highlight Date: 11/5/2015 1:18:19 PM -06'00'
Comment ID: 31a cont.

Author: Medopera Subject: Highlight Date: 3/31/2016 2:08:16 PM
Comment ID: 31b
Topic: Purpose and Need, Purpose and Need

Author: Medopera Subject: Text Box Date: 11/5/2015 1:24:30 PM -06'00'
Commenter 32

1 MR. ANDERSON: Thank you. We've
2 heard a lot about economics, and that's important. I
3 represent a couple of cemeteries south of town, and I
4 would like to address what's right and what's wrong
5 and mitigation.

6 We've been told that there will be very
7 minimal damage to our cemeteries, but recently in
8 South Carolina, they've had massive flooding, and I
9 saw pictures of trees uprooted, tombstones tipped
10 over, massive damage to cemeteries. How do you
11 mitigate that?

12 We were told that no graves would be
13 disturbed. Again, in South Carolina, they had graves
14 that were disturbed. How do you mitigate that?

15 I have 12 veterans in my cemeteries, and I
16 would like you to meet one of them. Willard Hicks,
17 August 17, 1918, December 14, 2006. World War II,
18 European Theater, Presidential Unit Citation, French
19 Croix de Guerre, 7 Battle Stars, 2 Bronze Invasion
20 Arrowheads, 2 Purple Hearts, 567 Combat Days, Africa,
21 Sicily, Italy, Rhineland, Southern France, and Central
22 Europe, and his final resting place is going to get
23 7 feet of water for 12 days. How do you mitigate
24 that? Thank you.

25 MS. DEHN: Ray Holzhay. Ray,

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Author: Medopera Subject: Highlight Date: 3/31/2016 2:09:04 PM
Comment ID: 32a
Topic: Cultural Resources, Cemetery Mitigation

Author: Medopera Subject: Text Box Date: 11/5/2015 1:28:34 PM -06'00'
Commenter 33

1 spelled R-A-Y, Holzhey, E-O L-Z-I-L-E-Y. Your time
2 starts now.

3 MR. HOLZHEY: Thank you. Thank you
4 for allowing me to speak to you guys today. It's a
5 pleasure to speak to you guys.

6 I would like to point out that none of the
7 alternatives of the RIS are based on a baseline that
8 currently exists.

9 Since the RIS was drafted for the federal
10 plan, there's been tons of thousands of drain tile
11 added to the system. There's been the addition of the
12 North Ottawa Basin project and two others. The Maple
13 River Dam has been raised and the Baldhill Dam has
14 been raised.

15 So when you look at the alternatives, in
16 particular, the diversion itself, the size in the
17 operational manual would be modified by these changes.
18 Drain tiles dry the soil up. The soil does not
19 freeze. When the soil does not freeze, the early melt
20 goes into the ground. It takes about 18 hours for the
21 soil to reach the - the water and soil to reach the
22 level of alfalfa roots, which is an approximation of
23 drain tile depths of 3 to 4 feet.

24 But then it has to drain out, which is
25 mostly behind switches, and most of them have

1 limitations, which could be held back in a waffle
2 plan, which is also not discussed in this plan.

3 Any one of plans, the impact -- the social
4 benefits -- the risk is severely mitigated by the
5 amount of drain tile -- the number of tens of
6 thousands of acres that have been done, and the,
7 probably, hundreds of thousands of acres of drain tile
8 that will be added before this program is even
9 started.

10 I think that this needs to be studied,
11 because the risk has fallen. Additionally, the other
12 things that haven't been calculated is the tens of
13 miles of diking and improvements that have been done.
14 The removal of houses and restrictions on the river's
15 flow have not been included.

16 So if you were to say, let's look at the
17 No Action Plan, and that's not viable. Maybe it is
18 now, because dikes are at 44 feet in Moorhead.
19 There's tens of thousands of acres of waffle storage
20 in the form of drain tile.

21 There's 10,000 acre feet in the North
22 Ottawa with the potential of increasing that to
23 20,000, which I think they're already working on. Two
24 other projects are out there. The Baldhill Dam was
25 raised 6 or 8 feet. The Maple River Dam didn't exist.

1 All of this mitigates some of the risk that's coming
2 up here.

3 I was going to come up here and do like
4 some of the other speakers and talk to you like
5 Sanford and Son in the 1980s and tell you about the
6 stress, and that I was coming to see Martha with a
7 heart attack and flooding. I won't do that.

8 I do have what's going to be the model of
9 the reservoir. Not ideal. I think that's irrelevant
10 to choosing a plan, and I think we have to look at
11 everything that's been done --

12 MS. DEHN: Ten seconds.

13 MR. HOLZHEY: -- before we choose
14 whether or not something is viable. Thank you.

15 MS. DEHN: Joel Hanson. Joel,
16 spelled J-O-H-N, Hanson, H-A-N-S-O-N.

17 MR. HANSON: Thank you. Just a
18 couple of points to add to what Mark had talked about
19 with the upstream cemeteries.

20 I represent the Lower Wild Rice and Red
21 River Cemetery, which is inconveniently located about
22 1/4 of a mile south of what is the proposed dam.
23 We're projected to have about 14.2 feet or top of our
24 cemetery.

25 We currently have about 390 graves at that

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Author: Medopera Subject: Highlight Date: 11/5/2015 1:54:37 PM -06'00'
Comment ID: 33a cont.

Author: Medopera Subject: Text Box Date: 11/5/2015 1:57:48 PM -06'00'
Commenter 34

Author: Medopera Subject: Highlight Date: 3/31/2016 2:11:11 PM
Comment ID: 34a
Topic: Cultural Resources, Cemetery Impacts

1 location. It's a very beautiful cemetery. It's where
2 I have personally purchased my final resting spot, and
3 to be quite honest with you, it rattles my cage to
4 think my final resting spot could be inundated by
5 14 feet of water for several days.

6 In addition to what Mark had said, 2200
7 graves are represented in the 11 cemeteries that are
8 noted in the Corps of Engineers and Division
9 documents.

10 Seven of these cemeteries are in the area
11 considered the staging area, and five of these -- or
12 seven are in the staging area, eleven total in the
13 staging and the impacted area. Five of those
14 cemeteries are in Minnesota, six are in North Dakota.

15 In the staging area cemeteries alone,
16 there are approximately 1500 graves. The plan, as put
17 forth by the Corps of Engineers, is to purchase
18 flowage easements at these cemeteries, and as Mark had
19 stated, how do you mitigate something like that?

20 Twelve additional days of water standing
21 on our graves. These graves are going to be -- the
22 water is not flowing. Our particular cemetery is at
23 the base of the dam. It's the first to go under
24 water. It's the last to lose its water.

25 We are told that the graves are not going

1 to be coming out of the ground, which I really have a
2 hard time believing, based on what happened out east a
3 few days ago.

4 Lots of unanswered questions. We're given
5 these hundreds of pages of documents with every
6 possible scenario from their perspective, but we are
7 not given definite answers as to what flowage
8 easements mean. What are some other options? What
9 would it look like if things were diked? And things
10 like that.

11 It's very emotional for us. There's lots
12 of families that are going to be impacted by this, and
13 so I just ask you to consider the information you have
14 very seriously and know that there's a lot of people
15 that are going to be impacted by what the City of
16 Fargo has to do. Thank you.

17 MS. DEHN: Anyone with information
18 that we haven't heard presented so far tonight, or
19 alternatives? Once again, I am down to one card, so
20 if you would like to step forward.

21 In the meantime, I'm going to call Kevin
22 Fisher. Kevin, spelled K-E-R-V-I-N, F-I-S-H-E-R-R.

23 MR. FISHER: Hi. My name is Kevin
24 Fisher. I'm a Realtor/member of the Fargo-Moorhead
25 Area Association of Realtors. Our Realtor association

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Author: Medopera Subject: Highlight Date: 11/5/2015 2:05:07 PM -06'00'
Comment ID: 34a cont.

Author: Medopera Subject: Text Box Date: 11/5/2015 2:05:31 PM -06'00'
Commenter 35

1 currently has 600 members, many of who live in
2 Minnesota.

3 In 2013, I was president of the
4 association, and since then, I have been the appointed
5 liaison by the association to be involved with a
6 matters concerning anything related to flood
7 protection and flood insurance.

8 Approximately six months ago, I attended a
9 meeting in Fargo to observe interaction between the
10 leadership of FEMA and our local leadership. One of
11 the topics of discussion centered around the current
12 FEMA floodplain elevation, versus the higher Army
13 Corps of Engineers elevation.

14 The FEMA representatives made it quite
15 clear that in the near future, they'd be adjusting
16 their flood elevation level to match that of the Army
17 Corps of Engineers level. Without certified permanent
18 flood protection, this would cause an estimated 800
19 structures in Moorhead to be pulled back into the
20 floodplain.

21 We, the members of the Fargo-Moorhead Area
22 Association of Realtors, are concerned about the
23 effect this would have on these properties, and all
24 properties that we reclassified to have higher flood
25 insurance rates.

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1 As you're already aware, our communities
2 are very intertwined. Many residents living on the
3 Minnesota side either worked, received medical
4 services, or have other businesses on the North Dakota
5 side.

6 I want to commend you on your
7 socioeconomic statement, but I believe it might be a
8 little understated. We agree with your analysis that
9 No Action and the No Action with Emergency Measures do
10 not meet the purposes and needs of the federally
11 authorized project.

12 Permanent flood protection is a necessity
13 in order to protect our community from the threat of
14 flooding, but also from the threat of higher flood
15 insurance rates, which would certainly cause a loss in
16 value of these properties and could potentially drive
17 some owners from their homes.

18 In conclusion, we have the support -- the
19 Fargo-Moorhead Area Association of Realtors supports
20 permanent flood protection in the form of the
21 diversion as the only viable option to protect our
22 community from the threat of flooding and higher flood
23 insurance rates.

24 I'd like to thank you for your time and
25 appreciate you allowing us to address you. Thank you.

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From: [Tim Fox](#)
To: ["Review, Environmental \(DNR\)](#)
Cc: [Townley, Jill \(DNR\)](#)
Date: Wednesday, October 28, 2015 3:37:07 PM
Attachments: [DNR comments 10-28-15.pdf](#)

Commenter 14 cont'd

Summary of Comments on WilkinCounty_TimothyFox_Commenter14b-h_Email1.pdf

Page: 1

Find attached comments on the Fargo Diversion EIS.

Timothy E. J. Fox
Wilkin County Attorney
P.O. Box 214
Breckenridge, MN 56520
218 643 8950

Author: Medopera Subject: Text Box Date: 12/15/2015 11:07:50 AM -06'00'

Commenter 14 cont'd

Author: Date: Indeterminate



October 28, 2015

Ms. Jill Townley, Project Manager
Environmental Policy and
Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road
St. Paul, MN 55155-4025

Dear Ms. Townley:

13.16.2.4.6 Does not adequately address the agricultural impacts.

The EIS incorrectly analyzes the staging area as a single isolated occurrence, rather than a component of other weather related and growing season events. The same factors that will influence a flood event will simultaneously negatively impact the planting and the harvest season.

- 1) During a wet fall, heavy snowfall, and wet spring, the planting season and fall harvest will encounter significant difficulties, even without the impact of a staging area. These conditions in conjunction with the adverse consequences occurring from the staging area will undoubtedly cause extensive damages.
- 2) There is a difference between spring runoff and flooding and potential damages. There is clearly a much greater distinction between impounding water, flooding or spring runoff that is not addressed.
- 3) The question of production/yield for a crop is not solely if a crop is planted, but when the crop is planted. The EIS suggests that simply planting a crop, regardless of a delay, is of little or no consequence in the relation to the economic impact of a high yield and a low or marginal yield.
- 4) Delayed planting will always reduce yield. The prospect of a yield producing a significant profit breaking even or enduring a loss will be determined by days during the spring planting. The later the spring planting the more likely crops, most notably corn, will not reach full maturity. The time of maturity will also dictate the time of harvest. A delayed maturity coupled with an

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Author: Medopera	Subject: Sticky Note	Date: 4/19/2016 2:16:53 PM
Comment ID: 14b		
Topic: Hydrology and Hydraulics, Seasonal Affects		
Author: Medopera	Subject: Sticky Note	Date: 12/15/2015 11:10:21 AM -06'00'
Comment ID: 14b cont.		
Author: Medopera	Subject: Sticky Note	Date: 12/15/2015 11:10:18 AM -06'00'
Comment ID: 14b cont.		
Author: Medopera	Subject: Sticky Note	Date: 4/6/2016 2:57:04 PM
Comment ID: 14c		
Topic: Socioeconomics, Agriculture Impacts and Mitigation (Planting Delays)		
Author: Medopera	Subject: Sticky Note	Date: 12/15/2015 11:10:11 AM -06'00'
Comment ID: 14c cont.		

earlier winter snow or freeze could cause substantial crop loss and carry over to a delayed spring planting the following year.

- 5) Historically there were several recent years where spring planting was an extreme challenge due to the wet fall and continued wet spring. It is not difficult to suggest that had the staging area, as a component of those adverse conditions, been in existence, thousands of acres would have remained unplanted. There should be a calculation that assumed the worst case scenario in relationship to the agricultural industry. What would the economic impacts be if the entire staging area and the area containing a foot or less of impounded water remained unplanted? If a 500 year flood event can be considered, surely this much more likely event should also be considered. These damages cannot be summarily excluded. The damages extend to seed and fertilizer suppliers, farm machinery dealers, fuel suppliers, transporters by rail and truck, and rural communities that rely on agriculture-generated income for employment, services and a continuing tax base.
- 6) It is totally incorrect to use the assumption "it would flood anyway". It is clear that the "it would flood anyway" is based on the unscientific "wet cycle" flooding. There are unquestionably agricultural areas that have not suffered from flooding that have been placed in the category of "it would flood anyway".
- 7) Agricultural production is a finite resource with immediate implications for the economic vitality of the agricultural related business in this area. The EIS should use acute scrutiny in protecting agriculture as a finite resource equal to wetlands and floodplains.

6.3.1 Adaptive Management

The suggested solution, to address the avoidance of adequately addressing the agricultural impacts or ignoring that they exist, as well as other damages, seems to be located in 6.3.1 Adaptive Management. However, Adaptive Management is a framework for perpetual litigation to determine damages from the project and its operation.

- 1) Adaptive Management assumes that there will be monitoring and resources to mitigate those predicted, but unquantified damages, as well as unpredicted damages. The operation of the project will be under the control of the Diversion Authority. The Diversion Authority has a vested interest in avoiding future costs, specifically mitigation.
- 2) The decision by the Corps concluding that cemeteries, inundated by the staging area, will not be mitigated, because of cost, may be an indication of what the future holds for monitoring and mitigating.
- 3) The EIS suggests that future funding for mitigation will be available. That assumption seems particularly unpersuasive. The funding for the project itself is not available. With expected cost overruns, future maintenance and capitol costs for repair and replacement, there will never be sufficient funds to mitigate in accordance with the Adaptive Management plan. There should be serious concerns that efforts to monitor and mitigate would ever occur.

Author: Medopera	Subject: Sticky Note	Date: 12/15/2015 11:10:05 AM -06'00'
Comment ID: 14c cont.		
Author: Medopera	Subject: Sticky Note	Date: 4/19/2016 11:41:42 AM
Comment ID: 14d		
Topic: Hydrology and Hydraulics, Base No Action Flooding		
Author: Medopera	Subject: Sticky Note	Date: 12/15/2015 11:09:58 AM -06'00'
Comment ID: 14c cont.		
Author: Medopera	Subject: Sticky Note	Date: 4/6/2016 2:57:59 PM
Comment ID: 14e		
Topic: Mitigation and Monitoring, Funding		
Author: Medopera	Subject: Sticky Note	Date: 12/15/2015 11:09:47 AM -06'00'
Comment ID: 14e cont.		
Author: Medopera	Subject: Sticky Note	Date: 12/15/2015 11:09:44 AM -06'00'
Comment ID: 14e cont.		

- 4) The Diversion Authority has suggested for years that a plan to mitigate for crop insurance would be developed. That has not occurred and currently has little or no chance of being resolved.
- 5) If someone who does not now have flood insurance, and would never need flood insurance, finds themselves in the staging area and must purchase flood insurance, is the Diversion Authority going to establish a permanent fund to perpetually reimburse the property owner for those costs? It seems particularly strange that someone who builds in a flood plain will be protected, to eliminate the payment of flood insurance, considered a benefit, while the protection is achieved at the cost of someone not previously located in a the floodplain, who must now purchase flood insurance is considered a "monitor and mitigate" component of the project when comparing benefits to damages. There are numerous other examples of this logic throughout the EIS.
- 6) The "Monitor and Mitigate" philosophy simply camouflages the true damages caused by the project. The comparison of alternatives is distorted by this approach. This creates a bias in favor of the project, because the accuracy of the damages can be hidden in the "Monitor and Mitigate" provision, while claiming to be adequately addressed and analyzed. Deferring to the Monitor and Mitigate philosophy appears throughout the EIS as a viable alternative to determining actual damages. When the only party that participates in the efforts to determine damages, namely the Diversion Authority, is the party who may potentially pay for the damages, the result is certainly tainted and unreliable.

Author: Medopera Subject: Sticky Note Date: 4/6/2016 3:11:28 PM
Comment ID: 14f
Topic: Socioeconomics, Agriculture Mitigation

Author: Medopera Subject: Sticky Note Date: 4/6/2016 3:11:55 PM
Comment ID: 14g
Topic: FEMA, Flood Insurance

Author: Medopera Subject: Sticky Note Date: 4/6/2016 3:12:10 PM
Comment ID: 14h
Topic: Mitigation and Monitoring, Masks Project Impacts

Very truly yours,



Timothy E. J. Fox
Wilkin County Attorney

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P.O. BOX 214
BRECKENRIDGE, MINNESOTA 56520

October 14, 2015

Ms. Jill Townley, Project Manager
Environmental Policy and
Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road
St. Paul, Minnesota 55155-4025

Dear Ms. Townley:

While I have many concerns about the project, I want to focus on a particular aspect of the Draft EIS that causes me concern as an attorney: the failure of the Draft EIS to pay serious attention to Executive Order 11988. In the scoping process, the DNR promised to "consider the requirements of Executive Order 11988 in its analysis of the proposed Project and alternatives to the Project." Yet, the Draft EIS fails to comply with that commitment. The document merely makes passing mentions of it, but actually misstates the directive of the order.

The scoping decisions inaccurately assert that "Executive Order 11988 directs federal agencies to consider impacts to existing floodplain, and to consider alternatives to avoid adverse impacts and incompatible development in the floodplain." Actually, the executive order bars any federal project from funding any project that directly or indirectly induces development in the floodplain. The order requires each federal agency:

To avoid direct or indirect support of floodplain development wherever there is a practicable alternative.

Commenter 14 cont.

Summary of Comments on WilkinCountyAttorney_TimFox_Commenter14i_Mail1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/2/2015 4:17:02 PM -06'00'
Commenter 14 cont.

Author: Medopera Subject: Sticky Note Date: 4/8/2016 10:59:41 AM
Comment ID: 14i (applies to whole letter)
Topic: Federal Executive Order 11988, Not Addressed or Inadequately Addressed



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The purpose of the order is not fulfilled by "considering" floodplain development, nor is it fulfilled, as suggested, by "considering alternatives". The order requires avoiding direct or indirect support of floodplain development wherever there is a practicable alternative.

Look at the language of the order. It contains the following key words:

Avoid: The project must **avoid** direct or indirect support of floodplain development.

Whenever: Direct or indirect support of floodplain development must be avoided **whenever there** is a practicable alternative.

Practicable alternative: The project must not support floodplain development if development can occur somewhere else.

The Draft EIS makes no effort to engage in even a cursory examination of these points.

The Draft EIS also seems to be predicated upon the erroneous premise that EO 11988 merely requires that development occur in the floodplain so long as the development is appropriately protected from flooding under FEMA standards. This is a grave misinterpretation of the words of the order and its purpose. Executive Order 11988 certainly seeks to avoid construction in flood vulnerable areas, but there is a second equally important objective of the Executive Order. It embodies sustainability principles, similar to those principles embodied in the Minnesota Mediated Settlement Agreement. It prevents federal projects from removing the floodplain storage capacity of floodplains, because removing flood storage has the unfortunate effect of moving floodwaters onto other lands. It prevents federal projects from simply shifting the consequences of flooding from favored landowners onto less powerful disfavored landowners.

This page contains no comments

One of the purposes of the Executive Order is to prevent projects like this from removing floodplain storage. Executive Order 11988 says it is designed to prevent:

The long and short term adverse impacts associated with the occupancy and **modification** of floodplains.

I see no evidence that the drafters relied upon regulations or statutory authority to interpret the requirements of EO 11988.

We have found that the USACE itself determined that development of even the 20 square miles of floodplain south of I-94 would constitute an unlawful violation of EO 11988. Surely, then, fostering development in 50 square miles of floodplain cannot be justified.

The EO 11988 MUST BE CONSIDERED because it is an environmental policy provision with the force of law, and its violation is removing floodplain storage. The Draft EIS seems to dismiss floodplain development and floodplain modification as unimportant to the EIS because it occurs on the North Dakota side of the River, but if this is the Department's rationale, we strongly disagree. Floodplain violations by the project are important on both sides of the River to both States for the following reasons:

1. **Incorporation into Minnesota Permitting Requirements:** EO 11988 is expressly incorporated into Minnesota permitting requirements. It cannot be ignored¹.

¹ Minn Rules § E115.0150 provides that a permit that changes the course, current or cross section of public waters must "must also be consistent with the goals and objectives of applicable federal, state, and local environmental quality programs and policies, including but not limited to shoreland management, floodplain management, water surface use management, boat and water safety, wild and scenic rivers management, water quality management, recreational or wilderness management, critical areas management, scientific and natural areas management, and protected species management." Dam permitting regulations incorporate and are subservient to §6115.0150. See § 6225.0310. (Where these parts conflict with other appropriate rules and requirements, the most restrictive provision shall apply.).

This page contains no comments

- 2. Elimination of Flood Storage Damages Minnesota Citizens and Government:** A major premise of USACE's approach to this flood control project is that we are in the latter phases of a wet-cycle in which we may reasonably expect larger floods than we have previously experienced. If that is true, it is engineering insanity to eliminate 50 square miles of existing floodplain storage. Why would you remove flood storage from the floodplain when there are plainly alternative locations for development? You would be allowing Fargo to take water off floodplain not needed for development and depositing that water unnecessarily on Minnesota residents, farmsteads, and communities.
- 3. Environmental Reviews Examine Feasible Alternatives:** Environmental reviews are supposed to examine most closely feasible projects and feasible alternatives. A project that breaks that law is not feasible and it's not practicable. You would not consider, I trust, a project option that unlawfully jeopardized endangered species, or proposed unnecessarily to fill wetlands. By refusing to apply EO 11988, you would be considering a project that is not feasible.
- 4. Failure to Apply MEPA principles:** In the State of Minnesota's comments to USACE's Draft EIS, Minnesota appropriately criticized USACE for failing to address whether this proposed project was the "least impact" solution. One of the major impacts of this project is its impact on floodplain. Yet, the EIS fails to address the fact that a project that eliminates 50 square miles of floodplain storage is not the least impact solution. The underlying assumption seems to be that eliminating 50 square miles of floodplain is permissible because a purpose of the project is to eliminate 50 square miles of floodplain. **A project proposer cannot evade MEPA's requirements simply by making environmental destruction an underlying purpose. You can't drain a lake by making lake-draining a project purpose. You can't pollute the air by making air pollution a project purpose.**

This page contains no comments

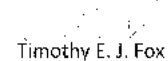
5. **Violation of Minnesota Mediated Settlement Principles.** By ignoring EO 11988, you are violating principles that have governed Minnesota flood control policy in the valley for over a decade. The DNR had a major role in adopting these policies.

Conclusion

I urge you to reconsider and change the way in which the draft EIS approaches Executive Order 11988. Please consider:

- Acknowledging that Executive Order 11988 is an environmental principle that governs Minnesota permitting requirements under public waters permitting and MEPA.
- Acknowledging that the project eliminates 50 square miles of flood plain storage for the purpose of fostering floodplain development in violation of EO 11988.
- Describing and exploring the alternatives, including the NED, and others, that avoid violating EO 11988.
- Recognizing that elimination of that floodplain storage is an avoidable environmental impact and that the project must be altered to prevent loss of that storage.

Very truly yours,



Timothy E. J. Fox
Wilkin County Attorney

This page contains no comments

 **Wilkin County, Attorney**
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FARGO MN
22 OCT 2015



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From: [Denise](#)
To: ["Review, Environmental \(DNR\)"](#)
Cc: ["morkend@hotmail.com"](#)
Subject: Comment of the DEIS, Fargo-Moorhead Flood Risk Management Project
Date: Tuesday, October 13, 2015 12:15:38 PM
Attachments: [Scan0006.pdf](#)

Commenter 23 cont.



Summary of Comments on MNDakUpstreamCoalition_CashAaland_Commenter23acont and b_Email_Fax_Letter1.pdf

Page: 1

Ms. Townley,

Attached please find a letter and attached Exhibits A-F. Please contact our office if you have any questions or concerns. Thank you.

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Author: Medopera Subject: Text Box Date: 11/10/2015 2:19:40 PM -06'00'
Commenter 23 cont.

Author: Medopera Subject: Sticky Note Date: 4/19/2016 12:54:36 PM
Comment ID: 23b
Topic: Alternatives, New Alternative

Author: Date: Indeterminate

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October 13, 2015

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RE: Comment of the DEIS, Fargo-Moorhead Flood Risk Management Project

Dear Ms. Townley:

I am writing on behalf of the MnDak Upstream Coalition to comment on the Minnesota DNR Draft Environment Impact Statement to the FM Flood Risk Management Project. The MnDak Upstream Coalition is a non-profit organization made up of over 500 residents of Minnesota and North Dakota who are impacted by Fargo's plan to dam the Red River. This comment to the Minnesota DNR Draft EIS has to do with alternative analysis. There exists a less impactful smaller footprint alternative to Fargo's current proposal that is worthy of further MN DNR study.

In late 2013, noted Minnesota engineer and hydrologist Charles Anderson, of Wisdeth Smith and Nolting, was privately retained by the Upstream Coalition to run an analysis on a smaller footprint proposed diversion. Specifically, Anderson was retained to run a simulation with the Army Corps' own HEC-RAS model, using Army Corps assumptions (100 year flood = 42.5 feet).

Anderson used the Army Corps HEC-RAS model to determine what result if:

- a. The Southern inlet to the FM Diversion is moved back north of the Wild Rice/Red River confluence. This was the initial location of the southern inlet to the FM Diversion in the Army Corps' preferred plan, also known as NED plan. (See Attached Exhibit A)(Fargo's current proposed inlet location is located further

This page contains no comments

south at its present position to accommodate the preference of the local sponsors);
and alternatively

- b. Distributed upstream retention as proposed by the Red River Basin Commission was implemented in conjunction with the smaller footprint dam and diversion.

What would the staging area look like under these two circumstances and what would the water levels be in Bakke, ND; Comstock, MN; Richland County, ND; Clay and Wilkin County, MN, with and without distributed upstream retention?

Essentially, this proposal sought to measure the value of using the existing flood plain for the temporary water staging/storage. Fargo's current alignment, the local preferred plan, eliminates a vast amount of existing natural flood plain that is presently undeveloped rural farm land. Fargo's plan then relocates this water behind a dam upstream on higher elevation areas that are not presently in the regulatory flood plain and that have no history of flood problems. Most notably these higher areas to be flooded include the Minnesota town of Comstock, Minnesota, the North Dakota community of Hickson/Bakke, and thousands of acres in rural Clay and Wilkin counties.

The location of the existing natural flood plain is illustrated by the attached diagram depicting the extent of the water during the 2009 flood. (See Attached Exhibit B). There exists a large undeveloped natural flood plain beginning north of the city of Oxbow and centering on the Wild Rice/Red River confluence. This undeveloped flood plain should be preserved as a natural water storage area, not destroyed for development purposes. The proposal modeled by Charlie Anderson rests on the assumption that flood plain should be preserved not eliminated. Moving the proposed inlet and high hazard dam north of the Wild Rice River confluence, but keeping the North Dakota alignment would minimize impacts, drastically reduce the amount of staging required, and eliminate the need to ring dike Comstock and Wolverton, MN. This smaller north alignment would also satisfy the "project purpose" which was fashioned by the FM Diversion Authority. As it would still be located on the west side of the Red River, the smaller tributaries would still be addressed. Please note this proposed alignment, called the "Preserve Floodplain" Alignment by Charlie Anderson, differs substantially from both the Army Corps NWRR (North Wild Rice River), and the north alignment alternative included in the MN DNR's DEIS. This "Preserve Flood Plain" alignment preserves much more undeveloped flood plain and minimizes the upstream impacts outside the regulatory flood plain.

Attached are the results of the Anderson's COE HEC-RAS model, with and without 20% flow reduction modification on the Red and Wild Rice rivers. (See Attached Exhibit C). Also attached are two illustrations created by Charlie Anderson depicting the extent of the staging area with this proposal, one with upstream retention, and one without. (See Attached Exhibits D and E).

In conclusion I would point out that when the Army Corps accepted the current alignment, the Locally Preferred Plan, over what is now referred to as the NED Plan, the size of the project doubled. The Locally Preferred plan extended the southern inlet of the Diversion

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Ms. Townley
October 13, 2015
Page 3

from North of the Wild Rice/Red River confluence south some 3 miles. The effect of this expansion was to eliminate some 14,000 acres of natural flood plain water storage area. This area is primarily undeveloped farm land. The purpose of this modification was clearly to eliminate flood plain for development. In fact, the Army Corps detailed the economic advantages of this flood plain elimination in section 3.7.5 of Appendix C of the Army Corps FEIS. (See Attached Exhibit F). The economic benefit of development of this rural land was also used to augment the benefit cost value of the project.

Moving the diversion inlet back north of the Wild Rice/Red River confluence would, according to the Army Corps own value engineering studies, save the project sponsors 100's of millions of dollars as there would be no need to construct a high hazard dam on the Wild Rice River, no need to ring dike Comstock, MN, Wolverton, MN and the water level in Oxbow would be so reduced as to require only a fraction of the protection currently under construction. The structures requiring mitigation under the "Preserve Flood Plain" alternative are structures currently located within the regulatory flood plain, mitigation of which would increase the capacity of the existing flood plain.

The Minnesota DNR should include in its alternative analysis this proposed smaller project that requires less storage and employs the existing regulatory flood plain for that storage. The "Preserve Flood Plain" plan modeled by Engineer Anderson is worth further exploration. This plan meets the legitimate goals of the sponsors' "project purpose," is more efficient, and less impactful even without distributed upstream retention. This alternative would be even more effective if distributed upstream retention was included in combination with the smaller footprint and the use of existing flood plain. Please let me know if I can provide more detailed information regarding the modeling of the "Preserve Floodplain" alternative that was completed by Charlie Anderson.

Sincerely,



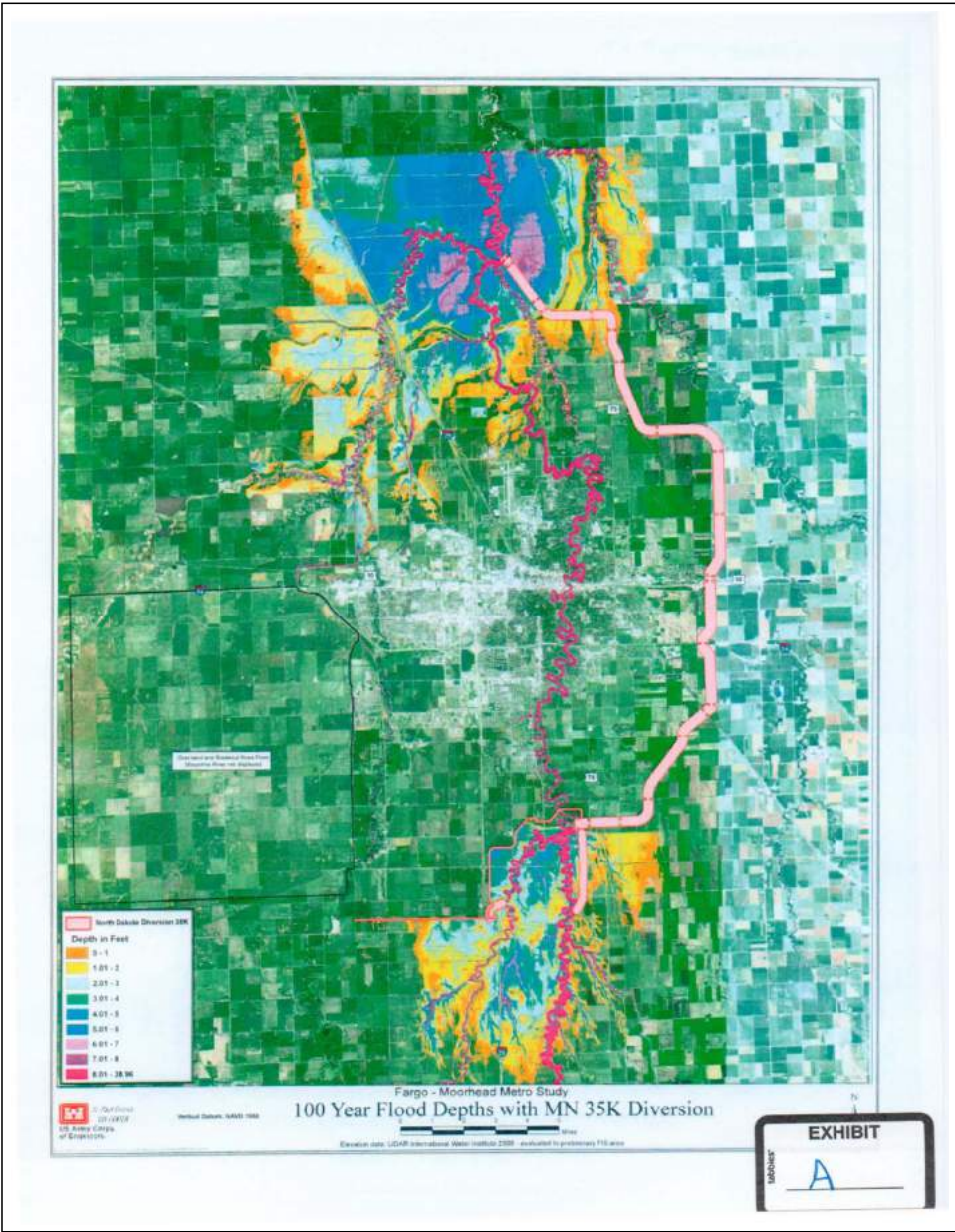
Cash H. Aaland

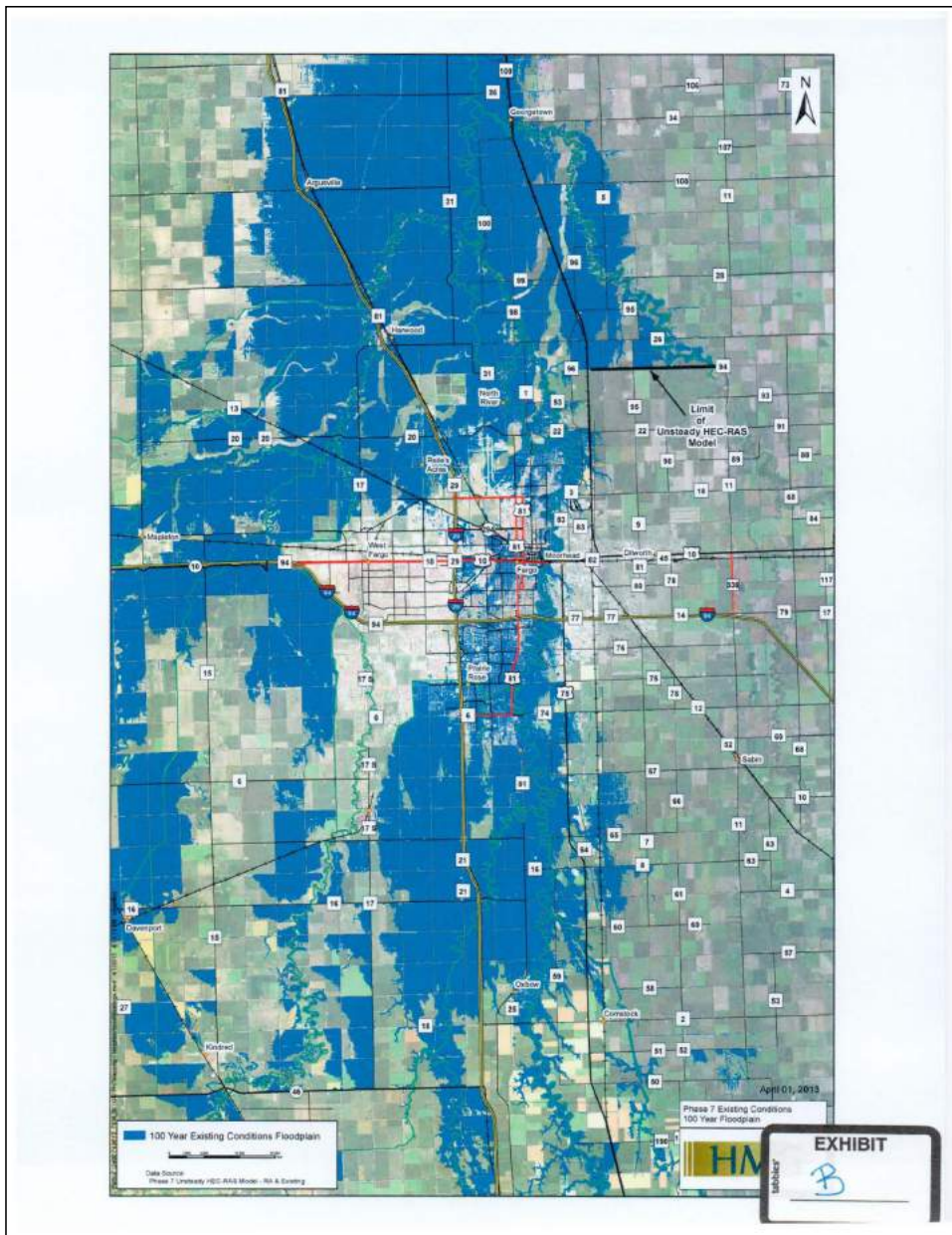
CHA/dmb
Attachments: Exhibits A - F

cc: MnDak Upstream Coalition Chairman David Morken

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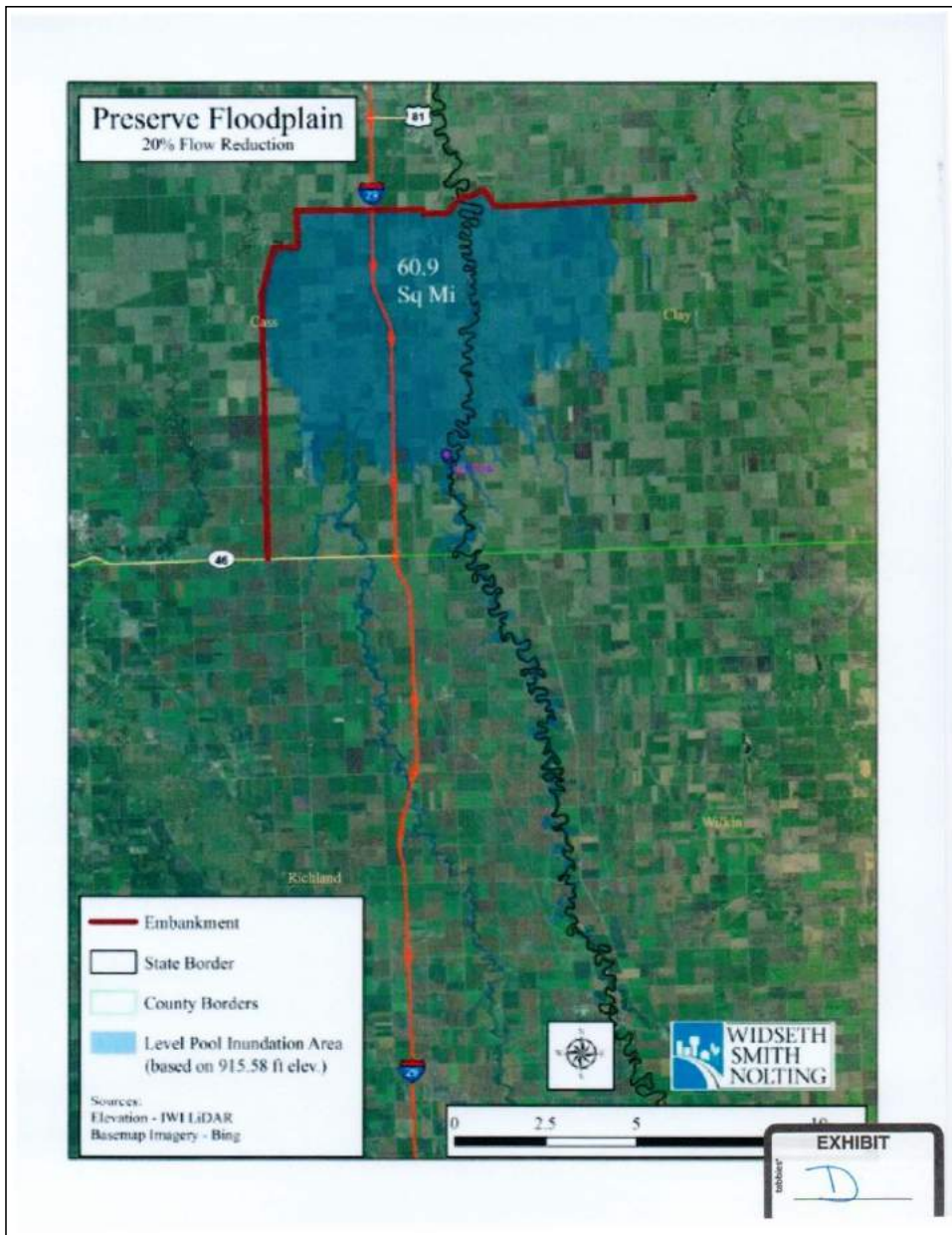
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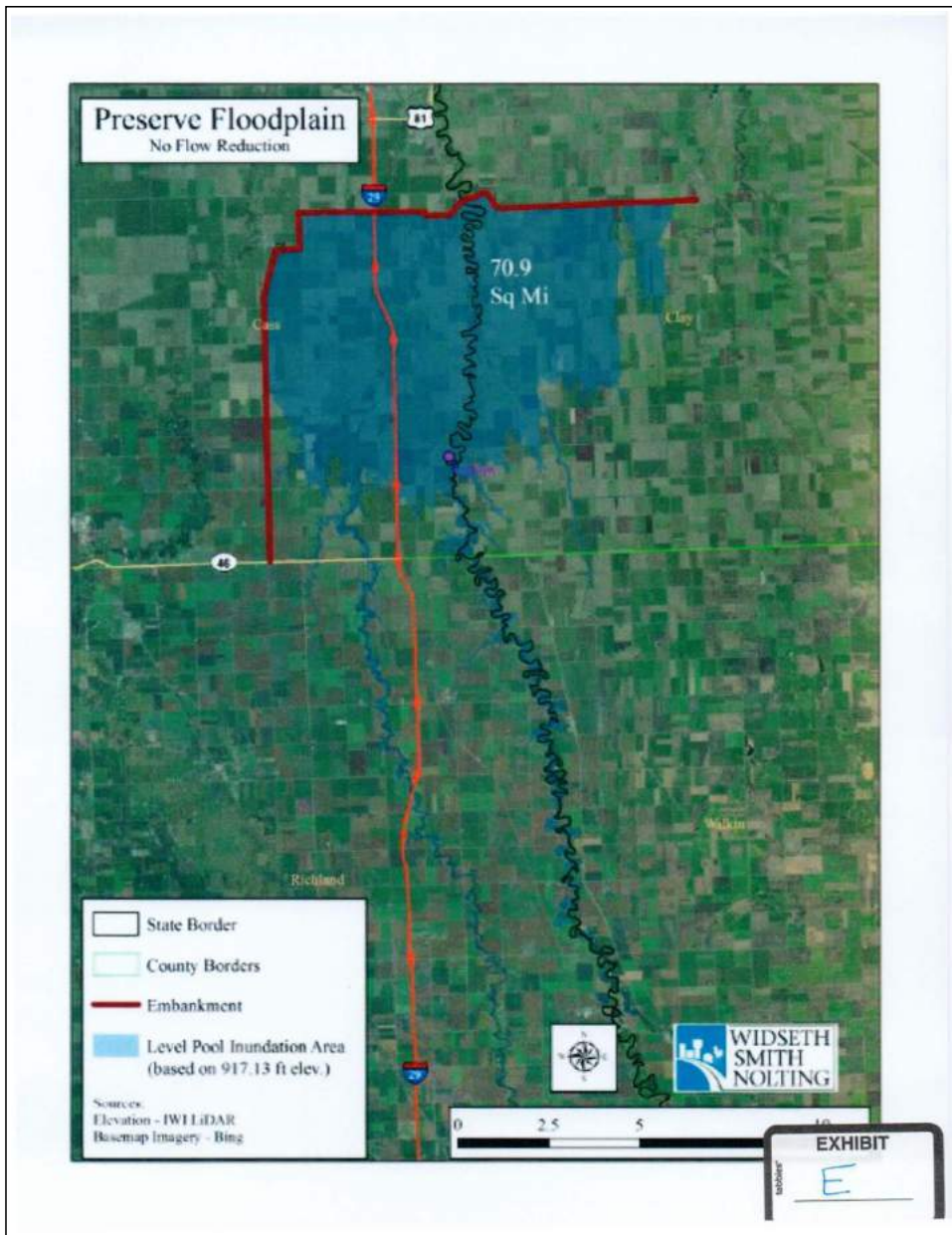
100 year flood elevations using COE HEC-RAS model
 With and without LTFS 20% flow reduction modifications
 on Red River and Wild Rice River



	No FM protection		Existing levees hold		Diversion plan opt A		Diversion plan NWRR		Preserve Floodplain	
	No flow reduction	20% flow reduction	No flow reduction	20% flow reduction	No flow reduction	20% flow reduction	No flow reduction	20% flow reduction	No flow reduction	20% flow reduction
	Elev (ft)	Elev (ft)	Elev (ft)	Elev (ft)	Elev (ft)	Elev (ft)	Elev (ft)	Elev (ft)	Elev (ft)	Elev (ft)
County line	919.71	917.24	919.72	917.24	922.98	921.39	920.11	918.17	920.04	918.11
Oxbow	916.97	915.00	916.98	915.01	922.84	921.22	918.10	916.69	917.56	916.15
Fargo	902.24	901.20	903.47	901.70	892.67	892.55	892.72	892.65	892.84	892.74
Hendrum	874.30	873.92	874.18	873.90	873.92	873.73	874.05	873.86	873.94	873.74



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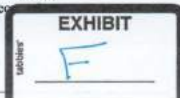
EAD, EAB, and EEAD for the Transportation category are displayed in Tables C-15 through C-17.

3.7.5 Flood proofing Cost Savings Benefits

Currently, new development in the floodplain in Fargo and Cass County requires flood proofing to reduce the threat of flood damage in the future and meet FEMA regulations. Savings of the cost to flood proof new construction is a benefit of a flood risk management project that can reduce the footprint of the floodplain. The area benefited is that area removed from the 100-year floodplain by the project that would have been developed in the future with flood proofing measures implemented.

Urban development in the study area has been expanding and will continue to expand over the course of the planning period. Fargo's population has grown from 47,000 in 1960 to over 93,000 in 2006, an average growth rate of over 2 percent per year (straight-line growth). To accommodate this growth, Fargo development has increased in recent years at an average rate of 266 acres per year. The Fargo Planning Department has projected urban growth for the next 50 years. They use this figure of 266 acres for projecting future development demand (Source: Growth Plan 2007 – City of Fargo, North Dakota). Growth is projected to occur within two development "tiers". Tier 1, an area adjacent to the present Fargo city limits, is sized to accommodate 25 years of growth at approximately 266 acres per year. Tier 2 is comprised of areas further away from the existing city and is expected to accommodate growth 25-50 years in the future. For years 25 through 50, it is assumed that development will continue at the rate of 266 acres per year. Each tier has a spatial component on both the north and south sides of town. In both Tier 1 and Tier 2 most future growth will occur within the 100-year flood plain and, without a flood risk management project, require flood proofing. In addition, within the city limits of Fargo itself, some acreage within the 100-year floodplain is also available for future development. Growth is expected at the same rate of 266 acres per year regardless of the need for flood proofing or not. Much of the area available for future growth is within the 100-year floodplain and future development with a diversion project in place would benefit from the saving of flood proofing costs in those areas removed from the floodplain.

Flood proofing measures include raising the grade of developable land with fill, waterproofing basement foundations, and building ring dikes around developable parcels. In addition to the direct construction cost is the opportunity cost of reduced revenue in the form of lost lot sales (estimated at up to \$40,000 per acre) as flood proofed land is less intensively developed from a structural standpoint than non-flood proofed land. The type of flood risk reduction provided would vary by land use. Commercial, industrial, and public/institutional land uses would most likely elevate because of the high cost of their facilities and the ability to pay for higher land costs. Cost for this measure ranges from \$55,000 to \$70,000, by either elevating the entire site or acquiring additional properties for fill to elevate their buildings and facilities. For instance, a new Wal-Mart in south Fargo elevated the entire site, building and parking lot. These types of land use would use approximately 42% of the projected developable land area.



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Residential and park land uses would more likely ring dike because the cost would be lower and these land uses seek lower cost land to make the housing feasible. Additional cost to develop in this manner is estimated at \$35,000 per acre. Costs can range higher, however, for the more expensive residential development projects that, like commercial projects, involve the placement of fill to raise the grade of their lots and adjacent ancillary uses. These land uses are estimated to use approximately 58% of the projected developable land area. The percentage estimates are based on current and projected land use in the Fargo Growth Plan. Exhibit N presents the calculation of the flood proofing cost savings benefit per acre of development on a weighted average basis. This benefit is expected for each of the diversion alternatives since each will reduce the flood plain footprint sufficiently to accommodate future demand for flood-free developable land.

Table C-14 Flood proofing Cost Savings Benefit per Acre

Type	Percent		
	Land use	Cost per acre	Wtd average
Comm/ind/public	42%	\$62,500	\$26,250
Residential	58%	\$35,000	\$20,300
Wtd average cost / acre			\$46,550

Source: Fargo Department of Planning

The savings per acre is applied to the average acres per year developed on land converted from floodplain to non-floodplain by a diversion project. Floodplain maps for without and with-project conditions were used to estimate the amount of land formerly in the floodplain that would realize the flood proofing cost savings benefit. At the rate of 266 acres per year, the future demand for developable land over the 50-year planning period is 13,300 acres. Growth is assumed at the same rate for the interim period between 2010 and the base year of 2018. Development in the floodplain within this period would require flood proofing and incur the related costs. This land (266 acres/year x 8 years = 2,128 acres) would not be expected to realize the cost savings benefit. Land within Tier 1 and the Fargo city limits would be projected to be developed before Tier 2 land regardless of its location relative to the floodplain. This is in keeping with the city's planning goal to grow in an orderly and efficient manner. There are approximately 20,000 acres within Tiers 1 and 2 and in Fargo available for future development to the year 2068 so supply exceeds demand for the foreseeable future. Of this land, approximately 14,000 acres is within the present 100-year floodplain. As expected, the larger the diversion project, the larger the area removed from the 100-year floodplain and the larger the expected annual flood proofing cost savings. Exhibit L displays the acres by plan opened up to development free of flood proofing requirements, land outside of the floodplain used to meet growth demand, and residual acreage that may still require flood proofing to meet demand. Annual benefits are also estimated by applying the weighted average flood proofing cost per acre to the average annual acres benefited by plan. Average annual benefits range from \$5.4 million for the MN Short 20k cfs diversion to \$10.4 million for the ND 35k cfs diversion.

From: [Denise](#)
To: ["Review, Environmental \(DNR\)"](#)
Cc: ["morkend@hotmail.com"](#)
Subject: FW: Attached Image
Date: Friday, October 23, 2015 5:14:32 PM
Attachments: [3292_001.pdf](#)

Ms. Townley,

Attached please find a letter from Mr. Aaland, the Larson Chart and McEwen Memo and Graph.
Thank you.


Denise Brinkman
Office Manager
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Summary of Comments on MNDakUpstreamCoalition_CashAaland_Commenter23c- e_Email_Fax_Letter2.pdf

Page: 1

 Author: Date: Indeterminate

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October 23, 2015

Commenter 23 cont.

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environmentalrev.dnr@state.mn.us

RE: Comment on the DEIS, Fargo-Moorhead Flood Risk Management Project

Dear Ms. Townley:

I am submitting this, my second comment on the Minnesota DNR Draft Environment Impact Statement to the FM Flood Risk Management Project, on behalf of myself and the MnDak Upstream Coalition. This comment to the Minnesota DNR Draft EIS has to do with the DNR's acceptance of the Army Corps Expert Opinion Elicitation pertaining to the level of flood risk and the definition of the 100-year floodplain.

Attached in support of my comment is a memo from Chris McEwen, a statistician. (McEwen Memo). Mr. McEwen is the Data Director for the South Dakota Democratic Party, also Director of Research for the private public relations firm Telos, and a NDSU graduate student having satisfied all but the thesis requirements for a Master's Degree in Statistics. Also attached is a chart depicting the annual precipitation for Fargo as well as river flow gage data. (Larson chart).

Before I state the substance of my comment, I would like to comment on the process itself. My residence is in harm's way of the proposed high hazard dam. I have therefore followed very closely the events concerning Fargo's dam and diversion plan. I work closely with the Board of the Upstream Coalition, the Commissioners of Richland and Wilkin counties, and their attorneys. We, members and agents of the Richland Wilkin JPA, have fruitlessly attempted to participate in the DNR's EIS process prior to the start of the comment period. Our

Page: 2

Author: Medopera Subject: Text Box Date: 11/10/2015 2:28:22 PM -06'00'
Commenter 23 cont.

Author: Medopera Subject: Highlight Date: 4/19/2016 12:51:43 PM
Comment ID: 23c
Topic: Hydrology and Hydraulics, Expert Opinion Evaluation Panel

Author: Medopera Subject: Highlight Date: 4/19/2016 12:51:49 PM
Comment ID: 23d
Topic: EIS Process

attempts to communicate facts, analysis and viewpoints contrary to those proffered by the project sponsor, the FM Diversion Authority, have been rebuffed by the DNR. We have stood by over the past year as the Army Corps, the agent of the FM Moorhead, has had unlimited access and input to the DNR employees creating the content of this draft EIS.

This process, wherein the project sponsors, the entities benefited by the project, and their agent the Army Corps, get exclusive access and input to the DNR, while the project opponents, persons and entities that that will suffer the impacts, get no access other than that allowed during a few week comment period, seems un-conscionable. This is particularly true in light of the fact that the Final EIS will be relied upon to guide the decision makers in the subsequent permitting process.

This inequity becomes most apparent when considering the Army Corps EOE, and the DNR's adoption of its hydrology as the basis of the entire Draft EIS. The executive summary of the Draft EIS provides: "The MNDNR utilized the recommendations of the EOEP in the EIS. Unless mentioned otherwise, all discussions in the EIS used EOEP hydrology." This premise was accepted without any input from any entity other than the FM Diversion Authority and its agent, the Army Corps. I believe accepting this EOE as a basis for evaluating the Fargo-Moorhead Flood Risk Management Project is an error that resulted in the overstating of the need for the proposed high hazard dam, and a vast understatement of its impacts. I urge the MN DNR to critically examine the basis for the conclusions of the Army Corps' in their EOEP.

The attached McEwen Memo demonstrates that the conclusions drawn by the Army Corps regarding their "wet cycle" analysis is unsupported by the precipitation record. There is no statistical support in Fargo precipitation record for the conclusions drawn by the EOE panel with respect to the 100 year flood risk. Rather their whole analysis seems to rely on peak flow river gage measurements. A trend of increased peak flows at Fargo, unrelated to precipitation, needs further examination. Clearly, the amount of water being drained through the FM metro has not changed. I submit most of this increased river flow is due to Fargo's development and elimination of the natural floodplain, which increases the velocity of the channel water. The precipitation record shows no trend.

The projections of the EOE and its definition of 100 and 500 year flood events seem fantastic in light of the amount of water it would take to bring about a flood of such height. Such an amount of water, according to the precipitation records, has never happened and if history is a gage, never will. The EOE 100 year event is the equivalent of 42.5 foot flood event in Fargo, a flood 3 feet higher than the regulatory FEMA level, and nearly two feet higher than the greatest flood in recorded history. Yet this EOE measurement seems to be the standard upon which the project's physical and economic impacts are measured. As I stated earlier, by accepting this EOE hydrology, the DNR is accepting a rationale which greatly overestimates the flood risk, and greatly under measures the project impacts. Accepting the EOE, without further study, eliminates the possibility of an accurate environmental assessment of the need for the high hazard dam, and an accurate environmental assessment of the impacts of said dam. Without an accurate agreement as how to measure impacts, there is no way to determine what alternative is the least impactful.

Author: Medopera Subject: Highlight Date: 11/10/2015 2:36:50 PM -06'00'
Comment ID: 23d cont.

Author: Medopera Subject: Highlight Date: 11/10/2015 2:37:31 PM -06'00'
Comment ID: 23c cont.

Ms. Townley
October 23, 2015
Page 3

Page: 4

From my understanding of the EOE hydrology, not only is the historical precipitation record ignored, the exaggerated flood risk, the EOE 100 year flood level, was based solely upon flow data from Fargo river gages, gages that measure flow rate impacted by the gradual reduction of floodplain storage. That development and destruction of flood plain occurring over a generation immediately south of the FM Metro, does not translate into greater flows or higher flood in rural areas further south. Applying the definitions arrived at by the EOE in areas unaffected by those factors is erroneous. Therefore applying the EOE definition to measure impacts of the project on upstream areas is equally erroneous.

For these reasons I would urge the MN DNR to review the proposed FM Project without regard to the EOE hydrology proffered by the project sponsor. Rather the DNR should accept the regulatory FEMA standards or independently verify the true flood risk posed by existing conditions as a necessary step to adequately assess the need for Fargo's proposed high hazard dam, the true environmental impacts caused by that dam, as well as the existence of lesser impact alternatives.

Sincerely,



Cash H. Aaland

CHA/dmb

Attachments: Larson Chart

McEwen Memo and Graph

cc: MnDak Upstream Coalition Chairman David Morken

Author: Medopera Subject: Highlight Date: 11/10/2015 2:38:12 PM -06'00'
Comment ID: 23c cont.

Author: Medopera Subject: Highlight Date: 4/19/2016 12:56:54 PM
Comment ID: 23e
Topic: Hydrology and Hydraulics, Expert Opinion Evaluation Panel

Christopher McEwen
chris.m.moewen@gmail.com
701-793-3528



To: Cash Aaland
From: Chris McEwen, Director of Research for Telos Associates
Date: October 21, 2015
Subject: Analysis of Precipitation Levels

Mr. Aaland,

Upon request, I reviewed precipitation data for Fargo from 1881 (the earliest available year) to 2014. This was to determine if, based on precipitation, the time period 1881-1941 was significantly drier than the time period 1942-2014.

I have concluded that there is no significant difference between the two time periods when considering the averages and the variation for both time periods using an independent samples t-test (average difference: 0.43 inches, p-value: .319). Thus, there is no evidence to indicate that the time period 1881-1941 was drier than 1942-2014 for the Fargo area.

While 1929-1941 saw abnormally lower rainfall, the time period prior to 1929 saw rainfall that was comparable with most of the century. Furthermore, there was no significant difference in rainfall for the time period from 1881-1889 and 2005-2014 (average difference = .475 inches, p-value: .43), which suggests that older historical data may have some compatibility with modern times in terms of rainfall expectation. Thus, it would be illogical and potentially unethical to discount the entire time period preceding 1941 from analysis of flood levels based on precipitation.

For reference, I included a graph that will hopefully serve as a helpful tool for visualizing these results. As judged by myself, the patterns are fairly consistent with the exceptions of two periods of higher-than-average rainfall (the late 1800s and the 2000s) and period of lower-than-average rainfall (1929-1941).

Should you need more information, please contact me.

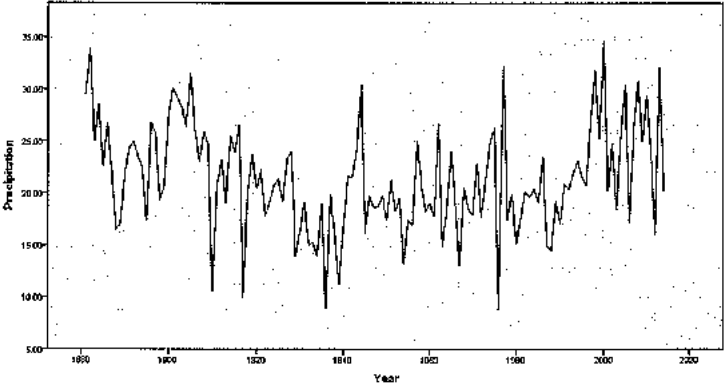
Thank you,

Chris McEwen
Director of Research | Telos Associates

Attachment: **Figure 1 – Graph of the Precipitation levels from 1881-2014**

This page contains no comments

Figure 1 – Graph of the Precipitation levels from 1881-2014



This page contains no comments

Fargo Precipitation History (Snow + Rain)

Year	Precipitation	Avg Discharge	Peak Discharge	Gage Height
1880				
1881	29.48		20000	36.8
1882	34.01			
1883	24.96			
1884	26.5			
1885	22.68			
1886	26.76			
1887	21.97			
1888	16.5			
1889	17.07			
1890	21.79			
1891	24.31			
1892	24.94			
1893	23.58			
1894	22.43			
1895	17.38			
1896	26.8			
1897	25.8		25000	39.1
1898	19.33			
1899	20.64			
1900	27.5			
1901	30.16			
1902	29.12	449.2	1180	10.5
1903	28.29	362.8	2450	13.9
1904	26.36	753.1	5220	21.3
1905	31.48	701.8	4250	18.4
1906	26	1064	3050	15.5
1907	23.02	1117	7000	29.8
1908	25.93	676.7	2600	14.7
1909	24.67	573	1780	13.04
1910	10.5	682.8	9000	23.1
1911	20.61	148	608	8.7
1912	23.2	301.8	1100	10.6
1913	19.04	294	1560	11.9
1914	25.49	606.9	3140	16.1
1915	23.94	805.2	3130	9.73
1916	26.58	1853	7740	23.63
1917	9.94	843.8	5240	17.8
1918	20.42	214.1	874	6.87
1919	23.75	239.5	680	6.5
1920	20.41	629.2	6200	17.2
1921	22.28	380.8	1970	8.4
1922	17.8	588.8	5200	14.7
1923	19.06	294.1	3960	11.6
1924	20.76	126.7	530	6.2
1925	21.32	185.5	940	7
1926	19.22	150.7	1600	8
1927	23.36	334.5	2650	9.1

1928	23.95	272.8	3840	13.3
1929	13.89	284.3	4440	12.8
1930	16.25	211	1340	10
1931	19.19	72.7	365	8.55
1932	15.05	52.4	875	9.45
1933	15.25	41.8	605	9.04
1934	13.97	17.5	323	8.55
1935	19.07	82	942	9.72
1936	8.87	58.8	1050	9.9
1937	19.89	101.5	1390	10.17
1938	16.21	125.5	1350	10.02
1939	11.23	179.2	3870	13
1940	16.64	93.5	1030	9.63
1941	21.68	178.6	1390	10.1
1942	21.51	508.4	3380	12.27
1943	24.22	1340	16000	28.4
1944	30.38	779.6	4150	14.28
1945	16.16	841.4	7700	20.7
1946	19.72	565.6	5970	17.13
1947	18.83	957.6	9300	22.83
1948	18.7	481.1	3390	12.45
1949	19.76	253.1	2660	11.27
1950	17.37	1025	7800	20.88
1951	21.25	694.2	8010	20.73
1952	18.26	1322	16300	28.79
1953	19.57	834.5	6720	18.05
1954	13.18	588.1	1920	10.53
1955	17.44	381.3	2780	11.12
1956	16.95	442.7	3870	12.54
1957	25.03	492.2	2540	11.1
1958	20.94	428.6	2380	10.9
1959	18.23	319.8	1250	10.42
1960	19.04	442.3	3900	12.48
1961	17.78	213.2	1020	9.24
1962	26.65	1756	9580	22.83
1963	14.94	566.9	4930	19.97
1964	18.26	390.4	2400	16.22
1965	24.01	895.5	11400	30.5
1966	18.97	1288	10700	30.16
1967	13.04	880.8	5900	22.34
1968	20.6	314.9	788	14.77
1969	18.52	1471	25300	37.34
1970	17.9	383	2480	16.27
1971	22.98	307.5	1910	15.87
1972	17.78	1085	7250	25.36
1973	21.52	379	1980	16.41
1974	24.99	667.7	4150	20.25
1975	26.3	1271	13200	33.26
1976	8.84	344.2	3200	18.7
1977	32.28	64.7	878	14.99
1978	17.44	1248	17500	34.41

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1979	19.97	1265	17300	34.93
1980	15.11	481.5	5470	20.74
1981	17.59	175	1710	15.84
1982	20.2	580.5	5920	25.07
1983	19.67	415.4	1750	15.99
1984	20.37	935.6	8650	28.27
1985	19.17	967	4690	20.08
1986	23.51	1928	8640	27.19
1987	15	734.3	3300	17.76
1988	14.53	227.6	981	15.1
1989	19.21	801.7	18900	35.39
1990	17.13	285.1	1220	15.4
1991	20.87	535.1	2630	16.99
1992	20.41	419.5	2590	16.93
1993	21.9	1573	10100	28.27
1994	23.1	1690	11200	26.69
1995	21.53	1549	11000	28.37
1996	20.77	1475	9940	28.75
1997	27.04	2619	28000	39.72
1998	31.85	1798	8510	24.87
1999	25.32	1581	4900	20.81
2000	34.75	1094	5630	22.82
2001	20.25	2221	20300	36.69
2002	24.81	954.9	4250	19.17
2003	18.42	760.3	6710	22.63
2004	25.99	683.5	5430	20.47
2005	30.44	2097	9810	28.18
2006	17.15	1919	19900	37.13
2007	26.24	2214	13500	30.88
2008	30.82	1028	4840	20.04
2009	24.89	3494	29500	40.84
2010	29.48	2887	21200	36.99
2011	23.98	4444	27200	38.81
2012	16.04	863.3	4120	17.83
2013	32.11	1572	18200	33.31
2014	20.19	2015	10400	27.85
2015				

1881-2014	21.41119403	819.80531	6515.5565	19.279
1881-1992 avg	20.73			
1992-2014 avg	24.87	19.01% more precipitation		
1881-1941 avg	21.64			
1942-2014 avg	21.22	-1.97% LESS precipitation		
1902-1941 avg	20.34			
1942-2010 avg	21.22	4.30% more precipitation		

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1902-1941 EOE		
avg Reduced -		
80%	4.07	
1942-2010 EOE		
avg Reduced -		
20%	16.97	317.20% precipitation augmentation

Cited Source: University of Minnesota
 Weather Warehouse
 NOAA
 NWS
 NWIS
 USGS

October 8, 2015

Ms. Jill Townley
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road,
St. Paul, Minnesota, 55155-4025

Ref. Fargo-Moorhead Flood Risk Management Project

Dear Ms. Townley:

I am writing in support of the proposed Fargo-Moorhead Flood Risk Management Project. This is a vital project for the Fargo-Moorhead region, where flood mitigation is a critical issue.

The project purpose is described as being to reduce flood risk, damages, and protection costs for the Fargo-Moorhead metro-area, and specifically to reduce flood risk potential from the Red River, Sheyenne, Wild Rice, Maple, Rush and Lower Rush rivers, and to qualify large portions of the metro area for 100-year flood accreditation by FEMA under the National Flood Insurance Program, and to reduce flood risks from floods exceeding the 100-year flood risk. These purpose statements are accurate and appropriate.

The Fargo-Moorhead metro area has historically always been at great risk of flooding, and in recent years this risk seems to have grown, as flooding frequency appears to be increasing. The metro area is a major regional economic, commercial, and services hub for western Minnesota and eastern North Dakota. The Fargo-Moorhead area is home to numerous businesses, health-care facilities, schools, cultural centers, and other institutions. A major flood event would have severe impacts on the community, not only through property damage, but from the loss of critical services, including access to health care, banking facilities, government offices, and other important community amenities.

This project, as proposed and approved by the U.S. Army Corps of Engineers and the United States Congress, will provide a permanent system to protect the metro area from such horrendous risks. I urge the DNR to support it as well, for the benefit of all affected Minnesota citizens.

Sincerely,

Kevin Fisher

Commenter 35 cont.

OCT 26 2015

Summary of Comments on KevinFisher_Commenter35b_Mail1.pdf

Page: 1

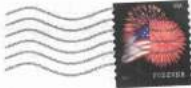
Author: Medopera Subject: Text Box Date: 12/2/2015 2:44:10 PM -06'00'
Commenter 35 cont.

Author: Medopera Subject: Highlight Date: 12/2/2015 2:44:43 PM -06'00'
Comment ID: 35b - is 35a cont. from Oral Comments Group

This page contains no comments

Kevin Fisher
5116 Rose Creek Pkwy. S.
Fargo, ND 58104

FARGO ND 581
24 OCT 2015 PM 1 L



Environmental Policy & Review Unit
Box 25
Ecological & Water Resources Division DNR
500 Lafayette Rd
St Paul MN 55155-9025
Attn: Ms Jill Townley

5.6

Summary of Comments on OralIndividual_Commenters36_40.pdf

Page: 1

Author: Medopera Subject: Highlight Date: 3/31/2016 2:28:09 PM
Comment ID: 36a
Topic: Proposed Project, General Opposition
Unsubstantive

Author: Medopera Subject: Text Box Date: 11/5/2015 2:21:39 PM -06'00'
Commenter 36

PROCEEDINGS

1
2 **Commenter 36** MARTIN JOHNSON: I've been against

3 this from the beginning. And I believe Fargo deserves

4 some type of flood protection, but the route they're

5 going, they've been dishonest, they've been -- I've lost

6 trust in them.

7 And I feel that if you guys give them

8 any leeway to start building this thing, they're going

9 to end up stabbing you guys in the back like they have

10 other people.

11 They'll be your buddy until they get

12 what they want and then all of the sudden in a

13 catastrophic flood, they're going to dump water on

14 Richland County and Wilkin County and Clay County and

15 they won't care.

16 And I'm just fed up with this. I'm

17 just tired of them not working together. And I'd like

18 to tell you that you've got to protect your people on

19 the Minnesota side because that's what you've been given

20 in doing for the people of Minnesota.

21 And I hate to see you make a deal

22 with the devil because they're going to run you over


23 whenever they can and they won't care.


24 And I kind of clarify them as thieves


25 of the night, but at least a good thief will show you


KIRBY KENNEDY & ASSOCIATES
(952) 922-1955

1 the knife that he's going to stick you with, these
 2 people aren't, they're going to take what they want and
 3 they won't care.
 4 (Next speaker)
 5 **Commenter 37** LARRY NESS: Well, my main opposition
 6 is the dam. And I think there's much better places to
 7 store water than where they're planning on storing it.
 8 There's other areas south that would not be affected as
 9 much, like places where they have pasture where they
 10 could store water and it's not going to really hurt
 11 them.
 12 where they're planning on storing,
 13 there's many, many cemeteries, every one of them is
 14 going to be affected. Also, if they brought water on
 15 there, I think all the wells will get contaminated.
 16 Because right now if you have a well
 17 on a vacant place, they make you seal it up and shut it
 18 up because they don't want anything going down into the
 19 water and affecting your aquifers or anything like that.
 20 So, my thought is -- well, I know
 21 they wouldn't go by my thought, but I thought instead of
 22 the diversion, they should do like Grand Forks and run
 23 the water right where the river runs and just dike it
 24 way up.
 25 Have you ever been to Grand Forks and

-  Author: Medopera Subject: Highlight Date: 11/5/2015 2:26:17 PM -06'00'
Comment ID: 36a cont.

-  Author: Medopera Subject: Text Box Date: 11/5/2015 2:27:04 PM -06'00'
Commenter 37

-  Author: Medopera Subject: Highlight Date: 3/31/2016 2:28:52 PM
Comment ID: 37a
Topic: Proposed Project, General Opposition
Unsubstantive

-  Author: Medopera Subject: Highlight Date: 3/31/2016 2:29:27 PM
Comment ID: 37b
Topic: Alternatives, Alternative:Move Staging Area

Author: Medopera Subject: Highlight Date: 11/5/2015 2:36:39 PM -06'00'
Comment ID: 37b cont.

Author: Medopera Subject: Highlight Date: 3/31/2016 2:30:21 PM
Comment ID: 38a
Topic: Dam Safety, Risk and Loss of Life Concerns

Author: Medopera Subject: Text Box Date: 11/5/2015 2:37:35 PM -06'00'
Commenter 38

5

1 seen what they did? I've talk to people up there and
2 since they've done that, they have no problem. And I
3 know they tell me when I bring up that comment, they say
4 the ground isn't stable enough here. It doesn't matter
5 where you are, if you have water running, it's going to
6 wash.

7 Last year I was out by the Sheyenne
8 diversion, they were scooping huge mud that had washed
9 into the diversion. And that's go to happen no matter
10 where you are. It doesn't matter if you run the water
11 in the river or if you run the diversion out, you're
12 going to have soil washing in.

13 So, my main comment is, I think
14 there's better places to store water way down south on
15 land that doesn't get affected as much here where they
16 grow all crops. There's area down there where they
17 don't grow crops, it's pasture land that they can store
18 water. That's about the only comment I have.

(Next speaker)

19
20 Commenter 38 JUDY NESS: I guess I feel a high
21 hazard dam where they're planning to put it would be
22 very detrimental to the rural -- rural people. That
23 would be a very high risk of personal -- personal -- I'm
24 drawing a blank. Just a very high risk for people that
25 would be in the path of the high hazard dam.

1 And I think they can move the inlet
 2 that they're talking about. The way they have planned
 3 as of right now, the inlet they could move further north
 4 than what they are planning right now and be just as
 5 effective and probably even less costly than they're
 6 planning. That's it.

(Next speaker)

8 **Commenter 37 cont.** LARRY NESS: I think where they're
 9 talking about the dam, I think there's nine cemeteries
 10 that would be affected. If you -- any time you put
 11 water on that, a lot of times that will just raise them
 12 right out of the ground.

13 The neighbor put in a septic system
 14 and he was going to put in plastic, just pushed right
 15 out of the ground. I think we may have the same thing,
 16 I don't know, with cemeteries with them wanting to push
 17 up. Maybe not, I'm just guessing.

(Next speaker)

19 **Commenter 39** JOEL HANSON: I am in Fargo, I live
 20 in Fargo, grew up on a farm near Hickson. I'm
 21 affiliated with the Lower wild Rice and Red River
 22 Cemetery. It's approximately a quarter of a mile south
 23 of the dam where the dam structure will be along
 24 Highway 81.

25 So, our projected water depth will be

- Author: Medopera Subject: Highlight Date: 3/31/2016 2:31:27 PM
 Comment ID: 38b
 Topic: Alternatives, Alternative: Move Staging Area

- Author: Medopera Subject: Highlight Date: 11/5/2015 2:47:13 PM -06'00'
 Comment ID: 37a cont.

- Author: Medopera Subject: Text Box Date: 11/5/2015 2:46:55 PM -06'00'
Commenter 37 cont.

- Author: Medopera Subject: Highlight Date: 3/31/2016 2:38:59 PM
 Comment ID: 39a
 Topic: Cultural Resources, Cemetery Mitigation

- Author: Medopera Subject: Text Box Date: 11/5/2015 2:47:41 PM -06'00'
Commenter 39

1 14 to 16 feet, something like that. I think it's really
2 unfortunate that the dam -- the location of the dam
3 wasn't taken into consideration when they were
4 replotting it.

5 Originally the dam -- yeah, the dam
6 was supposed to be about a mile south of there, which
7 would not have impacted our cemetery. But then they
8 moved it to a mile north, which then puts that much
9 water on our grave sites.

10 We've worked with Congressman Cramer
11 from North Dakota. He came out and visited several of
12 the North Dakota cemeteries. And just really concerned
13 about the insincerity of the Corps of Engineers, the F-M
14 Diversion Authority.

15 And they tell us there will be no
16 impacts. They came out and did a study and talked with
17 us a couple summers ago and came to the conclusion that
18 what they wanted to do was do a flowage easement and
19 allow our cemeteries to flood.

20 And in the wording in their
21 documents, that the Diversion Authority may help us
22 clean it up. I think the word "may" is kind of loose.
23 And it leaves them an out to not really take
24 responsibility for what is happening to our grave sites.

25 I think with some of the newer graves

1 I think it's very likely that the graves will pop out of
2 the ground with that much water standing for as long as
3 it's projected.

4 We haven't had any dislodged graves
5 up to this point, but it's been more of a natural
6 flooding where water comes and goes rather quickly. The
7 water hasn't stood like it will with the dam in place.

8 I don't know, it's just very
9 upsetting. Both my parents are there, my brother is
10 buried there, my grandparents are buried there, aunts
11 and uncles. And I'm really concerned that they would
12 take the approach of purchasing a flowage easement as a
13 solution to our graves.

14 When you look at the flooding that
15 was out East a couple weeks ago, you saw graves and
16 cemeteries being impacted all over the place. And what
17 the Corps of Engineers and the Diversion Authority
18 documents indicate is that they're not projecting any
19 graves will come out of the ground.

20 In fact, they speak about that quite
21 confidently. And I just don't know how they can
22 anticipate that, that we wouldn't have graves coming out
23 of the ground with sealed vaults and things like that.
24 The ground will thaw, the water will get underneath the
25 vaults and they will come up.

1 I just think there's a better
2 solution to this, whether they dike up the cemeteries or
3 do something. But for them to spend 60, 70 million
4 dollars in protecting oxbow and then they've got these
5 cemeteries that have been in place -- like, our cemetery
6 has been there since the 1870s.

7 And I think it's just morally and
8 ethically wrong. And these are engineers that when they
9 earn their degrees, they're basically signing an oath to
10 do their work ethically. And I think this whole project
11 has come down to what is convenient for the City of
12 Fargo. And I just think it's very unfortunate.

13 I guess that's it. I had a bunch of
14 other things. They break down the cemeteries in the
15 upstream area in two different areas. They call them
16 impacted sites, which are in the staging area, there's
17 seven cemeteries, both on the Minnesota and North Dakota
18 side.

19 And then there's impacted cemeteries
20 that are considered upstream that are within the red
21 zone that will see additional water, but they aren't
22 considered as impacted. So, they're basically telling
23 us that there's seven cemeteries that are considered
24 impacted.

25 In those seven cemeteries there's

1 approximately 2,200 grave sites of people that settled
2 this area, people that we laid to rest, family members
3 that we laid to rest, not ever anticipating something as
4 ridiculous as this coming to be.
5 It's very disheartening and very
6 stressful on the people. A cemetery is a place where
7 families have made plans to be buried as a family. And
8 this totally disrupts that.
9 I personally purchased my own grave
10 sites and I'm not so sure what to do about that. I
11 don't know that I want 14, 15 feet of water sitting on
12 top of my grave site. It's very concerning to me.
13 Let's see.
14 They tell us that there's no taking,
15 so there's a federal law that is protecting them from
16 having to do any type of additional mitigation. They
17 claim there's no taking when it comes to the cemetery
18 when, in fact, there is.
19 We're not able to bury people
20 throughout the year. If there's a flood in the spring,
21 those graves will not be able to be dug. And who knows
22 when that would be an option to be able to bury them.
23 So, that's a loss of someone being able to put closure
24 to the death of a loved one. I think that's very
25 unfortunate. Let's see.

Author: Medopera Subject: Highlight Date: 11/5/2015 2:58:21 PM -06'00'
Comment ID: 39a cont.

Author: Medopera Subject: Highlight Date: 3/31/2016 2:39:56 PM
Comment ID: 39b
Topic: Cultural Resources, Cemetery Taking

Author: Medopera Subject: Highlight Date: 11/5/2015 2:59:09 PM -06'00'
Comment ID: 39a cont.

1 They talk about erosion, they talk
 2 about sediment being deposited on the graves. And that
 3 all can be cleaned up. Just the moral and ethical
 4 position of this happening is just absolutely insane to
 5 me. I think that's it for now. Am I able to put
 6 additional stuff in writing later if I want?
 7 COURT REPORTER: Yes.
 8 JOEL HANSON: I think that covers it
 9 for now. Thank you very much. Thanks for coming up
 10 here.
 11 (Next speaker)
 12 Commenter 40 DOUG RESTEMAYER: Thank you for
 13 allowing me to speak today. My name is Doug Restemayer,
 14 I am the president and CEO of D-S Beverages. We are a
 15 local family owned Anheuser-Busch beer distributor
 16 headquartered in Moorhead serving some 1,000 retailers
 17 in about a 100-mile radius of Fargo-Moorhead.
 18 We employ 80 people with very good
 19 paying jobs and benefits. My company was founded in
 20 1968 by my father-in-law, who has been a resident of
 21 Moorhead for his entire 83 years of life.
 22 I took over that company in 2000
 23 after a career with Target Corporation in Minneapolis.
 24 I live in Fargo. I am also the immediate past Chair of
 25 the Fargo-Moorhead West Fargo Chamber of Commerce and

KIRBY KENNEDY & ASSOCIATES
 (952) 922-1955

Author: Medopera Subject: Highlight Date: 11/5/2015 3:00:22 PM -06'00'
 Comment ID: 39a cont.

Author: Medopera Subject: Text Box Date: 11/5/2015 3:00:38 PM -06'00'
 Commenter 40

Author: Medopera Subject: Highlight Date: 3/31/2016 2:40:26 PM
 Comment ID: 40a
 Topic: Socioeconomics, Economics

1 currently serve on the Board of Directors. The Chamber
2 represents over 2,100 chamber members with 94,000
3 employees in Minnesota and North Dakota.
4 I'd like to thank the Minnesota DNR
5 for their tireless effort reviewing the federally
6 authorized project that provides permanent flood
7 protection for the region. As a Minnesota business
8 owner, the uncertainty of flood protection provides a
9 different and unpredictable element of business risk.
10 Flooding impacts distributors of all
11 products, whether it is concrete, lumber, agricultural
12 equipment or in my case, Budweiser. Flooding impacts my
13 employees who live in Fargo and work in Moorhead and
14 equally impacts my Moorhead resident employees who
15 deliver beer in Fargo, West Fargo, and beyond.
16 The uncertainty of flood protection
17 crosses both sides of the Red River. The no action
18 alternative and no action with emergency measures do not
19 provide permanent flood protection. I thank the
20 Minnesota DNR for recognizing that fact.
21 The purpose and need for the
22 diversion is permanent protection. And the federally
23 authorized project provides that protection. We need to
24 stop worrying about floods every year and get on with
25 growing our businesses.

KIRBY KENNEDY & ASSOCIATES
(952) 922-1955

Author: Medopera Subject: Highlight Date: 11/5/2015 3:06:35 PM -06'00'
Comment ID: 40a cont.

Author: Medopera Subject: Highlight Date: 3/31/2016 2:41:23 PM
Comment ID: 40b
Topic: Proposed Project, General Support
Unsubstantive

1 without this certainty our growth as
2 a community will be stymied or potentially decline.
3 Less growth and fewer people means less beer sales for
4 my business. And with the potential for huge escalation
5 in flood insurance costs, my business would also be
6 severely impacted, buy flood insurance or buy beer.
7 And I do not state that simply for
8 amusement, it would be real. The Minnesota DNR has done
9 a thorough and complete review of this project. I look
10 forward to this Minnesota project moving forward quickly
11 to meet our permanent flood protection needs. Thank
12 you.

(Individual oral comments concluded at
9:30 p.m.)

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Commenter 41

From: [Al & Pat](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Monday, October 26, 2015 3:29:39 PM

October 26, 2015

The EOEP utilized the data from wet years only. They did not use the 100+ years of data to calculate the 100 year flood numbers. When talking 100 years not all years will be wet or not all years will be dry, any 100 year period will have a combination of wet and dry years. The EOEP started with a flawed premise in order to justify the cost benefit ratio and that could not be justified with numbers from the full 100 + years of data. This flawed premise is being utilized in all evaluations of the project.

Page 1 – 4. Increased magnitude and frequency of flooding in recent decades. Most years there is no increase in precipitation but there has been a consistent increased development of the flood plain. Displacement of water has created higher and more frequent flood events. Investigate the precipitation records to see if there is a big difference or increase in precipitation. Also investigate development of the flood plain area south of Fargo. This is the area to be protected within the diversion. It is currently in the flood plain so development of this area is in violation of Executive Order 11988.

Submitted by,

Alan and Patricia Otto
Box 35
Christine, ND 58015-0035

chola@wtc-mail.net

Summary of Comments on Alan&PatriciaOtto_Commenter41a-b_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/6/2015 10:04:45 AM -06'00'
Commenter 41

Author: Medopera Subject: Highlight Date: 4/19/2016 1:01:05 PM
Comment ID: 41a
Topic: Hydrology and Hydraulics, Expert Opinion Evaluation Panel

Author: Medopera Subject: Highlight Date: 3/31/2016 3:01:49 PM
Comment ID: 41b
Topic: Federal Executive Order 11988, Violation

From: [Al & Pat](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Monday, October 26, 2015 3:39:23 PM

Commenter 41 cont.

Summary of Comments on Alan&PatriciaOtto_Commenter41c-d_Email2.pdf

Page: 1

October 26, 2015

The burden of the project is being inflicted on the 20,000 acres that do not flood now without the project but will flood with the project. These acres are both inside and outside of the red line (the boundaries of the project). The project will protect the group of people represented by the Diversion Authority while they are pushing the burden of flooding and carrying flood insurance onto people who currently live in areas that do not flood. This is not responsible behavior.

Page 2-15 2.1.1.15 paragraph 3

"Any additional flood inundation within the FEMA revision reach that is outside of the staging area would be mapped as floodplain in order to portray the elevated flood risk outside of the required staging area."

Again, the burden of the project is being inflicted on the people and the land that does not flood now without the project but that will flood with the project.

As a general question, How will there be access to the entire area by ambulances during flood events? With the smaller roads closed and allowed to flood, how will people have access to emergence medical care during flood events?

Submitted by,

Alan & Patricia Otto
Box 35
Christine, ND 58015
chola@wtc-mail.net

Author: Medopera Subject: Text Box Date: 11/6/2015 10:11:32 AM -06'00'
Commenter 41 cont.

Author: Medopera Subject: Highlight Date: 3/31/2016 3:03:17 PM
Comment ID: 41c
Topic: Socioeconomics, Project is Immoral
Unsubstantive

Author: Medopera Subject: Highlight Date: 3/31/2016 3:03:38 PM
Comment ID: 41d
Topic: Socioeconomics, Emergency Access and Services

From: [Al & Pat](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Monday, October 26, 2015 3:47:09 PM

Commenter 41 cont.

Summary of Comments on Alan&PatriciaOtto_Commenter41e_Email3.pdf

Page: 1

October 26, 2015

In the mid to late 1960's there was a project to clean the debris from local rivers to aid in water flow. The benefits of this effort were realized for many years. This could be done again to supplement other efforts to help in flood fighting efforts. Without the debris which catches and holds back ice that causes flood waters to back up and flood areas there will be better water flows year round. I realize that a certain amount of dead trees, etc need to left in the river as habitat for fish but the excess can be removed as well as other man made debris that should not be in the river in the first place.

A big part of the problem in the spring is caused by the buildup of ice that causes flooding to spread out over a larger area.

Submitted by,

Alan & Patricia Otto
Box 35
Christine, ND 58015

chola@wtc-mail.net

Author: Medopera Subject: Text Box Date: 11/6/2015 10:57:48 AM -06'00'
Commenter 41 cont.

Author: Medopera Subject: Highlight Date: 3/31/2016 3:05:00 PM
Comment ID: 41e
Topic: Alternatives, Alternative: Dredge the River

From: [Al & Pat](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Monday, October 26, 2015 3:52:14 PM

Commenter 41 cont.

Summary of Comments on Alan&PatriciaOtto_Commenter41f-g_Email4.pdf

Page: 1

October 25, 2015

How will organic farms be protected? There are a good number of organic acres that are located within the staging area. Uncontrolled flood waters will contaminate organic acres so that they are no longer considered organic.

How will mitigation for farmers be handled? The increased costs to transport equipment and grain from farm land to new location of the base of operations if current location cannot be adequately protected from flooding is a cost that needs to be mitigated into perpetuity. The costs will be there, but the increased income to offset those costs will not be there unless the Diversion Authority (project sponsor) is made to be responsible for this.

Submitted by,

Alan & Patricia Otto
Box 35
Christine, ND 58015

chola@wtc-mail.net

Author: Medopera Subject: Text Box Date: 11/6/2015 10:51:54 AM -06'00'
Commenter 41 cont.

Author: Medopera Subject: Highlight Date: 3/31/2016 3:06:21 PM
Comment ID: 41f
Topic: Socioeconomics, Organic Farms

Author: Medopera Subject: Highlight Date: 3/31/2016 3:06:49 PM
Comment ID: 41g
Topic: Socioeconomics, Agriculture Mitigation

From: [Al & Pat](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Tuesday, October 27, 2015 1:08:24 PM

Commenter 41 cont.

Summary of Comments on Alan&PatriciaOtto_Commenter41h_Email5.pdf

Page: 1

October 27, 2015

Flood stage is set at 18 ft when low lying park areas and lower parts of golf courses are flooded. That level is self-inflicted as recreational development has been allowed and even encouraged in low lying areas. A more realistic flood stage level is considerably higher when waters start affecting actual structures. With the lower level, it makes the appearance of frequent flooding when many instances the water only impacts park areas and lower areas of golf courses but no actual living structures.

Alan & Patricia Otto
Box 35
Christine, ND 58015

chola@wtc-mail.net

Author: Medopera Subject: Text Box Date: 11/6/2015 10:58:41 AM -06'00'
Commenter 41 cont.

Author: Medopera Subject: Highlight Date: 3/31/2016 3:08:09 PM
Comment ID: 41h
Topic: FEMA, Flood Stage Level

From: [Al & Pat](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Tuesday, October 27, 2015 1:10:50 PM

Commenter 41 cont.

Summary of Comments on Alan&PatriciaOtto_Commenter41i-j_Email6.pdf

Page: 1

October 27, 2015

Failure of a Class 1 dam and/or the diversion banks will create catastrophic and sudden consequences. The financial losses and potential loss of lives with the project will be great than under current conditions as the flood plain is being developed instead of being left to protect the city by storing water during flood events.

Please do NOT permit this Class 1 dam.

Alan and Patricia Otto
Box 35
Christine, ND 58015

chola@wtc-mail.net

Author: Medopera Subject: Text Box Date: 11/6/2015 11:01:21 AM -06'00'
Commenter 41 cont.

Author: Medopera Subject: Highlight Date: 3/31/2016 3:11:22 PM
Comment ID: 41i
Topic: Dam Safety, Risk and Loss of Life Concerns

Author: Medopera Subject: Highlight Date: 3/31/2016 3:12:14 PM
Comment ID: 41j
Topic: Permitting Approval, Deny the Permit

From: [Al & Pat](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Tuesday, October 27, 2015 1:13:54 PM

October 27, 2015

Recreation features 2.1.1.16

The North Dakota Legislature has decided to not provide state funds for this feature.

Utilizing the diversion for recreational purposes will subject it to unnecessary wear and tear that could contribute to failure of the banks. Recreation could make it unable to be utilized to full capacity so that more water will have to be stored in the storage area and potentially outside of the official storage area.

Alan and Patricia Otto
Box 35
Christine, ND 58015

chola@wtc-mail.net

Commenter 41 cont.

Summary of Comments on Alan&PatriciaOtto_Commenter41k-l_Email7.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/6/2015 11:09:11 AM -06'00'
Commenter 41 cont.

Author: Medopera Subject: Highlight Date: 3/31/2016 3:13:29 PM
Comment ID: 41k
Topic: Recreational Features, Funding

Author: Medopera Subject: Highlight Date: 3/31/2016 3:13:42 PM
Comment ID: 41l
Topic: Recreational Features, Maintenance Concerns

From: [Al & Pat](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Tuesday, October 27, 2015 1:17:19 PM

Commenter 41 cont.

Summary of Comments on Alan&PatriciaOtto_Commenter41m-n_Email8.pdf

Page: 1

October 27, 2015

Evacuation plan and medical emergencies

No details of an evacuation plan have been released. Saying that it will be developed in the future does not inform the public. How will medical emergencies for people outside of the diversion be handled with many roads being allowed to flood during an event? Flooding the roads will also degrade them so that travel on the roads after an event will be difficult. This will further increase the amount of time that people outside of the diversion will be adversely impacted by the operation of the dam and diversion.

Alan and Patricia Otto
Box 35
Christine, ND 58015

chola@wtc-mail.net

Author: Medopera Subject: Text Box Date: 11/6/2015 11:20:58 AM -06'00'
Commenter 41 cont.

Author: Medopera Subject: Highlight Date: 3/31/2016 3:15:05 PM
Comment ID: 41m
Topic: Socioeconomics, Emergency Access and Services

Author: Medopera Subject: Highlight Date: 4/19/2016 2:57:42 PM
Comment ID: 41n
Topic: Infrastructure and Public Services, Flood Impacts to Roadways, Ditches and Culverts

From: [Al & Pat](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Tuesday, October 27, 2015 1:31:11 PM

Commenter 41 cont.

Summary of Comments on Alan&PatriciaOtto_Commenter41o_Email9.pdf

Page: 1

October 27, 2015

Location of the dam on the Red River – Will the dam structure be located on the North Dakota or Minnesota side? Will the new channel go on the North Dakota or Minnesota side? With North Dakota receiving most of the benefit of this project they should incur most of the costs, therefore North Dakota land should be sacrificed for the position of the dam and the new river channel.

First choice is – do NOT permit this High Hazard Class 1 dam. Second choice is – if you must permit it, then have the dam and new river channel located in North Dakota.

Alan and Patricia Otto
Box 35
Christine, ND 58015

chola@wtc-mail.net

Author: Medopera Subject: Text Box Date: 11/6/2015 11:30:59 AM -06'00'
Commenter 41 cont.

Author: Medopera Subject: Highlight Date: 4/20/2016 3:48:20 PM
Comment ID: 41o
Topic: Proposed Project, Project Description

From: [Al & Pat](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Tuesday, October 27, 2015 1:33:50 PM

Commenter 41 cont.

Summary of Comments on Alan&PatriciaOtto_Commenter41p_Email10.pdf

Page: 1

October 27, 2015

Sedimentation left behind after a flood event utilizing the dam & diversion.

Who will be responsible for the costs associated with cleaning sediment off of roads, out of ditches, off private property, including cemeteries, after flood events large enough to cause the use of the diversion and therefore the staging area? Will there be funds put in an escrow account to cover these expenses? The fine sediment is very difficult to clean off structures and can kill vegetation which then needs to be replaced – grasses, shrubs, flowers and potentially trees.

Alan and Patricia Otto
Box 35
Christine, ND 58015

chola@wtc-mail.net

Author: Medopera Subject: Text Box Date: 11/6/2015 11:35:56 AM -06'00'
Commenter 41 cont.

Author: Medopera Subject: Highlight Date: 4/19/2016 2:58:50 PM
Comment ID: 41p
Topic: Infrastructure and Public Services, Flood Impacts to Roadways, Ditches and Culverts

From: [Al & Pat](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Tuesday, October 27, 2015 1:37:25 PM

Commenter 41 cont.

Summary of Comments on Alan&PatriciaOtto_Commenter41_Email11.pdf

Page: 1

October 27, 2015

Author: Medopera Subject: Text Box Date: 11/6/2015 11:39:08 AM -06'00'
Commenter 41 cont.

Effect on Wildlife during an event.

Author: Medopera Subject: Highlight Date: 4/19/2016 2:51:41 PM
Comment ID: 41q
Topic: Wildlife, Disposal of flood-related dead animals

How will any wildlife that are killed during a flood event be properly disposed of? This needs to be insured to protect against spread of diseases to people and other animals.

Author: Medopera Subject: Highlight Date: 4/19/2016 2:51:47 PM
Comment ID: 41r
Topic: Wildlife, Flood-displaced wildlife impacts

Who will cover the costs incurred by damage to plants on private property by wildlife that are displaced due to flooding events?

Alan and Patricia Otto
Box 35
Christine, ND 58015

chola@wtc-mail.net

From: [Al & Pat](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Tuesday, October 27, 2015 1:37:25 PM

Commenter 41 cont.

Summary of Comments on Alan&PatriciaOtto_Commenter41_Email11.pdf

Page: 1

October 27, 2015

Author: Medopera Subject: Text Box Date: 11/6/2015 11:39:08 AM -06'00'
Commenter 41 cont.

Effect on Wildlife during an event.

Author: Medopera Subject: Highlight Date: 4/19/2016 2:51:41 PM
Comment ID: 41q
Topic: Wildlife, Disposal of flood-related dead animals

How will any wildlife that are killed during a flood event be properly disposed of? This needs to be insured to protect against spread of diseases to people and other animals.

Author: Medopera Subject: Highlight Date: 4/19/2016 2:51:47 PM
Comment ID: 41r
Topic: Wildlife, Flood-displaced wildlife impacts

Who will cover the costs incurred by damage to plants on private property by wildlife that are displaced due to flooding events?

Alan and Patricia Otto
Box 35
Christine, ND 58015

chola@wtc-mail.net

From: [Al & Pat](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Tuesday, October 27, 2015 5:34:29 PM

Commenter 41 cont.

Summary of Comments on Alan&PatriciaOtto_Commenter41_Email12.pdf

Page: 1

October 27, 2015

Will there be areas of standing water, particularly from abandoned portions of river channels, that will add to the breeding of mosquitoes? While a nuisance they can also carry diseases and infect the people that they bite.

Alan & Patricia Otto
Box 35
Christine, ND 58015

chola@wtc-mail.net

Author: Medopera Subject: Text Box Date: 11/6/2015 11:44:55 AM -06'00'
Commenter 41 cont.

Author: Medopera Subject: Highlight Date: 4/19/2016 2:54:14 PM
Comment ID: 41s
Topic: Wildlife, Potential risk from mosquito borne disease.

From: [Al & Pat](#)
To: [*Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Tuesday, October 27, 2015 5:37:01 PM

Commenter 41 cont.

Summary of Comments on Alan&PatriciaOtto_Commenter41_Email13.pdf

Page: 1

October 27, 2015

RE: 3.15.3.11

Do the numbers take into account the increased population that will live in the current flood plain that will be developed as the project is being built and afterwards? There is currently an increased rate of development of the floodplain as the project is being analyzed and is moving forward. Therefore, the number of potential lives that will be lost due to a dam failure is increasing at an alarming rate.

Alan & Patricia Otto
Box 35
Christine, ND 58015

chola@wtc-mail.net

Author: Medopera Subject: Text Box Date: 11/6/2015 11:51:23 AM -06'00'
Commenter 41 cont.

Author: Medopera Subject: Highlight Date: 4/19/2016 2:55:10 PM
Comment ID: 41t
Topic: Dam Safety, Risk Concern

From: [Al & Pat](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Tuesday, October 27, 2015 6:01:32 PM

October 27, 2015

Farm crop insurance

Federal crop insurance will not cover losses due to a man-made flood event. There have been two agricultural studies conducted for the Diversion Authority as they realize that they should insure the cropland that will be impacted by this project. The first study did not provide the results that were desired by the Diversion Authority so upstream observers were denied copies of the first study. A second study was commissioned utilizing inflated flood levels the U.S. Army Corps of Engineers has used to justify the project. There were assumptions made that land would be inundated by river levels that have never been seen before. It also assumes that culverts and drains would be ice free and snow free during the water storage process. The results of the study gave very low estimated damages per acre as the damages were averaged over all years, whether or not the land was flooded. While the cautionary note that "Study limitations and omissions of scope render these annualized values inappropriate for policy or financial use" in regards to the September 28th presentation of the Initial Assessment of the Agricultural Risk of Temporary Water Storage for the FM Diversion, the Diversion Authority has been touting the values presented in the study as good news that they will not have the large expenses that they had feared.

Another study needs to be conducted by an unbiased source that utilizes realistic water levels and is then also utilized by an unbiased group that won't be responsible for the financial consequences. The current studies either did not give the Diversion Authority the low costs that they wanted or they did but with the caveat that "Study limitations and omissions of scope render these annualized values inappropriate for policy or financial use".

Alan and Patricia Otto
Box 35
Christine, ND 58015

chola@wtc-mail.net

Commenter 41 cont.

Summary of Comments on Alan&PatriciaOtto_Commenter41u-v_Email14.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/6/2015 11:54:04 AM -06'00'
Commenter 41 cont.

Author: Medopera Subject: Highlight Date: 4/20/2016 4:35:53 PM
Comment ID: 41v
Topic: Socioeconomics, NDSU Agriculture Impact Study

Author: Medopera Subject: Highlight Date: 4/20/2016 4:35:41 PM
Comment ID: 41u
Topic: Socioeconomics, Agriculture Mitigation Adequacy

From: [Alan Roebke](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Red River Wildlife Area Proposal as seen on Informed TV
Date: Tuesday, October 27, 2015 2:38:15 PM

Commenter 42

Summary of Comments on AlanRoebke_Commenter42a_Email1.pdf

Page: 1

https://youtu.be/_hmiXVeiyg

View a new Wildlife Area Proposal using a mile wide corridor along the Red River of the north from Fargo ND to Climax MN. All seen on informed TV off the Fargo ND TV tower and the TV towers at Alexandria and Willmar MN. An area about the size of Itasca State Park, headwaters of the Mississippi River in MN. https://youtu.be/_hmiXVeiyg

Author: Medopera Subject: Text Box Date: 11/9/2015 12:34:56 PM -06'00'

Commenter 42

Author: Medopera Subject: Highlight Date: 4/20/2016 9:32:54 AM
Comment ID: 42a
Topic: Mitigation, Wildlife Corridor Along Red River

Alan Roebke | informedTV.com

d: 320.762.3737

c: 320.304.1382

Al@informedTV.com

www.informedTV.com

From: [Amber Nefzger](#)
To: ["Review, Environmental \(DNR\)"](#)
Cc: [Jly@eissolutions.com](#)
Subject: Fargo-Moorhead Risk Management Project DEIS
Date: Monday, October 26, 2015 2:53:58 PM

Commenter 43

Summary of Comments on AmberNefzger_Commenter43a-b_Email1.pdf

Page: 1

October 23, 2015

Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road
St. Paul, Minnesota 55155-4025 Email: environmentalrev.dnr@state.mn.us

REF: Fargo-Moorhead Flood Risk Management Project

Dear Ms. Townley, and project members,

I am writing to ask the Minnesota Department of Natural Resources to support, and ultimately approve, the Fargo-Moorhead Flood Risk Management Project. Specifically I am asking that you approve the proposed alternative that has already been granted federal approval.

Both the Army Corps of Engineers and the DNR have fully analyzed this project, and found it to be compliant with all applicable standards, to have little to no impact on environmental resources, and to fit with the stated purposes of the project – namely to provide protection against flood risk, damage and control costs associated with flooding from the several rivers that streak through the region. This project is designed to provide 100 year flood protection or greater.

This is a very valid purpose, and the need for such a project in this region is severe. We have very little natural high ground to help contain waters that rise above the banks of the several local rivers, including the Red River. Sandbagging and other temporary emergency measure have worked marginally well in the past, but are not reliable methods of protection, and come with their own set of challenges – what to do with all of the leftover sandbags, for instance. Also, sandbagging can be an expensive solution in the longer run; sandbags are not usable after a freeze, and therefore, in this area, need to be replaced often. These types of standard emergency tactics are short-term band-aids that fail to even provide reliable 50-year protection. Clearly a more permanent system in order.

This proposed project offers that protection. It will help Minnesotans who live in Moorhead, or who own property or businesses in Fargo, or who rely on the services of the metro area to avoid extreme interruptions or financial ruin in the event of a major flood.

This is the best plan I have seen for providing such protection. Given that the federal government has already signed off on it, after a thorough review, I would recommend that the State of Minnesota do the same.

Signed,

Amber R Nefzger, Realtor®

4342 15th Ave. S.

Ste 105

Fargo, ND 58103

Direct: 701-799-4104

www.ndmnhomes.com



Author: Medopera Subject: Text Box Date: 11/9/2015 12:45:41 PM -06'00'
Commenter 43

Author: Medopera Subject: Highlight Date: 4/1/2016 11:18:40 AM
Comment ID: 43a
Topic: Permitting Approval, Approve the Project
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/1/2016 11:19:06 AM
Comment ID: 43b
Topic: Proposed Project, General Support
Unsubstantive

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www.DesignerHomesFM.com
www.LUXECustomHomesFM.com

This page contains no comments

From: [Arden Breimeier](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: FM Flood Risk Management Project DEIS
Date: Tuesday, October 20, 2015 1:28:19 PM

Commenter 44

Summary of Comments on ArdenBreimeier_Commenter44a_Email1.pdf

Page: 1

October 20, 2015

Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Rd
St. Paul, MN 55155-4025

Author: Medopera Subject: Text Box Date: 11/9/2015 12:56:52 PM -06'00'
Commenter 44

Author: Medopera Subject: Highlight Date: 4/1/2016 11:21:34 AM
Comment ID: 44a
Topic: Proposed Project, Plan B

Dear Ms. Townley:

The recently completed MDNR Draft EIS (DEIS) examines the proposed FM Diversion channel (The Project) under the Diversion Authority's proposed route and an alternate channel route 1.5 miles to the north of the proposed southern alignment. Both of these scenarios assume the completion of the entire length of the diversion channel of approximately 30 miles with an additional 6 miles of connecting channel. The study assumes construction of the entire project and its final operation as a true diversion channel system.

What the DEIS does not appear to examine is the alternative plan that Fargo's late Mayor Dennis Walaker referred to as 'Plan B'. He spoke of this project variant in a television interview and it was again alluded to in an article in the Fargo Forum (July 30, 2013) by Eric Burgess: **Flood Diversion Project has 'Plan B'**. Oxbow's mayor also discussed it during a city meeting held in 2013.

Plan B is based upon the assumption that federal funding for the project will be slow in coming. Rather than hold up the project waiting for federal funds, the plan assumes construction and operation of phases one (northern reach) and two (southern reach) of the project with phase three (connecting link between one and two) held and made dependent upon receipt of federal funding. If DC delivers its share and sufficient local funding streams are still available, construction of phase three can begin.

The DEIS doesn't examine implications of the operation, short term or long term, of the Plan B project scenario. Water flows from phase one (northern reach) are unregulated so will flow downstream unrestrained. In order to mitigate for downstream impacts, water will need to accumulate deeper and be held longer in the staging area, a major component of phase two south of Fargo. Flows through Fargo/Moorhead will need to be curtailed until the flows from the Sheyenne, Maple, Rush and Lower Rush rivers subside, at which point flows through Fargo/Moorhead can be increased, thus draining down the staging area reservoir.

With the full project, the dam is expected to operate every ten years with staging area storage expected to last 10.5 days. It has been suggested that a Plan B project would perhaps double the time of storage in the staging area. What are the implications of

doubling the storage duration? Is such project operation acceptable to the MDNR and the State of Minnesota?

Page: 2

Author: Medopera Subject: Highlight Date: 11/9/2015 1:04:33 PM -06'00'
Comment ID: 44a cont.

I urge the MDNR to fully examine the implications of an operational Plan B system that utilizes two of the three project phases. Given the onerous financial requirements of this project, it takes little imagination to see circumstances evolve under which Plan B becomes Plan A over the long term. Though the Corps and the Diversion Authority both say that they intend to build the entire project, there is little motivation for them to do so if phases one and two are allowed to operate in the absence of phase three. After all, those two phases alone accomplish the vast majority of the Diversion Authority's goals of flood protection and opening expansion area within the existing flood plain.

Thank you for your consideration of this matter.

Arden Breimeier
614 Evergreen Cir
Oxbow, ND 58047

From: [Arden Breimeier](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo Moorhead Flood Risk Management Project DEIS
Date: Tuesday, October 27, 2015 12:24:08 PM

Commenter 44 cont.

Summary of Comments on ArdenBreimeier_Commenter44b_Email2.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/9/2015 1:06:23 PM -06'00'
Commenter 44 cont.

Author: Medopera Subject: Highlight Date: 4/19/2016 1:04:00 PM
Comment ID: 44b
Topic: Hydrology and Hydraulics, Expert Opinion Evaluation Panel

October 26, 2015

Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Rd
St. Paul, MN 55155-4025

RE: Fargo Moorhead Flood Risk Management Project DEIS

Subject: USACE EOE

The premise of 'need' as expressed by the FM Diversion Authority and as examined within the MDNR EIS process is suspect. The USACE EOE and POR flood elevation numbers are a construct designed primarily to advance the project, not to represent true and realistic flood risk.

When the idea of the LPP was first proposed, an immediate problem arose in project justification due to a poor outcome of the benefit/cost ratio analysis. In order to have any hope of receiving federal project approval and funding, this ratio needed to be dramatically improved.

The answer lay in the 'Executive Opinion Elicitation' (EOE) process. The USACE assembled a group of 'experts' who, over a period of approximately 48 hours, concluded that FEMA's 100-year flood elevation was low to the tune of four feet. With the new USACE EOE numbers, the benefit/cost ratio increased to approximately 1.74 to 1.

Are the USACE EOE and POR numbers driven by solid hydrologic analysis or are they politically driven in order to advance the diversion project? Given that the 2009 flood is the largest flood on record, what is the basis for the claim that it was smaller than a 100-year event at Fargo? This does not pass the test of logic and reason.

The USACE, through the EOE process, makes its case for a 'new normal', the notion that the future will bring more precipitation with ever larger floods. This is pure conjecture and is not supported by an analysis of the historical precipitation record for Fargo. From 1881 to 2014, there have been cycles of both wet and dry periods, with precipitation over the entire period averaging 21.41 inches per year. The USACE breaks the record into two smaller periods in order to make its case for a 'wet period' from 1942 to present but even that manipulation produces only a minimal average annual precipitation increase. That difference is driven in large part by the removal of the 1930s from the period of analysis ('wet period').

With regard to flood frequency at Fargo, a big deal is made every time they reach flood stage. Fargo's 'flood stage' of 18-feet is beyond ridiculous as it marks the point where water reaches Elm Street, a road built at the bottom of a river channel. It's an utterly meaningless number.

So, does the case made for 'project need' proceed from a false premise? Has the MDNR fully vetted the USACE EOE analysis? As topography is pretty much a constant, what is the source of the new precipitation that is to drive the projected increase in flood flows? Do the findings of the MDNR EIS process corroborate the USACE EOE numbers? Or are they assumed to be accurate based upon the exhaustive 48-hour study done by the EOE 'experts'?

No project of such size and scope, with such extensive impacts, should proceed from a false premise.

Thank you.

Arden Breimeier
614 Evergreen Circle
Oxbow, ND

Page: 2

Author: Medopera Subject: Highlight Date: 11/9/2015 1:11:30 PM -06'00'
Comment ID: 44b cont.

From: [Arden Breimeier](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: RE: Fargo Moorhead Flood Risk Management Project DEIS
Date: Tuesday, October 27, 2015 4:55:13 PM
Attachments: [How far south should Fargo grow.docx](#)

Commenter 44 cont.

Summary of Comments on ArdenBreimeier_Commenter44c_Email3.pdf

Page: 1

October 27, 2015

Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Rd
St. Paul, MN 55155-4025

RE: Fargo Moorhead Flood Risk Management Project DEIS

Subject: Project Purpose

The MDNR EIS examines the 'purpose' of the FM Diversion project but only to the extent of answering the question, "Does the proposed project meet the proposer's purpose?" The question of whether the purpose is appropriate or acceptable is to be left to the permitting process. But the motives of the proposer in defining the project's 'purpose and need' must be considered throughout the process.

If the purpose of the proposed project was as simple as protecting the existing footprint of Fargo, then the Corps' recommended project through Minnesota, the NED plan, would have been acceptable to the FM Diversion Authority and local interests. But the locals objected to this plan based upon the premise that it (the NED) only addressed the flooding of the Red River. Their argument was that a diversion plan needed to protect more area, that it needed to deal with water issues over and above those of the Red River, including the Sheyenne, Maple, Rush and Lower Rush rivers. This project became known as the Locally Preferred Plan, or LPP.

The original route of the diversion channel under the LPP had a southern alignment that laid directly atop the boundary lines between the Fargo and Kindred School districts. The channel inlet for this line was only about a mile north of the communities of Hickson, Bakke and Oxbow. When challenged on the rationale for the selection of this southern channel alignment, the USACE repeatedly claimed that it was the 'best technical line', that the decision was based upon engineering analysis. Within the FEIS, in the 'Value Engineering' portion of the study (Appendix O), it clearly states that the selection site for the inlet was a 'local decision', not one based upon engineering analysis. It states, "**Their reasoning for the location of the inlet being further south than the MN alignment was to accommodate the city of Fargo's current future plans for development...**"

A primary driver behind the LPP is drainage of the floodplain for development purposes. This is in clear and direct violation of Executive Order 11988 (EO 11988), yet the USACE accepted Fargo's claim of 'future growth area' as reason enough to disregard it. In visiting with a former USACE employee who was working for the PMC a few years back, I was told that EO 11988 is "as malleable as Gumby" in the eyes of the USACE: it means no more and no less than what they need it to mean at any given time. If you work for the Corps, when you arise each day, it is probably a job

Author: Medopera Subject: Text Box Date: 11/9/2015 1:12:38 PM -06'00'
Commenter 44 cont.

Author: Date: Indeterminate

Author: Medopera Subject: Highlight Date: 4/20/2016 11:27:27 AM
Comment ID: 44c
Topic: Proposed Project Purpose and Need, Questions Project Purpose

requirement to believe six impossible things before breakfast.

Page: 2

Evidence of future growth area as a major driver in the push behind the LPP reveals itself vividly at times, mostly through the activism of local Realtor, Home Builder and Chamber organizations. A few years ago, when the project encountered significant political headwinds in Bismarck, it was busloads of members from these organizations arriving en masse at the capitol, filling its corridors, that turned the tide back in the project's favor.

Author: Medopera Subject: Highlight Date: 11/9/2015 1:38:35 PM -06'00'
Comment ID: 44c cont.

With the release of the MDNR EIS and its examination of an alternative route 1.5 miles north of the proposed southern alignment, this collective group has once again sounded the alarm, mobilizing its members to send all manner of pro-project communication to the MDNR. The Realtors, Builders and Chamber all become very animated by any threat to the ongoing sprawl into the floodplain that is Fargo. It speaks volumes to 'economic' motivation if these folks represent the bulk of the 'pro-project' communication you receive.

Recent debate within Fargo city government about how far Fargo should grow south into the floodplain recently hit the pages of the Fargo Forum (attached article "How far south should Fargo Grow? Costs may require limits"). Based upon this article alone, it would appear that the northern channel alignment still leaves Fargo ample room for sprawl. Combined with new development and redevelopment within existing city limits, also referred to as 'infill', it seems that the three proponent groups listed above have little cause for concern. There is, too, ample room on high ground to grow east...into Minnesota.

The MDNR EIS suggests that the northern channel alignment will cost more than the proposed alignment. Please note that if the MDNR estimate numbers are built upon a USACE foundation, they are suspect. The USACE doesn't have a stellar record when it comes to being close with its project-cost guesswork. The Wahpeton/Breckenridge and Roseau projects have each gone past the 200% of estimate values and the simple Oxbow/Hickson/Bakke ring dike appears to be headed for the same fate. Nowhere has the USACE suggested that a 'purpose' of this project is to come in on budget so \$1.8 billion is quite unlikely. An estimated cost of \$4 billion is quite probably going to be closer and may yet be low.

It is an interesting process that permits the project sponsor to define the risk (EOE drives flood plain and NFIP requirement), define the solution (LPP over NED), under-state the cost (\$1.78 billion, static for 5-yrs) and stir the sense of urgency (bogus 2013 flood risk hype in legislative year). The 'project purpose' has been represented as flood protection for Fargo and Moorhead with the side benefit of newly protected flood plain within which the City of Fargo can grow unfettered. Given the initial delays in initiating the process of building through-town protection, the completion of which degrades the 'need' argument as it relates to the diversion channel, it can easily enough be argued that the priorities of 'project purpose' are the inverse of what has been represented.

It is important that the 'project purpose' represents the needs of the Fargo that is, not the Fargo that wants to be. The northern alignment retains more of the natural flood plain and at least gives a nod to Executive Order 11988. On a project of such size and scope, the cost of preserving this natural floodplain area is minimal.

Thank you.

Arden Breimeier
614 Evergreen Cir
Oxbow, ND

This page contains no comments

This page contains no comments

How far south should Fargo grow? Costs may require limits

By [Tu-Uyen Tran](#) Today at 6:00 a.m. October 26, 2015

RURAL FARGO – Surrounded by miles of farmland, an industrial park is under construction where Interstate 29 meets 100th Avenue South.

From here, it's about two and a half miles to the closest developed part of Fargo and roughly the same distance to the closest developed part of Horace.

Paces Lodging Corp., the developer of the Commerce on I-29 project, told city leaders more than a year ago that there's a demand for affordable industrial space that simply can't be met within city limits where costs are higher.

Mike Williams was the only city commissioner who argued against that logic at the time. He said it gets pretty expensive for taxpayers if developers are allowed to skip over industrial-zoned land within city limits where, at the behest of other developers, the city has already spent a lot of money on streets and sewers.

While Commerce on I-29 is an extreme example — few other developers have pushed so far south within Fargo's zoning jurisdiction and outside city limits — it does illustrate the economic drive **that's led the city to expand its footprint by 31 percent since 2000.**

It also illustrates the dilemma Fargo faces in paying for that growth, which includes not just building new infrastructure but providing services such as snow plowing, and police and fire protection in new areas.

Mayor Tim Mahoney said it's important to not go against market forces, which has led to successful neighborhoods such as Osgood in the city's southwest. But, he said, city commissioners are beginning to debate how the city grows and Williams isn't wrong about the need for efficiency. "Our challenge will be where do we go from here. Are we going to 76th (Avenue South)? Are we going to 100th?"

This page contains no comments

Fargo growth tiers

Fargo continues to grow south and, given current growth rates, city consultants anticipate development as far as 100th Avenue South to begin over the next few years.



This page contains no comments

Setting goals

The debate isn't entirely about how far south the city should grow but how dense.

Advocates of high-density growth such as Williams and Doug Burgum, a major downtown developer, say the city shouldn't expand into new areas until existing areas are built up. Within city limits, streets and sewers already exist so the city wouldn't have to finance new infrastructure. Building up in existing areas, a practice called infill development, also increases property values in those areas, allowing the city to better recoup the cost of services through property taxes.

There is actually broad agreement within City Hall and in the public that high-density growth is preferred to the kind of leapfrog development represented by Commerce on I-29. The city's growth plan calls for more residents per acre while the Go 2030 plan, developed with the input of residents, calls for more infill development.

In 1950, there were 10.7 Fargo residents for every acre. In the decades since, the city's physical size has grown faster than its population. There are now 3.7 residents per acre. So growing farther south without a huge increase in population would contradict the city's growth goals.

And the city does have leverage allowing it to work towards those goals.

We're at a point where we're going to have thoughtful discussion about how much further south we're going to go.

– Tim Mahoney, mayor of Fargo

The cheapest road, a two-lane asphalt road, costs an average of \$2.3 million a mile and underground pipes cost \$1.8 million a mile, not including rebuilding the road on top, according to the Engineering Department. Given those costs, the city's willingness to provide financing can make or break projects. Typically, the city doesn't require landowners to pay special assessments to cover its costs for 10 years or until the property is developed, whichever happens first.

The city also controls zoning as far as four miles outside city limits in areas where it expects to grow. That gives it a say over the kinds of buildings constructed and how many people are allowed to live in them.

This page contains no comments

While Commerce on I-29, located outside of Fargo, is getting infrastructure and services from other local governments it still had to go to the city for a zoning change. Most commissioners may have been persuaded because the city didn't have to pay for anything.

Poll: [How far south do you think Fargo should limit growth in the next 10 years?](#)

Market forces

Mahoney, who doesn't disagree with the general goal of high-density growth, cautioned against contradicting the market.

The Osgood neighborhood, which came about in the early 2000s, is filling in rapidly with high-value properties and is dense enough that residents can walk or bike to stores, the mayor said. Had the development come before the commission five years ago, when high-density growth became more popular, he said, he doubted city leaders would've approved of growth so far south.

But not all developments work out as expected.

Burgum, who was a software mogul before he became a downtown developer, said when he built what's now the Microsoft campus down south he had a lot of support from city leaders who thought it would trigger new developments.

Fifteen years later, there are still empty fields north and south of the campus, which lies along Interstate 29 between an extension of 44th Avenue South and 47th Avenue South.

How far south?

Within Fargo proper there is now close to 49 square miles, with developed areas stretching as far south as 76th Avenue South.

Williams said the city should offer incentives for growth within city limits because that's more efficient and allow new growth no farther than 64th Avenue South, at least until the flood diversion is done. Properties farther south are just too vulnerable, he said.

City Planner Jim Gilmour used the same logic when he suggested going as far as 76th Avenue South.

Between the present city limit and 76th Avenue there is around 4 square miles still outside city limits, which Gilmour said is enough for another 10 to 15 years of growth.

Commissioners generally agree that any new growth should be adjacent to existing infrastructure but they have yet to agree to a line in the soil, according to Mahoney. "We're at a point where we're going to have thoughtful discussion about how much further south we're going to go."

They'll have to decide on a policy soon.

Planning consultants told them earlier this year that the city has grown faster than planners expected. Given the current trajectory, they said that, in 15 years, the area roughly between 76th and 88th would be 60 percent developed and the area between 88th and 100th would be 10 percent developed. Currently, those areas are less than 5 percent developed. The cost of streets to serve the new growth is estimated at nearly \$260 million with Fargo bearing most of the brunt.

This page contains no comments

From: [Andrea Christianson](#) on behalf of [Austin Morris](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Risk Management Project DEIS
Date: Tuesday, October 27, 2015 10:09:50 AM

Commenter 45

Summary of Comments on AustinMorris&BenMeland_Commenter45a_Email1.pdf

Page: 1

Thank you and your entire unit for the fine work you do in safeguarding Minnesota's environment and natural resources. This work has again been reflected in your accurate evaluation of the Fargo-Moorhead Flood Risk Management Project. I now ask that you follow up on your good work by approving the proposed project, just as the U.S. Army Corps of Engineers has. This project will provide permanent, 100 year flood protection for the region centered on Fargo and Moorhead. Effective flood control is of particular importance in this area, with several rivers that are liable to flood each year, including the Red River, which flows directly down the middle of the metro area, and the Sheyenne, which flows through west Fargo. When these and other rivers in the area flood, the impact on the metro area can be devastating. It means property damage and losses that often accumulate into the millions, massive disruption of transportation, loss of access to vital services, and millions more dollars in clean up. At worst, they can also result in loss of life. This project has the goal of reducing these losses, and the proposed alternative is the only one that can adequately achieve this goal. Its design is more than sufficient to protect the metro area from the worst of the flood waters, and poses the least impact on existing residences. The only other alternative that even attempts to offer long term flood protection, the Northern Alignment Alternative, would impact far more structures and cost over \$80 million more. The two variations of the No Action alternative would fail to offer even 50 year protection. It is important that this project be approved and initiated as soon as possible. The project will already take around 8 years to complete, and any delay could push that date out even further, leaving the region without protection for all that time. It is also important to start the project so that the FEMA flood maps do not have to be updated. If they are, it is likely that the flood plain will rise and encompass a large number of new homes, decreasing their value and increasing the cost of insurance. This will bring severe financial hardships on dozens of families and small business owners. The U.S. Army Corps of Engineers has done a fantastic job of evaluating this proposed project and weighing its environmental risks against the benefits, to the projects favor. Your agency has done an equally fine job in your own analysis, and approval of the project is the logical next step.

Sincerely,
[Austin Morris](#) and [Ben Meland](#)
325 7th St. S.
Suite 300
Fargo, ND 58103

Author: Medopera Subject: Text Box Date: 11/9/2015 1:39:37 PM -06'00'
Commenter 45

Author: Medopera Subject: Highlight Date: 4/1/2016 11:29:25 AM
Comment ID: 45a
Topic: Permitting Approval, Approve the Project
Unsubstantive

From: [Bernard Dardis](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: FW: Fargo-Moorhead Risk Management Project DEIS
Date: Tuesday, October 20, 2015 8:23:03 AM
Attachments: [20151020072649854.pdf](#)

Commenter 46

Summary of Comments on BernardDardis_Commenter46a_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/9/2015 1:49:13 PM -06'00'
Commenter 46

Author: Date: Indeterminate

Good morning, please include this correspondence in the DNR report on the Fargo-Moorhead Risk Management Project.....Thank-you for your consideration.

Thanks,

Bernie Dardis
C.E.O.
Indigo Signworks, Inc.
1622 Main Avenue | Fargo, ND 58103
c. 701.367.2784 | p. 701.297.9696 | f. 701.297.9697
bernie.dardis@indigosignworks.com
www.indigosignworks.com

October 12, 2015

Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division
DNR
500 Lafayette Rd
St. Paul, MN 55155-4025

Email: environmentalrev.dnr@state.mn.us

Re: Fargo-Moorhead Flood Risk Management Project

Dear Ms. Townley,

I am writing to offer my support for the Fargo-Moorhead Flood Risk Management Project, and the federally authorized proposed alternative in the Draft Environmental Impact Statement. The proposed action is a well-designed project that will provide permanent 100-year flood protection to the greater Fargo-Moorhead area.

I think that both your agency and the US Army Corps of Engineers have done a good job in analyzing this project and the alternatives that were presented. Based on the accurate and complete analysis of the federally authorized alternative, I believe it should be permitted to move forward towards completion.

The purpose of, and need for, the project has been very accurately and succinctly defined by the Fargo-Moorhead Flood Diversion Authority as this: "to reduce flood risk, flood damages, and flood protection costs related to flooding in the Fargo-Moorhead metropolitan area." I do not think that anyone could have any disagreement that these are valid and critically important goals. There is a long history of flooding in the area on local streams and rivers, including the Red River and several smaller ones in the region. These rivers pass near or right through the Fargo-Moorhead Metro area, and place a great number of residences, businesses, and lives at risk, and can cause serious damage to infrastructure. The economic costs to western Minnesota residents is enormous, since not only in the Fargo-Moorhead metro area a key commercial, transport, and economic center which these folks rely on, but many Minnesotans work and own property in Fargo.

The proposed project, which has already received all of the required go-aheads from the federal government, is the only proposed option that will provide adequate protection. I think it is clear that the status quo is unacceptable, and that an area that is as prone to disastrous flooding as Fargo-Moorhead should not rely on sandbags as a protective measure. The Northern Alternative would impact a net of 60 additional homes, by moving the impoundment further north. Under this alternative, at least 274 structures would be affected, including businesses, and the historic St. Benedict's Church would be put at risk. In addition, this alternative will cost millions of dollars more to construct, and delay the project by years.

However you look at it, it is clear that the federally authorized proposal is the best option to provide permanent flood protection to this key area, and I ask that the DNR approve it without delay.

Sincerely,

Bennie C. Dastler
C.E.O.
Indigo Signworks.

Page: 2

Author: Medopera Subject: Highlight Date: 4/1/2016 11:31:06 AM
Comment ID: 46a
Topic ID: Permitting Approval, Approve the Project
Unsubstantive

From: [Beth McConnon](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo-Moorhead Flood Risk Management Project
Date: Wednesday, October 28, 2015 10:58:16 AM

Commenter 47

Beth McConnon
Representing: Self - Organic Farmer
Mailing Address: 1714 Gold Dr S Apt#205 Fargo, ND 58103
Email: bethmconnon@outlook.com

Comments on the DEIS for the proposed Fargo-Moorhead Flood Risk Management Project

I would like to begin by expressing my gratitude for the Minnesota Department of Natural Resource's work on the Draft Environmental Impact Statement for the proposed Fargo-Moorhead Flood Risk Management Project. The time and research that was put into this draft is made evident by the clarity and thoroughness of the resulting product. I am appreciative of the DNR's willingness to read and reply to public comments on its work, thank you for the opportunity to share my opinions on the DEIS.

After reviewing the DEIS, I was impressed with the depth of its studies, however, there are a few areas that I believe were left out or are causative of concern. These areas are listed and addressed below.

1. The first issue that was overlooked was the exploration of other studies that are feasible and have a lesser impact on Minnesotan land. It has been shown that there are other means of providing long term, 100+ year FEMA certifiable flood protection to the Fargo Moorhead area that have fewer detrimental impacts on the region as a whole and do not require a high hazard dam. These alternatives include, but are not limited to, the Minnesota 35K diversion (which was shown to be the least impactful and least expensive means of providing flood protection to the Fargo-Moorhead area), and basin-wide retention projects used in combination with large-scale water impoundments & drain tiling. I would urge the DNR to explore and analyze these alternatives.

2. Secondly, I am concerned about what will happen to the infrastructure of roadways within the proposed staging area. Have any studies been conducted that address the maintenance of gravel roads within or around the staging area? I would suspect that erosion is likely to occur in the event of water storage; will roads be accessible and safe to drive on for those who use them to access their homes or farmland? Will they be passable for emergency vehicles (ambulances, fire trucks, police vehicles, etc.) in the case of an emergency? Will school buses be able to drive on them? I am concerned about what will happen to county roads within the staging area not only for the safety of civilians, but also for the potential negative impacts that road erosion could have on farmland and wildlife. Please examine the possible damages to roadways, given the water levels proposed by the Fargo-Moorhead diversion project.

3. Third, I would like to bring up the issues surrounding organic agriculture in

Summary of Comments on BethMcConnon_Commenter47a-d_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/9/2015 1:56:09 PM -06'00'
Commenter 47

Author: Medopera Subject: Highlight Date: 4/1/2016 11:35:46 AM
Comment ID: 47a
Topic: Alternatives, Alternative: NED Plan for the MN 35K

Author: Medopera Subject: Highlight Date: 4/1/2016 11:36:39 AM
Comment ID: 47b
Topic: Alternatives, Alternative: DSA Plus More

Author: Medopera Subject: Highlight Date: 4/19/2016 2:59:51 PM
Comment ID: 47c
Topic: Infrastructure and Public Services, Flood Impacts to Roadways, Ditches and Culverts

Author: Medopera Subject: Highlight Date: 4/1/2016 11:37:48 AM
Comment ID: 47d
Topic: Socioeconomics, Organic Farms

association to the proposed diversion. Minnesota is a forerunner for organic agriculture in the Midwest; this is something that is commendable and recognized. Approximately 1,000 acres of certified organic farmland in Minnesota will be inundated with floodwater in the event that the proposed diversion is utilized. It is probable that certified organic land would be contaminated with floating debris, GMO seeds, and various chemical, insecticidal and fungicidal residues in this event. Will the USDA continue to grant organic certification to existing organic farmers within the staging area given these circumstances? Will crop insurance cover the loss of production in the staging area for years that it is utilized? How would the water staging area impact the valuation of farmland? How will the ecosystem be affected by long periods of inundation? I would ask that the DNR conduct a thorough analysis on the long-term affects that the proposed diversion would impose upon organic farming.

Thank you for taking the time to read my comments and for your dedication to ensuring the best outcomes for the state of Minnesota.

Respectfully,
Beth McConnon

Page: 2

Author: Medopera Subject: Highlight Date: 11/10/2015 10:02:50 AM -06'00'
Comment ID: 47d cont.

From: [Bev Marsh](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: FM Flood Risk Management Proj DEIS
Date: Saturday, October 24, 2015 10:17:07 AM

Commenter 48

Summary of Comments on BevandDeanMarsh_Commenter48a_Email1.pdf

Page: 1

To whom it may concern.

We ask the DNR to reject the Northern Alignment Alternative (NAA) in favor of the proposed, federally authorized plan. Since it has not been evaluated by the responsible federal agency, the NAA would by law require a whole new environmental review, analysis, and Environmental Impact Statement from the Corps of Engineers. There is no reason to waste time and public money and resources on doing an environmental review on this alternative, when one has already been done on the proposed project. Selecting the NAA would be an enormous waste of resources.

The main feature of the NAA would be to shift the impoundment downstream 1.5 miles, moving it north into more developed areas. In doing so, more homes will be affected. Even if a handful of homes will be spared impact by adopting the NAA over the proposed alternative, this benefit would be offset and more by the fact that as many as 60 additional homes would be impacted under the NAA than would under the proposed plan. In addition, a number of businesses, and more farmland would be affected by the NAA than by the proposed action.

The NAA would also place one of our region's most historic landmarks in jeopardy - St. Benedicts Catholic Church, the oldest Roman Catholic Church in the area. All of this for an additional price tag of \$81 million. The NAA is not worth it, and should be rejected by the DNR.

Sincerely,

Bev and Dean Marsh
11505 5th St S
Horace, ND 58047
bvmar@hotmail.com

Author: Medopera Subject: Text Box Date: 11/10/2015 10:10:20 AM -06'00'
Commenter 48

Author: Medopera Subject: Highlight Date: 4/1/2016 11:40:45 AM
Comment ID: 48a
Topic: Northern Alignment Alternative, General Opposition
Unsubstantive

From: BruceFurn@aol.com
To: [*Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Risk Management Project DEIS
Date: Thursday, October 22, 2015 3:00:59 PM

Commenter 49

Summary of Comments on BruceFurness_Commenter49a_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/10/2015 10:18:58 AM -06'00'
Commenter 49

Author: Medopera Subject: Highlight Date: 4/1/2016 11:42:14 AM
Comment ID: 49a
Topic: Proposed Project, General Support
Unsubstantive

Oct. 12th, 2015

Jill Townley, Project Manager

Environmental Policy and Review Unit
Box 25 Ecological and Water Resources Division, DNR
500 Lafayette Road
St. Paul, Minnesota, 55155-4025

Ref: Fargo-Moorhead Flood Risk Management Project DEIS

Dear Ms. Townley,

Thank you for the opportunity to weigh in on the federally authorized Fargo-Moorhead Flood Risk Management Project. I fully support this project for a number of reasons:

First, it provides permanent protection against flooding in the Fargo-Moorhead area. Due to the geography and number of rivers in the region, flooding is a real and persistent threat. The risk it poses to the local economy and safety of Minnesotans in the area is staggering. Fargo-Moorhead is a major metropolitan area, and many people in rural western Minnesota depend on it for their commercial, healthcare, transportation, and other needs. It is estimated by state officials that up to 60% of Moorhead residents work in North Dakota, most in Fargo. Many Moorhead businesses have a strong presence in Fargo. Rural residents and farmers in the region rely on the markets and transport hubs in Fargo to sell and ship their products, and to make purchases. This is an economic development issue for Moorhead, as well as a safety one.

Second, the project has already undergone a full environmental evaluation at the federal level, has been authorized by Congress, and received a favorable Record of Decision from the Army Corps of Engineers. This federal analysis was complete and thorough, and found that there would be no adverse environmental impacts. Your agency has done a superb job in looking at the federal documents, and I am sure you will agree that they are thorough and adequate to the task. Moreover, as you have correctly stated, there are no impacts from the project on vital environmental values as air quality, water supply and quality, or soil erosion.

Third, what few potential environmental impacts may occur have been anticipated and mitigated by the project designers. These include, but are not limited to, extensive monitoring of potential nesting sites and fish populations, wetlands mitigation, and compensation for cropland acquired for the construction of the diversion channel.

Fourth, I support the project because not completing it will result in a new flood mapping by FEMA, which could put the 100-year flood level higher, negatively

impacting many more homes, businesses and farms. This will drive up insurance costs, and reduce property values enormously. This project could preclude that new mapping.

Page: 2

Author: Medopera Subject: Highlight Date: 11/10/2015 10:21:39 AM -06'00'
Comment ID: 49a cont.

Lastly, this project is not merely the best of several possible alternatives. It is the only solution that provides permanent flood protection for Moorhead and the metropolitan area.

I therefore strongly urge the DNR to find in favor of the proposed alternative in the DEIS, and approve this vital flood protection project.

Yours Truly,

Bruce W. Furness
311 11th Ave S. Unit 202
Fargo, ND 58103

Have a Great Day
Bruce W. Furness

From: [Jerry Blomeke](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo Moorhead Flood Risk Management Project DEIS
Date: Tuesday, October 27, 2015 1:34:03 PM
Attachments: [DOC028.PDF](#)
Importance: High

Commenter 50

Summary of Comments on CassRuralWaterDistrict_Commenter50a_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/10/2015 10:22:39 AM -06'00'
Commenter 50

Author: Date: Indeterminate

Minnesota Department of Natural resources:

I have attached our comments on the referenced DEIS.

Sincerely,

Jerry Blomeke
General Manager
Cass Rural Water District
(701) 428-3139
(218) 790-1299 Cell

 Please consider the environment before printing this email.



Cass Rural Water Users District

BOX 98 • 131 MAPLE STREET
KINDRED, NORTH DAKOTA 58051
PHONE: 701-428-3139 • TOLL FREE: 800-922-2798
FAX: 701-428-3130
www.cassruralwater.com

Page: 2

Author: Medopera Subject: Highlight Date: 4/1/2016 11:43:44 AM
Comment ID: 50a
Topic: Infrastructure and Public Services, Impacts to Water Treatment Plants and Associated Infrastructure

October 28, 2015

Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road, St. Paul, Minnesota, 55155-4025

RE: Draft Environmental Impact Statement – FM Diversion Project

Dear Ms. Townley:

Cass Rural Water District (District) is a water utility that serves nearly 4,500 residential customers primarily in Cass County. About one half of our customer base is concentrated in and around the Fargo Metro area. The balance of our customers are spread throughout the remainder of Cass County. In addition to the residential customer base we also provide bulk service to 13 communities. Bulk service requires us to deliver water to a single metering point and the municipality then operates their own distribution and billing systems. The communities we serve in this manner are Casselton, Mapleton, Davenport, Kindred, Buffalo, Author, Hunter, Page, Grandin, Gardner, Tower City, Argusville, Amenia and Woodlawn. In total we serve a population of nearly 20,000 people.

As of this time the District's Board of Directors has taken no public position on the F-M Diversion Project. They have remained neutral simply because we have a significant number of our customer base that are both in favor of and opposed to the project. The primary concern of the District's Board is to make certain that any facility relocations required as a result of the F-M Diversion are kept to a minimum and that we are properly compensated for the cost of any relocation work.

The District operates three water treatment plants located near Page, Leonard and St. Benedict, North Dakota. The water treatment plant near St. Benedict (Phase 1 Plant) is located immediately south of Cass County Road 16 about one mile west of Interstate 29. In addition the District operates a water transmission and distribution system which includes several thousand miles of pipeline as well as 14 ground storage reservoirs and associated pumping stations.

We have reviewed the Draft Environmental Statement (DEIS) and have the following comments.

- Section 5 – Comparison of Alternatives** - On page 5-20 DEIS states that, when compared to the Proposed Project, the Northern Alignment Alternative has impacts to Infrastructure and Public Services that are "Similar to the Proposed Project, with the following differences." The table goes on to discuss the Town of Comstock, road crossings and the temporary closing of Cass County Highway 16. There is no comment in the table that addresses what we believe to be significant differences in the impacts to

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Cass Rural Water District infrastructure. As a result, the District strongly disagrees with that assessment. Under the Proposed Project our Phase 1 Plant will sit on the dry side of the dam and our well field will be on the wet side. Of course we would prefer that both the water treatment plant and well field be on the dry side. However, we have determined that there may be acceptable mitigation measures that can be taken to protect our well field under the Proposed Project.

2. Under the DNR's Northern Alignment Alternative the dam is moved 1 ½ miles north. Under this alternative the Phase 1 Plant will also be on the wet side of the dam. The District does not believe there are any acceptable mitigation measures which can be employed other than to abandon the Phase 1 Plant and build a new treatment plant in a nearby location that will be completely out of the retention area. Our Engineering firm Bartlett and West has made a preliminary estimate of the cost of such a mitigation measure. The estimated cost to relocate the Phase 1 Plant is \$11,862,500. (See Exhibit I) This cost estimate assumes we would somehow be able to continue to utilize the existing well field. If for some reason we would be unable to use the current water source for the Phase 1 Plant we would have no other alternative than to completely abandon the Phase 1 Plant. (See Exhibit II)
3. If we were forced to abandon the Phase 1 Plant the only acceptable mitigation measure would be to develop a plan to increase the capacity of our treatment plant south of Leonard - , North Dakota (Phase 2 Plant) by 1,000 gallons per minute and construct the necessary transmission pipeline infrastructure to transfer that capacity to the area currently served by the Phase 1 Plant. Bartlett & West has prepared a cost estimate for this situation. (See Exhibit II). That cost is \$15,015,000.
4. Based on the information that we have provided we request that you re-evaluate the comments regarding the comparison of the Proposed Project Northern Alignment Alternative to include language which reflects the significant increase in mitigation costs for Cass Rural Water District. We believe the NAA will result in significantly higher mitigation costs compared to the Proposed Project without an offsetting benefit.

In closing I would like to compliment the Minnesota DNR for the well run public meeting that was held in Moorhead as well as the fine presentation your staff conducted to explain the DEIS. I would also like to thank you for the opportunity to comment on the DEIS.

Sincerely,



Jerry Blomeke
General Manager
Cass Rural Water District

EXHIBIT I

**Cass Rural Water System
Phase 1 Water Treatment Plant Relocation**

Item	Estimated Cost	Total Estimated Cost
Reservoir 'A' WTP Relocation		
New Water Treatment Plant (1,000gpm)	\$7,800,000	
System 1 Wellfield Modifications	\$500,000	
New transmission pipeline to connect water treatment plant into existing system	\$825,000	
Subtotal Construction	\$9,125,000	
Administration, Legal, Lands and Engineering @ 30%	\$2,737,500	
Subtotal Other Project Costs	\$2,737,500	
Total Estimated Costs		\$11,862,500

EXHIBIT II

**Cass Rural Water System
Phase 2 WTP Expansion & Transmission Pipeline to System 1**

Item	Estimated Cost	Total Estimated Cost
Reservoir 'E' Expansion to serve Phase 1		
Expansion of existing WTP by 1,000 gpm	\$5,500,000	
System 2 Wellfield Expansion	\$1,200,000	
Additional Raw Water Pipeline	\$600,000	
25 mile transmission pipeline	\$4,250,000	
Subtotal Construction	\$11,550,000	
Administration, Legal, Lands and Engineering @ 30%	\$3,465,000	
Subtotal Other Project Costs	\$3,465,000	
Total Estimated Costs		\$15,015,000

This page contains no comments

From: [Charley Johnson](#)
To: [*Review_Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project EIS
Date: Tuesday, October 20, 2015 10:27:08 AM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[image006.png](#)
[image007.png](#)
[Diversion Support Memo 10-20-15.pdf](#)

Commenter 51

Summary of Comments on FM Convention & Visitors Bureau_Commenter51a_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/10/2015 10:35:24 AM -06'00'
Commenter 51

Author: Date: Indeterminate

Author: Date: Indeterminate

Author: Date: Indeterminate

Author: Date: Indeterminate

Author: Date: Indeterminate

Author: Date: Indeterminate

Author: Date: Indeterminate

Author: Date: Indeterminate

To Jill Townley, Environmental Policy & Review Unit, MN DNR.

Please accept for your records the attached resolution of support for the Fargo-Moorhead Diversion Project. If you have any questions, please address them to me at the address and phone number below.

Charley Johnson
President/CEO
FM Convention & Visitors Bureau
2001 44th St S
Fargo, ND 58103
Direct: 701-365-4567
www.FargoMoorhead.org





Fargo-Moorhead Convention & Visitors Bureau
2001 44th Street South
Fargo ND 58103

Phone: 701-365-4567
Fax: 701-282-4366
Toll Free: 800-235-7654
Mobile: 701-371-9911
Internet: www.fargomoorhead.org
E-mail: charley@fargomoorhead.org

Charley Johnson
President/CEO

Page: 2

Author: Medopera Subject: Highlight Date: 4/1/2016 12:49:17 PM
Comment ID: 51a
Topic: Proposed Project, General Support
Unsubstantial

Subject: Permanent Flood Protection
Date: 10/20/15

The Board of Directors of the Fargo-Moorhead Convention and Visitors Bureau passed this resolution at a special meeting on the above date:

In so much as a catastrophic flood would have a devastating and lasting negative impact upon the economy of the Fargo-Moorhead-West Fargo MSA, including hotels, attractions and restaurants, the Board of Directors of the FM CVB fully supports construction of the proposed Fargo-Moorhead Diversion Project, as currently designed and/or ultimately modified by the US Army Corps of Engineers.

Mike Prekel
Chairman of the Board

Charley Johnson
President and CEO

From: [Poynter, Charles \(Atos\)](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: " Fargo-Moorhead Flood Risk Management DEIS"
Date: Wednesday, October 28, 2015 2:29:14 PM

Commenter 52

Summary of Comments on CharlesPoynter_Commenter52a_Email1.pdf

Page: 1

To whom it may concern.

I would respectfully request moving the line 1.5 miles north does not happen as it appears to be a more expensive option, take four additional years which we cannot live through and takes additional homes out of the protection area.

Thank you.

Charles Poynter
Stanley Township resident.

Charley Poynter
SBU Vice President
North American Operations RTS US
Charles.poynter@atos.net
+1 701.866.4069
51 Broadway, Suite 202
Fargo, ND 58102-4933
www.atos.net



Author: Medopera Subject: Text Box Date: 11/10/2015 10:40:13 AM -06'00'
Commenter 52

Author: Medopera Subject: Highlight Date: 4/1/2016 12:52:15 PM
Comment ID: 52a
Topic: Northern Alignment Alternative, General Opposition
Unsubstantive

This page contains no comments

From: [Poynter, Charles \(Atos\)](#)
To: [*Review, Environmental \(DNR\)](#)
Subject: RE: We have received your comment
Date: Wednesday, October 28, 2015 2:38:31 PM

Please send to:

CharlesPoynter@gmail.com

From: *Review, Environmental (DNR) [mailto:environmentalrev.dnr@state.mn.us]
Sent: Wednesday, October 28, 2015 2:29 PM
To: Poynter, Charles (Atos)
Subject: We have received your comment

Thank you for providing comments on this environmental review document. We will review the comments you have provided. Responses to all substantive comments will be included in the official record. If you have provided your address, you will be included in mailings or electronic distribution of the record.

From: ckksbroom@netscape.net
To: [*Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 8:54:30 AM
Attachments: [DEIS comment 2.doc](#)

Commenter 53

Summary of Comments on CherieMathison_Commenter53a-b_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/12/2015 12:35:29 PM -06'00'
Commenter 53

Author: Date: Indeterminate

Comment and related photo attached.

Thank you,

Cherie Mathison
5298 174 1/2 Ave SE
Hickson, ND 58047

ckksbroom@aim.com

October 28, 2015

Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road
St. Paul, MN 55155-4025
(sent via e-mail to environmentalrev.dnr@state.mn.us)

Dear Ms. Townley,

I wish to submit a comment on the DEIS. My comment is concerning the impacts to the Hemnes Cemetery which is located on the bank of the Red River, in the extreme northeast corner of Richland County. This cemetery is the oldest Lutheran Cemetery in the State of North Dakota. There are 69 gravesites there, 51 are marked, 18 are unmarked. The earliest burial occurred in 1872. My family is working with the State Historical Society of North Dakota to have it designated as an official Historical Site, as it has been deemed eligible for listing on the National Register of Historic Places. With this designation, it will qualify for the CAP Section 14 program, and Federal funds will be made available to stabilize the riverbank.

The riverbank has been sloughing and eroding into the cemetery grounds for some years now. (see attached photo 1) In years of high water, more erosion occurs, but even in the years when there is no high water in the spring, sloughing of the riverbank still happens to a degree due to soil instability. If the dam and staging area are built and utilized, causing 1-3 ft of water to flood this cemetery, the bank will surely erode very quickly. Currently it has eroded to approximately 13' from the nearest gravesite (see photo 2, closest grave is at the stake on the left). Because the Hemnes Cemetery is so close to the river bank, a berm or ring dike is not an option unless extensive rebuilding of the riverbank is completed first, at considerable cost (\$1,072,000 per the USACE Draft Cemetery Mitigation Plan). This cost has not been included in the cost estimate for the Fargo-Moorhead Metro Flood Risk Management Project.

This is just one of the numerous cemeteries that will be adversely affected by this Project. Also not included in the Draft Plan are the affects this Project will have on the families who have ancestors and loved ones buried in these cemeteries. If the estimated cost to relocate a grave is between \$5,000 and \$8,000, how can an average family with numerous relatives to move afford to do it? The news coverage of the recent flooding in South Carolina showed what happened to coffins in airtight burial vaults when several feet of water covers the grave for several days. They rose, floated off and have to be retrieved and reburied. This unimaginable, traumatic scenario is entirely avoidable by not approving the permit for the Fargo/Moorhead Dam.

Respectively,

Cherie Mathison
5298 174 1/2 Ave SE
Hickson, ND 58047
ckksbroom@aol.com

Author: Medopera Subject: Highlight Date: 4/1/2016 12:53:28 PM
Comment ID: 53a
Topic: Cultural Resources, Hemnes Cemetery Mitigation

Author: Medopera Subject: Highlight Date: 4/1/2016 1:05:04 PM
Comment ID: 53b
Topic: Cultural Resources, Cemetery Mitigation

Author: Medopera Subject: Highlight Date: 11/12/2015 12:49:28 PM -06'00'
Comment ID: 53a cont.

This page contains no comments



This page contains no comments



From: ckksbroom@netscape.net
To: [*Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 8:58:17 AM
Attachments: [DEIS comment 3.doc](#)

Commenter 53 cont.

Comment and one related photo attached.
Thank you,

Cherie Mathison
5298 174 1/2 Ave SE
Hickson, ND 58047

ckksbroom@aim.com

Summary of Comments on CherieMathison_Commenter53c-d_Email2.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/12/2015 12:51:02 PM -06'00'
Commenter 53 cont.

Author: Date: Indeterminate

October 28, 2015

Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road
St. Paul, MN 55155-4025
(sent via e-mail to environmentalrev.dnr@state.mn.us)

Dear Ms. Townley,

I wish to submit a comment on the DEIS. My comment is concerning the impacts to the gravel roads and ditches in the rural areas affected by the staging of water upstream of the proposed Fargo/Moorhead Metro Flood Risk Management Project (or the F/M Dam/Diversion).

In North Dakota, our Townships are responsible for the upkeep and maintenance of the Township roads, and they do not have the spare funds to rebuild all the roads, bridges and culverts that will be damaged every time the staging area upstream of the Fargo/Moorhead Dam/Diversion is used. I do not agree with the US Army Corps of Engineers when they state that minimal damage will occur to these roads. I've seen how much damage happens when just the Wild Rice floods a few of them. There is a place in Pleasant Township where they just quit rebuilding a bridge altogether because it was poorly designed and washed downriver every time the Wild Rice flooded. They simply put in a "drive-over" in the bottom of the Wild Rice riverbed (see attached photo), and whenever the water is higher than this "drive-over", the nearby farmers and residents are forced to drive miles out of their way until the water goes back down. This will likely be the scenario in many places when the Townships run out of money to replace the washed out roadbeds, culverts and ditches filled with debris that will surely occur every time the staging area is utilized.

Please consider a better alternative of a "waffle plan" of numerous plots of land, dug to an appropriate depth to hold adequate amounts of flood water be placed in the current flood plain on the North Dakota side of the Red River south, and possibly even north of Fargo. The dirt removed from these plots of land could be reused to build a permanent dike system all the way through Fargo, and surrounding the current footprint of existing buildings. Further building into the floodplain would then require additional diking.

Respectively,

Cherie Mathison
5298 174 1/2 Ave SE
Hickson, ND 58047
ckksbroom@aol.com

Page: 2

Author: Medopera Subject: Highlight Date: 4/19/2016 3:03:03 PM
Comment ID: 53c
Topic: Infrastructure and Public Services, Flood Impacts to Roadways, Ditches and Culverts

Author: Medopera Subject: Highlight Date: 4/1/2016 1:38:51 PM
Comment ID: 53d
Topic: Alternatives, Alternative:DSA

This page contains no comments



From: ckksbroom@netscape.net
To: [*Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 9:00:28 AM
Attachments: [DEIS comment 1.doc](#)

Commenter 53 cont.

Summary of Comments on CherieMathison_Commenter53e-f_Email3.pdf

Page: 1

Comment attached, thank you.

Cherie Mathison
5298 174 1/2 Ave SE
Hickson, ND 58047

ckksbroom@aim.com

Author: Medopera Subject: Text Box Date: 11/12/2015 1:01:54 PM -06'00'
Commenter 53 cont.

Author: Date: Indeterminate

October 28, 2015

Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road
St. Paul, MN 55155-4025

(sent via e-mail to environmentalrev.dnr@state.mn.us)

Dear Ms. Townley,

I wish to submit a comment on the DEIS. My comment is concerning the pollution that will occur in the Red River if the dam and staging area are implemented. Since numerous farmsteads would be vacated and then subsequently flooded, how can the DNR or the Army Corps of Engineers accurately determine the type and amount of pollution that will occur when these farmsteads are suddenly flooded? Most have never flooded before, so they have numerous old dumping areas in the shelter belts and wooded areas, and in and around the farm buildings. Some of these dumping sites go back generations. There could be old, buried fuel tanks and waste oil tanks and leftover chemicals in steel drums that every farm seems to have laying around. Some of this garbage will float, some will leak, all of it will cause untold pollution. How can this possibly be avoided?

The salt levels that will be brought to the surface of the ground after repeatedly flooding the staging area south of Fargo and Moorhead will eventually kill all the plants and trees, creating a barren wasteland. This would completely disrupt the wildlife and the green corridor that the Red River currently has from start to finish. We must be good stewards of this land for future generations. Please do not permit this project.

Respectively,

Cherie Mathison
5298 174 1/2 Ave SE
Hickson, ND 58047
ckksbroom@aol.com

Author: Medopera Subject: Highlight Date: 4/1/2016 1:45:25 PM
Comment ID: 53e
Topic: Potential Environmental Hazards, Potential Environmental Hazards

Author: Medopera Subject: Highlight Date: 4/1/2016 1:46:02 PM
Comment ID: 53f
Topic: Potential Environmental Hazards, Salt Impacts

From: [Chuck Helmstetter](#)
To: ["Review_Environmental \(DNR\)"](#)
Cc: ["jly@eissolutions.com"](#)
Subject: Fargo-Moorhead Risk management Project DEIS
Date: Tuesday, October 27, 2015 10:33:54 AM
Attachments: [F-M 50.docx](#)

Commenter 54

Summary of Comments on CharlesHelmstetter_Commenter54a-b_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/12/2015 1:19:28 PM -06'00'
Commenter 54

Author: Date: Indeterminate

I am attaching my support to the actions for permanent flood protection for the area... I have operated business and owned properties for nearly fifty years in Moorhead /Fargo community and I can highly endorse the needs for a permanent flood solution.

Charles L. Helmstetter, Broker – Property resources Group – Mn Lic # 212636 .
Mailing address : 4265 So 45th Street # 200 Fargo, ND 58104
e-mail : chuck@propertyresourcesgroup.com --- direct phone 701-499-3908.
PS... I am also sending copies of this endorsement by regular postal service.

October 26, 2015

Jill Townley
Environmental Policy and Review Unit
Box 25, Ecological and Water Resources Division, DNR
500 Lafayette Rd
St. Paul, MN 55155-4025

Email: environmentalrev.dnr@state.mn.us

Ref: Fargo-Moorhead Flood Risk Management Project

Dear Ms. Townley,

I would like to submit my comment in support of the Fargo-Moorhead Flood Risk Management Project, and the proposed alternative in the Environmental Impact Statement for it. This project is vital to the economy of our region, as flooding is a very real risk, and can cause millions of dollars of damage, and millions more in lost income as business can be interrupted for weeks. These impacts are not just felt by the urban residents of Fargo and Moorhead, but by people throughout the region who rely on the city for services, access to markets, and everything else that a major regional hub offers.

The economic benefits are just due to preventing flood damages and reducing control costs, two important goals of the project; further benefit will be realized by preventing a new FEMA mapping process from being completed in the area. If FEMA undergoes this process, which is a very real possibility if the project is denied state approval, the 100 year flood level could be determined as being higher, affecting more homes, businesses and agricultural structures. This will have serious financial consequences for the owners of these properties, as their flood insurance premiums will increase drastically, and their property values will fall precipitously.

Any further delay of this project could lead to that happening, as well as increase the chance that another major flood will catch us ill-prepared. Failure to approve this proposed project will certainly have that result, but selecting another alternative could have the same effect. The Northern Alignment Alternative, unlike the proposed action, has not been through a federal environmental review. By federal law, if it is selected as the way forward, the U.S. Army Corps of Engineers will need to redo their entire process for this new alternative. This would be a waste of taxpayer money, federal resources, and could delay the project by years. That delay could also trigger the FEMA re-mapping. All of that for an alternative that negatively impacts a greater number of homes by shifting the inundated staging area downstream into more developed areas, and which will cost an additional \$81 million.

The proposed alternative has been approved already at the federal level, and has been very thoroughly studied and reviewed. It will provide permanent 100-year flood protection for a key part of the state, and do so in the most effective, least impactful manner. Please approve the proposed alternative.

Sincerely,

Page: 2

Author: Medopera Subject: Highlight Date: 4/1/2016 1:47:45 PM
Comment ID: 54a
Topic: Proposed Project, General Support
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/1/2016 1:48:28 PM
Comment ID: 54b
Topic: Permitting Approval, Approve the Project
Unsubstantive

This page contains no comments

From: [Kathy Askegaard](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: "Fargo-Moorhead Flood Risk Management Project DEIS"
Date: Tuesday, October 27, 2015 10:38:29 PM
Attachments: [DEIS_Comment_1_Mayor_Thomas_Askegaard.docx](#)
[DEIS_Comment_2_Mayor_Thomas_Askegaard.docx](#)
[DEIS_Comment_3_Mayor_Thomas_Askegaard.docx](#)
[DEIS_Comment_4_Mayor_Thomas_Askegaard.docx](#)

Commenter 55

Summary of Comments on CityofComstockMayorAskegaard_Commenter55a- e_Email1.pdf

Page: 1

Thomas P. Askegaard
Mayor, Comstock, MN

Author: Medopera Subject: Text Box Date: 11/12/2015 1:25:04 PM -06'00'

Commenter 55

Author: Date: Indeterminate

Author: Date: Indeterminate

Author: Date: Indeterminate

Author: Date: Indeterminate

Written Comment on the DEIS for the proposed Fargo-Moorhead Flood Risk Management Project

Name: TOM ASKEGAARD, MAYOR Email: kaskegaard@hotmail.com
Representing: CITY OF COMSTOCK, MINNESOTA
Mailing Address: PO BOX 39 Phone: 701-306-9315
COMSTOCK, MN 56525-0039

Page: 3

Author: Medopera Subject: Highlight Date: 4/20/2016 10:25:30 AM
Comment ID: 55b
Topic: Proposed Project Description, Comstock Ring Levee

TOPIC: Comstock Ring Dike--Infrastructure

If the Diversion Authority (DA) builds a ring dike around Comstock, the infrastructure of the town will require change. This change would most likely involve complete replacement of the current infrastructure. All costs associated with this replacement must be mitigated and completely covered by the DA.

With the railroad needing to raise its tracks that run north and south through Comstock, the town will face additional obstacles. The sewer system will not operate as needed. A result of the staging area is that the town lagoon will be in the "newly drawn" man-made flood plain. Since the railroad tracks will be raised, the lagoon would require raising up but this could not be done as it would butt up against railroad property. As a result, the town would need a new pond, which again, must be mitigated and completely paid for by the DA.

Written Comment on the DEIS for the proposed Fargo-Moorhead Flood Risk Management Project

Name: TOM ASKEGAARD, MAYOR Email: kaskegaard@hotmail.com
Representing: CITY OF COMSTOCK, MINNESOTA
Mailing Address: PO BOX 39 Phone: 701-306-9315
COMSTOCK, MN 56525-0039

Page: 4

Author: Medopera Subject: Highlight Date: 4/1/2016 1:55:28 PM
Comment ID: 55c
Topic: Cultural Resources, Cemetery Mitigation

TOPIC: Cemetery Mitigation

Comstock Lutheran Church, which is located in Comstock, has two cemeteries: Comstock Cemetery, east of town; and Clara Cemetery, located to the west closer to the Red River. The mitigation process appeared to just that—a process, by which statistics were calculated with the human factor being completely left out of the equation.

The USACE stated that the non-Federal sponsors would need to handle mitigation regarding post-flood clean-up, etc. If the Diversion Authority is to handle these issues, written agreements between the DA and individual cemetery boards must be signed prior to construction of the Project.

Written Comment on the DEIS for the proposed Fargo-Moorhead Flood Risk Management Project

Name: TOM ASKEGAARD, MAYOR Email: kaskegaard@hotmail.com
Representing: CITY OF COMSTOCK, MINNESOTA
Mailing Address: PO BOX 39 Phone: 701-306-9315
COMSTOCK, MN 56525-0039

TOPIC: Economic Issues

If the Diversion Authority builds a ring dike around Comstock, who will want to come to live in the town? The home values have already decreased and will only continue to go down. Who will attend the church in town?

Will the businesses remain in town? We have a thriving insurance company located on our main thoroughfare; what will persuade that company to stay in town? It certainly won't be the ease of access to the location, as the DA is planning only one road into and out of town.

When the DA planned for this single road entering/exiting to the west, the engineers overlooked the fact the our children travel east to school in Barnesville, MN. With the studies on sleep and learning, added travel time goes against recommendations.

Page: 5

Author: Medopera Subject: Highlight Date: 4/1/2016 1:56:01 PM
Comment ID: 55d
Topic: Socioeconomics, Comstock Economics

Author: Medopera Subject: Highlight Date: 4/1/2016 1:56:23 PM
Comment ID: 55e
Topic: Infrastructure and Public Services, Comstock Ring Levee

From: [April Walker](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 11:46:26 AM
Attachments: [Townley letter final.pdf](#)

Commenter 56

Summary of Comments on CityofFargo_AprilWalker_Commenter56a-b_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/12/2015 2:09:26 PM -06'00'
Commenter 56

Author: Date: Indeterminate

Ms. Townley

Please find the attached submittal a hard copy is being mailed as well.

Respectfully,

*April E. Walker, PE., C.F.M.
City Engineer
City of Fargo
200 N 3rd Street
Fargo, ND 58102*

*Office 701-241-1554
Fax 701-241-8101
awalker@cityoffargo.com*



ENGINEERING DEPARTMENT

200 3rd Street North
Fargo, North Dakota 58102
Phone: (701) 241-1545
Fax: (701) 241-8101
E-Mail: feng@cityoffargo.com

October 28, 2015

Jill Townley, Project Manager
Environmental Policy and Review Unit
Box 25 Ecological and Water Resources Division DNR
500 Lafayette Road
St. Paul, Minnesota, 55155-4025

Dear Ms. Townley,

I would like to thank you for the opportunity to comment on the Draft Environmental Impact Statement (DEIS) for the Fargo-Moorhead Flood Risk Management Project. There are two primary discussion points that I would like to cover:

First, I would like to address the Base No Action Alternative (Section 3.4.2.2), as well as the No Action Alternative (with Emergency Measures) (Section 3.4.2.3). Recent application of the unsteady HEC-RAS model and permitting requirements through the ND State Water Commission will increase the cost, level of difficulty in implementing, and perhaps even reduce the overall feasibility of the "currently funded" projects identified in the DEIS.

Secondly, the section titled Affected Cities in the Project Area (Section 3.14.1.3), refers to Fargo having "extensive planning and zoning related to floodplain management". This statement does not accurately reflect the aggressive nature of the City of Fargo's floodplain management program. I would like to provide additional detail for the record.

Base No Action Alternative (Section 3.4.2.2) & No Action Alternative (with Emergency Measures) (Section 3.4.2.3).

I wanted to make you aware of additional information that has been developed by the City of Fargo with regard to some of the flood control projects that were identified in the Base No Action Alternative. As the document indicates, the City of Fargo has continued to build levee and floodwall projects in areas that are the most difficult to protect and where there are numerous people impacted by the FEMA floodplain (RS 39.3), which became effective on January 16, 2015.

Section 3.2.2.2 of the DEIS indicates that "Any alterations to the flood hazard risk due to currently funded and completed projects will need a LOMR to officially update the effective FIRMs. These projects are eligible for LOMRs before completion of the Project if they meet the criteria outlined in subsection 3.2.1." The City has continued to develop projects that are identified as "currently funded" in the DEIS and, in some cases, we have been unable to execute these projects. As we undertook the effort of preparing a CLOMR, we determined that although the effective FIS is defined by a steady state HEC-RAS hydraulic model that looks solely at the peak discharge of the flood, the steady state model does not account for impacts these projects may have outside the areas being protected, and it would be inappropriate to continue to use this model to evaluate the implementation of the "currently funded" projects. We have access to the unsteady HEC-RAS model developed through the FM Diversion project, and this model has demonstrated a high level of accuracy in representing historical events. The unsteady HEC-RAS model also allows for the evaluation of the effectiveness of these projects and the impacts they have outside of the protected area, as required for permitting of the "currently funded" projects through the North Dakota State Water Commission. Therefore, it was determined that the unsteady HEC-RAS model should be used to evaluate the potential impacts of the proposed "currently funded" projects.

Street Lighting Sidewalks Design & Construction Traffic Engineering Truck Regulatory Flood Plain Mgmt. Mapping & GIS Utility Locations



Page: 2

Author: Medopera Subject: Highlight Date: 4/1/2016 1:58:16 PM
Comment ID: 56a
Topic: Land Use, Flood Damage Reduction Project Update

Author: Medopera Subject: Highlight Date: 4/1/2016 1:58:59 PM
Comment ID: 56b
Topic: Land Use, Fargo Floodplain Management

Author: Medopera Subject: Highlight Date: 11/12/2015 2:29:02 PM -06'00'
Comment ID: 56a cont.

Author: Medopera Subject: Highlight Date: 11/12/2015 2:20:50 PM -06'00'
Comment ID: 56a cont.

Author: Medopera Subject: Highlight Date: 11/12/2015 2:21:02 PM -06'00'
Comment ID: 56b cont.

The preliminary unsteady HEC-RAS model runs created to compare existing conditions (no emergency measures) to the proposed condition of implementation of all "currently funded" projects showed that in addition to lost floodplain storage of about 5,000 acre feet that would need to be mitigated, there is also a need to account for a loss of conveyance, as these projects change the overbank flow path for the Red River and tributaries. Unfortunately, the current state of the art tool assumes that the floodplain fringe, which is filled with houses, streets, and other infrastructure, would provide for fairly efficient flow (4,500 cfs). We believe this efficiency to be inaccurate and are undertaking efforts to follow up with additional 2D modeling to demonstrate more accurately the actual conveyance of the floodplain fringe. Until we have a better representation of the lost conveyance, we must plan to mitigate appropriately for the volumes identified.

At this point it has been determined that in order to store the lost conveyance through the peak of the FEMA 100 year flood, and to account for the lost floodplain storage, 2000 acres of land would be needed to store water 10' deep. This would further require excavation of 30 Million CY of earth material and the construction of 15 miles of levee to keep the ponds dry until they are needed to store peak flows. If this were feasible, we could achieve the goal of reducing the stage on the Red River to match the preliminary existing conditions model, and this would allow us to seek a permit from the NDSWC and a LOMR from FEMA. However, in the near future without the FM Diversion, these properties as well as many additional properties (approximately 19,000), would be returned to the floodplain with the adoption of the USACE 100 year floodplain.

In short, with the application of unsteady modeling for evaluating project impacts and permitting, it is clear that there is no easy solution to flood risk reduction and the mitigation of the identified impacts associated with the Base No Action Alternative (Section 3.4.2.2), as well as the No Action Alternative (with Emergency Measures) (Section 3.4.2.3). Development of these projects with a steady-state HEC-RAS model underestimates their true impacts, as it does not reflect the newly identified mitigation necessary for stage increases. Application of the unsteady HEC-RAS model and permitting requirements through the ND State Water Commission will increase the cost and level of difficulty in implementing the "currently funded" projects included as part of the DEIS. The mitigation necessary should be included in the discussion of these alternatives. Please find attached a presentation that further details the work conducted under the Southwest Area Storm Sewer Master Plan Study.

3.14.1.3 Affected Cities in the Project Area

Fargo has implemented numerous floodplain management strategies in an attempt to be more proactive in managing the continually changing floodplain. In May of 2012, the Fargo City Commission passed an ordinance that created watercourse setbacks from the Red and Sheyenne Rivers as well as any legal drain within Fargo. These setbacks created minimum disturbance zone setbacks (MDZS) of 350' on the Red and Wild Rice Rivers and 175' on the Sheyenne River, as well as a limited disturbance zone setbacks (LDZS) which is an additional 100' from the MDZS or the floodway whichever is greater.

Within these zones, no buildings or structures may be erected, constructed, enlarged or altered unless they conform with the regulations that are spelled out in the ordinance. The ordinance also strictly prohibits any land disturbing activity including, but not limited to, filling, grading and excavating within these zones. With this ordinance in place, there will be no future obstructions constructed within at least 100-feet of the floodways. This will allow the river corridors to continue to be in their natural state and any river bank failures and/or movements that may occur would be far

less likely to impact a structure. By pulling away from the river, this ordinance will be a benefit to the City for years to come, especially during this uncertain time of floodplain management change.

In anticipation of future FEMA floodplain changes, the City has also recently evaluated and updated the minimum building elevation requirements for a new structure. These changes were proposed after it became apparent from the previously discussed unsteady HEC-RAS model that the now effective FEMA floodplain (RS 39.3) is not accurately representing the 100 year flood risk to Fargo. To best position any new structures against future floodplain changes, the City requires all structures within the 41-foot water surface elevation inundation area (the potential new 100 year floodplain) to be elevated at least 1.2 feet above the 41' elevation as well as be constructed with a floodproof basement. If Fargo were to be remapped to the 41' elevation, these elevation requirements may not eliminate the mandated flood insurance requirement; however, they would result in significantly lower flood insurance premiums. This is due to Fargo being a FEMA basement exempt community wherein any structures that have a floodproof basement, that may be located within the floodplain, will be rated on the point of risk, which is the top of the floodproofed basement walls. With the City's current elevation requirements, this would result in the point of risk being at least 1-foot above a potential new base flood elevation.

Fargo also participates in FEMA's community rating system program. We are currently classified as a Class 7 community. However, we have recently gone through our audit and from our continued floodplain management activities we are anticipating moving to a Class 6 community upon finalization of this audit.

As you can see, our standard floodplain management practices are aggressive and far exceed the Federal and ND State minimum requirements. These efforts are being undertaken to responsibly address new development within our community and it is, therefore, important information to be contained in the DEIS record. Protection of existing properties is difficult, and it is for the benefit of those properties that the FM Diversion project is necessary.

Respectfully,



April E. Walker, PE., C.F.M.
City Engineer
City of Fargo

AEW/bem
Attachment

C: City Commissioners
Bruce Grubb, City Administrator
Darrell Vanyo, Diversion Authority Chair
Governor Jack Dalrymple
Tod Sando, State Engineer
John Paczkowski, NDSWC Regulatory
Craig Odenbach, NDSWC Water Development



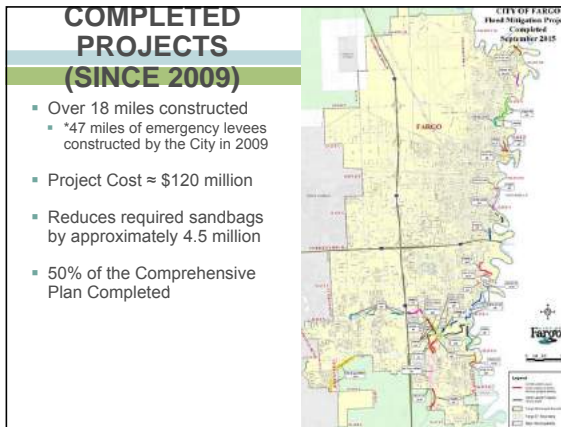
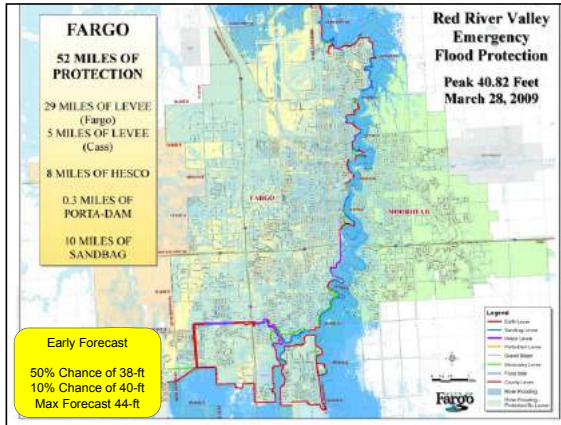
PROJECT NO. MS-14-20
SOUTH WEST AREA STORM SEWER MASTER PLAN

Comprehensive Plan

- Developed in Fall 2011/Winter 2012
- Certifiable Protection From the Effective Floodplain (39.4 Feet)
- Why Implement?
 - Short Term
 - Reduce emergency measures & provide real protection with each project completed
 - Long Term
 - Complete certifiable reaches to make flood insurance available at lowest possible rates
 - Combined with FM Diversion – Provide greater than 100-year protection
- Outstanding Issues

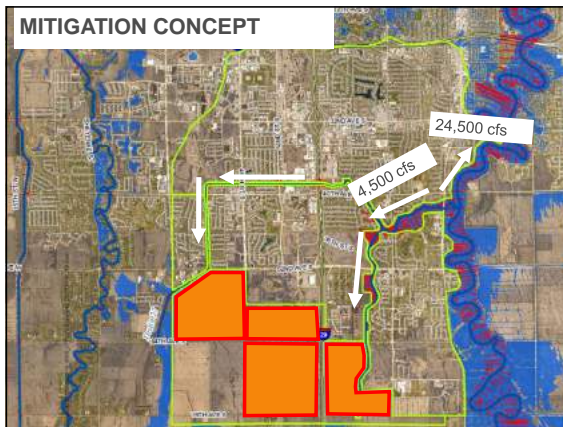
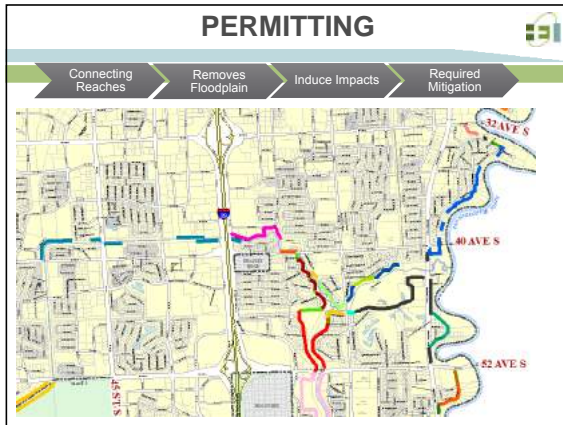
10/27/2015

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10/27/2015

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OVERVIEW

- Study Area
- FEMA Floodplain
- Flood Protection to Date
- Hydraulic Modeling
- Impacts from Flood Protection
- Mitigation and Costs

STUDY AREA

- Red River
- Wild Rice River
- Drain 27
- Drain 53
- Rose Coulee


An aerial photograph of a rural area with a grid of roads and fields. A blue line traces a path through the landscape, starting from the top left, moving east, then south, then east again, and finally south towards the bottom right. The path is labeled with 'Drain 27', 'Drain 53', and 'Rose Coulee'. To the right of the path, a winding blue line represents a river, labeled 'Red River'. At the bottom left, another winding blue line represents a river, labeled 'Wild Rice River'. The map also shows some buildings and infrastructure.

FEMA FLOODPLAIN

- Red River
- Wild Rice River
- Drain 27
- Drain 53
- Rose Coulee

▪ no human intervention
▪ no flood protection
▪ state of nature

Cass County FIS – Jan 2015
Clay County FIS – April 2012



The map displays a floodplain area with several water bodies and drainage systems. The Red River is shown on the right side, flowing north-south. The Wild Rice River is located at the bottom center. Drain 27 and Drain 53 are marked in the upper left and center-left areas, respectively. The Rose Coulee is a prominent feature in the center. The floodplain is shaded in light blue, indicating areas at risk of flooding. The map also shows some infrastructure like roads and buildings.



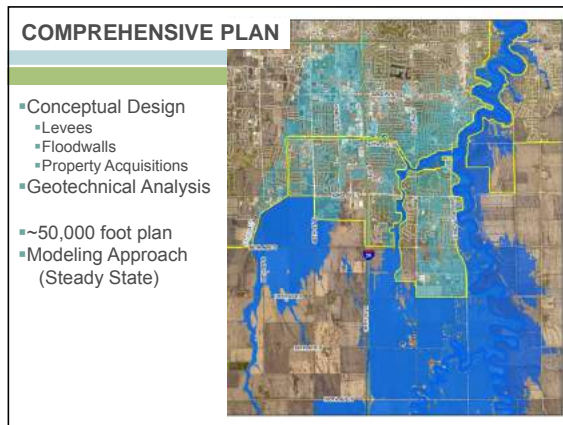
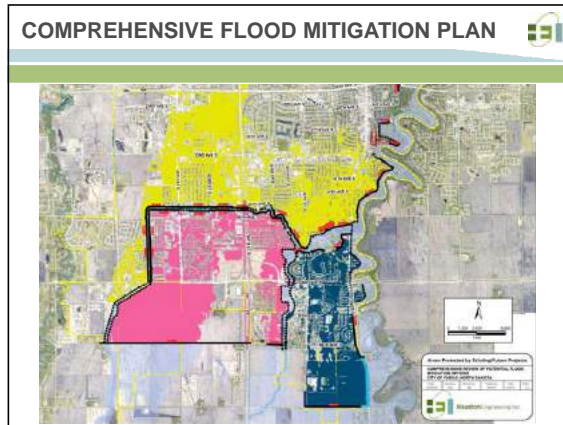
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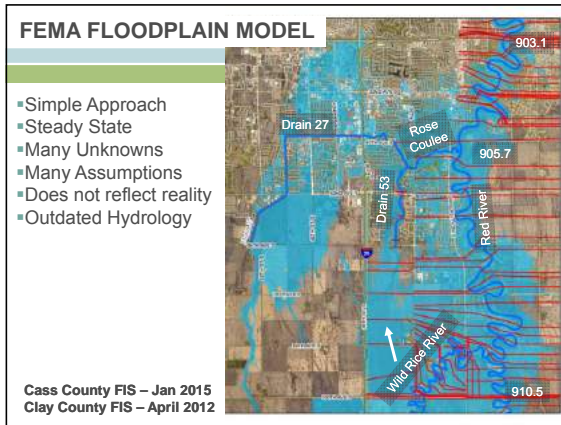
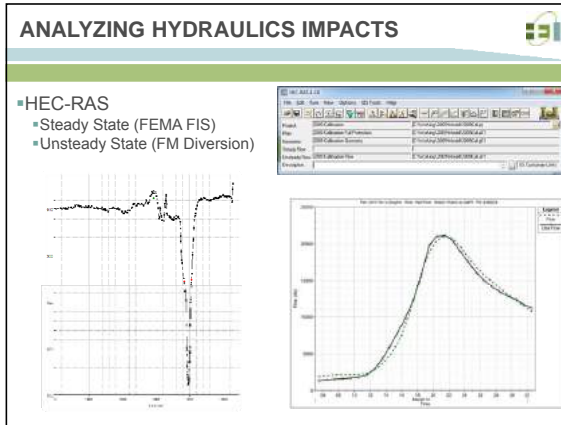


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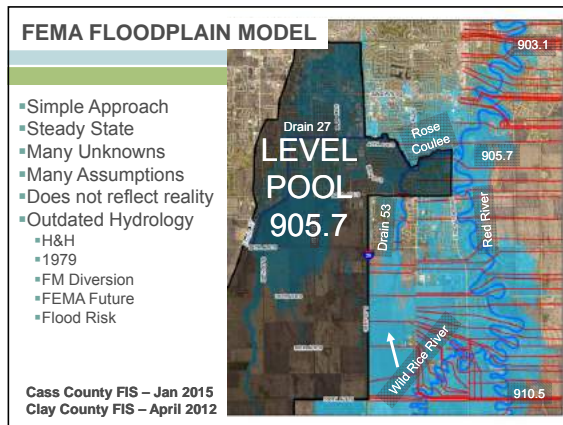
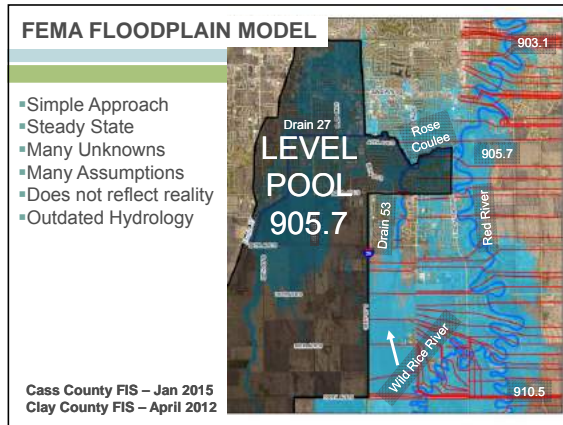
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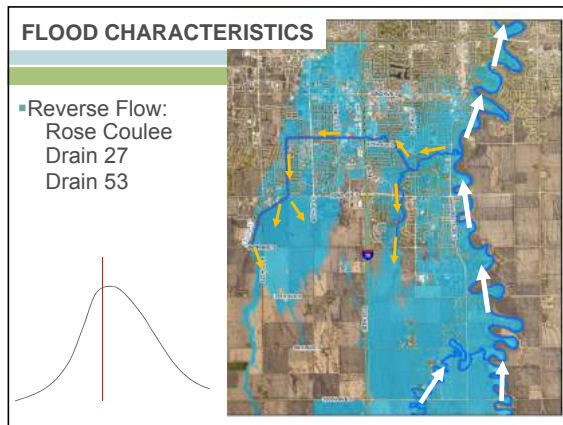
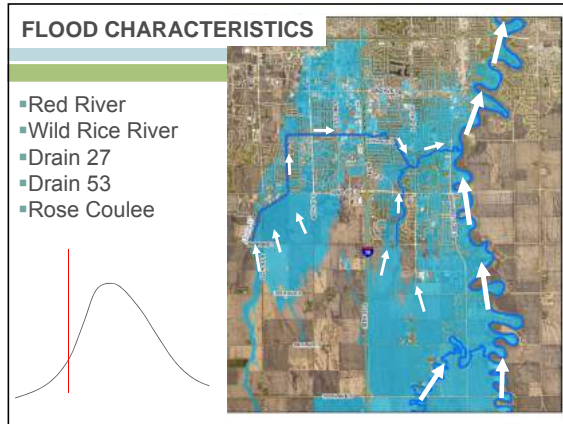
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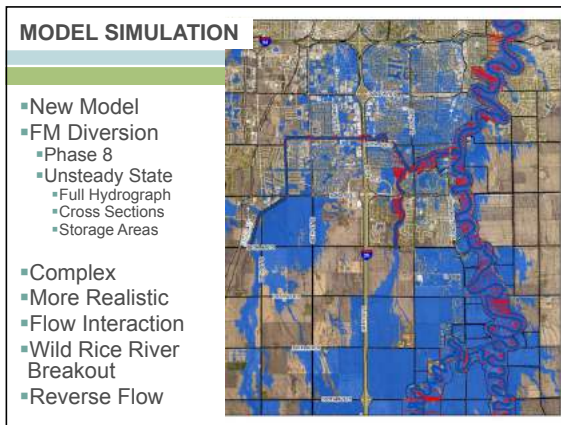
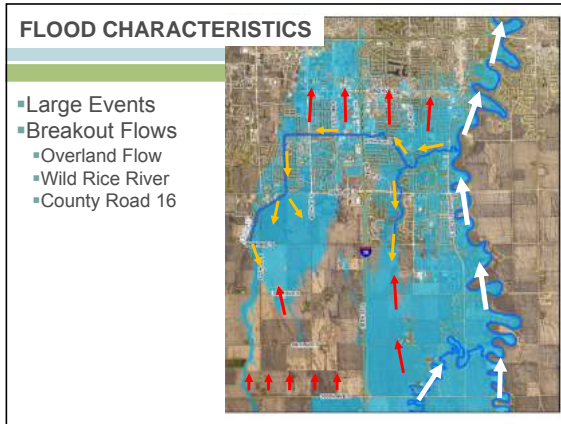
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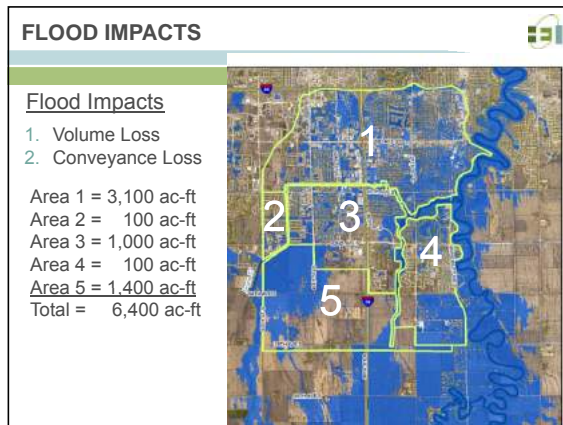
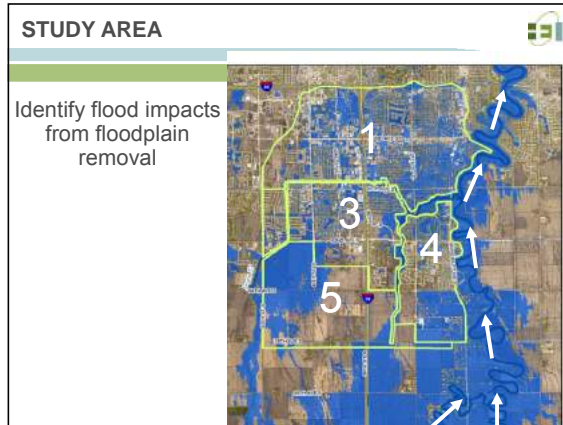
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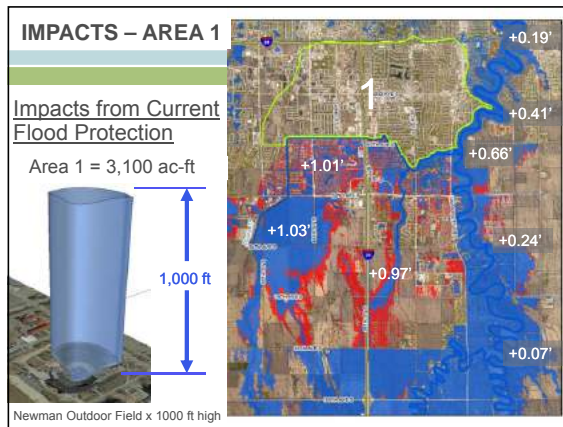
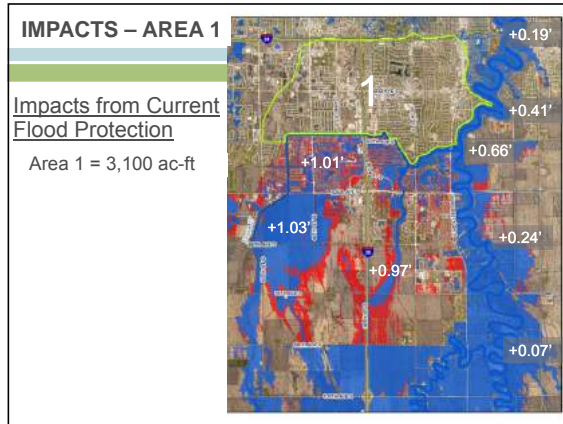
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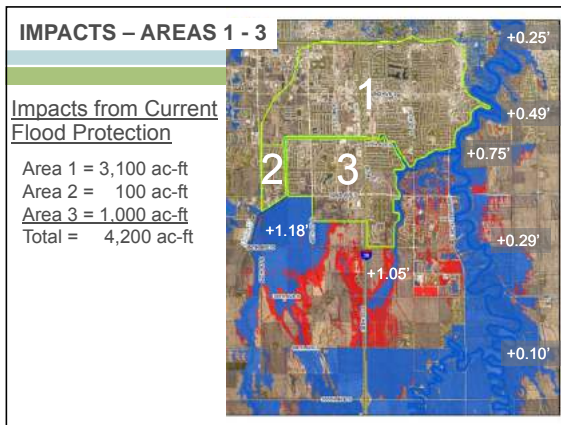
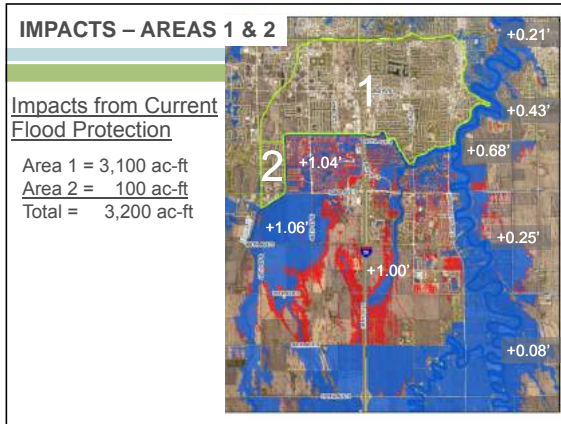
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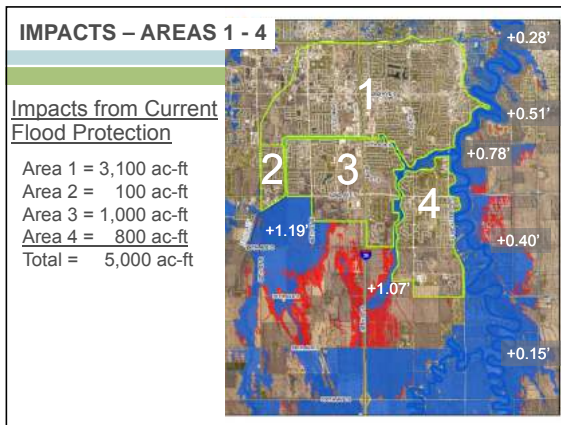
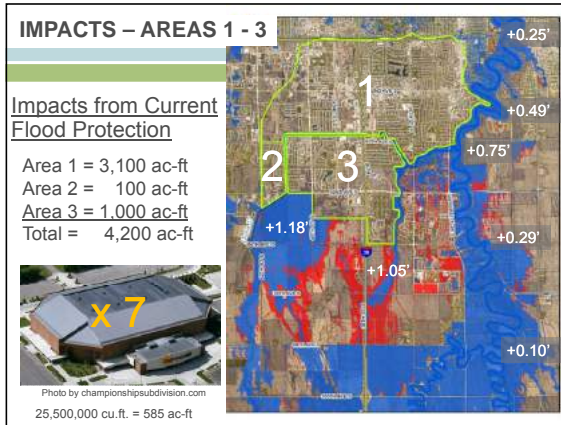
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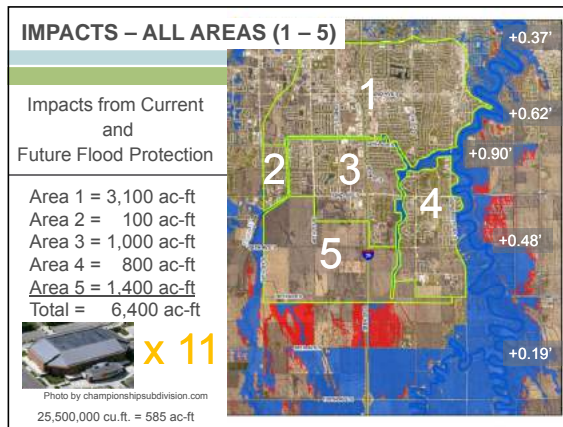
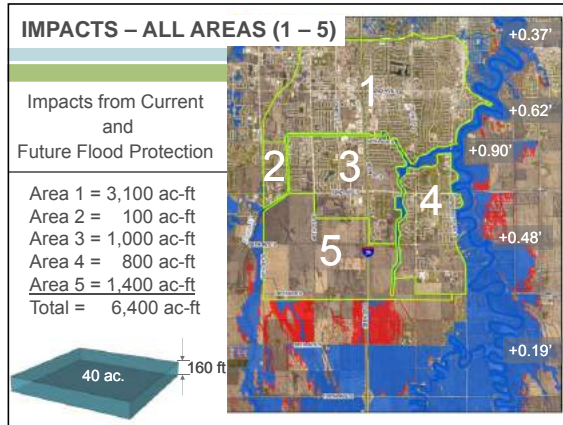
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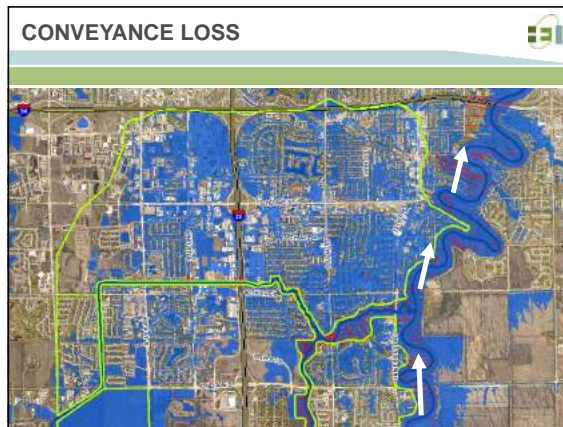
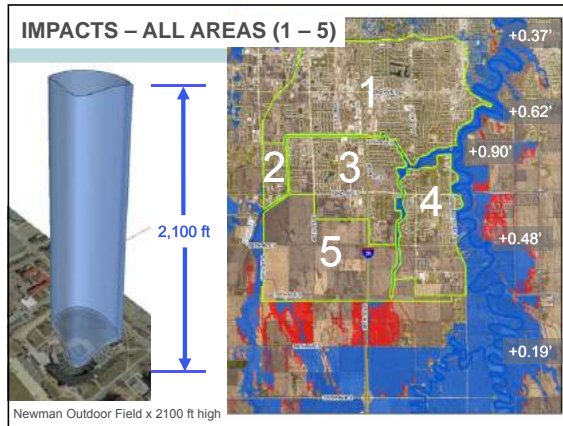


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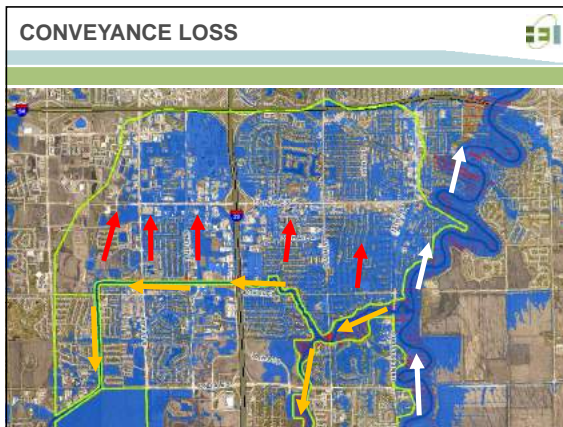
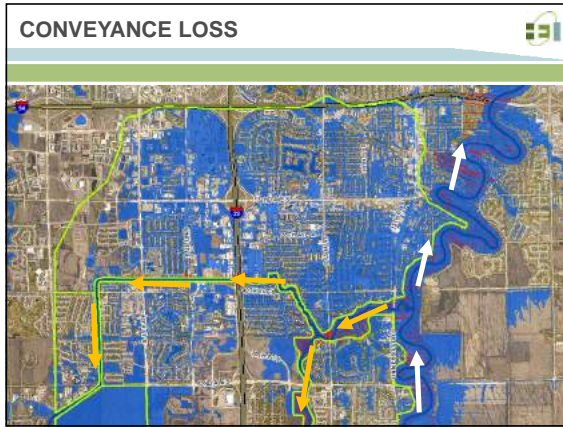
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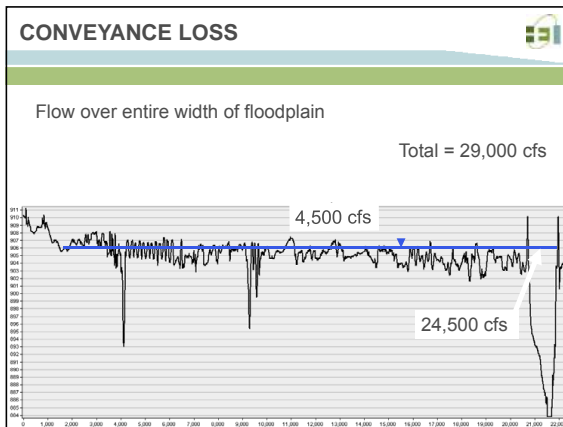
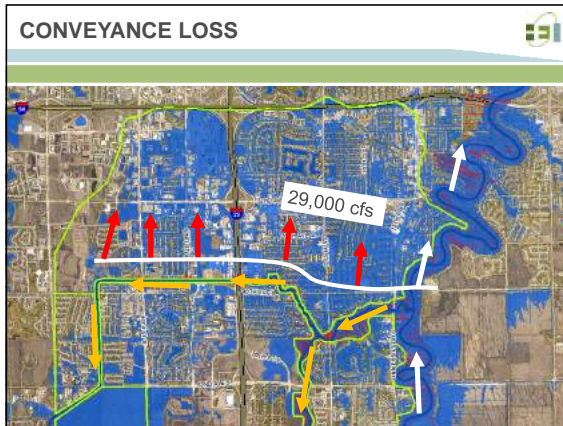
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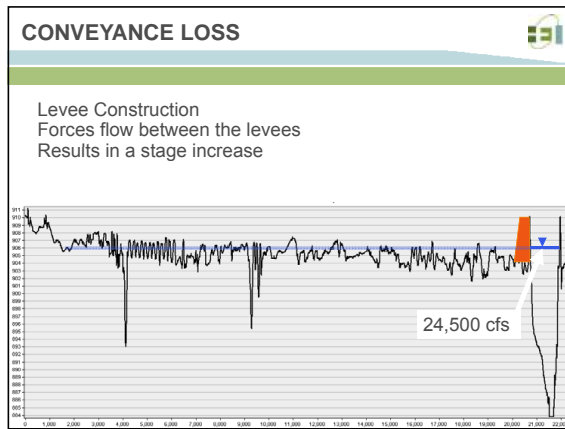
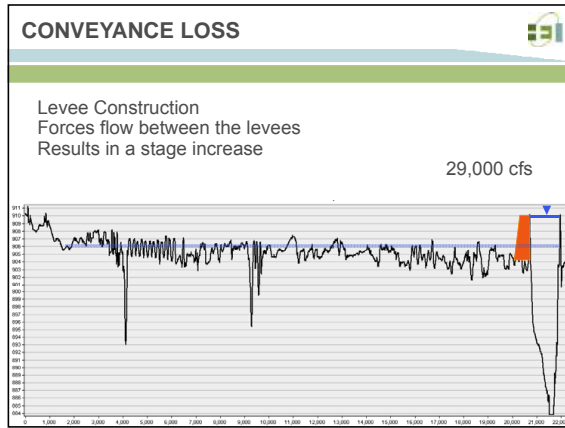
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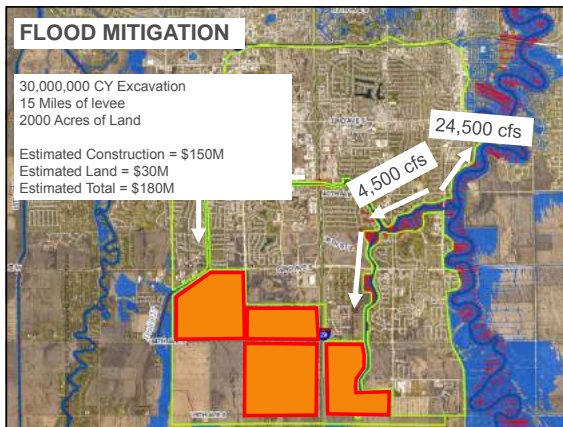
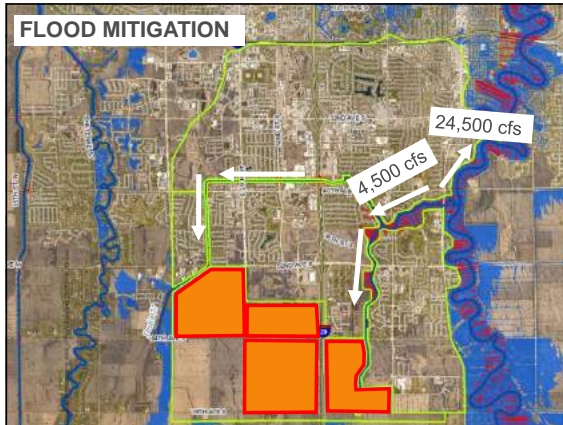
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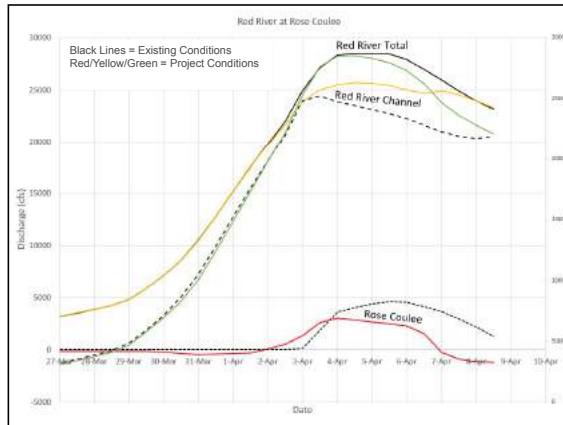
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ANALYSIS UPDATE

- Analysis to Date
- Uses latest FM Diversion model
 - Best Available
 - Model was developed for the larger scale project
 - Could be refined for this smaller scale project
- Plan to review model parameters
 - Detailed modeling to better reflect the isolated project area
 - Adjustments could result in 20-30% difference in results



Commenter 57

From: cliffenns@gmail.com
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Tuesday, October 27, 2015 11:12:06 AM

Summary of Comments on CliffEnns_Commenter57a-b_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/12/2015 2:37:39 PM -06'00'
Commenter 57

Comment for submission

My entire family and I ask the DNR to reject the Northern Alignment Alternative (NAA) in favor of the proposed, federally authorized plan, that has yet to be looked at. Since it has not been evaluated by the responsible federal agency, the NAA would by law require a whole new environmental review, analysis, and Environmental Impact Statement from the Corps of Engineers. There is no reason to waste time and public money and resources on doing an environmental review on this alternative, when one has already been done on the proposed project. Selecting the NAA would be an enormous waste of resources.

The main feature of the NAA would be to shift the impoundment downstream 1.5 miles, moving it north into more developed areas. In doing so, more homes will be affected, including ours.

Ours is a historical home built in the 1800's along the Red on cry 8, where we spent a life time restoring and diking it. It is also the location of my family business, where we all hunt, fish, and where my wife recently died and her ashes are spread. It is our life, and a community landmark.

Even if a handful of homes will be spared impact by adopting the NAA over the proposed alternative, this benefit would be offset and more by the fact that as many as 60 additional homes would be impacted under the NAA than would under the proposed plan. In addition, a number of businesses, and more farmland would be affected by the NAA than by the proposed action.

The NAA would also place one of our region's most historic landmarks in jeopardy - St. Benedicts Catholic Church, the oldest Roman Catholic Church in the area. All of this for an additional price tag of \$81 million. The NAA is not worth it, and should be rejected by the DNR.

If the original plan was not right then instead of either of these plans, I would then propose and like to see a study on a new Lateral diversion plan instead of allowing either of these plans to destroy for our beautiful valley, our history, and all those that created it.

Sincerely,
Cliff Enns

Ph. 218-233-5179

164 110th ave S
Moorhead, MN 56560

CliffEnns@gmail.com

Sent from my iPhone

Author: Medopera Subject: Highlight Date: 4/1/2016 2:05:10 PM
Comment ID: 57a
Topic: Northern Alignment Alternative, General Opposition
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/1/2016 2:05:41 PM
Comment ID: 57b
Topic: Alternatives, Alternative: Lateral Diversion Plan

From: codylavelle@yahoo.com
To: [*Review, Environmental \(DNR\)](#)
Date: Monday, October 26, 2015 5:00:49 PM

Commenter 58

Summary of Comments on CodyLavelle_Commenter58a_Email1.pdf

Page: 1

We ask the DNR to reject the Northern Alignment Alternative (NAA) in favor of the proposed, federally authorized plan. Since it has not been evaluated by the responsible federal agency, the NAA would by law require a whole new environmental review, analysis, and Environmental Impact Statement from the Corps of Engineers. There is no reason to waste time and public money and resources on doing an environmental review on this alternative, when one has already been done on the proposed project. Selecting the NAA would be an enormous waste of resources.

The main feature of the NAA would be to shift the impoundment downstream 1.5 miles, moving it north into more developed areas. In doing so, more homes will be affected. Even if a handful of homes will be spared impact by adopting the NAA over the proposed alternative, this benefit would be offset and more by the fact that as many as 60 additional homes would be impacted under the NAA than would under the proposed plan. In addition, a number of businesses, and more farmland would be affected by the NAA than by the proposed action.

The NAA would also place one of our region's most historic landmarks in jeopardy - St. Benedicts Catholic Church, the oldest Roman Catholic Church in the area. All of this for an additional price tag of \$81 million. The NAA is not worth it, and should be rejected by the DNR.

Sincerely,

Cody Lavelle
[1005 118th Ave S](#)
[Horace, ND 58047](#)

Sent from my iPhone

Author: Medopera Subject: Text Box Date: 11/12/2015 2:41:33 PM -06'00'

Commenter 58

Author: Medopera Subject: Highlight Date: 4/1/2016 2:10:47 PM
Comment ID: 58a
Topic: Northern Alignment Alternative, General Opposition
Unsubstantive

From: cisraelson@tampabay.rr.com
To: [*Review_Environmental \(DNR\)](#)
Subject: test
Date: Tuesday, October 27, 2015 5:42:53 PM

Commenter 59


Summary of Comments on ColleenIsraelson_Commenter59a-b_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/13/2015 7:40:38 AM -06'00'
Commenter 59


From: cisraelson@tampabay.rr.com
To: [*Review, Environmental \(DNR\)](#)
Subject: Re: FM Diversion
Date: Tuesday, October 27, 2015 5:52:40 PM

Page: 2

 Author: Medopera Subject: Highlight Date: 4/20/2016 11:28:34 AM
Comment ID: 59a
Topic: Proposed Project Purpose and Need, Questions Project Purpose

Good Afternoon:

Submitting my comments regarding proposed F-M dam/diversion.

 Author: Medopera Subject: Highlight Date: 4/1/2016 2:13:04 PM
Comment ID: 59b
Topic: Alternatives, Alternative: Dredge the River

I am opposed to this project for reason #1

 Author: Medopera Subject: Highlight Date: 11/13/2015 7:48:39 AM -06'00'
Comment ID: 59a cont.

Unnecessary encroachment of natural flood plane only for the purpose of growth for the City of Fargo. No Dam or Diversion is necessary.

Fargo should spend tax payers money cleaning out and widening the river and increasing infrastructure within the city limits to protect themselves. At this time it appears their only interest in protecting anything is Fargo's growth.

Thank you

Colleen Israelson
5515 Co Rd 81
Christine, ND 58015

From: cisraelson@tampabay.rr.com
To: [*Review, Environmental \(DNR\)](#)
Subject: Re: F-M Diversion comment
Date: Tuesday, October 27, 2015 5:57:05 PM

Commenter 59 cont.

Summary of Comments on ColleenIsraelson_Commenter59c_Email2.pdf

Page: 1

Good Afternoon:

Submitting my comments regarding proposed F-M dam/diversion.

I am opposed to this project for reason #2

Not enough time and effort have been spent on determining the amount of slough that will take place when Red River banks are saturated. Currently those banks are not stable even in dry weather.

Thank you

Colleen Israelson
5515 Co Rd 81
Christine, ND 58015

Author: Medopera Subject: Text Box Date: 11/13/2015 7:50:15 AM -06'00'

Commenter 59 cont.

Author: Medopera Subject: Highlight Date: 4/21/2016 9:30:48 AM
Comment ID: 59c
Topic: Stream Stability, Stream and Soil Stability Impacts

From: cisraelson@tampabay.rr.com
To: [*Review, Environmental \(DNR\)](#)
Subject: Re: F-M diversion comment
Date: Tuesday, October 27, 2015 6:10:56 PM

Commenter 59 cont.

Summary of Comments on ColleenIsraelson_Commenter59d_Email3.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/13/2015 7:52:19 AM -06'00'
Commenter 59 cont.

Author: Medopera Subject: Highlight Date: 4/1/2016 2:16:17 PM
Comment ID: 59d
Topic: Communication Concerns, Diversion Authority and USACE

Good Afternoon:

Submitting my comments regarding proposed F-M dam/diversion

I am opposed to this project for reason #3

As property owners within the Red line we were told that nothing would take place until property owners were met with and made whole by the Diversion authority and Army Corp.

To-date neither entity has ever met with us or has requested to meet with us individually to settle our concerns or consider making us whole in any way. Obviously their promise was a lie.

At this time the Oxbow project, which is unnecessary unless a Diversion and Dam are going to be completed, are making very significant strides in completing their project. Houses have gone up, greens are planted, roads are paved. Appears to me they are made whole while the rest of us are not considered for the sacrifice made by the 5 generations that have gone before us. There is history here, our area was settled before Fargo ever became a city.

Thank you

Colleen Israelson
5515 Co Rd 81
Christine, ND 58015

From: cisraelson@tampabay.rr.com
To: [*Review, Environmental \(DNR\)](#)
Subject: RE: F-M Diversion comment
Date: Tuesday, October 27, 2015 6:19:21 PM

Commenter 59 cont.

Summary of Comments on ColleenIsraelson_Commenter59e_Email4.pdf

Page: 1

Good Afternoon:

Submitting my comments regarding proposed F-M dam/diversion

I am opposed to this project for reason #4

No explanation has been provided or significantly studied regarding the ice jams that are inevitable with the project laid out in it's current plan. This outcome must be reviewed and should be something the Corp can explain before the project is ever considered.

Thank you

Colleen Israelson
5515 Co Rd 81
Christine, ND 58015

Author: Medopera Subject: Text Box Date: 11/13/2015 7:58:27 AM -06'00'

Commenter 59 cont.

Author: Medopera Subject: Highlight Date: 4/1/2016 2:17:06 PM
Comment ID: 59e
Topic: Cold Weather, Ice Jams

From: cisraelson@tampabay.rr.com
To: [*Review_Environmental \(DNR\)](#)
Subject: Re: F-M Diversion Comment
Date: Tuesday, October 27, 2015 6:30:40 PM

Commenter 59 cont.

Summary of Comments on ColleenIsraelson_Commenter59f_Email5.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/13/2015 8:03:44 AM -06'00'
Commenter 59 cont.

Author: Medopera Subject: Highlight Date: 4/1/2016 2:18:24 PM
Comment ID: 59f
Topic: Request for More Information, General Environmental Impacts

Good Afternoon:

Submitting my comments regarding proposed F-M dam/diversion

I am opposed to this project for reason #5

Other alignments should be consider before moving ahead. The current plan affects 3 counties besides Cass County. Not enough has been done to determine other alternatives including basin wide protection for all involved.

More studies are necessary for the BEST outcome for all, including a cost-savings, how to save money on this project, along with a detaled plan of how dikes, dam, water-ways will be maintained and monitored. By whom, at what cost, and who this additional cost will affect.

Thank you

Colleen Israelson
5515 Co Rd 81
Christine, ND 58015

From: cisraelson@tampabay.rr.com
To: [*Review, Environmental \(DNR\)](#)
Subject: Re: F-M Diversion Comment
Date: Tuesday, October 27, 2015 6:45:16 PM

Commenter 59 cont.

Summary of Comments on ColleenIsraelson_Commenter59f-g_Email6.pdf

Page: 1

Good Afternoon:

Submitting my comments regarding proposed F-M dam/diversion.

I am opposed to this project for reason #6

The current plan creates a wasteland for the landowners and farms in the region. This is a farm community which has not been remotely considered. How often will water be released, for what reason. Will it be limited to the time of year based on crop stage. Will there be crop insurance for water put on Farms by this project. Will the City of Fargo or the Government pay for the losses created by this project.

Will the land values be protected, will rent value be protected. Who will compensate farm businesses for the losses created by this project if not the above.

Will the a farm business be considered as a business "whole" meaning the entire building site along with all farmland as one entire business, which they are. No business should be allowed to be piece-mealed apart, they are considered one entity; Farming is a business and the same should apply it.

Thank you

Colleen Israelson
5515 Co Rd 81
Christine, ND 58015

Author: Medopera Subject: Text Box Date: 11/13/2015 8:10:02 AM -06'00'
Commenter 59 cont.

Author: cagreeso Subject: Highlight Date: 4/4/2016 8:43:11 AM
Comment ID: 59g
Topic: Proposed Project, Project Operation

From: [Craig Hertsgaard](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Thursday, October 22, 2015 9:39:25 PM
Attachments: [Craig Hertsgaard DNR comments.docx](#)

Commenter 60

Summary of Comments on CraigHertsgaard_Commenter60a-d_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/13/2015 8:15:54 AM -06'00'
Commenter 60

Author: Date: Indeterminate

Dear Ms. Townley:

The attachment to this email contains my comments for the Fargo-Moorhead Flood Risk Management Project DEIS.

Thank you,

Craig Hertsgaard



This email has been checked for viruses by Avast antivirus software.

www.avast.com

Ms. Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road
St. Paul, MN, 55155-4025

Dear Ms. Townley:

Thank you for the opportunity to comment on the EIS for the Fargo Moorhead Flood Risk Management Project that is currently under review.

The Fargo project is environmentally damaging for a number of reasons. Two of the major impacts are removal of approximately 30,000 acres of the natural floodplain, and the project staging area that covers approximately 50,000 acres. Despite the protection from river floods, the land to be removed from the floodplain will still be subject to flooding from large rainfall events. Rainfall events have caused the largest monetary loss to Fargo's residents and infrastructure to date. The economic and sociological impacts of the external staging area continue to be one of the largest negative effects of the project. The loss of agricultural productivity, the economic "dead zone" created by the reservoir, damage to transportation infrastructure, and inundation of historic cemeteries are just a few of the injuries that would be sustained by upstream residents.

Comment #1

No Study of Internal project floodwater storage.

A significant alternative not studied by the EIS was flood water storage inside the diversion channel. The project purpose is to "qualify substantial portions of the F-M Metro Area for FEMA flood insurance accreditation." Internal storage with a much smaller staging area, or perhaps none at all, may accomplish that goal. Much of Fargo's flood problems are due their permitting of new construction in the existing floodplain. If the floodplain were enhanced rather than removed, a reduction in peak river levels during times of peak flows would be accomplished. There are two examples of engineered plans already in place for the community and demonstrate that principle. The first is the Southside Flood Protection project. That plan included internal storage as well as internal bypass channels to reduce peak flood levels and provide FEMA protections. That plan was designed to have no impact on river levels upstream. The Southside project was rejected by the Army Corps because it violated Executive Order 11988. That federal rule prohibits projects that encourage development in the floodplain.

The second example is the current "Southwest Storm Sewer Master Plan" currently under consideration by the city of Fargo. That plan would create a 2000 acre internal storage area that would be excavated 10 feet deep to store 20,000 acre feet of water. If just half of the area to be removed from the natural

floodplain were converted to temporary flood storage, the need for the dam and staging area would be greatly reduced.

The internal storage alternative should be studied.

Comment #2

FEMA 100 year flood hydrology should be studied as base flood.

The MN EIS uses 100 year flood levels estimated by a revised historical base period that are high than those used by FEMA. The EOE panel assembled by the Army Corps in their FEIS review concluded that wet and dry periods could be extracted from historical data. The ACOE took that finding and concluded that the length of those historical periods could be anticipated as well. As a result, they dropped approximately half the data points from the historical record, and calculated anticipated 100 year river flows based on the data points they retained. There are several problems with this method.

First, from a statistical standpoint, the sample size of the historical data period is very small as compared to recent climate period history that began with the receding of the glaciers and the disappearance of Lake Agassiz. Climatologists have only a dim picture of the macro and mini cycles of weather that have occurred during that time period. The ACOE's decision to cut the available data in half further reduces a virtually non-statistically significant sample of a variable conditions to one with virtually no confidence of predicting future events.

Second, the premise for assembling the EOE panel was to more accurately predict climate conditions. The ACOE did not begin their FEIS with intent of creating a more accurate picture of future flood risk than what the historical record would predict. The ACOE calculated total annual damages from a FEMA 100 year flood event, and compared that to the cost of the proposed project. The benefit/cost ratio for the project was found to be less than 1, and would not qualify for federal authorization. In phase 2 of their analysis, they used new damage assumptions and cost estimates but still could not arrive at a benefit/cost ratio that was high enough. It was only at that point that they assembled the EOE panel to see if they could justify a large flood event to increase the cost of annual damages enough for their needs. The EOE process was not an empirical study to find a more accurate prediction of a 100 year flood event, but rather a reverse engineered process to qualify for a federal financial requirement. The statistical process was contaminated from the start and fundamentally flawed.

Finally, at its base, the EOE panel results were used to predict climate and resulting flood events for the future. The wet/dry cycle has never been successfully documented, or repeated. It's not like an El Nino event that has been observed and measured on numerous occasions.

The DNR EIS should include independent modeling that uses historical 100 year flood risk as an alternative to the EOEP inflated flood levels. Only then will there be a true analysis of project need, and environmentally sound alternatives.

Author: Medopera Subject: Highlight Date: 11/13/2015 8:19:33 AM -06'00'
Comment ID: 60a cont.

Author: Medopera Subject: Highlight Date: 4/1/2016 2:45:01 PM
Comment ID: 60b
Topic: Alternatives, Alternative: DSA Plus More

Comment #3

Author: cagreese Subject: Highlight Date: 4/20/2016 11:29:57 AM
Comment ID: 60c
Topic: Proposed Project Purpose and Need, Questions Project Purpose

Single alternatives were examined independent of each other, and a combination of least impactful alternatives weren't evaluated.

The DNR's EIS process examined a number of alternatives through its process. Distributed storage throughout the basin as well as dikes and levees through the metropolitan area were examined and dismissed as not meeting the project purpose. Project sponsors submitted their plan designs for evaluation based on their preferred outcome. The process leaves a gap in consideration for discovering the least impactful environmental alternative that would still largely meet the project purpose, if the project purpose is reasonable. In this case, the project purpose is to remove as much land as possible from FEMA flood insurance requirements. The conflicting outcome is that the purpose also becomes removing as much land from the natural floodplain as possible and transferring the flood risk to the staging area. The optimum solution would be to examine whether the best features of all options could be combined to create an acceptable project.

The DNR EIS should examine whether a combination of distributed storage, in town dikes and levees, internal storage, and a downsized diversion plan that removes less land from the natural floodplain could largely meet project goals and have less negative environmental impacts.

Thank you for considering my comments,

Craig Hertsgaard
5530 165th Ave SE
Kindred, ND 58051
hertsfarm@iuno.com

This page contains no comments

From: [Curt Bjertness](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Tuesday, October 27, 2015 12:25:17 PM
Attachments: [EIS Letter Signed.bmp](#)

Commenter 61

Summary of Comments on C-W Valley Co- op_Commenter61a-c_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/13/2015 8:42:01 AM -06'00'

Commenter 61

Author: Date: Indeterminate

Attached are my comments on the Fargo Diversion.

Thank you

Curt Bjertness

Po Box 69

Wolverton, MN 56594

218-995-2565

curt@cwvalley.net

October 26, 2015

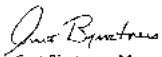
Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, BNR
500 Lafayette Road
St. Paul, Minnesota 55155-4025

The Locally Preferred Plan of the Fargo Diversion Authority will cause economic hardship on upstream people, businesses and school districts. I am not against providing Fargo/Moorhead flood protection but the continued expansion by Fargo and development into a natural flood plain for the growth of Fargo should not be allowed.

I manage C-W Valley Co-op which is a locally owned farmer co-operative that will be severely impacted if this current plan is implemented. Many of our patrons will also be negatively impacted by this project. In two of the past three years, our patrons had a window of 8-9 days for planting without going well past optimum planting dates and into preventive planting periods that would normally be covered by crop insurance. If flood waters are held back onto this land for several days, I do not believe the crops will get planted nor will they be covered by crop insurance. At this time there has not been a plan developed to protect these farmers against their losses. The business I manage was formed by the merger of two co-ops that have been in existence since 1929. We are a full service co-op providing fuel, fertilizer and chemical to our patrons as well as grain facilities to handle their grain. If this land does not get planted or even gets planted late, the negative financial impacts of reduced grain handle and reduced ag inputs sold could very well put this company out of business as well as some of the farmers that are impacted. As a business we do not have insurance available to protect against this type of loss.

The facilities that are operated by C-W Valley Co-op as well as many of the impacted farmland acres are not in flood plains without this proposed project. I do not believe it is logical to build in a natural flood plain and expect others to sacrifice their property, homes, and businesses. More than that, it is not ethically or morally right to continue the expansion into a natural flood plain for the growth of Fargo and have others sacrifice for it.

My suggestion is to have Fargo discontinue their expansion into the natural flood plain and to provide flood protection through Fargo without the staging area. Without the continued expansion I think this could be a viable alternative. The surrounding communities that have areas out of the flood plains could be developed economically for a strong regional economy versus a Fargo growth at the expense of others.



Curt Bjertness, Mgr
C-W Valley Co-op
PO Box 69
Wolverton, MN 56594

Page: 2

Author: Medopera Subject: Highlight Date: 4/1/2016 3:02:59 PM
Comment ID: 61a
Topic: Socioeconomics, Agriculture Impacts and Mitigation (Planting Delays)

Author: Medopera Subject: Highlight Date: 4/1/2016 3:03:52 PM
Comment ID: 61b
Topic: Socioeconomics, Project is Immoral
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/1/2016 3:04:24 PM
Comment ID: 61c
Topic: Alternatives, Alternative: Fargo Flood Damage Reduction

From: dIsraelson@tampabay.rr.com
To: [*Review, Environmental \(DNR\)](#)
Subject: Comment FM Div
Date: Tuesday, October 27, 2015 7:10:46 PM

Commenter 62

Summary of Comments on DallasIsraelson_Commenter62a-b_Email1.pdf

Page: 1

Hello,

Diversion Authority has determined that there will be no money set aside to maintain the Comstock to Hickson bridge. This will stop interstate trade creating business failure due to the loss of the bridge. Additionally, the rural roads will not be maintained because the Corp feels the roads will not suffer from saturation or flooding.

Thank you

Dallas Israelson
5515 Co Rd 81
Christine, ND 58015

Author: Medopera Subject: Text Box Date: 11/13/2015 8:59:53 AM -06'00'
Commenter 62

Author: Medopera Subject: Highlight Date: 4/1/2016 3:05:53 PM
Comment ID: 62a
Topic: Infrastructure and Public Services, Comstock/Hickson Bridge

Author: Medopera Subject: Highlight Date: 4/19/2016 3:04:32 PM
Comment ID: 62b
Topic: Infrastructure and Public Services, Flood Impacts to Roadways, Ditches and Culverts

From: dIsraelson@tampabay.rr.com
To: [*Review, Environmental \(DNR\)](#)
Subject: Comment FM Div
Date: Tuesday, October 27, 2015 7:19:53 PM

Commenter 62 cont.

Summary of Comments on DallasIsraelson_Commenter62c-d_Email2.pdf

Page: 1

Wildlife spends their winters in the woods on the river as their protection. Saturated trees are dead trees and will provide no support to wildlife. Creating a dead area along with clogging up bridge-ways and channels with debris will significantly increase flooding.

Dallas Israelson
42399 Lida View Lane
Vergas, MN 56587

Author: Medopera Subject: Text Box Date: 11/13/2015 2:07:18 PM -06'00'
Commenter 62 cont.

Author: Medopera Subject: Highlight Date: 4/1/2016 3:08:30 PM
Comment ID: 62c
Topic: Wildlife and Wildlife Habitat, Flood Impacts to Wildlife and Wildlife Habitat

Author: Medopera Subject: Highlight Date: 4/20/2016 10:58:18 AM
Comment ID: 62d
Topic: Proposed Project Operation, Flood Debris and Cleanup

From: dIsraelson@tampabay.rr.com
To: [*Review, Environmental \(DNR\)](#)
Subject: Comment FM Div
Date: Tuesday, October 27, 2015 7:25:04 PM

Commenter 62 cont.

The Ag industry in Hickson, Comstock, Woilverton, Christine, Knahed and Celfax will be severely affected by this project at best. At worst would be obliterated.

It is probable that were there two flood events in two consecutive years that local banks would go under do to those substantial losses.

Thank you

Dallas Israelson
42399 Lida View Lane
Vergas, MN 56587

Summary of Comments on DallasIsraelson_Commenter62e_Email3.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/13/2015 2:16:29 PM -06'00'
Commenter 62 cont.

Author: Medopera Subject: Highlight Date: 4/1/2016 3:10:33 PM
Comment ID: 62e
Topic: Socioeconomics, Agriculture Impacts on Local Economy

From: dIsraelson@tampabay.rr.com
To: [*Review, Environmental \(DNR\)](#)
Subject: Comment FM Div
Date: Tuesday, October 27, 2015 7:33:18 PM

Commenter 62 cont.

Summary of Comments on DallasIsraelson_Commenter62f_Email4.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/13/2015 2:22:19 PM -06'00'
Commenter 62 cont.

If Fargo going to be held accountable? Fargo continues to build on the river creating an even narrower water passage that increases flooding. There are many examples within Fargo city limits and Oxbow. Despite buy-outs of river homes, they have again allowed building against the river in the same locations where they did their buy-outs.

Author: Medopera Subject: Highlight Date: 4/1/2016 3:11:48 PM
Comment ID: 62f
Topic: Land Use, Fargo's Comprehensive Plan

Right now they are building an entirely new golf course into the bottom of the river.

The river and the city of Fargo need to return to the 1897 flow rate with-in city limits.

Dallas Israelson
42399 Lida View Lane
Vergas, MN 56587

From: dIsraelson@tampabay.fl.com
To: [*Review_Environmental \(DNR\)](#)
Subject: Comment FM Div
Date: Tuesday, October 27, 2015 7:42:43 PM

Commenter 62 cont.

Summary of Comments on DallasIsraelson_Commenter62f-g_Email5.pdf

Page: 1

Section lines put in after 1897 are a protection, if the 1897 flow level were restored to same the city would not flood. No mention of 1897 flowage has been compared in any of the Corp studies. If they have they have not been made public.

New building in South Fargo is now in the Hood plane where the 1997 flood occurred. Permits should not have been awarded, no school should have been built; the school is raised approx. 4-5 feet with them knowing they were filling in a wetland to create this school and community. Were it rain heavily or actually flood this area would be the first to go by way flooding itself.

Dallas Israelson
42399 Lida View Lane
Vergas, MN 56587

Author: Medopera Subject: Text Box Date: 11/13/2015 2:28:11 PM -06'00'
Commenter 62 cont.

Author: Medopera Subject: Highlight Date: 4/19/2016 11:40:02 AM
Comment ID: 62g
Topic: Hydrology and Hydraulics, 1897 Flowage

Author: Medopera Subject: Highlight Date: 11/13/2015 2:31:51 PM -06'00'
Comment ID: 62f cont.

From: [Dan Lindquist](#)
To: ["Review_Environmental \(DNR\)](#)
Subject: Fargo Moorhead Risk Management Project DEIS
Date: Wednesday, October 28, 2015 6:35:33 AM
Attachments: [206125311668C97BD2.png](#)

Commenter 63

Summary of Comments on DanLindquist_Commenter 63a_b_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/13/2015 2:43:05 PM -06'00'
Commenter 63

Author: Date: Indeterminate

Author: Medopera Subject: Sticky Note Date: 4/1/2016 3:15:46 PM

Please find my attached letter. Thank you,

Dan Lindquist
2318 River Dr N
Moorhead, MN 56560

Ecological and Water Resources Division
300 Lafayette St
St. Paul, MN 55105-4025
RE: Fargo Moorhead Flood Risk Management Project
ATTN: JG Torrey, Project Manager

Dear Mr. Torrey,

I am sure I speak for most, if not all, residents of Moorhead and the surrounding region when I say that the need for enhanced flood control is a critical and urgent one for our part of the state. On the same I believe there is near universal agreement. The purpose of this letter is to request that the Fargo Moorhead Flood Risk Management Project be given the highest priority in the state's budget.

This is a critical and urgent need that must be met. Floods can cause hundreds of millions of dollars in damage, loss of life, and other consequences and actions to be taken are needed to prevent, or at least reduce, the damage and loss of life. The Fargo Moorhead Flood Risk Management Project is a permanent, significant project in Moorhead and is needed.

First of all, the estimate when compared to the cost of project, it is only a matter of time before a major flood strikes in the area again. We are not just a one-time flood risk management plan. The Department of Natural Resources, the Federal Emergency Management Agency will not allow the flood risk for this region to be reduced using the flood risk plan. This could be a significant barrier to new homes, businesses, and other properties inside the flood plain, with devastating financial consequences for the property owners.

For these reasons, it makes sense to address the flood risk and get it started. Seeking the Northern Region's approval is a critical step in the Fargo Moorhead Flood Risk Management Project. A solution that meets the needs of the region is needed. The Fargo Moorhead Flood Risk Management Project is needed to protect the region and its residents. We are asking only approval from the DNR. I urge you to grant it that approval.


Dan Lindquist
Dan Lindquist Construction Inc.
2318 River Dr N
Moorhead, MN 56560

DEIS Letter

[VIEW SLIDE SHOW](#) [DOWNLOAD ALL](#)



This album has 1 photo and will be available on OneDrive until 1/26/2016.

10/22/2015

Minnesota DNR

Environmental Policy and Review Unit Box 25

Ecological and Water Resources Division

500 Lafayette Rd

St. Paul, MN 55155-4025

RE: Fargo-Moorhead Flood Risk Management Project
ATTN: Jill Townley, Project Manager

Dear Ms. Townley,

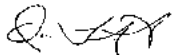
I am sure I speak for most, if not all, residents of Moorhead and the surrounding region when I say that the need for permanent flood control is a critical and urgent one for our part of the state. On this point, I believe there is near universal agreement. The purpose describe by the Fargo-Moorhead Flood Diversion Authority for the Fargo-Moorhead Flood Risk Management Project put it very well: "the purpose of the project is to reduce flood risk, flood damages, and flood protection costs related to flooding in the Fargo Moorhead metropolitan area."

This is a purpose, and a project, that everyone can get behind. Flooding can cause hundreds of millions of dollars in damage, risk lives, and interrupt commerce and access to vital services and facilities for weeks. In an area as naturally prone to flooding as ours, temporary emergency measures are simply not enough – a permanent, engineered system is appropriate and deeply necessary.

Time is of the essence when it comes to this sort of project. It is only a matter of time before a major flood occurs in this area again. Not only that, but if a comprehensive flood management plan is not approved of and set in motion shortly, the Federal Emergency Management Agency will re-draw the flood maps for this region, in all likelihood raising the flood plain level. This could put a significant number of new homes, businesses, and other properties inside the flood plain, with devastating financial consequences for the property owners.

For these reasons, it makes sense to approve the proposed action and get it started. Selecting the Northern Alignment Alternative will require a new federal Environmental Impact Statement, a process that could delay by project by years. The proposed alternative is fully analyzed and approved at the federal level, and is awaiting only approval from the DNR. I urge you to grant it that approval.

Sincerely,



Dan Lindquist

Dan Lindquist Construction Inc

2318 River Dr N

Moorhead, MN 56560

Page: 2

Author: Medopera Subject: Highlight Date: 4/1/2016 3:14:57 PM
Comment ID: 63a
Topic: Permitting Approval, Approve the Project
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/1/2016 3:15:41 PM
Comment ID: 63b
Topic: Proposed Project, General Support
Unsubstantive

From: [Roxanne & David Morken](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 11:59:18 AM

Commenter 64

Summary of Comments on Dave&RoxanneMorken_Commenter64a_Email1.pdf

Page: 1

Thank you for the opportunity to comment on the Fargo-Moorhead Flood Risk Management Project DEIS.

Author: Medopera Subject: Text Box Date: 11/13/2015 2:43:56 PM -06'00'
Commenter 64

The Operational Plan for the Fargo Moorhead Flood Control Plan seems to be lacking in specifics for a layman to understand. In looking through the Minnesota DNR's DEIS, I do not see plans for how a catastrophic break would be handled by the cities of Fargo and Moorhead. With flooding from snow melt, there is a window of time to prepare for possible flooding. In the event of a break, how many miles, structures and individuals would be lost? What is the time frame from a break in the dam and diversion until inundation of the area happens? What would be the size of that area? I would like to see a report on how much time there will be and if the damage to the city would not be more than a 2009 flood event.

Author: Medopera Subject: Highlight Date: 4/1/2016 3:17:06 PM
Comment ID: 64a
Topic: Dam Safety, Risk and Loss of Life Concerns

Again, thank you for the exhaustive study you have completed on the Army Corps EIS and our opportunity to point out what may be missing.

Dave and Roxanne Morken

17555 62nd St SE

Walcott, ND 58077



This email has been checked for viruses by Avast antivirus software.
www.avast.com

From: [Dave Gingrey](#)
To: [*Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project EIS
Date: Wednesday, October 28, 2015 3:21:16 PM

Commenter 65

The FM diversion project should not be allowed. Fargo has no right to take land which does not belong to the city for a project which may never be used. Fargo has created the flooding problem by allowing expansion into the flood plain and not constructing flood protection at the same time. Fargo will get the benefits of the diversion without making any sacrifices.

Dave Gingrey

Northstar Safety, Inc.
701-282-2110

Summary of Comments on DaveGingrey_Commenter65a-b_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/13/2015 2:46:58 PM -06'00'
Commenter 65

Author: Medopera Subject: Highlight Date: 4/4/2016 9:05:52 AM
Comment ID: 65a
Topic: Proposed Project, Project is Immoral
Unsubstantial

Author: Medopera Subject: Highlight Date: 4/4/2016 9:06:49 AM
Comment ID: 65b
Topic: Land Use, Fargo's Comprehensive Plan
Unsubstantive

From: [Dave Kinskey](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo-Moorhead Risk Management Project DEIS
Date: Tuesday, October 27, 2015 9:36:54 PM

Commenter 66

Summary of Comments on DaveKinskey_Commenter66a-b_Email1.pdf

Page: 1

October 26, 2015

Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road
St. Paul, Minnesota 55155-4025
Email: environmentalrev.dnr@state.mn.us

Re: Environmental Impact Statement for Fargo-Moorhead Flood Risk Management Project

Dear Ms. Jill Townley,

As a property owner in Moorhead, MN, I am deeply concerned about the chance of flooding in the metro area. We have several rivers in the vicinity of Fargo-Moorhead, all of which pose a flood risk. The damage from a major flood be devastating financially for affected property owners, and even if you manage to escape without property damage the toll caused by the economic disruption that a major flood event brings can be enormous.

That is why I support the proposed Flood Risk Management Project wholeheartedly, and recommend full permitting and funding for it.

The proposed alternative for the project has many things going for it: first, it is a technically sound plan that will provide permanent flood protection for the metro area. The plan to impound flood waters upstream in a staging area, then diverting the waters around Fargo-Moorhead is recognized as the absolute best way to prevent major damage from occurring. The location of the impoundment dam is such that the inundated area will impact as few existing structures as possible, and the plan includes ring levees to be built around communities (Oxbow-Hickson-Bakke, and Comstock) that could be affected.

Second, the proposed plan has already been reviewed and approved at the federal level. The US Army Corps of Engineers did a detailed and complete environmental review, in accordance with the National Environmental Protection Act, and submitted a favorable Record of Decision. This means that the project has a green light from the federal level, and awaits only state approval. If the state were, however, to choose a different option than the proposed alternative, that plan would need to go back through the entire federal approval process. This would be, in my view, a waste of time and money, and only serve to delay flood protection.

Third, initiating a permanent flood control plan, like the proposed action, would stave off a remapping of the flood plain by the Federal Emergency Management Agency. FEMA redoes their flood plain maps every 5 years in the absence of a valid plan for managing flood risk. When they do, the flood plain level inevitably is placed higher, which encompasses more homes and businesses. When this happens, those properties are subject to massive increases in insurance rates, and corresponding loss of property value. This often brings financial ruin to those property owners. Starting a solid flood control project, however, can forego the remapping.

These are just a few reasons why the proposed flood control project is a good idea, and should be approved of by the MNDNR.

Sincerely,



Dave Kinskey
4218 2nd St. S.
Moorhead, MN 56560
E-mail: davekinskey@hotmail.com
Cell phone: 701-729-6450

Author: Medopera Subject: Text Box Date: 11/13/2015 2:59:33 PM -06'00'
Commenter 66

Author: Medopera Subject: Highlight Date: 4/4/2016 9:08:05 AM
Comment ID: 66b
Topic: Proposed Project, General Support
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/4/2016 9:08:46 AM
Comment ID: 66a
Topic: Permitting Approval, Approve the Project
Unsubstantive

This page contains no comments

From: [David Wahlstrom](#)
To: [*Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Tuesday, October 27, 2015 11:34:30 PM

Commenter 67

Summary of Comments on DavidWahlstrom_Commenter67a_Email1.pdf

Page: 1

Gentlemen,

I live in one of the numerous homes that would be wiped out by your new plan. Currently, my home is owned by my boss and his wife. I'm in the process of acquiring the property. My boss, Ron Knutson, his wife, Ruth, and their son, Braun, Own Memory Fireworks. Which is another business which would be on your hit list of properties to be leveled and wiped out. They built this new store, and bought this house. With the understanding from the city of Fargo. That the diversion channel was to be located south of Cty Rd 16. The plan the Corp. of Engineers favors.

Now you people come along. After how many thousands and thousands of tax payer dollars. Has been spent already on studies, planning, buyouts, etc., etc. Come in and think this whole process needs to be started all over again from scratch. HOW MUCH MORE TAX PAYER MONEY DO YOU THINK HAS TO BE SPENT. This whole diversion issue is getting ridiculous. It's like a contest to see how many more homes and businesses can be sacrificed before all of you government officials are happy. The current plan was chosen because it had the least amount of impact on personal and business properties. Plus lower cost, and it provides the most flood protection to the Fargo area. Your plan does just the opposite. WHAT EVER HAPPENED TO USING GOOD OLD COMMON SENSE!!!!!!.

There's already enough people who live in this area that will effected by the current favored plan. I do understand the need to protect Fargo. But at the same time, I feel for the people who have to give up everything they've worked for in order to provide this protection. Now you characters come along and what to add to that list. More businesses gone, more homes gone, not the mention one of the oldest churches in North Dakota. Have you no morals?

Right now, they say total cost will be 1.8 billion dollars. We tax payers know better. Even if construction started tomorrow. The cost would be over 2 billion easy. With your plan, the resulting delays would drive this figure up. I wouldn't be surprised if it would hit 2.5 billion. Enough is enough!

I ask and urge you, to instead support and back the original plan favored by the Corp. of Engineers. Thank you for your time.

Sincerely yours,

David A. Wahlstrom

David A. Wahlstrom
10603 38th ST S
Horace, ND 58047

dwmfw@hotmail.com

Author: Medopera Subject: Text Box Date: 11/13/2015 3:07:13 PM -06'00'
Commenter 67

Author: Medopera Subject: Highlight Date: 4/4/2016 9:10:04 AM
Comment ID: 67a
Topic: Northern Alignment Alternative, General Opposition
Unsubstantive

From: [Dean Meyer](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 10:19:23 AM

Commenter 68

Summary of Comments on DeanMeyer_Commenter68a_Email1.pdf

Page: 1

My name is Dean Meyer and I live at 2095 110th Ave S, Moorhead, MN 56560. In response to the DEIS that was released a little while back I have several comments.

Author: Medopera Subject: Text Box Date: 11/13/2015 3:12:38 PM -06'00'
Commenter 68

I grew up in Minnesota and moved to Fargo in 1998. I purchased my first house in 2001 in West Fargo. When planning the next stage of my life I wanted to moved out of town. In the process of trying to find a place that was out of town I had to also take into consideration the placement of the diversion and the dam structures. The parcel that I found was located north of the current proposed dam.

Author: Medopera Subject: Highlight Date: 4/4/2016 9:11:38 AM
Comment ID: 68a
Topic: Northern Alignment Alternative, General Opposition
Unsubstantive

Two and a half years ago I purchased that parcel of land. On that land was two houses, a barn, small shed and a garage. Since the purchase of that parcel I have done many things, spent many hours and thousands of my personal income to improve the property. I burnt both houses down, buried my electrical lines and placed a new house that I now live in with my wife and 3 young boys. While planning the placement of the house I worked with the Buffalo River watershed district and an engineering firm to make sure that my house was at a proper elevation to avoid overland flooding. With that planning the house was placed around 2 feet higher than the previous high water level at an elevation that is equal to 110th Ave S. We moved into our house in August of 2014.

I am not the only one that has had to take into consideration the diversion and dam placement. Currently on 110th Ave S over the last 5 yrs on a 3 mile stretch, four other houses have been built. All of us planned our placement of houses and purchase of land based on the currently approved placement of the dam. By changing to the northern alignment there are more houses that are affected and a larger area will be placed behind the dam. If the diversion is approved and built, (which in my opinion it should never be built) it should be done with the currently approved southern alignment.

When at the meeting that was done at the Marriot in Moorhead there was one large item that stuck out to me. It is that I did not see my current property marked properly. Like stated earlier in this message I have a house, extra garage, barn and shed on my current property. If the northern alignment is chosen I do not believe that I could possible find a parcel of land that would be comparable to what I currently own. My 7 acres has hundreds of trees some of which are probably over 100 yrs old and gives me protection from the wind in all directions. When trying to find a parcel of land there was nothing on the MN or ND side that was comparable. Most parcels where empty pieces with no trees or additional buildings. Like I stated earlier, I do not believe that a diversion should be built or permitted in the first place, but if it is it should be done with the current alignment and placement.

Thanks
Dean, Kelly, Jonah, Caleb and Christian Meyer

This page contains no comments

From: [Deborah Nichols](#)
To: ["Review, Environmental \(DNR\)"](#)
Date: Tuesday, October 27, 2015 1:47:05 PM

Deborah Nichols
Realtor
Cell: 701.388.9492

Park Co. Realtors
28 N 10th St, Fargo

Commenter 69

Summary of Comments on DeborahNichols_Commenter69a-c_Email1.pdf


Page: 1

Author: Medopera Subject: Text Box Date: 11/13/2015 3:22:12 PM -06'00'

Commenter 69

From: [Deborah Nichols](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Signed letter
Date: Tuesday, October 27, 2015, 1:52:17 PM
Attachments: [F-M 30.docx](#)

Page: 2

 Author: Date: Indeterminate

Deborah Nichols
Realtor
Cell: 701.388.9492

Park Co. Realtors
28 N 10th St, Fargo

From: [Deborah Nichols](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Letter signed
Date: Tuesday, October 27, 2015 2:19:53 PM

Page: 3

10/20/2015

Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road,
St. Paul, MN 55155-4025
Email: environmentalrev.dnr@state.mn.us

Ref: Fargo-Moorhead Flood Risk Management Project DEIS

Dear Ms. Townley, and DNR staff,

I would like to thank the Minnesota Department of Natural Resources, and in particular your division, for the fine work you have done over the years in protecting Minnesota's people, land, and resources, work that is reflected in your draft Environmental Impact Statement on the Fargo-Moorhead Flood Risk Management Project.

Your analysis properly dismissed some proposed alternatives as being unfeasible, such as the Distributed Storage Alternative, and accurately pointed out that the Northern Alignment Alternative would impact more homes and cost many millions of dollars more.

Your analysis of the federally authorized, proposed alternative was also accurate and complete, and demonstrated the benefits that this project would bring to the region, by providing permanent flood control for an area long known to be subject to periodic and devastating flood events.

The purpose of the project is to reduce flood risk, flood damage, and flood control costs, and proposed solution will deliver that. It is a well-designed plan that will protect the Fargo-Moorhead metro area and surrounding region, at the lowest cost, while posing the least impact possible on local homes, communities, and the environment, and also precluding a remapping of the region by FEMA, which could place dozens of homes in a newly drawn flood plain, with immense financial consequences for the property owners.

About the only area where I could perhaps see some minor inaccuracy in the document is where, in the socio-economic section, you state that 38% of Moorhead residents work in Fargo or West Fargo; however, the state's Economic Development Report says that the number is close to 60%, which serves to demonstrate how critical flood protection for the Fargo-Moorhead metro area is to Minnesota.

Overall, this is a very good document that reflects the best of your agency. Based on your analysis, and the federal one that preceded it, I support the project, and recommend full approval, permitting and funding for it.

Yours Truly,
Deborah Nichols

Deborah Nichols
Realtor
Cell: 701.388.9492

Park Co. Realtors
28 N 10th St, Fargo

Author: Medopera Subject: Highlight Date: 4/4/2016 9:14:42 AM
Comment ID: 69a
Topic: Proposed Project, General Support
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/20/2016 4:16:54 PM
Comment ID: 69b
Topic: Socioeconomics, Economics

Author: Medopera Subject: Highlight Date: 4/4/2016 9:17:11 AM
Comment ID: 69c
Topic: Permitting Approval, Approve the Project
Unsubstantive

This page contains no comments

10/20/2015

Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road,
St. Paul, MN 55155-4025

Email: environmentalrev.dnr@state.mn.us

Ref: Fargo-Moorhead Flood Risk Management Project DEIS

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The purpose of the project is to reduce flood risk, flood damage, and flood control costs, and proposed solution will deliver that. It is a well-designed plan that will protect the Fargo-Moorhead metro area and surrounding region, at the lowest cost, while posing the least impact possible on local homes, communities, and the environment, and also precluding a remapping of the region by FEMA, which could place dozens of homes in a newly drawn flood plain, with immense financial consequences for the property owners.

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Overall, this is a very good document that reflects the best of your agency. Based on your analysis, and the federal one that preceded it, I support the project, and recommend full approval, permitting and funding for it.

Yours Truly,

From: djista@foretel.net
To: ["Review, Environmental \(DNR\)"](#)
Subject: DNR EIS Comments October 11, 2015
Date: Sunday, October 11, 2015 5:56:04 PM
Attachments: [DNR EIS Comments October 11, 2015.docx](#)

Commenter 70

Summary of Comments on DianeIsta_Commenter70a-j_Email1.pdf

Page: 1

Greetings to the DNR:

Attached is a document that contains (5) comments concerning the DNR EIS.

Our life as it is for us and our great-grandchildren is hanging in the balance of the decision concerning the Fargo diversion. Richland County is where my mother's parents settled in Kent MN and then Abercrombie ND. My father's parents homesteaded in Abercrombie Township on 2 quarters of land. My sister-in-law's grandparents homesteaded near Christine, ND. A large portion of this land is in danger of being flooded for the Fargo diversion. I am well aware that any comments concerning our heritage will not be considered as a comment to the DNR EIS, but it is extremely sad that is not considered. Thank you for allowing me to comment on the DNR EIS review.

Diane Ista Landowner in Richland County and member of the Min Dak Upstream Coalition.
4345 47th Ave. S.
Fargo, ND 58104
218-784-8060 Cell

Author: Medopera Subject: Text Box Date: 11/13/2015 3:31:57 PM -06'00'
Commenter 70

Author: Date: Indeterminate

Author: jitownle Subject: Test Subject Line Date: 4/4/2016 9:18:47 AM
Comment ID: 70a
Topic: Socioeconomics, Century Farmers

**DNR EIS Comments
October 11, 2015**

Prepared by Diane Ista

4345 47th Ave. S., Fargo, ND 58104

**Also a landowner in Richland County and member of the Min Dak
Upstream Coalition.**

Fargo has invested millions of tax payer funds to build flood walls, levees, home and business buyouts, etc. I am grateful for their efforts and dedication to protect Fargo from flooding. In the 2009 flood Fargo protected 69 miles with sand bags, levees and other methods. Fargo won the fight because of the leadership from the city of Fargo and the thousands of volunteers who filled sand bags, placed sand bags where needed, volunteers that manned the phones to keep the communication going.

Now, if a flood the size of 2009 were to hit Fargo, 39 miles have been protected with permanent flood protection to date. When the project now underway completes the 2nd St. levee, removing Park Place, to be replaced with a permanent wall or levee and continues on to Oak Grove area and others, my estimate is there will only be 10 miles or less to protect with temporary levees and sand bags.

With Fargo protected to 42.5 feet is it really necessary to flood thousands of acres of farmland, build a dam, flood cities, homes, farmsteads, buildings and grain bins, cemeteries, etc. to protect Fargo from a manageable flood?

Please deny the Fargo Diversion's efforts to build a 36 mile channel, several bridges over 5 rivers, which are questionable as to functioning during cold winter months. This fiasco is not necessary. The USACE in all their wisdom should be able to protect the city of Fargo to a height of 45 feet flood level.

Please consider all the environmental damage the flooding will cause for those flooded south of Fargo. Deny the permit, please.....

Comment # 2:

With Fargo increasing their flow through town to 35 cfs and a very strong possibility the cfs will increase, the actions of the USACE and the Fargo Diversion will increase the flow downstream and cannot be disputed. The USACE was instructed to have "zero" impacts downstream! Can the downstream be reassured there will be zero impacts?

Author: jitownle Subject: Comment on Text Date: 4/4/2016 9:19:57 AM
Comment ID: 70b
Topic: Base No Action Alternatives, Existing Conditions
Unsubstantive

Author: jitownle Subject: Comment on Text Date: 4/20/2016 11:31:39 AM
Comment ID: 70c
Topic: Proposed Project Purpose and Need, Questions Project Purpose

Author: jitownle Subject: Comment on Text Date: 4/4/2016 9:21:16 AM
Comment ID: 70d
Topic: Permitting Approval, Reject the Project
Unsubstantive

Author: jitownle Subject: Comment on Text Date: 4/4/2016 9:21:48 AM
Comment ID: 70e
Topic: Environmental Impacts, General Environmental Impacts

Author: jitownle Subject: Comment on Text Date: 4/19/2016 12:31:56 PM
Comment ID: 70f
Topic: Hydrology and Hydraulics, Downstream impact

Please deny the permit so the downstream will not have to suffer environmental damage, which has not been considered in the DNR EIS.

Author: jitownle Subject: Comment on Text Date: 10/23/2015 11:08:16 AM

Comment # 3:

The Fargo development plan to build in the flood plain south of 52nd Ave. and further south where the Davies school was built is another disaster waiting to happen. Hauling in fill to raise the homes and businesses will not solve the problem of building in a flood plain. Just as our past leaders in all their wisdom allowed homes to be built very close to the river, in 20 years the elected leaders in Fargo will begin buying out homes built in low lying land. The water table is high and levees are known to fail. Please deny the permit to the Fargo Authority so the next generation will not have to go through what home owners are going through now. The poor judgment of the Fargo elected officials in 2015 allowing the development in a slough will make another generation suffer. Please deny the permit.....

Author: jitownle Subject: Comment on Text Date: 4/4/2016 9:23:16 AM
Comment ID: 70g
Topic: Base No Action Alternative, Existing Conditions
Unsubstantive

Author: jitownle Subject: Comment on Text Date: 4/4/2016 9:23:46 AM
Comment ID: 70h
Topic: Fish Passage and Biological Connectivity, Fish Impacts

Author: jitownle Subject: Comment on Text Date: 4/4/2016 9:24:33 AM
Comment ID: 70i
Topic: Socioeconomics, Agriculture Mitigation

Comment # 4:

How can the DNR state that there will be fish passage? When frozen with little or no water under the ice and when the Fargo area has a lack of rainfall so there is no water in the diversion ditch how is this possible? The DNR and the Fargo Authority are putting their head in the sand and just hoping the bridges over 5 rivers will work properly for fish passage. Deny the permit!

Comment # 4:

**The compensation for loss of income from the flooding upstream is not only an un-known, it is another case of the shell game. If this generation allows an easement into perpetuity that will affect forever all who will be caretakers of the land in the future, how will those farming the land be compensated for crop loss and loss of income in 30 years from now much less 100 years from now?
It cannot be done and even suggesting it can be done is fraud. There will be flooding in the spring and during the crop year from excessive rainfall many times in the next 30 years. How will the next generation in charge of the diversions view compensating farmers for their crop loss? There will be flooding from the dam/diversion and that is a given. There is going to be damage to the crops under water. Who is so brilliant that they can make a statement that it is, "highly unlikely" there will be flooding where the dam will be used in the next 10 years? The statement can be countered with the statement it is "likely" that there will and can be flooding in the next 10 years, you can count on that. Will the next**

generation state they do not want to follow the original agreement for compensation of loss of income? Will the congress abort all crop insurance in the next 10 years? What funds will be used to establish an escrow account into perpetuity to compensate for crop loss as promised? Please deny this permit and confront the USACE and the Fargo Diversion Authority that compensating income loss into perpetuity is a farce!!

Author: jitownle Subject: Comment on Text Date: 10/23/2015 11:24:41 AM

Author: jitownle Subject: Comment on Text Date: 4/20/2016 11:32:00 AM
Comment ID: 70
Topic: Proposed Project Purpose and Need, Questions Project Purpose
Unsubstantive

Comment # 5:

**The Forum stated in their Opinion Page," that good research is confirming that the Fargo-Moorhead flood diversion will do much more good than harm." The comments stated above confirm that the diversion will do more harm than good. The Forum also stated, Once again, the best possible fact based, objective analyses are undermining the 'sky is falling' opponents, who have tried to characterize the flood protection project as doing immense and irreparable harm to upstream." These statements characterize the disrespect and blatant attitude of The Forum, USACE and the Fargo Diversion Authority to disregard the potential of destroying the environment and destroying a heritage of those upstream.
Please deny the permit.**

From: [Don Krassin](#)
To: "[Review_Environmental \(DNR\)](#)"
Subject: Objection to FM Diversion Project
Date: Thursday, October 15, 2015 2:09:20 PM
Attachments: [donkrassin@702com.net.vcf](#)

Commenter 71

Summary of Comments on DonKrassin_Commenter71a-c_Email1.pdf

Page: 1

Dear Madam or Sir:

As a citizen of Richland County, North Dakota I wish to pass on my opposition to the FM Diversion project as currently proposed.

The current proposal will adversely:

- a. Effect the Tax Base of Richland Co
- b. Permanently take some good farmland out of production
- c. Permanently subject significant amounts of good farmland to probable annual flooding which will reduce the production of such land and may bring in by flood weed seeds and other invasive plant species.
- d. By flooding up stream, bring in unwanted and unneeded 'nutrients' which could adversely effect crop production while helping the growth and spread of noxious weeds.

Alternative:

Flood protection for the Fargo Moorhead area is a good goal. But the City of Moorhead has basically all ready achieved that with dikes, buy outs etc.

Fargo could easily protect their citizens just as Moorhead has done. In fact, Fargo has done considerable work in that regard.

But the currently constiated FM Diversion Project goes far beyond flood protection. It is favored by developers in Fargo because developers will be able to build on 'flood plain' while submerging Richland Co (and Wilkin Co) land.

New Engineering.

I am not an engineer, but reliable reports indicate there are new engineering studies that can solve the Fargo flood problem without the adverse effects of the FM Diversion Project as currently proposed.

Don Krassin
Attorney at Law
120 1st St S.
Wahpeton ND 58075
701 642 4747
donkrassin@702com.net

Author: Medopera Subject: Text Box Date: 11/13/2015 3:50:59 PM -06'00'
Commenter 71

Author: Date: Indeterminate

Author: Medopera Subject: Highlight Date: 4/4/2016 11:36:17 AM
Comment ID: 71a
Topic: Proposed Project, General Opposition
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/4/2016 11:36:59 AM
Comment ID: 71b
Topic: Alternatives, Alternative: Fargo Flood Damage Reduction

Author: Medopera Subject: Highlight Date: 4/4/2016 11:37:46 AM
Comment ID: 71c
Topic: New Information Available, Engineering Studies
Unsubstantive

Summary of Comments on DonNelson_Commenter72a_Email1.pdf

Page: 1

From: [Don Nelson](#)
To: [*Review_Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 1:02:47 AM
Attachments: [OHB_Review_Table1_ArmyCorpsNumbers.pdf](#)
[OHB_Impact_Analysis_Map_ArmyCorpsNumbers.pdf](#)
[OHBFIsmemo2014-04-08FEMA_Numbers.pdf](#)

Commenter 72

Author: Medopera Subject: Text Box Date: 11/16/2015 8:58:24 AM -06'00'
Commenter 72

Author: Date: Indeterminate

Author: Date: Indeterminate

Author: Date: Indeterminate

Author: Medopera Subject: Highlight Date: 4/19/2016 2:13:01 PM
Comment ID: 72a
Topic: Hydrology and Hydraulics, OHB Ring Levee Impacts in Minnesota

The OHB ring dike project needs a thorough investigation on the Impacts to MN. The original study that was done and provided to the MN DNR was done using FEMA numbers in an attempt to show no MN Impacts. If FEMA numbers were being used for the diversion project there would be no project and there would be no OHB ring dike. That is a fact that the Diversion Engineers readily admit to. They are using Army Corps numbers everywhere else in the project in an attempt to justify the project but decided to use lower numbers in the OHB impact study in an attempt to hide MN Impacts. After they did that study I was able to get them to re-do the study using the correct numbers. The new study (also done by Houston Engineering) showed that the MN Impacts from the OHB dike go for about 9 miles (8 miles to the south of OHB and 1 mile to the north of OHB). Probably the most simplistic way to say it is they were only able to justify the building of the OHB dike based on the higher Army Corps numbers but then they changed to using the lower FEMA numbers to show no impact from the OHB dike. I don't believe you will find anywhere else in the entire Diversion Project an impact study done using FEMA level numbers. It is only by them using the higher Army Corps level numbers that they have attempted to justify any part of this Diversion Project including the OHB dike. Now you will also notice that they are admitting to 9 miles of MN Impacts but are only admitting to a half inch of Impact. Simple Mathematics and Hydrology tell you that you can't hold water back for 9 miles and only cause a half inch Impact. The reason they will only state a half inch impact is because Pleasant Township in ND has a water ordinance that says there can be no impact from any project that is more than one inch of impact. I am requesting that MN DNR does their own Impact study from the OHB project and include that in the MN EIS.

The southeast section of the OHB ring dike has been built in the floodway. This restricted the river by 50% compared to before construction. Now during floods the available width for floodwater flows at that dike location is half what it used to be and now causing MN impacts. That dike will force all future floodwater to be pushed into MN where floodwaters have never gone. Had no MN flooding issue in 2009 at this location. The OHB dike at this location needs to be removed completely or at a minimum moved to the top of the hill (back west) to get rid of the MN Impact.

I have attached 3 files. OHB_Review_Table1_ArmyCorpsNumbers is a chart showing the impacts at various cross sections using the Army Corps level numbers.

OHB_Impact_Analysis_Map_ArmyCorpsNumbers is the map with the cross sections from the chart that shows the MN Impacts go for 9 miles based on Army Corps level numbers.
OHBFISmemo2014-04-08FEMA_Numbers is the original OHB impact study done using FEMA level numbers in an attempt to show no MN Impact.

Page: 2

Author: Medopera Subject: Highlight Date: 11/16/2015 9:06:16 AM -06'00'
Comment ID: 72a cont.

Email: donnelso@hotmail.com

Phone: 218-585-4550

Address: 5086 130th Ave. South

Moorhead, MN 56560

Thanks,

Don Nelson



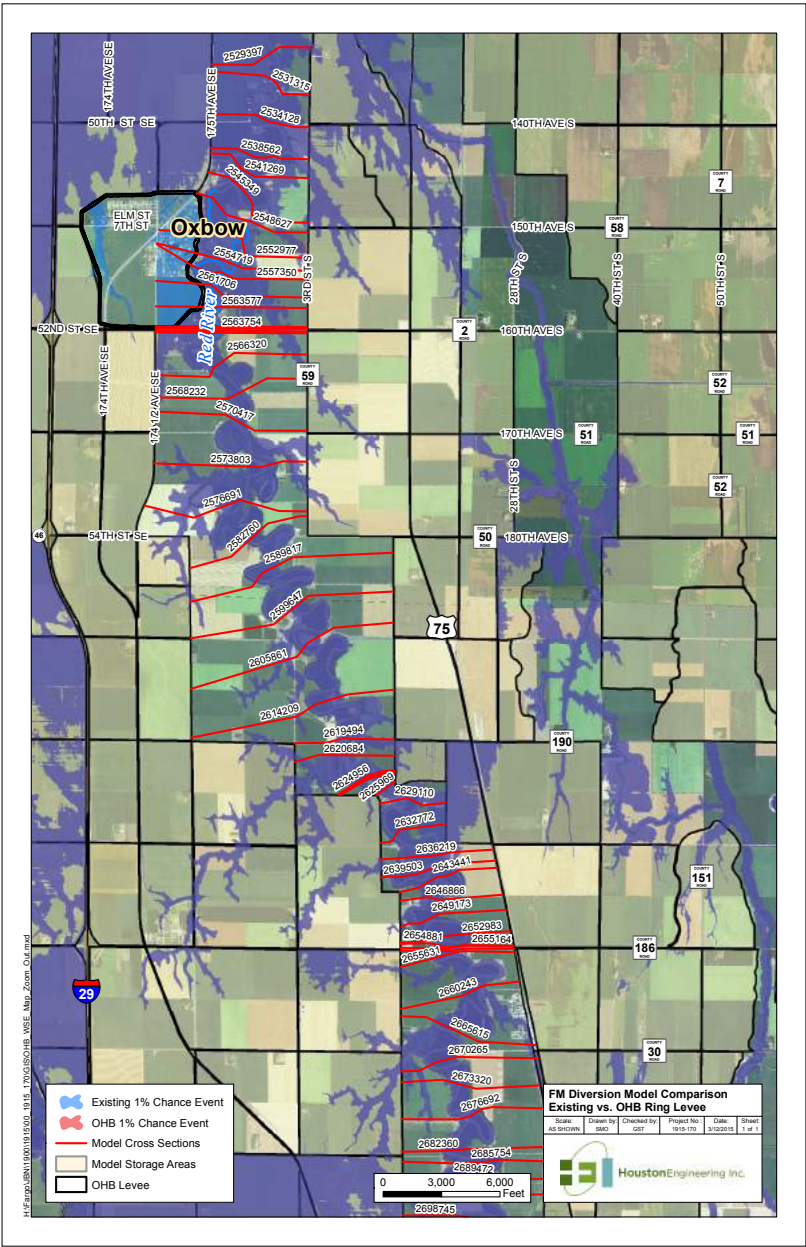
Table 1: FM Diversion Model Comparison – Existing vs. OHB Ring Levee

HEC-RAS Model River Station	Existing Conditions	With-Project Conditions	Impacts Existing vs. With Project (feet)
2670265	927.79	927.79	0.00
2665615	927.39	927.40	0.01
2660243	926.93	926.93	0.00
2655631	926.41	926.42	0.01
2655216	926.33	926.33	0.00
2655164	926.20	926.20	0.00
2654881	926.21	926.21	0.00
2652983	926.09	926.10	0.01
2649173	925.80	925.81	0.01
2646866	925.55	925.56	0.01
2643441	925.31	925.32	0.01
2639503	925.04	925.05	0.01
2636219	924.80	924.81	0.01
2632772	924.48	924.49	0.01
2629110	924.25	924.26	0.01
2625969	924.02	924.03	0.01
2625143	923.94	923.95	0.01
2625093	923.93	923.95	0.02
2625063	923.49	923.50	0.01
2624956	923.48	923.50	0.02
2620684	923.13	923.14	0.01
2619494	923.03	923.05	0.02
2614209	922.57	922.58	0.01
2605861	921.89	921.91	0.02
2599647	921.33	921.35	0.02
2589817	920.43	920.46	0.03
2582760	919.66	919.69	0.03
2576691	918.89	918.92	0.03
2573803	918.61	918.64	0.03
2570417	918.25	918.28	0.03
2568232	917.96	918.00	0.04
2566320	917.74	917.77	0.03
2563980	917.54	917.57	0.03
2563876	917.53	917.56	0.03
2563754	917.48	917.52	0.04

This page contains no comments

2563654	917.47	917.51	0.04
2563577	917.32	917.33	0.01
2561706	917.19	917.20	0.01
2557350	916.92	916.92	0.00
2554719	916.70	916.71	0.01
2552977	916.45	916.46	0.01
2548627	916.03	916.04	0.01
2545349	915.73	915.74	0.01
2541269	915.43	915.44	0.01
2538562	915.26	915.27	0.01
2534128	914.97	914.98	0.01
2531315	914.77	914.77	0.00

This page contains no comments



Technical Memorandum
Evaluation of Oxbow, Hickson, Bakke Levee Impacts

To: Bruce Spiller
From: Lyndon M. Pease, PE
Subject: Evaluation of OHB Levee Impacts
Date: 4/8/2014
Project: Oxbow, Hickson, Bakke Ring Levee

The Houston-Moore Group conducted a hydraulic analysis to determine the 1-percent chance event flood impacts of the Oxbow, Hickson, Bakke (OHB) Ring Levee. The steady flow HEC-RAS model developed for the Southern Cass County Preliminary FIS was used in the analysis. This model was created using HEC-RAS version 3.1.3, and was finalized by Houston Engineering, Inc. in February 2009.

This analysis consisted of adding the OHB levee's design into the existing HEC-RAS geometry. The HEC-RAS levees stationing was set to the levee daylight edge closest to the river, and set to the designed elevation of 927.7 feet (NAVD 1988). Levees were added to seven cross sections between river stations 482.698 and 485.09. The OHB levee alignment and HEC-RAS cross sections are shown in Figure 1. The levee footprint does not encroach in the floodway. Table 1 presents the 1-percent chance event water surface elevations for existing and with-levee conditions. The results of the hydraulic analysis show that the impact of the OHB levee on water surface elevations during the 1-percent chance flood event is less than 0.01 feet and no structures are impacted.





Figure 1 - OHB Levee and Cross Sections



Table 1 – 1-Percent Chance Event Water Surface Elevation

Reach	River Station	With-Levee W.S. Elev (ft)	Existing W.S. Elev (ft)	Difference With-Levee Minus Existing (ft)
Cass Clay County	481.8 CI	914.06	914.06	0.00
Cass Clay County	482.3 CJ	914.26	914.26	0.00
Cass Clay County	482.698	914.44	914.44	0.00
Cass Clay County	482.7	914.43	914.43	0.00
Cass Clay County	482.702	914.44	914.44	0.00
Cass Clay County	483.1 CK	915.10	915.10	0.00
Cass Clay County	483.9 CL	915.72	915.72	0.00
Cass Clay County	485.08 CM	915.87	915.87	0.00
Cass Clay County	485.09	915.87	915.87	0.00
Cass Clay County	485.11	915.89	915.89	0.00
Cass Clay County	485.12 CN	915.89	915.89	0.00
Cass Clay County	485.6 CO	915.96	915.96	0.00
Cass Clay County	485.9 CP	916.09	916.09	0.00
Cass Clay County	486.3 CQ	916.36	916.35	0.01*
Cass Clay County	487.0 CR	916.88	916.88	0.00
Cass Clay County	487.5 CS	917.33	917.33	0.00
Cass Clay County	488.68 CT	918.42	918.42	0.00

*The actual difference between with-levee minus existing is 0.002 ft.



From: [Don Nelson](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 1:27:56 AM
Attachments: [OHBMap.png](#)

Commenter 72 cont.

Summary of Comments on DonNelson_Commenter72aa_Email5.pdf

Page: 1

Attached is a map of the OHB project with a couple of comments I have added to it.

One is a location of a culvert that they had stated over a year ago that they would add where they made a road to go up to the top of the dike. They said this was needed to let water run west and reduce MN Impacts. This has NOT been done. They have basically plugged the ditch and not allowing any water to run west. Please enforce that they add this culvert.

The other comment on the map is the location in the southeast corner where they have built the dike in the floodway and reduced the available width for floodwaters to flow by 50%. Now during floods the available width for floodwater flows at that dike location is half what it used to be and now causing MN impacts. That dike will force all future floodwater to be pushed into MN where floodwaters have never gone. Had no MN flooding issue in 2009 at this location. The OHB dike at this location needs to be removed completely or at a minimum moved to the top of the hill (back west) to get rid of the MN Impact.

Email: donnelso@hotmail.com

Phone: 218-585-4550

Address: 5086 130th Ave. South
Moorhead, MN 56560

Thanks,

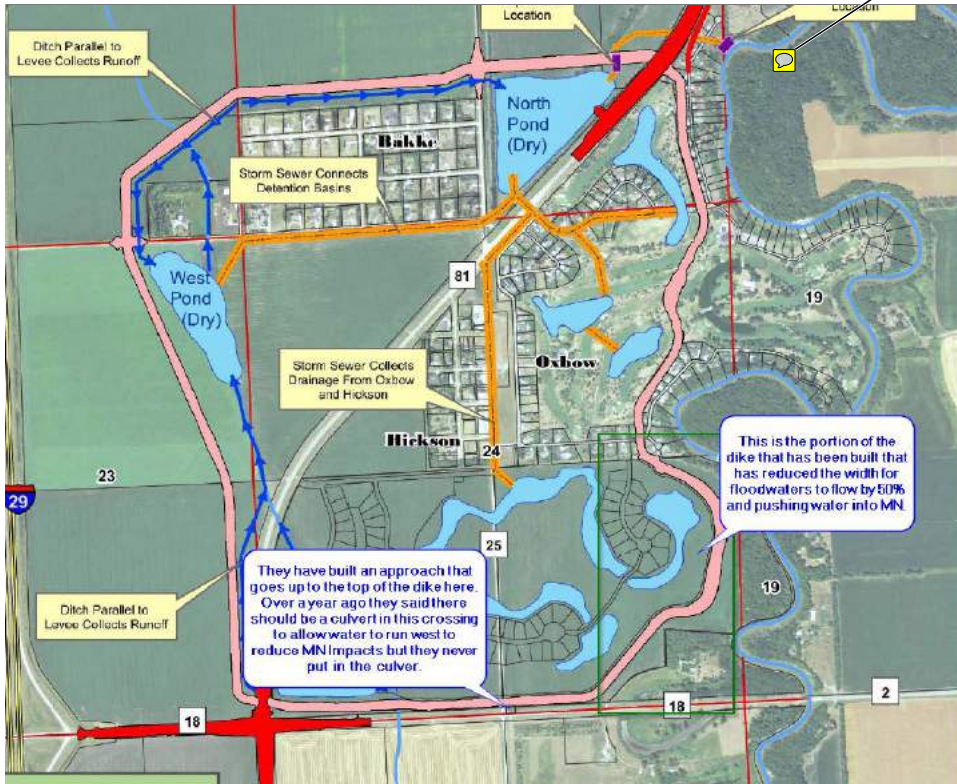
Don Nelson

Author: Medopera Subject: Text Box Date: 11/16/2015 10:53:18 AM -06'00'
Commenter 72 cont.

Author: Date: Indeterminate

Author: Medopera Subject: Highlight Date: 4/20/2016 10:44:15 AM
Comment ID: 72aa
Topic: Proposed Project Description, OHB Ring Levee

Author: Medopera Subject: Highlight Date: 11/16/2015 11:01:43 AM -06'00'
Comment: 72a cont.



From: [Don Nelson](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 1:02:15 PM
Attachments: [Dayton.docx](#)

Commenter 72 cont.



Summary of Comments on DonNelson_Commenter72bb_Email6.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/16/2015 11:09:18 AM -06'00'
Commenter 72 cont.

Author: Medopera Subject: Sticky Note Date: 11/16/2015 11:17:37 AM -06'00'
Comment ID: 72bb - Comments included herein are described in other comments submitted 72a-72aa.

Author: Date: Indeterminate

Attached is a document from a presentation I gave during a talk with MN Governor Dayton and DNR Commissioner Tom Landwehr in September of 2014.

I am submitting this as part of my comments to the DNR EIS process. It doesn't all pertain 100% to the EIS but much of it does and it is all related to the EIS and Diversion Project. I ask that you consider the content as part of my comments. I have went without a job for the last almost 4 years and have dedicated my time to attending basically every meeting there has ever been on the FM Diversion including all the Diversion Authority meetings which has amounted to 100's and 100's and 100's of meetings. My goal has been to make sure that any plan that so severely impacts MN in a negative way never be implemented. Any plan that has a staging area that impacts MN is completely unacceptable.

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Moorhead, MN 56560
Thanks,
Don Nelson

This page contains no comments

Live on family farm north of Comstock, MN in Holy Cross Township of Clay County

- 8 feet above 500 year Army Corps flood level
- 17 feet higher than Davies High School in South Fargo
- Tieback Levee for the High Hazard Dam is on north side of the house on our property
- Property sits just outside the arbitrary "red box" and is designated as not affected according to Army Corps rules. They have stated that since this property is in the impact of a "foot or less" category it is not affected and they don't have to do anything. There would be almost a foot of water placed in the yard at times during the operation of the staging area. This is the same scenario for over 20,000 acres of land in the staging area out of more than 50,000 acres.
- Have attended nearly every Diversion Authority and Diversion related meeting over the last several years

Our Farmstead across from Oxbow

- House sits at the Army Corps 500 year flood level
- House and all buildings would have to be torn down
- Could never build on the property again for eternity while Fargo would be able to build in the Floodplain of South Fargo
- Fargo is forcing everyone in the staging area to make huge sacrifices while not one square inch of Fargo property is negatively affected by their plan

Oxbow/Hickson/Bakke Ring Levee

- Portion built this year reduces available width of floodwater flows (based on 2009 flood) by over 50%
- Base of dike is built 10 feet below the 2009 flood level
- Diversion Authority did a study to show no impact to MN using 100 year FEMA flood level rather than the 100 year Army Corps flood level. Those numbers are roughly 2 feet lower than the Army Corps numbers at Oxbow. Army Corps numbers are being used for everything else on the FM Diversion project.
- MN DNR has not studied the impact to MN from the OHB dike. The DNR has indicated that they have accepted the study done by the Diversion Authority stating there is no impact to MN. When talking to a DNR representative they were not aware of the river channel being reduced by 50%, the dike being built 10 feet below the 2009 flood level, or the study being done using the 2 foot lower numbers than the 100 year Army Corps numbers.
- The stated reason by Aaron Snyder for building the OHB ring dike so far down the hill and so close to the river is to "Accommodate the new Oxbow golf course design".
- Remember that Oxbow currently has a ring dike built after the 2009 flood that is at a height higher than the 500 year flood elevation.
- I would say either remove the new dike construction or at a minimum move it to the top of the hill to minimize MN impacts.

Holy Cross Township

- Most of HC township sits above the 100 year floodplain level and much of it sits above the 500 year floodplain level.
- Now 92% of HC township would be negatively impacted by water during the operation of the staging area even though this is all extremely high ground.

The 2 people that make up the MN representation on the Diversion Authority (Nancy Otto and Kevin Campbell) voted for the Diversion Authority's Federal lawsuit to preempt MN law.

- One has to severely question their motives to bypass MN law and not allow MN residents their rights

To be clear, I am not against Fargo getting reasonable flood protection. Any time there has been a flood that needed sandbagging I have been in Fargo personally throwing thousands and thousands of sandbags. But this project is much more about enabling Fargo to develop in the floodplain on the south side than it is about flood protection for the existing city. I believe the currently proposed project is so corrupt and immoral that I do not understand how anybody can be for it.

From: [Don Nelson](#)
To: ["Review_Environmental \(DNR\)"](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 1:06:58 AM

Commenter 72 cont.

Summary of Comments on DonNelson_Commenter72b-m_Email2.pdf

Page: 1

Comments on Executive Summary – DEIS document

Page 4

Where it says 32,000 acre upstream staging area it should say the correct figure of 54,000 acre staging area. It needs to show the real impact that includes the newly impacted areas of MN that is under 6 inches that was never impacted before.

Author: Medopera Subject: Text Box Date: 11/16/2015 9:08:51 AM -06'00'
Commenter 72 cont.

Author: Medopera Subject: Highlight Date: 4/20/2016 10:54:42 AM
Comment ID: 72b
Topic: Proposed Project Description, Staging Area Definition

Page 11

Point 1 of Reduce flood risk potential associated with a long history of frequent flooding on local streams including the Red River, Sheyenne, Wild Rice (North Dakota), Maple, Rush and Lower Rush Rivers passing through or into the F-M metropolitan area. It should be corrected that Maple, the Rush and Lower Rush rivers DO NOT pass through or into the FM metro area. The impacts from diverting the 5 ND rivers into the Diversion results in MN Impact caused by staging water in MN so that ND can get rid of its flooding issues from its 5 rivers. All MN Impact and Zero benefit to MN from this.

Author: Medopera Subject: Highlight Date: 4/4/2016 11:05:47 AM
Comment ID: 72c
Topic: Edit, Edit Denied

Author: Medopera Subject: Highlight Date: 4/4/2016 11:03:12 AM
Comment ID: 72d
Topic: Socioeconomics, Average Annual Damages

Author: Medopera Subject: Highlight Date: 4/4/2016 1:15:37 PM
Comment ID: 72e
Topic: Socioeconomics, Moorhead College at Risk

Page 11

Where it says Average annual national economic flood damages in the F-M metropolitan area are estimated to be more than \$51 million. This is completely false. The actual number from flood fighting costs Cumulative from 1994 to 2015 as provided by the City of Fargo's Auditors Office is \$36,905,730. That is a far cry from 51 million every year. Once again the DA continues to lie about info they give out.

Author: Medopera Subject: Highlight Date: 4/4/2016 1:16:22 PM
Comment ID: 72f
Topic: FEMA, Flood Stage Level

Author: Medopera Subject: Highlight Date: 4/4/2016 1:16:37 PM
Comment ID: 72g
Topic: Proposed Project, Project Operation

Page 11

Where it says Infrastructure at risk in the F-M urban area includes several regional medical centers, three college campuses, and city and county government offices. There are no college campuses at risk in Moorhead MN!! And Fargo is currently designing a new City Hall to be built on and overlooking the river bank in Fargo.....They are intentionally putting themselves at risk. This is not MN's problem.

Page 11

Where it says The Red River has exceeded the National Weather Service flood stage of 18 feet... 18 feet is nothing. Nothing in Fargo is even impacted under current conditions by doing absolutely nothing until it gets over 34 feet. All dikes are being built to 44 feet. All floodwalls are built to 45 feet. Once the gaps and dikes are finished in town of Fargo a 40 foot flood is no longer even an issue.

Page 12

Where it says Operation of the Project would occur when it becomes known that a stage of 35.0 feet would be exceeded at the Fargo gage.

35 feet is way too low to start operation. Once in town Fargo dikes are completed they can handle over 40 feet easily.

Page 16

Where it says Based on the estimated depth and duration of a 500-year flood, 225,000 acre-feet or 32,000 acres are required for staging water before directing it to the connecting channel.

Again, the correct figure is 54,000 acres it needs to show the real Impact that includes the newly impacted areas of MN that is under 6 inches that was never impacted before.

Page 16

Where it says All of the fringes of the inundated area within the staging area would experience additional flood depths of zero to one foot.

This statement is not even remotely close to accurate. I am just outside the "red box" on MN side and just on south side of the dike/dam. I currently sit 8 feet above the Army Corps 500 year flood level. If this project was to happen I would have a foot of water in the yard. Going from 8 feet above the 500 year level to having a foot of water in your yard is severely more than "would experience additional flood depths of zero to one foot"!!!! It would take an additional 13 feet to put that 1 foot in my yard under existing conditions.

Page 23

Where it says The Project would include floodwalls and levees in Fargo and Moorhead, which would allow more flows to pass through town and reduce Project operation frequency. The in-town levees would be such that FEMA would be able to accredit the levees for the 100-year flood once the Project is complete.

Fargo will have FEMA accreditation from the levees to 100 year without the Diversion Project.

Page 24

Where it says The Coordination Plan requires that the areal extent of flood inundation required for operation of the Project within the staging area be mapped as floodway in order to ensure that the required volume is available for the Project during the 100-year flood. If this is the case how did the current construction of OHB ever happen? The southeast section of the OHB ring dike was built in the floodway. This restricted the river by 50% compared to before construction. Now during floods the available width for floodwater flows at that dike location is half what it used to be and now causing MN impacts. That dike will force all future floodwater to be pushed into MN where floodwaters have never gone. Had no MN flooding issue in 2009 at this location. The OHB dike at this location needs to be removed completely or at a minimum moved to the top of the hill (back west) to get rid of the MN Impact.

Page 24

Where it says It is anticipated that for agricultural lands in most areas, farming could continue without significant impacts.

The last few years there have been issues getting crops planted by the required planting dates for crop insurance where there has been absolutely NO floodwaters on the land. Planting has been completed at times on the last available day under current conditions again with NO floodwater on the land. Now if you inundate this land there is absolutely no way "farming could continue without significant impacts".

Page: 2

Author: Medopera Subject: Highlight Date: 11/16/2015 9:35:24 AM -06'00'
Comment ID: 72f cont.

Author: Medopera Subject: Highlight Date: 11/16/2015 9:35:57 AM -06'00'
Comment ID: 72b cont.

Author: Medopera Subject: Highlight Date: 4/19/2016 1:52:22 PM
Comment ID: 72h
Topic: Hydrology and Hydraulics, Flood Fringe Depths

Author: Medopera Subject: Highlight Date: 4/19/2016 1:52:38 PM
Comment ID: 72i
Topic: Hydrology and Hydraulics, Fargo's Levees and Floodwalls

Author: Medopera Subject: Highlight Date: 11/16/2015 9:44:55 AM -06'00'
Comment ID: 72a cont.

Author: Medopera Subject: Highlight Date: 4/4/2016 1:18:38 PM
Comment ID: 72j
Topic: Socioeconomics, Agriculture Impacts and Mitigation (Planting Delays)

Page 26

Where it says Emergency measures have lower reliability, higher risk for loss of life than permanent flood risk reduction features.

Under current conditions loss of life potential is basically (Zero chance). With the Project that includes a High Hazard Dam and that Dam fails (very High chance for Loss of Life). The loss of life scenario is way better off under current conditions.

Page 28

Where it says The NAA would locate the tieback embankment and connecting channel north of the Project approximately 1.5 miles.

The words here say 1.5 miles north. The map shows it at being moved just over 2 miles north of current design. Which one is right? One or the other is wrong. But in reality both alignments have large Impacts to MN and zero benefit to MN.

Page 30

The option of more flows through town COMBINED with Distributed Storage Alternative should be explored as a combined alternative and not just dismissed on their own. The RRBC study proved that 20% reduction would drop river height by over 3 feet. Once the dikes in Fargo get to gage height of 44 and 45 feet combined with DSA that becomes a viable alternative.

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Moorhead, MN 56560

Thanks,
Don Nelson

Page: 3

Author: Medopera Subject: Highlight Date: 4/4/2016 1:19:09 PM
Comment ID: 72k
Topic: Dam Safety, Risk and Loss of Life Concerns

Author: Medopera Subject: Highlight Date: 4/4/2016 1:57:03 PM
Comment ID: 72l
Topic: Edit, Edit Accepted

Author: Medopera Subject: Highlight Date: 4/4/2016 1:57:38 PM
Comment ID: 72m
Topic: Alternatives, Alternative: DSA Plus More

From: [Don Nelson](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 1:08:38 PM

Commenter 72 cont.

Summary of Comments on DonNelson_Commenter72cc_Email7.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/16/2015 11:23:28 AM -06'00'
Commenter 72 cont.

Author: Medopera Subject: Highlight Date: 4/19/2016 2:18:37 PM
Comment ID: 72cc
Topic: Hydrology and Hydraulics, Staging Area Drainage

The arbitrary "Red Box" on all the maps to designate the Staging Area is completely inaccurate. I live just east of the "Red Line" in MN at the intersection of County Road 60 and 61 on those maps. It shows that no water will be on the east side of the road yet there is of course a culvert in the road allowing the water to back up across the road and equal the height on both sides of the road. Under current conditions any water on the east side of the road must run west. If it can no longer do that it will obviously back up on the east side of the road into my yard. All you will see on the Diversion Authority printed maps for this area is "We haven't figured out how to drain this yet". They have had time to figure out they want recreational features on top of the diversion bank but they haven't had time to figure out 1000's of details that have real impact to MN residents. This is completely unacceptable and needs to be addressed.

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Phone: 218-585-4550
Address: 5086 130th Ave. South
Moorhead, MN 56560

Thanks,
Don Nelson

From: [Don Nelson](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 12:32:47 AM
Attachments: [Flood_Multl_year_Cost_Report_-_As_of_7.31.15.pdf](#)

Commenter 72 cont.

Summary of Comments on DonNelson_Commenter72dcont_Email13.pdf

Page: 1

From Socioeconomics info sheet 7 the below statement is completely wrong. The attached spreadsheet is provided by the City of Fargo's Auditors Office and lists the TOTAL Flood Fighting Costs from 1994 to 2015 at \$36,905,730. That is a far cry from \$48 million every year.

Author: Medopera Subject: Text Box Date: 11/16/2015 11:44:06 AM -06'00'
Commenter 72 cont.

Author: Date: Indeterminate

Author: Medopera Subject: Highlight Date: 11/16/2015 11:44:32 AM -06'00'
Comment ID: 72d cont.

- Under current conditions, average annual damages (includes damages from buildings, contents, and vehicles) from flooding are estimated to be approximately \$2 million for Minnesota and \$48 million for North Dakota.

>
> Jill Pagel
> City of Fargo
> Auditor's Office
> Ph 701-241-8108
> Fax 701-476-4188
> jpagel@cityoffargo.com
>
>
>
> -----Original Message-----
> From: Jenica Flanagan
> Sent: Monday, August 24, 2015 11:43 AM
> To: Jill Pagel
> Subject: RE: [Fwd: Flood]
>
> Jill,
>
> The requested report is attached.
>
> Thank you!

This page contains no comments

Email: donnelso@hotmail.com

Phone: 218-585-4550

Address: 5086 130th Ave. South

Moorhead, MN 56560

Thanks,

Don Nelson

City of Fargo, North Dakota
Flood Multi-Year Cost Report
 As of July 2015
 1994-2015



Year	Flood Fighting Costs	Home Buyouts	Flood Control Projects	Diversion	Total
1994	\$ -	\$ -	\$ 82,900	\$ -	\$ 82,900
1995	-	-	49,220	-	49,220
1996	-	-	-	-	-
1997	5,217,158	-	3,959,648	-	9,176,806
1998	810,931	-	2,126,041	-	2,936,972
1999	275,521	-	3,129,788	-	3,405,309
2000	628,891	-	945,080	-	1,573,971
2001	3,289,149	-	3,263,292	-	6,552,441
2002	191,435	-	6,746,921	-	6,938,356
2003	2,790,760	-	3,364,404	-	6,155,164
2004	47,956	-	41,259	-	89,215
2005	183,716	-	2,581,599	-	2,765,315
2006	749,570	-	873,880	-	1,623,450
2007	199,787	-	2,050,384	-	2,250,171
2008	-	-	1,650,708	-	1,650,708
2009	9,810,665	7,406,614	4,052,246	-	21,269,525
2010	3,530,628	6,409,510	8,686,652	-	18,626,790
2011	6,436,725	12,748,682	22,982,796	443,138	42,168,203
2012	-	7,079,437	9,800,135	7,652,681	24,532,253
2013	2,742,838	19,833,755	4,619,724	7,072,961	34,269,278
2014	-	8,634,298	17,229,274	19,373,131	45,236,703
2015	-	1,767,529	4,918,476	15,733,922	22,419,927
Totals	\$ 36,905,730	\$ 63,879,825	\$ 103,154,427	\$ 50,275,833	\$ 253,772,677

From: [Don Nelson](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 1:20:08 PM

Commenter 72 cont.

Summary of Comments on DonNelson_Commenter72dd_Email10.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/16/2015 11:35:03 AM -06'00'
Commenter 72 cont.

Author: Medopera Subject: Highlight Date: 4/4/2016 2:51:49 PM
Comment ID: 72dd
Topic: Alternatives, Alternatives: DSA Plus More

Alternative:

Following the drought of 2012 in the spring of 2013 the Diversion Authority and weather service were predicting a flood of historic magnitude. Dry dirt obviously doesn't freeze the same way that wet ground freezes solid. It turned out that a high percentage of the spring moisture ran into the ground and spring 2013 was a non-event. Drain-tile basically mimics the conditions of the soil that happened in spring of 2013. Drain tiling more land in combination with other measures such as Distributed Storage and in-town dikes would be an alternative to the current plan not needing a Staging Area.

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Moorhead, MN 56560

Thanks,
Don Nelson

From: [Don Nelson](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 1:30:45 PM

Commenter 72 cont.

Summary of Comments on DonNelson_Commenter72ee_Email11.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/16/2015 11:36:45 AM -06'00'
Commenter 72 cont.

Author: Medopera Subject: Highlight Date: 4/4/2016 2:54:04 PM
Comment ID: 72ee
Topic: Socioeconomics, Mitigation

Regarding the Ag Impacts document (Appendix J)

There are way to many uses of the words "may provide" or "may cover" in this document.

The policy may provide supplemental income for producers when Project operations cause impacts and when federal crop insurance does

The supplemental crop risk policy may provide equivalent coverage as growers have today and may cover the prevent plant scenarios where Project operation would prohibit planting.

The supplemental risk policy may also cover damages caused by project operation to planted crops (summer impacts).

Crop insurance does not cover any profit made during farming operations. It basically covers expenses. On this land in MN that is above 100 and 500 year flood levels that has never flooded before but now will be in the staging area just "providing crop insurance" does not cut it. Without the staging area there would be a profit factor on each crop that needs to be compensated for.

Also, the Ag Impact Study that the Diversion Authority hired NDSU to do was a complete sham. After NDSU's initial study the DA and the Corp's made NDSU re-do their numbers for 9 months until they got the outcome they wanted. The original study had some fields taking over 21 days to draw down. The Corp's answer was "they forgot to put a culvert in the model". Water trapped in a field behind a road will not draw down in 21 days with no outlet. Even NDSU laughed at the Corps by coming up with such nonsense.

MN DNR needs to do a study of all impacted MN farmland as part of this project.

Email: donnelso@hotmail.com

Phone: 218-585-4550

Address: 5086 130th Ave. South
Moorhead, MN 56560

Thanks,
Don Nelson

From: [Don Nelson](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 1:38:18 PM

Commenter 72 cont.

Summary of Comments on DonNelson_Commenter72scontandff_Email12.pdf

Page: 1

As noted by proponents of the project on October 14th DNR comment meeting all they care about is development. Person after person got up saying "I am a realtor and I want to sell houses (in the floodplain of Fargo)". Or "I am with the homebuilders association and I want to build houses (in the floodplain of Fargo)". And they don't want to have people paying Flood Insurance for these houses in the floodplain.

Alternative:

Don't allow the houses to be continued to be built in the floodplain of Fargo and do not allow them to "fix" their problem by creating a staging area in MN. Having MN Impacts so that Fargo doesn't have to pay flood insurance in their floodplain built houses is in now way a benefit to MN. All impact to MN and no benefit to MN.

As I have noted in previous comments I sit in the potential staging area in MN but am 8 feet above the 500 year Army Corp level numbers. If this project go through I would be put in the 100 year floodplain. Who is going to pay for my flood insurance? This same scenario would exist for many MN residents.

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Address: 5086 130th Ave. South
Moorhead, MN 56560

Thanks,
Don Nelson

Author: Medopera Subject: Text Box Date: 11/16/2015 11:40:20 AM -06'00'
Commenter 72 cont.

Author: Medopera Subject: Highlight Date: 11/16/2015 11:41:42 AM -06'00'
Comment ID: 72s cont.

Author: Medopera Subject: Highlight Date: 4/20/2016 4:22:14 PM
Comment ID: 72ff
Topic: Socioeconomics, Federal Emergency Management Agency Flood Insurance Costs

From: [Don Nelson](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 1:10:39 AM

Commenter 72 cont.

Summary of Comments on DonNelson_Commenter72n-y_Email3.pdf

Page: 1

- <!--[if !supportLists]-->1) <!--[endif]-->It needs to be investigated why the "Current Condition" Impacts for all the Cemeteries were done using the new Army Corps elevated flood levels for 100 and 500 year to falsely show current impacts that don't exist but yet when it came time to show impacts to MN from the OHB ring dike they chose to use the much lower FEMA flood levels. This picking and choosing what numbers to use based on if it is beneficial to Fargo's and the Army Corp's outcome is criminal.
- <!--[if !supportLists]-->2) <!--[endif]-->Appendix A page 4. To go from a 50 year flood to a 100 year flood at the location of the Embankment is .69 feet. Yet to go from a 50 year flood to a 100 year flood in Fargo it is 1.68 feet. Moreover to go from a 100 year flood to a 500 year flood at the location of the Embankment is 1.22 feet. Yet to go from a 100 year flood to a 500 year flood in Fargo it is 4.2 feet. The Fargo numbers are a bit exaggerated.
- <!--[if !supportLists]-->3) <!--[endif]-->Alternative. A Wild Rice Alternative needs to be investigated. This could result in NO MN Impact. In 2009 the cfs from the Wild Rice and the Red River were very close to the same. If you diverted the Wild Rice river southwest of Oxbow and sent it around Fargo in roughly the same location as the current project path you would have all Impacts in ND and none in MN. Fargo's project purpose would be met. If a mini-staging area was needed it could all be contained in ND.
- <!--[if !supportLists]-->4) <!--[endif]-->Alternative. There is a huge opportunity for an extremely large Storage site north of the White Rock Dam. This needs to be investigated.
- <!--[if !supportLists]-->5) <!--[endif]-->The current plan of diverting the Wild Rice, Sheyenne, Maple, Rush and Lower Rush into the Diversion and have the Red River staged in MN is a horrible plan for MN. All MN Impact so that ND gets the benefit. Makes no sense for MN.
- <!--[if !supportLists]-->6) <!--[endif]-->The existing floodplain of South Fargo needs to be preserved and allowed to flood rather than filling it in with development. In 2009 Fargo was scared of water coming across 52nd Ave. South so they lined it with Hesco's. If you look in that same location now it is being completely filled in with development of houses and businesses. That is completely insane for Fargo to do but this is not MN's problem and MN should not take any impact because Fargo wants to develop the floodplain.
- <!--[if !supportLists]-->7) <!--[endif]-->The current plan is all MN Impacts with No MN Benefits so that Fargo can develop in the floodplain. Very bad plan for MN. The

- Author: Medopera Subject: Text Box Date: 11/16/2015 9:57:36 AM -06'00'
Commenter 72 cont.
- Author: Medopera Subject: Highlight Date: 4/19/2016 1:13:35 PM
Comment ID: 72n
Topic: Hydrology and Hydraulics, Expert Opinion Evaluation Panel
- Author: Medopera Subject: Highlight Date: 4/4/2016 2:23:11 PM
Comment ID: 72o
Topic: Proposed Project, Project Operation
- Author: Medopera Subject: Highlight Date: 4/4/2016 2:23:48 PM
Comment ID: 72p
Topic: Alternatives, Alternative: Wild Rice River Diversion, No Dam
- Author: Medopera Subject: Highlight Date: 4/4/2016 2:24:26 PM
Comment ID: 72q
Topic: Alternatives, Alternative: North Dakota/South Dakota Retention
- Author: Medopera Subject: Highlight Date: 4/4/2016 2:25:13 PM
Comment ID: 72r
Topic: Proposed Project, General Opposition
Unsubstantive
- Author: Medopera Subject: Highlight Date: 4/4/2016 2:25:43 PM
Comment ID: 72s
Topic: Floodplain Development, Floodplain Development
Unsubstantive
- Author: Medopera Subject: Highlight Date: 11/16/2015 10:14:37 AM -06'00'
Comment ID: 72r cont.

ground in the staging area on MN side is almost all above the 100 year and much of it above the 500 year levels. All this high ground in MN would be put under water so that Fargo can develop the floodplain in South Fargo. As an example my house sits 17 feet higher than Davies High School in South Fargo but yet I am just behind the dike in the staging area in MN. That makes no sense. In 2009 the land that Davies High School was built on was under water but yet Fargo chose to build a school there. This is not MN's problem and MN should certainly not take the Impact to fix the problem that Fargo intentionally caused for themselves.

<!--[if !supportLists-->8) <!--[endif-->Even though the land on MN side in the Staging Area is above the 100 and 500 year levels all the buildings would need to be torn down and nothing could be built in the staging area in MN while ND would develop in their floodplain. Again all impact to MN with no benefit to MN. All benefit is in ND.







<!--[if !supportLists-->9) <!--[endif-->Appendix A page 5 Where it says Besides the Maple River and Sheyenne River, all local drainage would be directed into the diversion. It is completely illegal to improve local drainage as a result of this project.

<!--[if !supportLists-->10) <!--[endif-->Appendix A page 5 – Where it says The project goal is to maintain but not increase the existing 1-percent chance (100-year) event floodplain outside the diversion channel. This maintains floodplain storage and helps minimize downstream impacts. Fargo should be maintaining floodplain storage everywhere rather than filling it in with Development and they wouldn't be in the situation they are in.

<!--[if !supportLists-->11) <!--[endif-->It is very important to note that Moorhead and Minnesota has absolutely no need for this project and has absolutely Zero benefit. Yet there are devastating effects in Southern Clay County and Wilkin County. It makes no sense to cause such damage and destruction in Minnesota when there is no benefit in Minnesota and all the benefit is in Fargo, ND. This entire project is only for Fargo, ND to be able to Develop in the floodplain around Davies High School. What Fargo wants to do is in direct violation of Executive Order 11988. My house sits 17 feet higher than Davies High School yet I am behind the proposed dike in MN so that Fargo can build in the Floodplain. That is wrong for MN. We also have a farmstead along the River that sits above the 500 year floodplain that if the dike is in place could put 7 feet of water in the yard. This land has obviously never flooded but if this project goes through we would have to tear down the house and all buildings and never be allowed to build on our land for the rest of our life but yet Fargo could build in the floodplain around Davies High School. This is wrong for MN.

<!--[if !supportLists-->12) <!--[endif--> It is crazy to only allow 35 feet through town. Fargo needed only 100,000 sandbags to protect the city to a level of 40 feet in 2013. The Army Corps plan says Fargo has to have permanent dikes to handle 42.5 feet. A minimum of 40 feet should always be allowed to run through town. If they did this and used the existing floodplain area around Davies High School (estimated at 100,000 acre/feet) there would be very little retention further south needed. Please

Page: 2

-
-  Author: Medopera Subject: Highlight Date: 11/16/2015 10:15:38 AM -06'00'
Comment ID: 72r cont.
-
-  Author: Medopera Subject: Highlight Date: 4/20/2016 10:11:46 AM
Comment ID: 72t
Topic: Proposed Project and Northern Alignment Alternative, Local Drainage Improvements Illegal
-
-  Author: Medopera Subject: Highlight Date: 11/16/2015 10:19:10 AM -06'00'
Comment ID: 72s cont.
-
-  Author: Medopera Subject: Highlight Date: 11/16/2015 10:20:36 AM -06'00'
Comment: 72s cont.
-
-  Author: Medopera Subject: Highlight Date: 11/16/2015 10:22:42 AM -06'00'
Comment ID: 72g cont.
-
-  Author: Medopera Subject: Highlight Date: 11/16/2015 10:22:36 AM -06'00'

investigate this. It is critical that the floodplain around Davies High School be left intact and not developed in.

<!--[if !supportLists-->13) <!--[endif]-->What is the mitigation for Historic Properties?

<!--[if !supportLists-->14) <!--[endif]-->Fargo has stated intentions to do the Northern Reach and the Southern Embankment/Dam and possibly never finish the Diversion Channel. This does not match the plan in the MN EIS document.

<!--[if !supportLists-->15) <!--[endif]-->Please note that the "Red Box" that is on the Army Corps maps does NOT include all the areas impacted. Note on the MN side where the Dam/Dike extends 2 miles past the red box. That whole area is impacted. Please research that area as well.

<!--[if !supportLists-->16) <!--[endif]-->If the Staging Area existed there would be no Wildlife left in MN in the Staging Area. The Deer population would become non-existent. There would be no place for them to exist and they would either die or have to leave the area entirely. The impacts to fish would be huge. There would be dead fish everywhere once the staging area water goes down. This should be of huge concern to the MN DNR.

<!--[if !supportLists-->17) <!--[endif]-->If a farmer was to raise cattle in the staging area what would they do with them every spring? They could not be left in the staging area.

<!--[if !supportLists-->18) <!--[endif]-->The bottom line is that this Project makes no sense for MN. There are no benefits to MN. There are only huge impacts to MN.

Page: 3

Author: Medopera Subject: Highlight Date: 11/16/2015 10:22:51 AM -06'00'
Comment ID: 72g cont.

Author: Medopera Subject: Highlight Date: 4/4/2016 2:26:59 PM
Comment ID: 72u
Topic: Cultural Resources, Historic Properties Mitigation

Author: Medopera Subject: Highlight Date: 4/4/2016 2:27:32 PM
Comment ID: 72v
Topic: Proposed Project, Plan B

Author: Medopera Subject: Highlight Date: 11/16/2015 10:31:01 AM -06'00'
Comment ID: 72b cont.

Author: Medopera Subject: Highlight Date: 4/4/2016 2:28:09 PM
Comment ID: 72w
Topic: Wildlife and Wildlife Habitat, Flood Impacts to Wildlife and Wildlife Habitat

Author: Medopera Subject: Highlight Date: 4/4/2016 2:28:43 PM
Comment ID: 72x
Topic: Fish Passage and Biological Connectivity, Fish Impacts

Author: Medopera Subject: Highlight Date: 4/4/2016 2:29:13 PM
Comment ID: 72y
Topic: Socioeconomics, Livestock Impacts

Author: Medopera Subject: Highlight Date: 11/16/2015 10:36:26 AM -06'00'
Comment ID: 72r cont.

Email: donnelso@hotmail.com

Phone: 218-585-4550

Address: 5086 130th Ave. South
Moorhead, MN 56560

Thanks,

Don Nelson

From: [Don Nelson](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 1:14:34 PM

Commenter 72 cont.

Summary of Comments on DonNelson_Commenter72pcont_Email9.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/16/2015 11:34:08 AM -06'00'
Commenter 72 cont.

Author: Medopera Subject: Highlight Date: 11/16/2015 11:33:52 AM -06'00'
Comment ID: 72p cont.

Alternative.

A Wild Rice Alternative needs to be investigated. This could result in NO MN Impact. In 2009 the cfs from the Wild Rice and the Red River were very close to the same. If you diverted the Wild Rice river southwest of Oxbow and sent it around Fargo in roughly the same location as the current project path you would have all Impacts in ND and none in MN. Fargo's project purpose would be met. If a mini-staging area was needed it could all be contained in ND and have no MN Impact.

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Address: 5086 130th Ave. South
Moorhead, MN 56560

Thanks,
Don Nelson

From: [Don Nelson](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 1:12:49 AM

Commenter 72 cont.

Summary of Comments on DonNelson_Commenter72z_Email4and8.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/16/2015 10:37:43 AM -06'00'
Commenter 72 cont.

Author: Medopera Subject: Highlight Date: 4/19/2016 1:16:57 PM
Comment ID: 72z
Topic: Hydrology and Hydraulics, Expert Opinion Evaluation Panel

When the 2009 flood actually occurred it was well in excess of a 100 year flood at 40.82 feet. Fargo and the Army Corps have since downplayed it and called it only a 50 year flood. They then fabricated a new number for the 100 year flood so that the Cost Benefit ratio would be more favorable for the project.

Out on the rrbdin.org site and specifically under <http://gis.rrbdin.org/ffviewer/> you can choose to display what they are calling the 2009 flood extent map. This was put together by Houston Engineering. Now if you take that 2009 flood extent map and lay it over the "100 Year Army Corps Current Conditions" map (which was also put together by Houston Engineering) you will notice that the 2009 flood extent map has a LARGER footprint than what the Army Corps is calling a 100 year flood. So even though Fargo and the Army Corps is trying to say 2009 was only a 50 year flood they created their own maps that prove that the 2009 flood was even bigger than what the Army Corps is calling a 100 year flood. The MN DNR should investigate this.

Email: donnelso@hotmail.com

Phone: 218-585-4550

Address: 5086 130th Ave. South
Moorhead, MN 56560

Thanks,

Don Nelson

From: [Don Nelson](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: RE: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 1:12:27 PM
Attachments: [2009floodextent.png](#)

Email 8 - updated
Email 4

Page: 2

Author: Medopera Subject: Text Box Date: 11/16/2015 11:31:53 AM -06'00'
Email 8 - updated Email 4
Author: Date: Indeterminate

Re-sending with the 2009 flood extent map attached. This was produced from the below website.

From: donnelso@hotmail.com
To: environmentalrev.dnr@state.mn.us
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wed, 28 Oct 2015 01:12:44 -0500

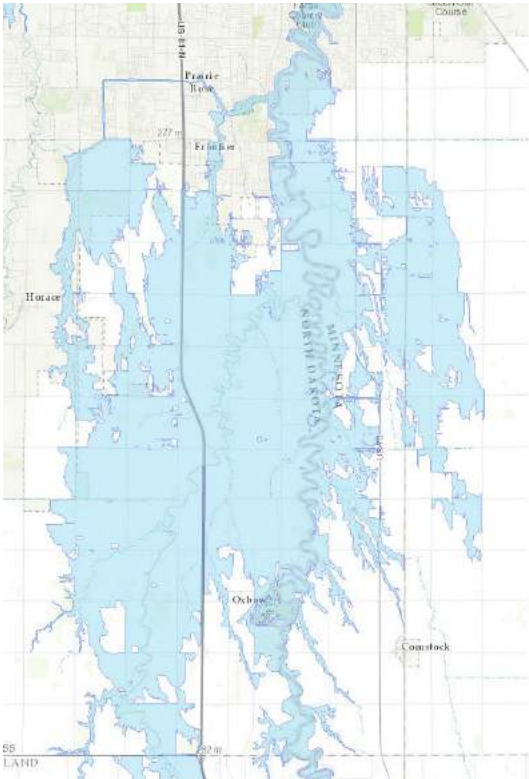
When the 2009 flood actually occurred it was well in excess of a 100 year flood at 40.82 feet. Fargo and the Army Corps have since downplayed it and called it only a 50 year flood. They then fabricated a new number for the 100 year flood so that the Cost Benefit ratio would be more favorable for the project.

Out on the rrbdin.org site and specifically under <http://gis.rrbdin.org/ffviewer/> you can choose to display what they are calling the 2009 flood extent map. This was put together by Houston Engineering. Now if you take that 2009 flood extent map and lay it over the "100 Year Army Corps Current Conditions" map (which was also put together by Houston Engineering) you will notice that the 2009 flood extent map has a LARGER footprint than what the Army Corps is calling a 100 year flood. So even though Fargo and the Army Corps is trying to say 2009 was only a 50 year flood they created their own maps that prove that the 2009 flood was even bigger than what the Army Corps is calling a 100 year flood. The MN DNR should investigate this.

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Phone: 218-585-4550
Address: 5086 130th Ave. South
Moorhead, MN 56560

Thanks,
Don Nelson

This page contains no comments



From: [Doug Burgum](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Tuesday, October 27, 2015 11:22:40 PM
Attachments: [Doug_Burgum_Comments_final.pdf](#)
Importance: High

Commenter 73

Summary of Comments on DougBurgum_Commenter73a-f_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/16/2015 2:26:01 PM -06'00'
Commenter 73

Author: Date: Indeterminate

Good evening,

Please see the attachment for my comments regarding the Project DEIS.

Thank you,

Doug Burgum
10 Tallgrass Trail
Horace, ND
doug@tallgrasstrail.com

Draft DEIS Comments

Page: 2

Author: Medopera Subject: Highlight Date: 4/4/2016 3:02:09 PM
Comment ID: 73a
Topic: Purpose and Need, Can't Change Purpose and Need

Subject:

Fargo-Moorhead Flood Risk Management Project DEIS

Content:

Dear Ms. Townley, please find my enclosed comments in response to the Fargo-Moorhead Flood Risk Management Project Draft EIS.

Douglas Burgum
10 Tallgrass Trail
Fargo, ND 58047

As a Fargo-Moorhead business owner and community member whose property is directly impacted by area flooding and the Proposed F-M Flood Diversion outcome, I am happy to provide my Draft EIS review comments. Like the MNDNR, I am greatly invested in ensuring the Final EIS clearly and accurately conveys potential project impacts and the language is reflective of the process leading up to this point as the Final EIS will be the basis used for the Statement of Adequacy and the permitting and funding decisions.

While there are principal determinations in the DEIS that I concur with, my comments here will address issues of concern and include recommended areas for clarification in the Final EIS to ensure all parties are appropriately informed in their decision making. The primary areas where significant issues exist that I will be commenting on are with the Project Purpose and Need and the Northern Alignment Alternative. These two areas are fundamental to the adequacy of the DEIS and its value of informing the public and permitting process, additional areas of concern will follow.

Purpose and Need

My understanding is that the MDNR has been an active participant and contributor in establishing the Purpose and Need for the project. Like the Diversion Authority, I too agree with the stated Purpose and Need within the DEIS. Within the DEIS, though, I find three key items confusing and misleading.

First, the DEIS references the Purpose and Needs statements as being developed by the Diversion Authority while the development of the Purpose and Needs was a collaborative process amongst multiple entities and the community. Secondly, within the DEIS, the reference to "Project Proponent's" has been added several times which I believe will lead the public to interpret that the MNDNR had little or no role in developing the Purpose and Need. Lastly, it is my opinion that encouraging the public to comment about whether the Project Purpose and Need are appropriate or acceptable is leading the public to believe they have the ability to augment the Purpose and Need. I believe the combination of these concerns could be detrimental to the project upon establishing the Statement of Adequacy, an outcome we all want to circumvent.

I recommend the Purpose and Need section in the Final EIS clarify that the development of the Purpose and Need was a collaborative process, that the references to "Project Proponent's" be removed and clarification provided to the reader that while comments about the project purpose and need are acceptable, they will only be considered as part of developing the Final EIS and do not have the potential to change the existing Project Purpose and Need.

Northern Alignment Alternative

As required by law, the MNDNR searched for alternatives to the proposed project, ultimately recommending one alternative as potentially feasible. The NAA alternative, though, is essentially the same project as the proposed project, but shifting the route 1.5 miles north. It is the same type of upstream staging project yet is counterintuitive to the goals and past work of many other entities, including the Diversion Authority and U.S. Army Corps of Engineers.

The F-M Diversion Project has been in development since 2008 and has been highly vetted to limit the impact on people, property, and the environment. With the goal of minimizing the threat to life and property from flooding, the NAA runs counter to this goal and is inferior to the federally approved Project for the following reasons:

- 274 more structures are impacted by the NAA than by the Proposed F-M Diversion Project
- 60 more homes and homeowners would be impacted and require mitigation in the NAA
- The NAA would cost at least \$81 million more to construct, and likely more given that the NAA impacts have not been fully investigated and property values in the impacted area appear undervalued in this estimate. I am fully skeptical that the additional cost amount of \$81,000,000 is low.
- It has been stated that the NAA would push back the construction timeline of the diversion by up to 4 years. It does not appear to me that the escalating construction costs over time are calculated in the additional cost estimate.
- Numerous businesses along the I-29 corridor would need to be bought out or relocated, and these costs and impacts have not been fully explored. This includes Starr Fireworks, Memory Fireworks (new facility), Sun Gold manufacturing, and the large and recently expanded Westfield Distributing.
- The historic St. Benedict's Church (ND), including a large and substantial cemetery, and the homes in St. Benedict, and the community of Rustad, MN, including Hoff Lutheran Church, are all directly impacted by the NAA, and to avoid destruction, would need to be bought out and relocated, and these costs and impacts have not been fully explored.
- The substantial Cass County Road 16/Clay County Road 8 bridge over the Red River would likely be inaccessible during NAA flood event operation. This bridge is not impacted by the Proposed F-M Diversion Project. This bridge is approximately 1 mile south of the DNR's NAA and will be impacted by NAA project operation. In fact, the closest Red River crossing is 5 miles north at 52nd Avenue South in Fargo, ND and closure of the CR-16/CR-8 Bridge during NAA project operation will require over 10 mile detours to cross the Red River, and will impact farmers, business owners, commuters, and emergency service response times in the area.

Author: Medopera Subject: Highlight Date: 11/16/2015 2:33:47 PM -06'00'
Comment ID: 73a cont.

Author: Medopera Subject: Highlight Date: 4/4/2016 3:03:18 PM
Comment ID: 73b
Topic: Northern Alignment Alternative, General Opposition
Unsubstantive

- It also appears from the maps provided that the existing I-29 interchange at ND Co Road 16 would be affected by the NAA. Under the recommended and thoroughly studied F-M Diversion project route, this interchange would be on the “dry side” of the diversion channel. A recent cost projection for adding an I-29 interchange at 76th South in Fargo (only a few miles north of the interchange under discussion here), was pegged at a cost of \$26.5 million. It does not appear that the full cost of the impact on the I-29 interchange is accounted for in the \$81 million estimate of additional cost.





Because the DEIS contains a substantial amount of information, making it difficult for decision makers and the public to discern, I recommend providing the above information in a simple-to-read table. The differences between the Proposed Project and the NAA need to be prominently identified for readers.

Additional Areas of Concern

1. DEIS Table 5.1 indicates that the number of jurisdictions impacted by a Conditional Letter of Map Revisions will be easier to obtain due to a limited new inundation in Richland and Wilkin Counties. This is inaccurate as the number of jurisdictions impacted by a CLOMR for the Proposed F-M Diversion Project and NAA will be identical. See sub-bullets:
 - Project: Clay County, Wilkin County, City of Comstock, Eagle Township, Pleasant Township, City of Christine, City of Oxbow, City of Horace, City of Fargo
 - NAA: Clay County, Wilkin County, City of Comstock, Eagle Township, Pleasant Township, Stanley Township, City of Oxbow, City of Horace, City of Fargo
2. The DEIS states in several locations that “economic considerations” alone are not a basis to dismiss an alternative; however the public is asked to provide comments pertaining to “socioeconomic” effects as it relates to the flood control project, a broad concept. Clarification should be provided to the reader on the two concepts. For example, the Proposed Project costs considerably less (economic considerations) yet the majority of this cost difference is a result of additional acquisition of high-value property. These acquisitions relate directly to flood risks and life disruption (socioeconomic) which are effects that are fully recognizable as a basis to choose one alternative over another.

I am concerned readers do not understand what is and is not appropriate criteria for choosing between alternatives. The Proposed F-M Diversion Project puts 274 fewer structures in jeopardy, a legitimate and important rationale for selecting the Proposed Project.

The three years of work by the MNDNR has resulted in an impressive DEIS document whereby the Fargo-Moorhead Metropolitan Area is now closer than ever to realizing a long-term flood protection plan. Fargo-Moorhead is ready to move forward and put an end to the anxiety and fear associated with each flood season. I ask the MNDNR to give serious consideration to the above comments and recommended improvements for the Final EIS. A Final EIS that lacks clarity in the above noted areas could potentially result in serious project delay, continuing to put the F-M community at risk that a major flood event will take place before protections are installed.

	Author: Medopera	Subject: Highlight	Date: 11/16/2015 2:36:25 PM -06'00'
	Comment ID: 73b cont.		
<hr/>			
	Author: Medopera	Subject: Highlight	Date: 4/4/2016 3:03:52 PM
	Comment ID: 73c		
	Topic: Comparison of Alternatives, Side by Side Comparison Needed		
<hr/>			
	Author: Medopera	Subject: Highlight	Date: 4/4/2016 3:04:20 PM
	Comment ID: 73d		
	Topic: FEMA, CLOMR		
<hr/>			
	Author: Medopera	Subject: Highlight	Date: 4/4/2016 3:04:32 PM
	Comment ID: 73e		
	Topic: Comparison of Alternatives, Criteria for Alternative Selection		

In closing, the best solution for the F-M Metro Area will be the one with the lower cost, and least impact for the majority of people. This is what the Proposed Project does; it is the flood diversion solution that is best at balancing the impacts and blends all the project considerations and issues. The NAA is not more effective at limiting the impact on people, property, and the environment or minimizing the threat to life and property from flooding. And it likely, in the end, will cost more than \$100 million extra, on top of an already expensive project. In contrast, the NAA has greater negative economic considerations and socioeconomic effects associated with it. The NAA is a less effective and more costly diversion plan with greater negative impact on area residences and businesses and therefore should not be considered a contending alternative to the Proposed Project.

Thanks for listening, and thanks for all the work you have done in an effort to balance a myriad of competing interests and viewpoints.

Sincerely,

Doug Burgum

Author: Medopera Subject: Highlight Date: 4/4/2016 3:05:20 PM
Comment ID: 73f
Topic: Proposed Project, General Support
Unsubstantive

From: [Doug Busselman](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 2:43:01 PM

Commenter 74

Summary of Comments on Minnesota Farm Bureau_DougBusselman_Commenter74a_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/13/2015 4:09:28 PM -06'00'
Commenter 74

Author: Medopera Subject: Highlight Date: 4/4/2016 3:07:21 PM
Comment ID: 74a
Topic: Proposed Project and Northern Alignment Alternative, General Opposition
Unsubstantive

October 28, 2015

Re: Fargo-Moorhead Flood Risk Management Project DEIS

Please include the points which we believe need to be included in the process being used for consideration of the Fargo-Moorhead Flood Risk Management Project.

We support:

- (1) We support flood control in the Red River Valley (RRV) being accomplished through basin-wide retention projects which provide local benefits, dikes and levees through urban areas and limiting development in natural flood plains;
- (2) Preserving and protecting rural cemeteries when dams, levees, and water diversions are constructed.
- (3) All water retention efforts and decisions being controlled by local watershed districts.

We are also opposed to the high hazard dam that is part of the Fargo-Moorhead project. Minnesota Department of Natural Resources should deny the permit for this dam.

Thank you in advance for including these comments in your record. We look forward to responses related to these subjects.

Doug Busselman
Director of Public Policy
Minnesota Farm Bureau
3080 Eagandale Place
Eagan, MN 55121
Email: doug.busselman@fbmn.org
(651) 768-2109

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This page contains no comments

From: dleier@far.midco.net
To: [*Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Tuesday, October 27, 2015 7:56:56 PM

Commenter 75

Summary of Comments on Douglas&ChristyLeier_Commenter75a_Email1.pdf

Page: 1

To whom it may concern:

This email is in regards to the Northern Alignment Alternative Option for the Project DEIS. Our home and business is one of the many homes that will be affected by this alternative plan. We have lived on these three acres for more than 15 years. We have spent those 15 years making our few acres a place we call home and look forward to spending our retirement here. We are both hard working people who grew up in the country and share a love of the outdoors. We have spent countless hours, planting and tending to more than 200 trees which we planted by hand on our little spot of land. We built this home in its current location because it offered up space, peace of mind and a place to enjoy the outdoors. We would like to keep our home and our livelihood intact. We strongly encourage you to seek a different alternative plan.

Sincerely,

Douglas and Christy Leier
6909 112th Ave. S
Horace ND 58047

Author: Medopera Subject: Text Box Date: 11/13/2015 4:06:13 PM -06'00'
Commenter 75

Author: Medopera Subject: Highlight Date: 4/4/2016 3:09:01 PM
Comment ID: 75a
Topic: Northern Alignment Alternative, General Opposition
Unsubstantive

From: [CO-Kindred, Doug Lingen](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Tuesday, October 20, 2015 4:14:33 PM

Commenter 76

Summary of Comments on DougLingen_Commenter76a_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/13/2015 4:13:31 PM -06'00'
Commenter 76

Author: Medopera Subject: Highlight Date: 4/4/2016 3:10:19 PM
Comment ID: 76a
Topic: Alternatives, Alternatives: Internal Storage

If the Diversion Authority says this is not about land development wouldn't the idea of internal storage in some of the low lying areas help?

Thanks for you time

Doug Lingen
Doug.lingen@chsinc.com

416 plum tree road
Hickson, nd 58047

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From: [CO-Kindred, Doug Lingen](#)
To: [*Review, Environmental \(DNR\)](#)
Subject: RE: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Tuesday, October 20, 2015 4:22:30 PM

Commenter 76 cont.

Summary of Comments on DougLingen_Commenter76b_Email2.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/13/2015 4:15:44 PM -06'00'
Commenter 76 cont.

Author: Medopera Subject: Highlight Date: 4/4/2016 3:11:20 PM
Comment ID: 76b
Topic: Dam Safety, Risk Concerns

Soil stability was something that was talked about from the very beginning of this project. It was always said that the soil in the FM area would not be able to hold even simple dikes. I have been in my home for 15 years and the soil continues to settle every year. I can only imagine what a high hazard dam and moving water will do to the soil. Not sure I have a alternative but maybe something on a smaller scale.

Thanks for you time

Doug Lingen
Doug.lingen@chsinc.com

416 plum tree road
Hickson, nd 58047

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Commenter 77

Kingsred, N.D.
Oct 14, 2015

Project Manager

To Jill Townly
Re: regards to EIS Draft Fargo - Washed
flood risk management project.

There are other options that have and should
be continued to be look at, as a possible solution
or at least an aid so maybe a smaller diversion
or none at all may be needed.

☐ I am including a couple of things from the
Spring of 2011 Tour of water retention. The cover
letter shows the sponsors of this long term solution
or aid in solution. You probably have this out
one page shows about 10 possible retention sites,
one that I have highlighted is on the Wild Rice
river at Montador which could hold back 50000
acre-feet, fairly large. Put some of these together
with the amount of Drain tile which has
been done in the last few years could reduce
a large amount of run off. As we know
land which has drain^{tile} reduces top soil moisture
so has ability to hold moisture in Spring +
large rain events.

☐ If this diversion project was to go
ahead the type of dam on Red River should not
be a high hazard dam but instead be similar
to the one at Horace, N.D. or the Sheyenne
Diversion between Horace + west Fargo. The
gist of this dam is the diversion inlet is high
enough so water stays in river channel until
a large flow occurs then it spills into

Summary of Comments on DougChristianson_Commenter77a-e_Mail1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/10/2015 10:59:25 AM -06'00'

Commenter 77

Author: Medopera Subject: Sticky Note Date: 4/4/2016 3:53:07 PM
Comment ID: 77a
Topic: Alternatives, Alternative: DSA Plus More

Author: Medopera Subject: Sticky Note Date: 4/4/2016 3:53:54 PM
Comment ID: 77b
Topic: Alternatives, Alternative: Project with Smaller Dam

Author: Medopera Subject: Sticky Note Date: 4/4/2016 3:54:57 PM
 Comment ID: 77d
 Topic: Proposed Project, Number Protected

Author: Medopera Subject: Sticky Note Date: 4/4/2016 3:55:44 PM
 Comment ID: 77e
 Topic: Alternatives, Alternative: Fargo Flood Damage Reduction Project

diversion and the main stream S. Hoegense has a wall across the river can only get so high beyond the dam. Lets say on the Red River it could let 58 to 39 feet through so Fargo could manage it. which with their diking should not be a problem.

☐ The Diversion authority is also judging their number of people protected by this project to get 200,000 people, as they say, would need all of Fargo, Moorhead, Dilworth & west Fargo. we know all of Fargo doesn't have a problem Moorhead has got it self protect quit well and a large part never had a problem at higher elevations. Dilworth is high elevation also, west Fargo is protected by Horace to west Fargo diversion. So we know the numbers arent there to justify cost benefits.

☐ Fargo & Diversion authority want to store water on land with at least 918 to 923 elevation. so Fargo can develop land in 907 or little above. that must quite, they should pass over that and develop in this high land and let the lower flood plain land be retention and holding.

This project is just to develop in flood plane. with the diking they have done and continue to do, they will be manageable.

Grand Forks dike seem to be doing well.

Thank You,
 Douglas Christensen
 Kindred, N.D. 58051
 16933 53rd St S.E.

WATER RETENTION Spring 2011 TOUR

Red River Basin

Minnesota, South Dakota, North Dakota

HOST:

Red River Basin Commission

With special tour assistance from:

Cass County Joint Water Resource District

With tour assistance from:

Bois de Sioux Watershed District

Buffalo Red River Watershed District

Houston Engineering Inc.

Interstate Engineering

Moore Engineering

NRCS ND/SD

Widseth Smith Nolting





ry:
 sources/
 nrol

n:
 County, ND

ponsors:
 l County Water
 e District and
 st Cass Water
 e District

**red
 itures:**
 3 area: 1,400 miles²
 y: 50-60,000 ac-ft
 area: 4,200 acres

ross section:
 vation: 1,048 ft
 of fill: 36 ft

Challenge

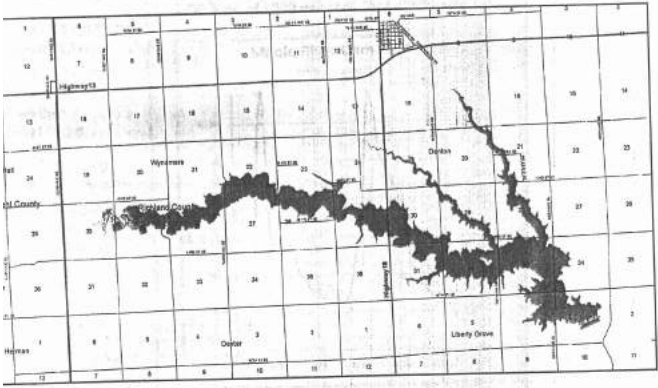
Flooding remains a critical issue up and down the Red River Valley, requiring exploration of water retention opportunities and the identification of solutions. Other considerations include securing the approval and funding to implement solutions, as well as protecting environmental resources.

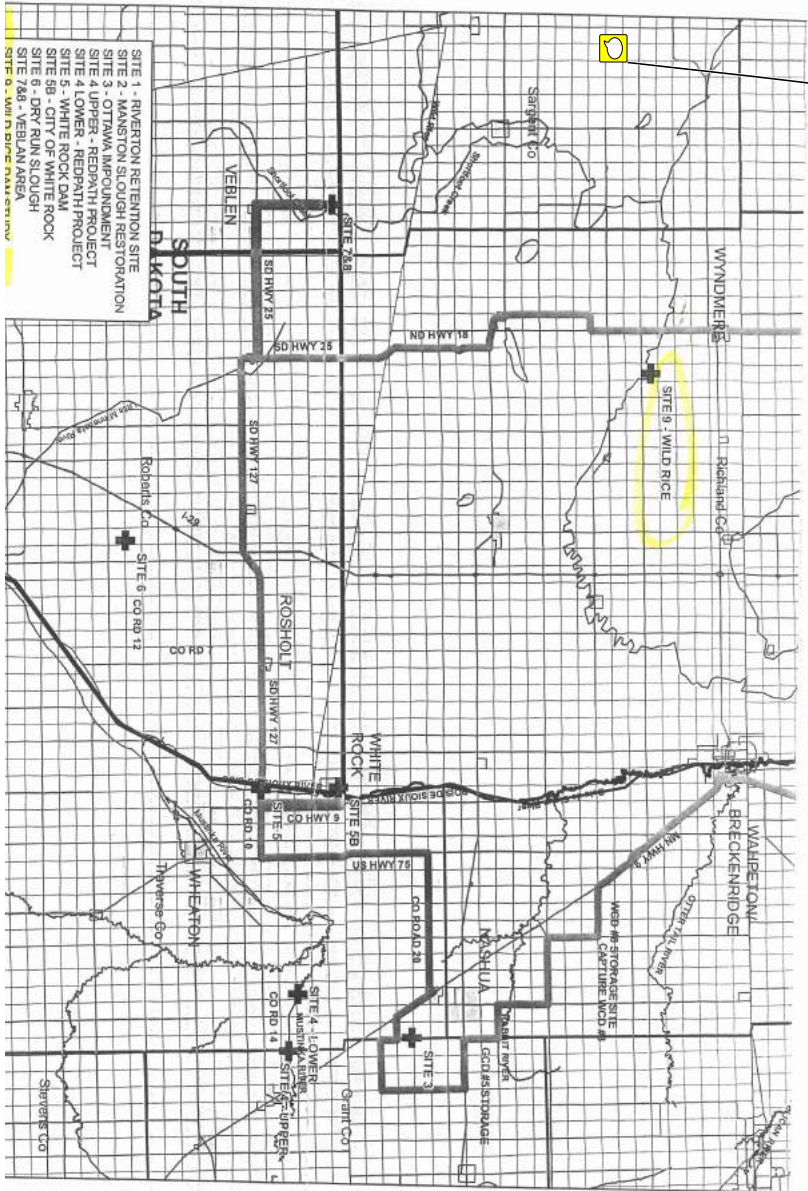
Proposed solution

The Richland County and Southeast Cass County Water Resource Districts have completed a study of the Wild Rice and Antelope Creek watersheds, which identified several water retention opportunities. Based on the study results, the Water Resource Districts have selected a 50,000 acre-foot Wild Rice River main stem site for further development. The site is located approximately four miles east of North Dakota State Highway 18 near Mantador, N.D.

Potential project outcomes

An exploratory soils investigation has shown that the site is suitable for the construction of a dam and the districts are in the process of determining the downstream benefits of the proposed facility.





Mr. David Christensen
1695 3rd St SE
Kindred, ND 58051

FARGO ND 581
15 OCT 2015 PM 2 L



*Jill Tenley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Quality Resources Div, DNR
500 LaFayette Road, ST. Paul, MN. 55155-4025*

ES1ES14034



5.0

This page contains no comments

From: [Critchley, Tona](#)
To: [*Review, Environmental \(DNR\)](#)
Cc: [Saylor, Timothy P.](#)
Subject: Letter of Support from Essentia Health
Date: Monday, October 26, 2015 3:20:40 PM
Attachments: [10-26-15 Letter of Support.pdf](#)

Commenter 78

Summary of Comments on EssentiaHealth_Commenter78a-b_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/13/2015 4:24:50 PM -06'00'
Commenter 78

Author: Date: Indeterminate

Good afternoon, Ms. Townley: Please accept the attached letter from Tim Saylor, Essentia Health West Region Chief Operating Officer. I will mail to you the original letter as well.

Thank you.

Tona Critchley
Executive Assistant
Essentia Health West Region
Administration Department
3000 32 Avenue South
 Fargo, ND 58103
(701) 364-3421
tona.critchley@essentiahealth.org

October 26, 2015

Jill Townley, Project Manager
Environmental Policy and Review Unit
Box 25 Ecological and Water Resources Division
Department of Natural Resources
500 Lafayette Road
St. Paul, MN 55155-4025
environmentalrev.dnr@state.mn.us

Re: Fargo-Moorhead Flood Risk Management Project DEIS

Dear Ms. Townley:

As the premier health care provider in rural Minnesota, Essentia Health is supportive of the proposed flood risk management project, as approved by the U.S. Army Corps of Engineers. We believe that permanent flood control is necessary for the Fargo-Moorhead region, given the history of catastrophic flooding from the several rivers that flow through the area.

Beyond the obvious economic damages, major flood events present serious medical and health issues. First, of course, there is the risk of injury or death from the flood waters and debris. Second, the flooding often complicates patient transport and emergency response, as roadways are rendered unpassable. This also makes evacuation of high-risk or non-ambulatory patients much more difficult and dangerous.

For these reasons, a permanent system to reduce flood risk is in order. The proposed action outlined in the DEIS is the best available option for providing this. The No-Action alternatives would maintain the status quo, which essentially consists of unreliable and temporary measures, rather than engineered solutions. The Northern Alignment alternative would impact more homes and cost millions of dollars more, money that would be better spent elsewhere. The proposed alternative will effectively control the flood risk, and do so in most economical manner possible.

Our support is also based on the fact that the proposed alternative has already gained the support of the responsible federal agencies, following a comprehensive environmental review. This review examined all potential impacts and determined that the risk from the project was wither low or adequately mitigated by various controls built in to the design.

We feel that the proposed and federally authorized Fargo-Moorhead Flood Risk Management Project will provide adequate, 100-year flood protection for the metro area and surrounding region, and we urge the Minnesota department of Natural Resources to grant the project the requisite approval.

Sincerely,



Timothy P. Saylor
Chief Operating Officer

Author: Medopera Subject: Highlight Date: 4/4/2016 3:58:10 PM
Comment ID: 78a
Topic: Proposed Project, General Support
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/4/2016 3:58:16 PM
Comment ID: 78b
Topic: Permitting Approval, Approve the Project
Unsubstantive

From: Lynn F
To: *Review, Environmental (DNR)
Subject: FM Diversion
Date: Tuesday, October 27, 2015 2:25:29 PM
Attachments: image001.png

Summary of Comments on FargoHousingandRedevelopmentAuthority_Commenter79a -b_Email1.pdf

Page: 1

October 27, 2015

Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road,
St. Paul, MN 55155-4025

Commenter 79

Ref: Fargo-Moorhead Flood Risk Management Project

Dear Ms. Townley,

We strongly support the Fargo-Moorhead Flood Risk Management Project as approved by the U.S. Army Corps of Engineers, and recommend your agency approve it as well.

The need for permanent flood control is a crucial one in our part of North Dakota. Several local rivers, including the Red and Sheyenne, flow near or through the metro area and are prone to flooding. When this occurs in the Fargo-Moorhead metro area, serious economic and social disruption is the result. Fargo-Moorhead is a major regional center for commerce, transportation, and other economic needs.

As such we support the proposed action over the other alternatives for several reasons:

1. It has already received approval at the federal level, meaning that it has undergone a rigorous and comprehensive environmental review and been found to have little or no adverse environmental impacts. Moreover, a different action, like the Northern Alignment Alternative, would need to undergo the same process again, a waste of taxpayer money, time, and resources.
2. The proposed project is technically sound, and will best serve the purpose of providing a permanent solution to reduce flood risk, damage, and protection costs.
3. Taking the "no action" approach will not provide substantive or reliable protection against even 50-year flood events, let alone 100-year or more.
4. Lack of approval for the project will result in a new FEMA mapping, which would likely raise the flood plain and put the property values of many additional homes and businesses at great risk, while simultaneously driving up insurance costs.
5. The proposed project will meet or exceed all state and federal standards, but be owned and operated by a local authority.

There can be little disagreement as to the need for a project of this type. Given the federal approval, the well-thought-out design of this project, and the urgency it demands, we again recommend that the DNR approve of it without delay.

Sincerely,

On behalf of The Board of Commissioners of the Fargo Housing and Redevelopment Authority
Lynn Fundingsland
Executive Director

Author: Date: Indeterminate

Author: Medopera Subject: Text Box Date: 11/13/2015 4:29:43 PM -06'00'

Commenter 79

Author: Medopera Subject: Highlight Date: 4/4/2016 4:00:14 PM
Comment ID: 79a
Topic: Proposed Project, General Support
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/4/2016 4:00:51 PM
Comment ID: 79b
Topic: Permitting Approval, Approve the Project
Unsubstantive

This page contains no comments

Lynn Fundingsland, Executive Director
Fargo Housing & Redevelopment Authority
325 Broadway
Fargo, ND 58102
Ph: 701-478-2552
Fax: 701-478-2612
lynnf@fargohousing.org



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From: [Fred Eckhardt](#)
To: [Info \(DNR\)](#)
Subject: Fargo flood control
Date: Wednesday, September 16, 2015 3:27:25 PM

Commenter 80

I oppose the Fargo flood control. It cost too much money to the tax payer, will take too much ND land out of production and will flood MN land.

Thank you,

Fred Eckhardt
Boyd, MN

Summary of Comments on FredEckhardt_Commenter80a_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/13/2015 4:32:34 PM -06'00'
Commenter 80

Author: Medopera Subject: Highlight Date: 4/4/2016 4:03:05 PM
Comment ID: 80a
Topic: Proposed Project and Northern Alignment Alternative, General Opposition
Unsubstantive

From: [Fred Schumacher](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo-Moorhead Flood Risk Management Project EIS
Date: Tuesday, October 27, 2015 7:28:18 PM
Attachments: [MN DNR EIS comment.odt](#)

Commenter 81

Summary of Comments on FredSchumacher_Commenter81a-j_Email1.pdf

Page: 1

Comment: MN DNR Draft EIS Fargo-Moorhead Flood Risk Management Project

Fred Schumacher, 10/27/15

...this project is an "engineer's dream and nightmare"

stated by a USACE engineer at the F-M aqueduct model open house, Rosemount, MN 7/23/14

Engineers dream of breaking new ground, doing something that hasn't been done before. The Red River Diversion is such a project, attempting to do many things that have never before been tested. It is unfortunate that the MN DNR review brief appears to have limited the investigation to determining if the project "as read" would accomplish what it states it will. The more appropriate question is "should" it do what it intends, considering the nightmare scenarios that could develop as a result of failures of project components. It is not only the dam on the Red River that is high risk.

My main nightmare has to do with the geomorphology of the notoriously weak Red River Valley subsoils and the unanalyzed effect of impounding water over a waffle-grid of township roads, two issues I brought to the attention of Governor Dayton at the public hearing in Breckenridge, MN on September 2, 2014.

1. Dynamic loading of river aqueducts, shear stress failure, and icing.

The \$2.6 million 1:50 scale Maple River aqueduct model in Rosemount, MN is marvelous for testing water flows; however, it cannot predict how the actual aqueduct will respond to real-life stresses on the structure itself under winter conditions and during spring break-up flood flows, and how those forces will act on the underground components supporting the structure, especially when it is under extreme loads in shear. A shear failure of an aqueduct would be catastrophic, shifting the entire structure downstream and blocking the diversion channel itself.

Author: Medopera Subject: Text Box Date: 11/17/2015 9:38:15 AM -06'00'
Commenter 81

Author: Date: Indeterminate

Author: Medopera Subject: Highlight Date: 4/4/2016 4:04:27 PM
Comment ID: 81a
Topic: Dam Safety, Risk and Loss of Life Concerns

Author: Medopera Subject: Highlight Date: 4/4/2016 4:05:19 PM
Comment ID: 81b
Topic: Aqueducts, Aqueduct Risk Concerns

USACE Maple River Project Manager Bill Casjke stated at the Rosemount open house that the Corps had reviewed all water aqueduct projects world wide and had found only one where a free-flowing river was made to pass over a canal, and that was in the foothills of the Himalayas in India in a location that never freezes. A river aqueduct has never been built in a winter climate as severe as Fargo-Moorhead's. The Rosemount model will be tested for icing conditions through use of styrofoam blocks. This is entirely inadequate. The model is inside a building in a location that is 10 degrees warmer in winter than Fargo-Moorhead and does not have its average 12.4 mph wind speed. At Rosemount, I asked, only half in jest, if each aqueduct would have its own electrical sub-station, considering the amount of power that would be required to heat the aqueducts to keep them from freezing to the bottom. Accurate modeling would require refrigerating the building and using large fans to replicate real life Red River Valley winter conditions.

Author: Medopera Subject: Highlight Date: 11/17/2015 9:48:22 AM -06'00'
Comment ID: 81b cont.

Author: Medopera Subject: Highlight Date: 4/4/2016 4:05:50 PM
Comment ID: 81c
Topic: Dam Safety, Risk Concerns

Static loads of the aqueducts will be carried by caissons down to the glacial till underlying the 100 feet or so of Red River Valley clay; however, these extremely soft clays, sometimes described as having the strength of pudding, will not be able to provide resistance from shear force on the aqueducts generated by fast flowing water, ice and debris. The only aqueduct design component countering shear appears to be the downstream apron of concrete cast on the ground. If the soils underneath become water saturated, as could happen during a wet fall season, the whole structure could slide downstream.

2. Differential effect of freezing and thawing of soils under and in the tie-back levees.

The tie-back levees will function as dams but be designed as levees, without the multiple redundancies of true dams. They will be the largest earthen structures ever built on top of Red River Valley clay soils. In a spring flood situation, the downstream side of the levees will remain frozen, while the soils on the upstream side will thaw and swell as they take on water. Red River Valley soils have a very high coefficient of expansion, resulting in a rotational moment acting on the levee. This could cause cracks to develop through which water could pour. During the USACE cemetery evaluation tour on July 20, 2014, I asked the geotech engineer how the Corps would address this problem. He said he had never thought of that. I said that as a retired Red River Valley farmer I was very aware of how its soils expand and contract and they had better start thinking about it. If the levees were to fail with 50,000 acre-feet of water impounded, Fargo-Moorhead would be wiped out.

3. The waffle-grid of township roads and reservoir hydraulics.

The Rosemount model tour was introduced with the statement that the Red River Valley is "flatter than a pancake." I asked that if that were the case, why is a reservoir being put on top of such a flat area. No answer was forthcoming. Of course, the area is not flat as a pancake, especially Fargo and Moorhead, which are sited on top of a shallow peninsula stretching west

into the valley from the Minnesota side. The twin-towns exist because the Northern Pacific Railroad determined that location was the highest ground on which to place their rail crossing of the valley. It is this high ground that made the high density settlement of the Fargo-Moorhead area possible. As long as urban development stays on this high ground, it remains safe from flooding.

At the Rosemount model tour, I asked if hydraulic modeling of water flowing over the grid of township roads in the reservoir area had been done. Aaron Buesing, USACE hydraulics engineer, said that had NOT been done but "we absolutely need to study township roads." At this date, I don't know if that has been done. I don't see an indication of that in the DNR EIS or other supporting documents. Water flow into and out of the reservoir has been based on a flat surface without the impediment of township roads. This provides a highly inaccurate estimate of real life conditions.

Township roads will act as mini-dams. In spring flooding conditions, culverts will be frozen shut, forcing water to flow over the tops of the roads, creating waterfalls which will undercut the roads and create numerous wash-outs. On filling of the reservoir, water will flow over the south and east banks of the roads on the Minnesota side and south and west banks on the North Dakota. On emptying of the reservoir, any roads not already washed-out will see their opposite banks undercut. This will be a huge problem not addressed in the study. Repair costs will be major. Damage to township roads alone makes the project a Class III high risk dam (DEIS page 3-203). At the cemetery tour, I recommended USACE personnel organize another tour with township officers to discuss the road problem. That was not done.

4. Indemnification of damages to farmland from reservoir flooding.

Reservoir flooding is an act of man not nature and thus any damages would not be compensated through federal crop insurance. The Diversion Authority is aware of this problem but has not fully addressed it. A one-time easement payment is entirely inadequate to cover damages. As noted in section 3, the waffle-grid of roads will interfere with flood water drainage making planting either impossible or highly delayed, creating severe economic stress to farmers in the staging area. The NDSU agricultural study did not address this issue and is nearly worthless in evaluating farm damage as a result of diversion operation. MN DNR needs to evaluate farmland damage more stringently and balance it off against downstream benefits. Township road waffle-grid hydraulics absolutely has to be a part of any modeling of effects.

5. Executive Order 11988 and the Red River Diversion

As I mentioned above, Fargo and Moorhead sit on high ground. Moorhead, averaging about

Page: 3

Author: Medopera Subject: Highlight Date: 4/19/2016 2:26:05 PM
Comment ID: 81d
Topic: Hydrology and Hydraulics, Township Roads

Author: Medopera Subject: Highlight Date: 4/19/2016 3:05:42 PM
Comment ID: 81e
Topic: Infrastructure and Public Services, Flood Impacts to Roadways, Ditches and Culverts

Author: Medopera Subject: Highlight Date: 4/4/2016 4:07:57 PM
Comment ID: 81f
Topic: Socioeconomics, Agriculture Mitigation

Author: Medopera Subject: Highlight Date: 11/17/2015 10:02:58 AM -06'00'
Comment ID: 81e cont.

Author: Medopera Subject: Highlight Date: 4/4/2016 4:08:09 PM
Comment ID: 81g
Topic: Socioeconomics, Project Cost

three feet higher than Fargo, was able to achieve 100-year flood protection through a system of buy-outs and levees costing \$100 million, all from state and local funds. The Red River diversion project, which primarily protects Fargo, would cost 20 times as much. This high cost is to a large degree caused by the complexity required by the crossing of five rivers with the diversion channel and the need for an upstream reservoir to keep water flows at the Canadian border from not speeding up or rising past present conditions. Because the reservoir is sited in a shallow bowl, it has to flood a large area in order to hold back a sufficient amount of water.

The study states that annual flood damages average \$51 million. This is high, considering that the latest major flood in 2009 caused \$55 million in damages according to NOAA estimates. But even accepting the high figure of \$51 million, this would equal the annual interest cost of the diversion project at a low 2.5% interest rate, without the added cost of amortization. I can't see how any objective economic analysis could come up with a positive benefit/cost ratio, considering how little Moorhead had to spend to achieve 100-year flood protection.

There is no shortage of land available for development in the Fargo-Moorhead area that safe from flooding. Most of that land lies in the interior of Fargo and to the east and west of Fargo itself. Fargo's decision to build the new Davies High School on flood prone land was a signal to developers that Fargo intended to expand south into its natural flood plain. Without the diversion project this area would continue to be at risk of flooding, not from the Red River, but from overland flows. However, by Executive Order 11988, no federal funds can be used to make development in the natural flood plain possible. This project is a test of Executive Order 11988.

The issue of federal funds may be moot, since the chances of the project actually receiving federal construction funding are close to nil. Since the state of North Dakota has already told the Diversion Authority that the amount authorized for the project are all the state funding it will receive, and since the chances of Minnesota providing any funding are also close to nil, the residents of Fargo will have to pick up the tab, an astronomical cost to a small city. Somebody has to provide some "tough love" and tell the straight story, that this is a project which has been a boon to engineering consulting firms but that its chances of actually being built are slim, especially if the high risk negative possibilities I've laid out are fully grasped by the residents of the area.

The North Dakota side diversion project uses complexity as a problem solving tool after the much simpler Minnesota side diversion was rejected. As a result, it increases risk factors for project components failure by at least an order of magnitude, as well as increasing cost substantially. To answer the question "should" this project be built, any rational analysis would have to be no.

Page: 4

Author: Medopera Subject: Highlight Date: 11/17/2015 10:14:10 AM -06'00'
Comment ID: 81g cont.

Author: Medopera Subject: Highlight Date: 4/4/2016 4:08:52 PM
Comment ID: 81h
Topic: Federal Executive Order 11988, Violation

Author: Medopera Subject: Highlight Date: 4/4/2016 4:09:36 PM
Comment ID: 81i
Topic: Proposed Project, Funding
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/4/2016 4:09:58 PM
Comment ID: 81j
Topic: Proposed Project, General Opposition
Unsubstantive

Fred Schumacher
3460 N. Range Line Rd.
Gheen, MN 55771
218 787-2212
fredschum@gmail.com

This page contains no comments

From: [Fred Schumacher](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo-Moorhead Flood Risk Management Project EIS
Date: Wednesday, October 28, 2015 8:53:39 AM

Commenter 81 cont.

Summary of Comments on FredSchumacher_Commenter81eanddcont_Email2.pdf

Page: 1

Addendum to comment by Fred Schumacher
10/28/15

Author: Medopera Subject: Text Box Date: 11/17/2015 10:30:44 AM -06'00'
Commenter 81 cont.

Yesterday I sent in my comment to the Draft EIS Fargo-Moorhead flood diversion project

Author: Medopera Subject: Highlight Date: 11/17/2015 10:30:23 AM -06'00'
Comment ID: 81e (and d) cont.

I would like to add an addendum to Section 3: The waffle-grid of township roads and reservoir hydraulics.

This morning I spoke with St. Paul USACE hydraulics engineer Aaron Buesing about this issue. I had assumed that since there was no mention in the DEIS of reservoir area township roads hydraulics that such a study had not been done. He confirmed that supposition and said that such a study was in the pipeline and hoped it would begin within two to three months. He also stated that reservoir fill-up and draw-down levels and rates had been calculated based on all road culverts being open. He acknowledged that this is frequently not the case in spring flood conditions, with many culverts blocked by ice, and that road damage from water overflows would be expected.

Without a study of the effect of a waffle-grid of township roads on reservoir hydraulics, accurate estimates of damages are not possible. It also makes the NDSU agricultural impacts study even less useful. I want to reemphasize that a township roads study is an absolutely essential requirement for the decision making process.

Fred Schumacher
3460 N. Range Line Rd.
Gheen, MN 55771
218 787-2212
[fredschum@gmail.com](mailto:fredschem@gmail.com)

From: [Gerry Zimmerman](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Diversion
Date: Friday, October 23, 2015 11:59:29 AM
Attachments: [Jill Townley DNR Diversion.docx](#)

Commenter 82

Summary of Comments on GerryZimmerman_Commenter82a_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/17/2015 10:32:08 AM -06'00'
Commenter 82

Author: Date: Indeterminate

Jill Townley

Please find attached

Yours Truly,

Gerry Zimmerman

This page contains no comments

Jill Townley
Environmental Policy and Review Unit
Ecological and Water Resources Division DNR

Subject: Fargo Diversion Project

Please let me introduce myself. My name is Gerry Zimmerman and I live just north of Moorhead .

Since 2010 we have been in the process of tiling our farm with one difference. That difference is that I am also using the drainage tile to subirrigate the our land where I have water to use for this purpose.

To accomplish this we are using water from a drainage ditch that is in the Buffalo Red River Watershed. This ditch is only along a part of what we farm and as a result we are only able to subirrigate a portion of our farm.

These projects are being monitored by NDSU's, Agricultural and Biosystems Engineering Dept. Dr. Tom Scherer and Dr. Xinhua Jia. At the University of Minnesota, Dr. Gary Sands and the Buffalo Red River water Shed is also contributing to the work being done. Dr. Jia has also been working with a similar project at the Miller Farms near Fairmount, N.D.

A three year SARE study by Dr. Jia was completed last fall. Dan Gunderson from MPR reported on it in conjunction with an interview with a soils scientist from the University of MN, Jeff Strock, on what could be possible if the ditch network were to be used for another purpose besides drainage, just as the drainage tile can be used for a second purpose. (MPR news, After decades of draining, some MN farmers look to put water back. Google: Gerry Zimmerman, subirrigation or Dr. Xinhua Jia, subirrigation.)

In normal years we experience to much water during late April and June and not enough during late July and August. The drainage subirrigation tile attempts to address these issues.

Ditch 39, our water source, has some water flow in it year round. The problem with this water source is that there is not enough water during very dry periods. And a well is not an option, since water can only be located on a limited basis.

Our findings to date are that crops will respond to limited water during late July. This response is on the order of 10%. If ten percent could be added to the commodity output of the valley, it would be a huge contribution to the economics of this area.

Water is such an important issue today with climate change, the importance of food production on ever fewer acres of land, water depletion of existing aquifers, together with population increases placing greater dependence on those water resources.

Retention of water along the edge of the Red River Valley needs to be considered. Areas where traditionally marginal agricultural lands exist. Retention in these areas could fulfill several purposes.

1. Hold water back during spring flooding to protect Fargo Moorhead.
2. Provide recreation for the public
3. Provide irrigation water for late summer
4. Provide habitat for wild life.
5. Possible become aquaculture farms
6. Provide a water source for the Fargo Moorhead during dry periods

A project such as the diversion will do only one thing and that is get rid of the water. Water that you may wish you had in the future.


Yours truly,

Gerry Zimmerman
7267 50th St. N.
Glyndon, MN 56547

Summary of Comments on StateofNorthDakota_GovDalrymple_Commenter83a_Email1 .pdf

From: [Townley, Jill \(DNR\)](#)
To: [Magnuson, Caroline \(DNR\)](#)
Subject: FW: Flood protection
Date: Wednesday, October 28, 2015 8:15:03 AM
Attachments: [Landwehr MN DNR.pdf](#)

Page: 1

 Author: Date: Indeterminate

Jill Townley

Planner Principal, EIS Project Manager
Environmental Policy and Review Unit
Division of Ecological and Water Resources
MN Department of Natural Resources
500 Lafayette Road, Box 25
St. Paul, MN 55155
651-259-5168

 Please consider the environment before printing this e-mail.

From: Lund, Janis M. [mailto:jlund@nd.gov]
Sent: Tuesday, October 27, 2015 2:48 PM
To: Landwehr, Tom (DNR)
Cc: Townley, Jill (DNR); Dayton, Mark (GOV); Travnicek, Andrea J.
Subject: Flood protection

Commissioner Landwehr,

Attached is Governor Dalrymple's October 27 letter regarding flood protection for Fargo-Moorhead.

Regards,

Jan Lund
Office of the Governor
State of North Dakota
600 East Boulevard Avenue
Bismarck, ND 58505
701.328.2715
jlund@nd.gov



— State of —
North Dakota
Office of the Governor

Jack Dalrymple
Governor

Commenter 83

October 27, 2015

Mr. Tom Landwehr, Commissioner
Minnesota Department of Natural Resources
500 Lafayette Road
St. Paul, MN 55155-4025

Dear Commissioner Landwehr:

On behalf of the State of North Dakota, we appreciate the work your agency has completed on the Fargo-Moorhead Flood Risk Management Project Draft Environmental Impact Statement (DEIS). The range of alternatives considered by the Minnesota Department of Natural Resources (MDNR), and your opportunity to assess the work conducted by the US Army Corps of Engineers (Corps), has been thorough. We look forward to working cooperatively with the MDNR to ensure that Fargo-Moorhead receives the flood protection it so desperately needs, and that it is accomplished in an environmentally responsible manner.

Based on the analysis conducted by FEMA and the Corps, the need for permanent flood risk protection in the Fargo-Moorhead area has never been more critical. We narrowly averted catastrophe in 2009, and every spring poses the threat of an even more devastating flood. I know you will agree that a do-nothing alternative, which would force Fargo and Moorhead to rely solely on emergency flood fighting, is simply not an option. The region needs FEMA-certifiable protection that can keep the communities safe even above 1 percent risk levels, and give them the ability to successfully fight even larger flood events.

All concerned recognize that the Red, Wild Rice, Sheyenne, Maple and Rush Rivers all pose significant flood risks to the metro area and each must be addressed. At this time it seems only a North Dakota Diversion Channel will protect against those risks. We hope that the process can now move forward in a timely manner.

The North Dakota State Water Commission will work diligently to ensure environmental impacts of the project are minimized through our permitting process, and we look forward to continuing the collaborative dialogue with Minnesota officials. I am confident that, working together, our two states can mitigate any environmental impacts, and the local project sponsors will continue to work with impacted residents to address their concerns as much as possible.

Sincerely,

Jack Dalrymple
Governor

C: Governor Mark Dayton
Jill Townley, Project Manager, Minnesota DNR

37:68:56

Page: 2

Author: Medopera Subject: Text Box Date: 11/17/2015 10:38:47 AM -06'00'
Commenter 83

Author: Medopera Subject: Highlight Date: 4/4/2016 4:15:05 PM
Comment ID: 83a
Topic: Proposed Project, General Support
Unsubstantive

From: [Greg Butler](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS I am against this proposal Northern Alignment Alternative (NAA)
Date: Tuesday, October 27, 2015 9:26:22 PM

Commenter 84

Summary of Comments on GregButler_Commenter84a_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/17/2015 10:41:49 AM -06'00'
Commenter 84

Author: Medopera Subject: Highlight Date: 4/4/2016 4:16:52 PM
Comment ID: 84a
Topic: Northern Alignment Alternative, General Opposition
Unsubstantive

We ask the DNR to reject the Northern Alignment Alternative (NAA) in favor of the proposed, federally authorized plan. Since it has not been evaluated by the responsible federal agency, the NAA would by law require a whole new environmental review, analysis, and Environmental Impact Statement from the Corps of Engineers. There is no reason to waste time and public money and resources on doing an environmental review on this alternative, when one has already been done on the proposed project. Selecting the NAA would be an enormous waste of resources.

The main feature of the NAA would be to shift the impoundment downstream 1.5 miles, moving it north into more developed areas. In doing so, more homes will be affected. Even if a handful of homes will be spared impact by adopting the NAA over the proposed alternative, this benefit would be offset and more by the fact that as many as 60 additional homes would be impacted under the NAA than would under the proposed plan. In addition, a number of businesses, and more farmland would be affected by the NAA than by the proposed action.

The NAA would also place one of our region's most historic landmarks in jeopardy - St. Benedicts Catholic Church, the oldest Roman Catholic Church in the area. All of this for an additional price tag of \$81 million. The NAA is not worth it, and should be rejected by the DNR.

Sincerely,
Greg Butler II

12021 south university drive
Horace, ND 58047
gfb823@gmail.com

From: [Jill Lavelle](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Tuesday, October 27, 2015 7:46:11 AM

Commenter 85

Summary of Comments on JillLavelle_Commenter85a_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/17/2015 10:46:22 AM -06'00'

Commenter 85

Good Morning,

From: [Jill Lavelle](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Tuesday, October 27, 2015 8:57:38 AM

Page: 2

Author: Medopera **Subject:** Highlight **Date:** 4/4/2016 4:18:33 PM
Comment: 85a
Topic: Northern Alignment Alternative, General Opposition
Unsubstantive

Good Morning,

I am asking the DNR to reject the Northern Alignment Alternative (NAA) in favor of the proposed, federally authorized plan. Since it has not been evaluated by the responsible federal agency, the NAA would by law require a whole new environmental review, analysis, and Environmental Impact Statement from the Corps of Engineers. There are no fiscally responsible reasons to waste more time and public monies to do another environmental review for this alternative. Selecting the NAA would be an enormous waste of resources.

The NAA proposes moving the diversion north 1.5 miles into more developed residential and commercial areas. By selecting this plan, even more homes, farmland and businesses will be affected than in the federally authorized plan. Even if a handful of homes will be spared impact by adopting the NAA over the proposed alternative, this benefit would be offset and more by the fact that as many as 60 additional homes would be impacted under the NAA than would under the proposed plan.

The NAA would also place one of our region's most historic landmarks in jeopardy - St. Benedicts Catholic Church, the oldest Roman Catholic Church in the area. All of this for an additional price tag of \$81 million.

On a personal note, I believe stalling the proposed federally authorized plan is not in the interest of the citizens of Cass and Clay counties and certainly all the surrounding communities that rely on these two counties for their employment, medical care and educational opportunities. I strongly recommend staying with the approved proposed federally funded diversion project and please, let's just get it done!!

Sincerely,

Jill M Lavelle

806 118th Ave S

Horace, ND 58047

jlavelle1@msn.com

From: [Gregg](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: fargo-moorhead flood risk management project DEIS
Date: Wednesday, September 23, 2015 5:11:59 PM

Commenter 86

Summary of Comments on GregHanson_Commenter86a_Email1.pdf

Page: 1

Jill Townely

Having attended many meetings concerning this project and listening to what the City of Fargo has proposed going back to their Southside Flood Control Project, basin wide retention has my vote. Realizing this does not give Fargo all it wants, will give them protection provided they do not develop into the flood plain on their south side. Charlie Anderson has stated this could reduce water levels 20%, which is huge and would benefit basin wide, would not drastically change the way water flows and most importantly, it would not require the construction of a hazardous diversion and dam! Personally, retention would allow me to stay on the farm that has been in the family for over 100 years, that sounds very good to me.

Thank you for your time:

Gregory J Hanson
17263 50th ST SE
Horace, ND 58047-9756
gjhanson@hotmail.com
701-799-3727

Author: Medopera Subject: Text Box Date: 11/17/2015 10:47:37 AM -06'00'
Commenter 86

Author: Medopera Subject: Highlight Date: 4/4/2016 4:20:10 PM
Comment ID: 86a
Topic: Alternatives, Alternative: Basin-Wide Approach

From: [Gregg](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: fargo-moorhead flood risk management project DEIS
Date: Wednesday, September 23, 2015 5:27:43 PM

Commenter 86 cont.

Summary of Comments on GregHanson_Commenter86b_Email2.pdf

Page: 1

Jill Townley:

The Diversion Authority and the City of Fargo are focusing on the construction of 6 new holes on a private golf course instead of concentrating on Fargo's own internal flood protection, proves to me this diversion plan is all about development and not solely about flood protection.

Author: Medopera Subject: Text Box Date: 11/17/2015 1:13:30 PM -06'00'
Commenter 86 cont.

Author: Medopera Subject: Highlight Date: 4/20/2016 11:33:39 AM
Comment ID: 86b
Topic: Proposed Project Purpose and Need, Questions Project Purpose

Thank you for your time:
Gregory J Hanson
17263 50th ST SE
Horace, ND 58047-9756
gjhanson@hotmail.com
701-799-3727

From: [Gregg](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: fargo-moorhead flood risk management project DEIS
Date: Wednesday, September 23, 2015 5:42:22 PM

Commenter 86 cont.

Summary of Comments on GregHanson_Commenter86c_Email3.pdf

Page: 1

Jill Townley:

Living along the Wild Rice River with wooded land, we have spent effort and money in encouraging wildlife growth, including the release of pheasants. Turkeys and deer seem to be making a come back, this project that will hold water on our property, endangering the trees and other habitat, will drive out all the wildlife, leaving nothing.

Thank you for your time:

Gregory J Hanson
17263 50th ST SE
Horace, ND 58047-9756
gjhanson@hotmail.com
701-799-3727

Author: Medopera Subject: Text Box Date: 11/17/2015 1:14:55 PM -06'00'
Commenter 86 cont.

Author: Medopera Subject: Highlight Date: 4/4/2016 4:23:03 PM
Comment ID: 86c
Topic: Wildlife and Wildlife Habitat, Flood Impacts to Wildlife and Wildlife Habitat

From: [Gregg](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: fargo-moorhead flood risk management project DEIS
Date: Wednesday, September 23, 2015 5:51:26 PM

Commenter 86 cont.

Summary of Comments on GregHanson_Commenter86d_Email4.pdf

Page: 1

Jill Townley:

There seems to be aspects of this current diversion/dam project plan that are untested, for instance, they must cross 5 rivers and from what I have heard the Corps has never done this, let them experiment somewhere else.

Thank you for your time:

Gregory J Hanson
17263 50th ST SE
Horace, ND 58047-9756
gjhanson@hotmail.com
701-799-3727

Author: Medopera Subject: Text Box Date: 11/17/2015 1:17:31 PM -06'00'
Commenter 86 cont.

Author: Medopera Subject: Highlight Date: 4/4/2016 4:24:36 PM
Comment ID: 86d
Topic: Proposed Project and Northern Alignment Alternative, General Opposition
Unsubstantive

From: [Jeff M. Thomas](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Risk Management Project DEIS
Date: Monday, October 19, 2015 1:16:37 PM
Attachments: [image004.png](#)
[image005.png](#)

Commenter 87

Summary of Comments on JeffThomas_Commenter87a_Email1.pdf

Page: 1

October 19, 2015

Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road,
St. Paul, Minnesota, 55155-4025
ATTN: Jill Townley, Project Manager

Dear Ms. Townley,

I strongly recommend that the MNDNR approve the Fargo-Moorhead Flood Risk Management Project, which has already garnered approval from the U.S. Army Corps of Engineers and Congress. This project is needed in order to provide permanent flood control for the Fargo-Moorhead metropolitan area. Flooding in our area causes millions of dollars' worth of damage, and has the potential to cost lives. Flooding is a well-established risk in this region, and the temporary emergency measures currently in place are not sufficient to provide a long term feasible solution to mitigate this risk.

This project, however, will provide that solution. The plan, calling for impoundment upstream and a diversion of flood waters around the metro-area, is well engineered, and will protect thousands of homes, businesses and lives. The time to start this project is now, before the next catastrophic flood event.

The other reason for a sense of urgency surrounding the implementation of the project is that the Federal Emergency Management Agency (FEMA) redoes its flood maps every five years. The next update, if there is no permanent flood control plan in place, will increase the number of homes located within the floodplain, with devastating impacts on insurance rates, home values, and mortgages.

Aside from the utility of the plan, it is clearly being done in a way that respects the appropriate environmental values. The plan includes pages of proposed mitigations for several environmental questions, and calls for extensive monitoring. The infrastructure constructed for this project will also include such features as trails to aid in the aesthetic appearance and utility during non-flood times.

The bottom line is that this project is needed to protect the people and property of Minnesota. Permanent flood mitigation is as critical an issue as we could face in this region. Your agency has done a good job of evaluating the plan, on the heels of the U.S. Army Corps of Engineers analysis, and now is the time to move ahead and begin putting this project in motion. Time is of the essence, and I encourage you to approve this project in as timely a manner as possible.

Regards,

Author: Medopera Subject: Text Box Date: 11/17/2015 1:29:37 PM -06'00'
Commenter 87

Author: Date: Indeterminate

Author: Date: Indeterminate

Author: Medopera Subject: Highlight Date: 4/4/2016 4:31:13 PM
Comment ID: 87a
Topic: Northern Alignment Alternative, General Opposition
Unsubstantive

This page contains no comments

Jeff Thomas

Market President
Fargo, Moorhead and West Fargo



CORNERSTONE BANK

<p>Jeff Thomas Cornerstone Bank Market President Fargo Main (701) 364-9646 Work (701) 730-0211 Mobile jeff.thomas@cornerstonebanks.net 2280 45th Street S Fargo, ND 58104 www.cornerstonebanks.net</p>
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Experts. Right there across the table.



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From: [Jeff M. Thomas](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Risk Management Project DEIS
Date: Monday, October 19, 2015 1:16:37 PM
Attachments: [image004.png](#)
[image005.png](#)

Commenter 87

Summary of Comments on JeffThomas_Commenter87a_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/17/2015 1:29:37 PM -06'00'
Commenter 87

Author: Date: Indeterminate

Author: Date: Indeterminate

Author: Medopera Subject: Highlight Date: 4/4/2016 4:26:02 PM
Comment ID: 87a
Topic: Northern Alignment Alternative, General Opposition

October 19, 2015

Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road,
St. Paul, Minnesota, 55155-4025
ATTN: Jill Townley, Project Manager

Dear Ms. Townley,

I strongly recommend that the MNDNR approve the Fargo-Moorhead Flood Risk Management Project, which has already garnered approval from the U.S. Army Corps of Engineers and Congress. This project is needed in order to provide permanent flood control for the Fargo-Moorhead metropolitan area. Flooding in our area causes millions of dollars' worth of damage, and has the potential to cost lives. Flooding is a well-established risk in this region, and the temporary emergency measures currently in place are not sufficient to provide a long term feasible solution to mitigate this risk.

This project, however, will provide that solution. The plan, calling for impoundment upstream and a diversion of flood waters around the metro-area, is well engineered, and will protect thousands of homes, businesses and lives. The time to start this project is now, before the next catastrophic flood event.

The other reason for a sense of urgency surrounding the implementation of the project is that the Federal Emergency Management Agency (FEMA) redoes its flood maps every five years. The next update, if there is no permanent flood control plan in place, will increase the number of homes located within the floodplain, with devastating impacts on insurance rates, home values, and mortgages.

Aside from the utility of the plan, it is clearly being done in a way that respects the appropriate environmental values. The plan includes pages of proposed mitigations for several environmental questions, and calls for extensive monitoring. The infrastructure constructed for this project will also include such features as trails to aid in the aesthetic appearance and utility during non-flood times.

The bottom line is that this project is needed to protect the people and property of Minnesota. Permanent flood mitigation is as critical an issue as we could face in this region. Your agency has done a good job of evaluating the plan, on the heels of the U.S. Army Corps of Engineers analysis, and now is the time to move ahead and begin putting this project in motion. Time is of the essence, and I encourage you to approve this project in as timely a manner as possible.

Regards,

This page contains no comments

Jeff Thomas

Market President
Fargo, Moorhead and West Fargo



CORNERSTONE BANK

<p>Jeff Thomas Cornerstone Bank Market President Fargo Main (701) 364-9646 Work (701) 730-0211 Mobile jeff.thomas@cornerstonebanks.net 2280 45th Street S Fargo, ND 58104 www.cornerstonebanks.net</p>
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Experts. Right there across the table.



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From: [Jenny Mongeau](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 9:22:36 AM

Commenter 88

Summary of Comments on JennyMongeau_Commenter88a_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/17/2015 1:51:04 PM -06'00'
Commenter 88

Author: Medopera Subject: Highlight Date: 4/4/2016 4:30:20 PM
Comment ID: 88a
Topic: Cultural Resources, Kurtz Family Cemetery

Have all the cemetery risks been evaluated on the Northern Alignment Alternative? There is a family cemetery in Kurtz township that doesn't appear on any of the cemetery studies that would be within the proposed staging area of the Northern Alignment alternative.

Jenny Mongeau
Clay County Commissioner

4886 110th ave s.
Moorhead, MN 56560
701-238-2987

jenny.mongeau@co.clay.mn.us

From: [Jeremy Oliver](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fwd: Flood Diversion Project DEIS
Date: Tuesday, September 15, 2015 9:13:05 AM

Commenter 89

Summary of Comments on JeremyOliver_Commenter89a-c_Email1.pdf

Page: 1

Subject: Flood Diversion Project DEIS

I am writing to comment on the draft DEIS. I am a resident of Fargo and am opposed to the diversion project. My opposition to this approach to dealing with FM flood protection is based on the following:

<!--[if !supportLists]-->• <!--[endif]-->Cost of \$1.8 billion for a 7 foot drop in 100 year flood level;

<!--[if !supportLists]-->• <!--[endif]-->40 mile long and 20 mile wide impact area with a 30 mile long diversion channel has huge social and economic impacts on our area. The DEIS acknowledges that there are areas outside of the staging area that would become newly inundated or would experience additional depths of flooding as a result of the Project operation;

<!--[if !supportLists]-->• <!--[endif]-->Ongoing cost of maintaining this enormous structure beyond the initial project cost. With the numerous ditches and smaller control structures to maintain I believe the ongoing management costs and risks of failure are substantial and not adequately addressed;

<!--[if !supportLists]-->• <!--[endif]-->Finally, I believe there is a better alternative. The DEIS states that Since the 1997 flood, the Cities of Fargo and Moorhead have implemented flood risk reduction measures, including acquisition of floodplain houses, constructing levees and floodwalls, raising and stabilizing existing levees, installing permanent pump stations and improving storm sewer lift stations and the sanitary sewer system. I believe these measures should continue to complete flood protection for FM at a much lower initial cost and a lower ongoing maintenance cost with much less impact on our surrounding area.

Keep the river in the river channel and its natural flood plain area as it passes through Fargo. Remove structures and infrastructure that should not have been built close to the river and build permanent flood levees. The same steps to protect outlying communities such as Oxbox and Comstock with ring levees should be taken as will be needed anyway with this diversion. I don't believe the diversion is the best alternative, or a sound use of taxpayer funds.

Author: Medopera Subject: Text Box Date: 11/17/2015 1:54:59 PM -06'00'
Commenter 89

Author: Medopera Subject: Highlight Date: 4/4/2016 4:32:29 PM
Comment ID: 89a
Topic: Proposed Project, General Opposition
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/4/2016 4:33:04 PM
Comment ID: 89b
Topic: Operation and Maintenance, Cost

Author: Medopera Subject: Highlight Date: 4/4/2016 4:33:40 PM
Comment ID: 89c
Topic: Alternatives, Alternative: Fargo Flood Damage Reduction

Jeremy Oliver
3501 19th St. S.
Fargo, ND 58104

From: jerry.keller
To: [*Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Sunday, October 25, 2015 11:21:22 AM

Commenter 90

Summary of Comments on GeraldKeller_Commenter90a_Email1.pdf

Page: 1

Please email comments to: Environmentalrev.dnr@state.mn.us
Subject line: **Fargo-Moorhead Flood Risk Management Project DEIS**

Author: Medopera Subject: Text Box Date: 11/17/2015 2:09:25 PM -06'00'
Commenter 90

Comment for submission

Author: Medopera Subject: Highlight Date: 4/4/2016 4:35:32 PM
Comment ID: 90a
Topic: Northern Alignment Alternative, General Opposition
Unsubstantive

We ask the DNR to reject the Northern Alignment Alternative (NAA) in favor of the proposed, federally authorized plan. Since it has not been evaluated by the responsible federal agency, the NAA would by law require a whole new environmental review, analysis, and Environmental Impact Statement from the Corps of Engineers. There is no reason to waste time and public money and resources on doing an environmental review on this alternative, when one has already been done on the proposed project. Selecting the NAA would be an enormous waste of resources.

The main feature of the NAA would be to shift the impoundment downstream 1.5 miles, moving it north into more developed areas. In doing so, more homes will be affected. Even if a handful of homes will be spared impact by adopting the NAA over the proposed alternative, this benefit would be offset and more by the fact that as many as 60 additional homes would be impacted under the NAA than would under the proposed plan. In addition, a number of businesses, and more farmland would be affected by the NAA than by the proposed action.

The NAA would also place one of our region's most historic landmarks in jeopardy - St. Benedicts Catholic Church, the oldest Roman Catholic Church in the area. All of this for an additional price tag of \$81 million. The NAA is not worth it, and should be rejected by the DNR.

Sincerely,

Gerald Keller
11350 5th street south
Horace, ND 58047
701-361-8229
papajerryk@gmail.com

From: [Stading, Joel](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: "Fargo-Moorhead flood risk management project dets"
Date: Wednesday, October 28, 2015 1:50:27 PM

Commenter 91

I was told to respond by e-mail today and comment on the proposed northern alignment for the F-M diversion. As far as a comment, we are not sure what to say other than if it is going to put the water storage area right behind our property (or on our property) we are not in favor of it at all, who would be?? We are not sure if this proposal puts more acres in the retaining/staging area or not, but moving it 1.5 miles farther north puts the staging area even closer to the cities which this thing is supposed to be protecting. Where our property is has a decent elevation level compared to a major part of the south end of Fargo. In 2009 we had a bit of an issue with flood water around our residence, but the deepest area was about a foot in the driveway. The majority of my residence only had about 3-4 inches of water around the sand bag dike we built. VERY MANAGEABLE. We know for a fact that if the Fargo/Moorhead residence were responsible for their own flood protection, and not city equipment, LIKE WE ARE IN OUR DEVELOPMENT, the city of Fargo and Moorhead would look much different today due to all the damage they would have sustained. At this point with all the proposed diversion paths that have been put out since the start of this whole thing and the way everything changes, we are not confident that any of these current plans are going to be finalized or agreed on, this will most likely change several more times. We are not even sure that this project will even be completed in our lifetime. we realize that something has to be done to help protect the cities, we also believe that the southern plan would benefit us and put our property in a better position, but why put structures that have a slight risk of flooding into a greater risk by moving this north. Again, if this actually does take place, and we are going to be at a greater risk of flooding, we are confident the authorities will do the right thing and propose a buyout plan for our area, if this is, in fact, the best plan for protecting the cities of Fargo and Moorhead. We received this packet just a few days ago, so if we have incorrectly read the information given to us, we apologize. But if water is going to be staged around, or on our property, of course we are not in agreement with the northern proposal. Thank you.

Summary of Comments on Joel&ChristineStading_Commenter91a_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/17/2015 2:11:47 PM -06'00'
Commenter 91

Author: Medopera Subject: Highlight Date: 4/4/2016 4:36:58 PM
Comment ID: 91a
Topic: Northern Alignment Alternative, General Opposition
Unsubstantive

Joel and Christine Stading

10401 6 ST. S FARGO, ND 58104

From: [Tim Tracey](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 8:48:15 AM

Commenter 92

Summary of Comments on JohnAskegaard_Commenter92a_Email1.pdf

Page: 1

Dear DNR,

We are a large organic farmer that will be directly impacted by the building of the diversion dam. Yes, the value of our farmland has dropped precipitously and in future years our land will routinely be under 2 feet of water during spring planting. There is no adequate solution to compensate an organic farmer for the diversion flood risk other than outright land acquisition (refer to you Organic Farm EIS report).

It pains us that the 6th generation farming this land near Comstock will be responsible for its sale to a governmental agency. Our family does not look upon this disruption lightly. However, as citizens we do understand the need for the greater good and the Red River Valley needs a long term solution to its flooding problem. We are not happy with the disruption this will cause our family but we also understand that a permanent solution is needed. All the evaluations and research have been done so it is time to stop dawdling, make the tough decision to approve the dam permit and begin building the needed diversion.

The DNR has done a disservice to the citizens of the Red River Valley through its continued delays in issuing the EIS. The repeated delays have only increased the uncertainty and negative impact to those affected. Please stop dragging your feet on the inevitable and approve the existing diversion plan. Being in limbo for 5 years has devastated our business much worse than making the tough call and moving forward for the greater good. Approve the permit immediately and build the needed diversion.

Respectfully,
The John B. Askegaard family

Author: Medopera Subject: Text Box Date: 11/17/2015 2:18:24 PM -06'00'
Commenter 92

Author: Medopera Subject: Highlight Date: 4/4/2016 4:38:13 PM
Comment ID: 92a
Topic: Permitting Approval, Approve the Project
Unsubstantive

From: john@myCPRealty.com
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo-Moorhead Risk Management Project DEIS
Date: Monday, October 26, 2015 4:27:27 PM
Attachments: [sigimg0](#)

Commenter 93

October 25th, 2015

Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road
St. Paul, MN 55155-4025

Dear Ms. Townley,

I strongly urge the Department of Natural Resources to approve the proposed Alternative in the Environmental Impact Statement for the Fargo-Moorhead Flood Risk Management Project. Permanent flood protection is a vital necessity for the region, and the proposed alternative is the only one which will provide that protection.

Doing nothing is not a reasonable option. There are several rivers passing through the region, including the Red River which flows right between Fargo and Moorhead, all of which are historically known to flood regularly. If we do not institute a viable flood protection plan, not only will future floods cause millions of dollars of damage, and more money and resources in scrambling to put together emergency measures, but the Federal Emergency Management Agency will be forced to re-draw their flood maps for the region, raising the flood level and driving insurance rates up for many people who will suddenly find their property located in the flood plain. This will be a huge economic hit for the region.

The other actionable alternative, the Northern Alignment, is also unacceptable. Even though it provides more permanent flood control than the No-Action options, it does so in a least efficient manner. The Northern Alignment calls for moving the impound pool 1 ½ miles to the north, in a location that will envelop many more existing homes in the pool and take up more land than the proposed plan. It will also cost \$81 million more, making it a less fiscally responsible alternative.

Finally, selecting the Northern Alignment over the proposed alternative will add potentially years of delay to the project. Unlike the Northern Alignment, the proposed action has already been through a federal review and EIS; if selected, the Northern Alignment option would need to be subject to the same review, adding months or even years to the project timeline. This would be redundant, and still risk the remapping because of the delay.

This is a good project, which has passed federal muster and is ready to be put into action to provide permanent 100 year flood protection for western Minnesota. I believe these are compelling reasons to support the project, and urge the DNR to do what is right for the people for Moorhead and the surrounding area, and approve the proposed action.

Yours Truly, _____ John M Colvin Broker/Owner CP Realty

John Colvin 550 W Brook Dr Horace ND 58047

Summary of Comments on JohnColvin_Commenter93a_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/17/2015 2:25:23 PM -06'00'
Commenter 93

Author: Date: Indeterminate

Author: Medopera Subject: Highlight Date: 4/4/2016 4:39:27 PM
Comment ID: 93a
Topic: Proposed Project, General Support
Unsubstantive

This page contains no comments

John Colvin
CP Realty
Broker/Owner
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www.myCPRealty.com
Not intended as solicitation if already working with another Broker.



From: [John Hickman](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, September 16, 2015 12:15:37 PM

Commenter 94

Summary of Comments on JohnHickman_Commenter94a_Email1.pdf

Page: 1

Greetings!

The Fargo-Moorhead Flood Risk Management Project should be abandoned because there is a much, much, much better alternative. Flood control in the Red River of the North basin should be achieved through distributed storage such as has been done with the North Ottawa Impoundment in the Bois de Sioux Watershed. North Ottawa has ended the local flooding problem; it reduces flooding in the main stem; it improves agricultural production; and it provides a wealth of natural resource benefits. There has not been a single negative consequence. The North Ottawa story is told in a documentary I helped produce:
<https://www.youtube.com/watch?v=bVwuOwASKig>

Divert the money from the diversion channel! Invest it in distributed storage!

Sincerely,
John Hickman

Author: Medopera Subject: Text Box Date: 11/17/2015 2:28:41 PM -06'00'
Commenter 94

Author: Medopera Subject: Highlight Date: 4/4/2016 4:40:45 PM
Comment ID: 94a
Topic: Alternatives, Alternative: DSA

From: [John Zeglin](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 4:08:05 PM

Commenter 95

Summary of Comments on JohnZeglin_Commenter95a_Email1.pdf

Page: 1

I appreciate a chance to be heard.

I have several views and comments.

First, we have a recreational farm and nice cabin on the north end of Traverse and south end of Mud Lake in Traverse County. When our family bought it in 1972 we were experiencing floods about once in 7 years. That seemed to be the norm for a while but gradually it got worse. Our home is in the Twin Cities so years of weekend trips out there saw dramatic change to the landscape from Hoffman going west. Wetlands were being drained every year. As that happened flooding came more often and its only gotten worse and much worse in the last couple of decades and now to the point of the last ten years or so we are averaging over a flood a year. Some years none, some years now multiple times. The last five years we have seen tiling and ditching done at a crazy pace and the results of all this has meant the water gets to our area so much faster than ever before and it takes so much less snow or rain and we have flooding. We have 650 acres that every acre except the "mound" we built our newer cabin on is under water.

What even we can conclude is the changes with this flooding has dramatically been worsened by peoples changes on the landscape all under government watch over the decades

As the flooding worsened amazingly our property taxes have skyrocketed but that's not important to this issue.

I can only feel for the people that are now being told will have flooding after this diversion is done that had not had the issues before. That seems so unfair and I can only imagine the impact that will have on their lives. Wow!

Why don't you deal with the real issues. As you are preparing to spend billions of taxpayers dollars (mine included) you are allowing for continued drainage of wetlands and tiling of farm land at the same time. Stop it and stop it now. Start reversing this and the problem will lessen over time. Restore wetlands which will also help with our poisoned water situation which someday will probably do us all in. Please don't spend my money on this if you are not going to deal with the real issues.

Lastly in fairness to those of us who have been negatively impacted for years and decades by governments neglect to our lands give us a tax break if we get flooded every year. Its not fair that we have lost 75% of our trees, almost can't plant a crop on our remaining farm land and

Author: Medopera Subject: Text Box Date: 11/17/2015 2:31:30 PM -06'00'
Commenter 95

Author: Medopera Subject: Highlight Date: 4/4/2016 4:42:01 PM
Comment ID: 95a
Topic: Socioeconomics, Project is Immoral
Unsubstantive

have years where the recreational reason we have the land is hindered by sometimes almost the whole summer. This is the same land that use to flood once in every 7 years and now we are having floods of a lifetime more than once a decade.

Page: 2

Author: Medopera Subject: Highlight Date: 11/17/2015 2:35:44 PM -06'00'
Comment ID: 95a cont.

Thanks for the opportunity to rant a little.

John Zeglin
2858 Nelson Road
Delano, MN. 55328
(Owner of 650 acres Traverse County -Wheaton MN.)

From: Julie
To: *Review, Environmental (DNR)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Monday, October 26, 2015 6:51:42 PM

Commenter 96

Summary of Comments on Julie&PaulHeuer_Commenter96a_Email1.pdf

Page: 1

We ask the DNR to reject the Northern Alignment Alternative (NAA) in favor of the proposed, federally authorized plan. Since it has not been evaluated by the responsible federal agency, the NAA would by law require a whole new environmental review, analysis, and Environmental Impact Statement from the Corps of Engineers. There is no reason to waste time and public money and resources on doing an environmental review on this alternative when one has already been done on the proposed project. Selecting the NAA would be an enormous waste of resources.

The main feature of the NAA would be to shift the impoundment downstream 1.5 miles, moving it north into **more developed areas**. In doing so, **more homes** will be affected. Even if a handful of homes will be spared impact by adopting the NAA over the proposed alternative, this benefit would be offset and more, by the fact that as many as **60 additional homes would be impacted under the NAA** than would under the proposed plan. In addition, a **number of businesses, and more farmland** would be affected by the NAA than by the proposed action.

The NAA would also place one of our region's **most historic landmarks in jeopardy**--St. Benedict's Catholic Church, the oldest Roman Catholic Church in the area. All of this for an additional price tag of \$81 million.

The NAA is not worth it and should be rejected by the DNR.

Sincerely,
Julie and Paul Heuer
8305 River View Road
Fargo, ND 58104
nosisters60@yahoo.com
pdh_56@yahoo.com

Author: Medopera Subject: Text Box Date: 11/17/2015 2:36:58 PM -06'00'

Commenter 96

Author: Medopera Subject: Highlight Date: 4/4/2016 4:43:11 PM
Comment ID: 96a
Topic: Northern Alignment Alternative, General Opposition
Unsubstantive

From: [Darlene Finken](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS - Comments
Date: Wednesday, October 28, 2015 4:07:27 PM
Attachments: [Letter to Jill Townley FINAL Comments DEIS and Attach10_28_20.pdf](#)

Commenter 97

Summary of Comments on JPA_GeraldVonKorff_Commenter97a-j_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 1/4/2016 9:53:47 AM -06'00'

Commenter 97

Author: Date: Indeterminate

Please find attached to this email the comments submitted on behalf of the Richland-Wilkin Joint Powers Authority. Thank you.

Darlene V. Finken
Paralegal

RINKE NOONAN
Suite 300, US Bank Plaza
P.O. Box 1497
St. Cloud, MN 56302
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October 28, 2015

Direct Dial: 320-656-3508
Jvonkorff@RinkeNoonan.com

Jill Townley
Project Manager Environmental Policy and Review Unit
Minnesota Department of Natural Resources
Box 25 Ecological and Water Resources Division, DNR 500 Lafayette Road
St. Paul, MN 55155-4025

SENT VIA EMAIL: environmentalrev.dnr@state.mn.us

**Re: Fargo-Moorhead DEIS
Comments of Richland-Wilkin Joint Powers Authority**

Dear Ms. Townley:

I. Introduction

These are the comments of the Richland-Wilkin Joint Powers Authority (JPA). The JPA is a Minnesota-North Dakota joint powers authority formed by Richland and Wilkin Counties with governmental members located in Cass and Clay County as well. Its members include a number of towns and cities in both states. The JPA has worked collaboratively with the Minnesota North Dakota Upstream Coalition (MnDak) to ensure that the views of communities and individuals located upstream of the proposed Red River dam are heard.

At the outset, we appreciate the efforts of the State of Minnesota and the Department of Natural Resources to examine the impacts of the Locally Preferred Project (LPP). While we have a number of concerns about the content of the Draft EIS, we think that taken together, the Minnesota Draft EIS and the Federal Final Environmental Impact Statement are sufficient to establish that the conditions necessary for State and local permitting have not been met. We recognize that the authors of a Minnesota EIS are not charged with making this ultimate permitting decision, however we believe that the Draft EIS could do a significantly better job of exploring the environmental facts that are necessary to inform the judgment of permitting authorities.

Although the document has many strengths, it fails utterly to deal with the central issues that caused the DNR to demand an EIS in the first place: the rationale and justification for what the DNR described as a "drastic" departure from the original agreed template principles for the Fargo-Moorhead project. We will turn to this issue in subsequent sections. The DNR's central

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[2171868] Letter to Jill Townley FINAL Comments DEIS 10 28 20
10/28/2015 3:47 PM

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objection to the LPP was that by seeking to promote massive floodplain development and removing 50 square miles of floodplain storage in violation of EO 11988, the Locally Preferred Project (LPP) drastically deviated from the original Feasibility Study Planning Objectives and Constraints. As discussed below, the DNR's August 2010 letter, and subsequent letters in 2011, specifically focused upon the Diversion Authority's (DA) radical departure from the original developed inter-state understanding of the guiding principles to be utilized in developing flood control for the metropolitan area. One key reason why this State Environmental Review was initiated, was to assist the State of Minnesota in determining whether it could support deviation from those principles, or whether it would insist that the guiding principles would be restored.

It is therefore extremely disappointing that the Draft EIS virtually ignores this important issue. It is almost as if the Department got lost in the underbrush of minutia and detail, and forgot completely why it entered the EIS forest in the first place.

We will argue in these comments that the Final EIS must recognize:

- (a) That by drastically deviating from the original project purpose, the LPP unnecessarily impairs a critical natural resource, the flood water storage and conveyance capacity of the Red River and its floodplains, to a massive extent which cannot be justified by the legitimate need to protect the Fargo-Moorhead metropolitan area.
- (b) That the USACE's designation of the Minnesota 35K diversion as the NED project establishes that there exists an alternative which provides outstanding protection to the Fargo-Moorhead metropolitan area at a lesser cost and with significantly less environmental impacts. The dismissal of this project by project proponents as an acceptable alternative represents a violation of Minnesota Statutes Section 116D.04 subdivision 6 and effectively sabotages the Department's ability to fully investigate an alternative which meets MEPA's standards. It further sabotages the Governor's decision that he would exercise his statutory function under 33 USC § 701-1.
- (c) That the modification of the project purpose by the Diversion Authority is designed to accomplish an illegal objective: the elimination of 50 square miles of floodplain storage to promote development south and north of Fargo, which as a consequence inflicts unnecessary flooding on Minnesota.
- (d) That the statements of the Department in its June and November 2011 letters to the USACE remain as true today as they were then: that the Draft Environmental Impact Statement fails to demonstrate: that the LPP is ecologically sustainable, that it represents the least impact solution, that it has consequences that can be mitigated without inflicting unacceptable consequences on others, and that it meets the legal permitting requirements of the State and its political subdivisions. Nothing in the Draft EIS undercuts these conclusions.
- (e) That the LPP improperly eliminates major opportunities to preserve the flood

storage and flood conveyance functions of the Red River.

(f) That, while the original concept plan agreed to during the feasibility approach “fit within the ‘basin-wide approach’ as described in the 1998 Mediation Agreement...the tentatively preferred alternative [LPP] drastically deviates from the Feasibility Study Planning Objectives and Constraints.” August 6, 2010 DNR Letter objecting to LPP, incorporated and restated in July 2011 DNR letter.

In addition to the text of these comments, we requested a report from engineer Charles Anderson of WSN. Mr. Anderson provides numerous examples of the ways in which the project could be improved dramatically, reducing the volume of water that needs to be managed. The EIS should explore and describe these alternatives and convey those options to the Governor and permitting authorities so that they can each perform their statutory functions under 33 USC 701-1 and under MEPA. Mr. Anderson’s report provides further evidence that the LPP is not the least impact solution; that there are alternatives that can reduce or prevent the flooding of upstream communities. The Report is attached to our comments as an appendix.

II. The Draft EIS Fails Utterly to Address the DNR’s Original Objection to the LPP--- That it Modified the Original Project Purpose in Order to Justify Violations of Environmental Principals and Foster Illegal Development of the Floodplain.

The Draft EIS has completely lost track of the original purpose that triggered Minnesota’s Environmental Impact Statement. Minnesota’s environmental review was launched when the Diversion Authority (DA) rejected the USACE’s selection of the Minnesota 35K diversion plan, and chose instead a plan which Minnesota regarded as environmentally unsound. Minnesota asked USACE to address these concerns in the Federal EIS, but the USACE refused to do so, because USACE and DA wanted to rush a Chief’s letter to the Congress. Consequently, USACE and DA agreed to postpone the Minnesota’s concerns to the Minnesota environmental review. The Draft EIS has completely lost track of this original purpose. The point of the postponement was to provide a review of the implications of changing the project from NED to LPP, including the violations of EO 11988 and the mediated settlement principles contained in the LPP. The DA and USACE’s position that despite the undertaking in the federal EIS, Minnesota is now bound to review only the narrow purpose behind the LPP is completely unfounded and unsustainable.

In 1998, after much study and in order to resolve a hotly disputed generic environmental review, Minnesota and the USACE signed a so-called mediated settlement agreement designed to base Red River basin flood control on sustainable flood control principles. When the Congress authorized studies to develop a consensus plan which would provide massive federal aid to protect the Fargo-Moorhead Metropolitan area, all interested parties accepted sustainable flood control as the foundation of planning. Those principles were identified as the agreed “template” for flood control planning in the DNR’s August 2010 letter. Any flood control project would:

Author: Medopera Subject: Highlight Date: 4/20/2016 9:14:35 AM
Comment ID: 97a
Topic: Federal EIS, MNDNR Comments

Author: Medopera Subject: Highlight Date: 4/20/2016 9:14:39 AM
Comment ID: 97b
Topic: Federal EIS, MNDNR Comments

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- Reduce flood risk and flood damages in the Fargo-Moorhead metropolitan area,
- Restore or improves degraded riverine and riparian habitat in and along the Red River of the North, Wild Rice River (North Dakota), Sheyenne River (North Dakota), and Buffalo River (Minnesota) in conjunction with other flood risk management features,
- Provide additional wetland habitat in conjunction with other flood risk management features,
- Provides recreational opportunities in conjunction with other flood risk management features.
- Avoid increasing peak Red River flood stages, either upstream or downstream
- Minimize loss of floodplain in accordance with Executive Order 11988

In 2009, when USACE completed an alternatives review, the Minnesota 35K flood diversion was selected as the National Economic Development project based upon these principles. The NED project -- which retained a great deal more natural floodplain storage than the LPP -- constituted the best solution to meeting the project objectives. The NED designation identifies:

“(T)he alternative plan with the greatest net national economic benefit consistent with protecting the nation’s environment (the NED plan).”

As discussed below, in 2009, Fargo and Cass County tried to convince the USACE to depart from these principles by attaching the so-called Southside project to the proposed project. The Southside project would have developed only 20 square miles of floodplain, but USACE emphatically rejected the proposal, declaring officially that development of floodplain would be unlawful because it violated Executive Order 11988. The federal EIS failed to discuss this fact, and we discovered the USACE’s ruling only recently when the record of decision was transmitted to the Federal Court. In fact, when Congress authorized a feasibility study of a flood control project that would protect the Fargo-Moorhead metropolitan area, both North Dakota and USACE both represented that the project would be designed without inflicting harm on upstream and downstream communities and that it would be accomplished in a sustainable way. This commitment to sustainable flood control approaches is what purchased Minnesota’s support for Congressional studies.

Then, in 2010, members of the Diversion Authority convinced the USACE to dramatically increase the scope and cost of the diversion project, approving the so-called Locally Preferred Project (LPP). The LPP violated the agreed principles and sought to develop not just the 20 square miles previously found to be illegal, but 50 extra square miles of floodplain.

It is at this point that the DNR demanded scrutiny in the federal environmental review. DNR itself recognized that USACE and DA had engaged in a massively consequential change in project purpose by slipping in the floodplain development objective. In its August 2010 letter objecting to that change, the Department pointed out that the original project purpose was based upon the above described template. A copy of the DNR’s description of the original

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understanding is contained in our electronic appendix. The NED was based upon an agreed template for sustainable and ecologically sound flood management. Under that agreed template, the Department reminded, any flood control project would be required to:

*Avoid increasing peak Red River flood stages, either upstream or downstream
Minimize loss of floodplain in accordance with Executive Order 11988, Floodplain Management¹*

This original project purpose, said the Department, “would better fit within the ‘basin-wide approach’” as described in the 1998 Mediation Agreement. **“However, the tentatively preferred alternative drastically deviates from the Feasibility Study Planning Objectives and Constraints².”**

The NED was rejected and LPP locally selected for parochial local reasons—to allow Fargo to double its geographic size to double that of Minneapolis, with a fraction of the population, behind federally subsidized levees. The locally selected project cost vastly more money, it inflicted vastly more environmental damage, and the primary benefit that justified this extra expense was that it facilitated development of 50 square miles of floodplain in North Dakota in violation of EO 11988. It was a drastic deviation from the original purpose and principles that justified the project.

To address this concern, Minnesota demanded that the Federal EIS justify this fundamental change in purpose in the environmental review. Eliminating floodplain storage would fundamentally alter the Red River and its floodplain. DNR complained:

The DEIS has not identified how the ACOE has complied with executive Order 11988 on floodplains.

¹ The other principles, taken from the DNR letter are listed above: Reduce flood risk and flood damages in the Fargo-Moorhead metropolitan area, Restore or improves degraded riverine and riparian habitat in and along the Red River of the North, Wild Rice River (North Dakota), Sheyenne River (North Dakota), and Buffalo River (Minnesota) in conjunction with other flood risk management features, Provide additional wetland habitat in conjunction with other flood risk management features, Provides recreational opportunities in conjunction with other flood risk management features.

² DNR demanded that the USACE respond to these concerns in its four letters, but the USACE simply stated that it would respond to those concerns in the State EIS. However, when the State EIS process commenced, under the supervision of new environmental review staff, the USACE said that the new project purpose eliminated any need to discuss this drastic deviation. One is left with the impression that the DA is seeking to hoodwink the DNR out of addressing the central issue which caused the commencement of the environmental review in the first place.

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The Department objected to the LPP's "drastic deviation" from the sustainability principles found in the 1998 Mediated Settlement Agreement.

*Such a project [the one now supplanted by the LPP] would better fit within the "basin-wide approach" as described in the 1998 Mediation Agreement. **However, the tentatively preferred alternative drastically deviates from the Feasibility Study Planning Objectives and Constraints.** (Emphasis added).*

This complaint was repeatedly incorporated in the three letters from the Department that followed. The August 2010 letter concluded:

This project is estimated in excess of \$1.4 billion and will be with us for a very long time. Accordingly, the Corps' and local sponsors must ensure on the front end, the best design possible that protects the Fargo-Moorhead Area, downstream communities, and addresses the array of environmental concerns, is the design selected.

It is critically important that DNR staff recognize precisely what happened at this point. Governor Dayton has authority under 33 USC § 701-1 to reject Fargo's attempt to flood Minnesota to develop floodplain. The issue was not the best way to implement the LPP: the issue was whether Minnesota would allow North Dakota interests to use federal funds in violation of EO 11988, to arrogate to the City of Fargo the Red River's flood conveyance and storage capacity, a scarce resource that is part of a precious riverine resource which protected the basin against flooding. Minnesota was asking that the Federal environmental review make these issues transparent, so that the public, local governments, regional governments and the State of Minnesota could consider, not just how to implement Fargo's objectives, but whether they would allow that purpose in the first place.

This was not a federal versus State issue: it was an issue of whether Fargo's local parochial development objectives, to protect undeveloped floodplain for future development, would be allowed to push that floodwater off of the natural floodplain and into Minnesota flooding cemeteries, communities, and farmsteads. The USACE did not recommend the LPP, but had found the NED to be superior.

USACE and DA sought to postpone the analysis Minnesota requested, because they wanted to rush a Chief's Report to Congress, but they committed to revisiting these issues in the Minnesota Environmental review. But, no sooner was the ink dry on the President's signature on the authorization bill, that the DA reneged its promise, and asserted that Minnesota's environmental review was bound only to consider the specific project purpose of the LPP. This was a blatant attempt to hoodwink Minnesota and Minnesotans, as well of the Governor, out of their right to examine the choice between LPP and NED and to examine not just the way that the LPP would be implemented but the actual choice of project purpose in the first place.

The Final EIS must perform the function that initiated the State EIS in the first place. That function was to examine the comparative environmental impacts of all

alternatives, not just the alternative that Fargo seeks to impose on Minnesotans. This function is all the more important, because Governor Dayton in his letter to Secretary Darcy made it crystal clear that the Governor has reserved his right to stop the LPP in its tracks, and he is counting on the comparative environmental analysis and permitting functions to provide him information on whether it is in Minnesota's interest to permit the LPP or whether instead to insist on the NED or other alternative.

To accomplish this objective the DEIS, and then the permitting process, must both harken back to the initial questions posed by the DNR: whether this project is ecologically sustainable, whether it is the least impact solution, whether it is consistent with state and local law.

III. The EIS Should More Clearly Recognize that the Red River's Water Storage and Conveyance Capacity is a protected natural resource under Chapter 116D and 116B and under the Wacouta Test.

The Final EIS must recognize that the Red River and its floodplains represent a unique and critical protectable natural resource under section 116B.02 subdiv.4 and 116D.04 subdiv.1a(a). In contrast to its treatment of floodplain, the Draft EIS does a reasonably good job of identifying the importance of rare and endangered species, of fish, and the need to avoid invasive species. In fact, the Red River and its floodplains represent an especially important natural resource, because they provide irreplaceable, unique flood protection resources for the entire Red River basin. The DEIS disappoints because it fails to recognize the protected status of floodplain resources. Rivers and their floodplains are dynamic and complex natural systems that provide important societal benefits, both economic and environmental. Floodplains provide a natural ecologically based response to the natural phenomenon of flooding. They reduce the loss of life and property, protect critical natural and cultural resources, and contributes to the sustainable development of our communities.

"In towns and cities across the nation, protecting and restoring floodplain resources will enhance the quality of life for this and future generations into the 21st century, and beyond."
FEMA: *PROTECTING FLOODPLAIN RESOURCES A Guidebook for Communities.*

The FEMA floodplain guidebook continues:

The term "natural resources" often brings to mind products, such as timber or fossil fuels that may be extracted from their natural environments and sold as commodities for profit. But the natural values of floodplains are different; their value lies not in their removal and sale, but in the functions that they perform within the floodplain environment.
Id. at 5.

River systems and their floodplains have ecological functions³ that make them a critical

³ "Undeveloped floodplain land provides many natural resources and functions of considerable
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and irreplaceable natural resource from a biological perspective. *Id.* at 6. But they also provide critical natural flood and erosion control, by providing flood storage and conveyance, reduced flood velocities, reduced peak flows, and reduced sedimentation. *Id.* at 9. The draft EIS exhibits an almost cavalier disregard for the importance of floodplain and river system as a protectable natural resource. Elimination of 50 square miles of floodplain storage impairs a natural resource just as surely as eliminating a wetland or large chain of lakes. The Draft EIS seemingly disregards a half century of recognized engineering and hydrological research that eliminating natural floodplains – and the corresponding legal frameworks implemented to protect natural floodplains – is complete folly.

The floodwater conveyance and storage function of the Red River and its floodplains is a protected resource under the modified five-part *Wacouta* test. *State ex rel. Wacouta Tp. v. Brunkow Hardwood Corp.*, 510 N.W.2d 27 (Minn. App. 1993). The Red River and its floodplains represent a rare, unique, and endangered resource. They are the only resource available to convey water from the entire basin; they are carrying water from numerous tributaries northward, eventually to the Hudson Bay and there is no other natural resource available to meet that function. When development is allowed to destroy that natural function, a unique and precious resource is being destroyed. Because of its unique configuration, lying as it does in extremely flat country, its limited capacity must be preserved, husbanded and carefully managed. Wasting its water carrying and storing capacity is just as foolish and environmentally unsound as squandering water in a desert. The LPP will have long term adverse effects on natural resources, and the river system's capacity is irreplaceable.

The DA claims that moving the water off the floodplain and placing it on farms and communities mitigates that destruction, but that is not so. That is destroying two natural resources instead of one. Water is being moved off of a floodplain, so that the owners of that land can reap profits at taxpayer expense to engage in subsidized development in locations that must be permanently protected, not just for the next few decades, but for centuries to come. If at any time, North Dakota fails to maintain the infrastructure (for example, when its oil wealth diminishes) the development that occurs in this low lying area will face vastly enhanced damages. Developing the floodplain is a form of “gambling against the river,” gambling which is completely unnecessary, because there is clearly higher ground available in the Fargo-Moorhead metropolitan area.

economic, social, and environmental value. Nevertheless, these and other benefits are often overlooked when local land-use decisions are made. . . . The nation's coastal and riverine floodplains support large and diverse populations of plants and animals. In addition, they provide habitat and critical sources of energy and nutrients for organisms in adjacent and downstream terrestrial and aquatic ecosystems. The wide variety of plants and animals supported directly or indirectly by floodplains constitutes an extremely valuable, renewable resource important to economic welfare, enjoyment, and physical well-being. The variety of floodplains and associated wetlands across the country create habitat for many forms of fish and wildlife. Many spend their entire lives in floodplain wetland.” FEMA, Floodplain Natural Resources and Functions.

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The LPP proposes to eliminate 50 square miles of undeveloped floodplain storage, a modification to the natural hydrological function that is as breathtaking as it is unprecedented in scope. The result will be to dramatically impair a critical function of a natural resource in both states, reducing the ability of this resource to store and carry water in times of flood. The proposed removal of floodplain occurs at the very time that the USACE has asserted that the ensuing decades are likely to experience increased flooding – and if that is true, then preservation of the basin’s storage function is all the more critical. Elimination of floodplain storage has significant consequential effects on other natural resources, and it is now being proposed at the very time when national policy has called for a redoubled effort to preserve floodplain storage. If water problems increase, will USACE simply try to expand the storage further into the agricultural areas to the south, having learned that urban development in the floodplain always trumps the rights of agriculture and rural communities? The storage capability of the Red needs to be husbanded and saved. If Minnesota approves the concept that Fargo can expand into its floodplain and use Minnesota as its flood storage reservoir, what is the principled rule that will prevent this from happening again and again?

The EIS should fully recognize that the LPP proposes an unprecedented impairment of a protected natural resource, the flood protection and water carrying capacity of the Red River system. The magnitude of the proposed impairment dwarfs other impairments of natural resources which have been considered in MEPA cases. *State ex rel. Swan Lake Area Wildlife Ass'n v. Nicollet County Bd. of County Com'rs*, 711 N.W.2d 522 (Minn. App. 2006), (small, shallow, partially drained, and dammed lake); *State ex rel. Wacouta Tp. v. Brunkow Hardwood Corp.*, 510 N.W.2d 27 (Minn. App. 1993) (Bald eagles and trees in which they roost); *Minnesota Public Interest Research Group v. White Bear Rod and Gun Club*, 257 N.W.2d 762 (Minn. 1977) (single lake and surrounding wetlands); *Corwine v. Crow Wing County*, 244 N.W.2d 482 (1976) (Nokay Lake); *County of Freeborn v. Bryson*, 210 N.W.2d 290 (Minn. 1973) (single lake); *State v. Archabal v. County of Hennepin*, 495 N.W.2d 416 (Minn. 1993) (armory building).

IV. North Dakota Cities and Counties Cannot Impose Environmental Destruction upon Minnesota by Redefining a Proposed Project Purpose to Force Development of the Floodplain.

JPA wants to make it clear that both federal and state law prohibit North Dakota cities and counties from attempting to force state and local governments to violate EO 11988 by concocting a project purpose that shifts floodwaters off of the floodplain and onto other cities, towns or counties. A project purpose definition cannot force Minnesota governments to violate MEPA, nor can it force the State of Minnesota or its local governments to impair public waters, nor can it force them to violate state and federal water policy.

The EIS should make it clear that the fact that the local sponsor has sought to limit the project purpose does not mean that permits must be granted for a narrow purpose which causes unjustified environmental damage. There are several aspects to these concerns:

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- (a.) Selection of the LPP was accompanied by the DA's attempt to narrow the project purpose so as to eliminate the alternative designated by the USACE as the NED project.
- (b.) The narrowing of purpose is tailored to justify a violation of Executive Order 11988 and is manifestly unreasonable.
- (c.) The selection of the LPP intentionally destroys an environmental resource, the capacity of the Red River to handle floodwaters, in ways that force those floodwaters to be diverted onto flood-free lands and communities.
- (d.) The selection of the LPP was accomplished *before* completion of the federal and state environmental reviews, thus depriving Minnesota agencies, counties, towns and citizens of a transparent and full comparative review of the policy choices involved in selection of the LPP. Neither North Dakota nor the USACE could tie Minnesota (or that of its local governments) hands in exercising their management of natural resources in the public domain.
- (e.) DA is not a landowner seeking to exercise its right to develop lands, as for example in an application of a conditional use permit. DA is seeking permission to alter the course, current and flow of a major public resource and divert its waters onto southern Clay and Cass Counties and Northern Richland and Wilkin Counties. DA cannot force Minnesota and its political subdivisions to permit that flooding simply by narrowing a project purpose in such a way as to make the project accomplishable only in one way.

As discussed above, federal law recognizes the sovereign right of States to impact, and even veto, the defined purpose of a locally sponsored flood control project. Moreover, federal law recognizes the right of local governments to apply their permitting laws to locally sponsored projects. In this regard, Minnesota --- and local government permitting authorities --- stand in a very different legal position from that of, say, a gravel company that seeks a conditional use permit to extract gravel under a zoning ordinance. The gravel company owns its gravel and it gets to define the purpose of its project. If the gravel company proposes as part of its project purpose to deposit tailings next to a stream or wetland, the permitting agency can reject the proposal for environmental reasons and impose conditions, but the zoning authority does not have power over the way in which the gravel company defines its purpose. If the purpose selected by the applicant is manipulative, designed to prevent evaluations of reasonable alternatives for siting the tailings, the permitting authority can reject the permit and condition it on returning with a suitable alternative. The problem here is that the DA is presenting its proposal as if it is an owner of the Red River seeking a permit based upon a claim of right and asserts that the State of Minnesota has no legitimate right to participate in the formation of the project purpose itself. Minnesota is a sovereign with the right to refuse to support Fargo's proposed purpose. If it were otherwise, Cities in one state could appropriate waters from another state, or divert waters to another state, simply by launching a local project with the support of a powerful Congressman.

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This is a fundamental error in the conception of this environmental review, and we discuss it in considerable detail in this section. The state of Minnesota has a federal statutory right to participate in the formation of the purpose for this project, in addition to its regulatory authority for the granting of permits. The point we are making in this section is that when the Governor and the DNR both raised concerns about the project purpose, DA and USACE deferred that discussion to the Minnesota Environmental Impact review. The Governor has written that he expected that the environmental review conducted by Minnesota would address foundational issues: whether the project was ecologically sustainable, whether it was the least impact solution, whether its features could be mitigated, and so on.

The Governor had a right to information that would help him decide whether the NED or the LPP or some modification of either was in Minnesota's interest so that he and the Department could make a policy judgment about whether to support or reject either of those proposals. Similarly, local permitting authorities have a right to environmental information with which to evaluate whether the LPP will be permitted at all. They can conclude that they are unwilling to permit the LPP to flood their localities, when the NED can provide even a superior flood control function with lesser impacts. Fargo has no right to flood Wilkin County. Fargo cannot demand the right to flood Wilkin County because Fargo has decided that it will only do flood control if it is allowed to develop 50 square miles of floodplain.

USACE and DA had no right to tie the Governor's hands by insisting that the state environmental review should be limited to the new project purpose that they defined. This would be like telling the Department of Transportation that it must run a new highway through a wetland because the proposers of the new highway have defined the purpose of the highway project as going from St. Cloud to Fargo in a straight line, because a straight line is the shortest distance between two points.

We recognize that purpose-narrowing in this way cannot prejudice the MEPA least impact analysis by entities with permitting power. Project purpose cannot prejudice the permitting process. However, we nonetheless believe that it is important that the environmental review explicitly recognize the fact that DA has attempted to narrow the project purpose in order to achieve an environmentally damaging project. Moreover, if the EIS is to fulfill the purpose that the Governor envisioned – to assist him in exercising the right of the Governor to impact Congressional authorization and appropriation – the EIS should be comparing the LPP to the NED project and making transparent the positives and negatives of each. By ruling out the NED for environmental review, the DA has deprived the Governor of the information that he needs to perform his duties under the color of state sovereignty.

One cannot justify the development of floodplain by claiming that keeping floodwaters out of the floodplain is "managing the five tributaries." Water gets into the floodplain when a river overflows. If you could justify developing the floodplain by claiming that you are merely keeping water from overflowing river banks during floods, why then there would be nothing left of the Executive Order's floodplain protection. It would be like justifying filling a wetland by saying, I'm not filling the wetland: that's not my purpose; I just have to find a place to put all my

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extra dirt. When flood conditions send more water than rivers can handle, the water overflows the banks of those rivers and flows out into the adjoining floodplains. EO 11988 bars development of those floodplains, because floodplains are nature's safety valve to accept the water that cannot be accommodated by the river channel. They are called floodplains because the rivers that run through them flood into the adjoining plains.

In 2009, the USACE had ruled that Fargo and Cass County could not lawfully use a federal project to foster development in the floodplain. (See below). Undeterred by that ruling, they decided to redefine the project purpose in such a way as to define the cheapest, most economically and environmentally sound project alternative. They couldn't announce that the purpose was to develop 50 square miles of floodplain, so they concocted an alternative framing of that purpose which did the same thing, but didn't make the EO 11988 violation obvious. They said we are trying to keep the five tributaries from flooding into the floodplain – we must control the five tributaries. When this happened, the City of Oxbow and others negatively affected by the LPP objected:

The Corps elevated the LPP over other practicable alternatives, and in so doing, altered its definition of the project purpose. Selectively modifying the project purpose to elevate one alternative above all others is prohibited by NEPA. The stated purpose of the proposed action is to “reduce flood risk, flood damages and flood protection costs related to the flooding in the Fargo-Moorhead Metropolitan Area,” SDFR&EIS at 30. The Corps is obligated to consider reasonable alternatives that accomplish this stated purpose and need. 40 C.F.R. § 1502.14.

At DA's behest, USAC was confining the project purpose to eliminate alternatives that were less environmentally damaging, Oxbow continued:

Perhaps in an attempt to “cogently explain” its rationale for selecting the LPP over the Federal Comparable Plan (“FCP”) — the Minnesota diversion alternative — the Corps points to the fact that the LPP reduces flood stages in five specifically identified North Dakota tributaries to the Sheyenne River. See e.g., SDFR&EIS at 92 (discussing “completeness”), at 101 (discussing EO 11988 impacts) Attachment 1 at 2 (discussing why the LPP was selected over the FCP despite the FCP being more cost effective). See also letter from Beth S. Ginsberg to Aaron Snyder re: Corps' CWA Section 404(b)(1) analysis dated June 13, 2011 at 2. Nowhere, however, is reducing flood stages in these specific tributaries identified in the purpose and need section. Instead, the purpose and need statement is explicitly worded much more broadly to enable the Corps to reasonably compare the LPP against a reasonable range of alternatives that would accomplish its stated goal of “reduc[ing] flood risk, flood damages and flood protections costs related to the flooding in the Fargo-Moorhead Metropolitan Area.” The Corps did not limit its options to those that specifically address flooding on the Sheyenne River and its tributaries.

This device to define away the NED and force development of the floodplain was unlawful from a federal perspective, as Oxbow explained:

In any event, the Corps' narrowing of its project purpose and need necessarily makes a North

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Dakota alignment the only plan capable of meeting this new project purpose because it crosses all of these tributaries where the others do not. The courts, however, have ruled that an agency cannot define the objectives of its own actions in terms so unreasonably narrow that only one alternative from among those in the agency's power would accomplish the goals of the agency's action, rendering the EIS a foreordained formality. See, e.g., Nat'l Parks & Conservation Ass'n v. BLM, 586 F.3d 735, 746 (9th Cir. 2009).

This narrowing of purpose did not occur with the consent or participation of the State of Minnesota. It was imposed unilaterally by the Diversion Authority as a local preference, before the federal environmental review was complete and at time when Minnesota's own comments had not been answered. In other words, Minnesota's concerns were simply read out of the selection of project purpose. By so doing, the USACE and DA were seeking to evade Minnesota's federally protected right. After the Supreme Court ruled in 1941⁴ that the commerce clause power could be used to flood Oklahoma over the Governor's objection, Congress commenced a series of reforms designed to protect state sovereignty. The 1944 Flood Control Act was amended to afford the Governor of a state a virtual veto over flood control projects. 33 U.S.C. § 701-1. *See also* Corps EP-1165-2-1 Paragraph 3-3. Governor Dayton elected to defer his decision under section 701-1 until completion of the environmental review.

The sovereign right of the Governor to impact the purpose of the project, and not just the manner of achieving the purpose, results from repeated abuses of the earmarking process in which powerful Senators or Congressmen trade approval of a wasteful or harmful project for some other favor. Without this right, Congress recognized that Senators like Conrad or Dorgan might use their influence to inflict damage on Minnesota through the earmarking process, or the Senate majority leader could use his power over earmarks to obtain changes in the Ohio River damaging to Ohio upstream and Missouri downstream. Cincinnati should not be able to use Boehner's power to flood Kentucky, and Kentucky should not be able to use McConnell's power to flood Ohio.

Dayton's letter of August 21, 2014 makes it clear that he expected that the environmental review process should focus on what he recognized was a central issue: Whether the LPP should be allowed to flood Minnesota farms and communities in order to make a development profit for persons who own previously undeveloped floodplain:

I have very serious concerns about the Project. Much of the land in the staging area has not previously been flooded, even in the worst floods of record. Since Moorhead is currently protected to the 42-foot river stage, less than 10% of the Project's benefits will accrue to Minnesota. The Fargo area will receive over 90% of the Project's benefits, including the protection for future economic development of an undeveloped flood plain on the south side of Fargo. In fact, a major feature of the Project's design appears to be the flooding of Minnesota (and North Dakota) farmland in order to assure North Dakota developers that their investments will be safeguarded.

⁴ *State of Oklahoma ex rel. Phillips v. Guy F. Atkinson Co.*, 313 U.S. 508 (1941)

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The Governor was seeking to afford a form of due process to the applicants. As Governor, he might have exercised an unreviewable power to notify Congress that he had determined that the project should not be authorized. But he chose instead to seek information from the environmental review process. As his letter explains:

The State of Minnesota has voiced concerns with the Project on four separate occasions, with informal comments in 2009 and three formal comment letters during the federal environmental review process. Because Minnesota planned to address its issues in its EIS, the Corps communicated that those issues would not be part of the federal review. Indeed, a number of the Corps' responses to comments in the Federal Supplemental Draft Environmental Impact Statement stated that "[the Corps] recognizes the need for a Minnesota State EIS for this project and has been coordinating with the Minnesota Department of Natural Resources and project sponsors for the development of this EIS."

Governor Dayton's concerns were likewise echoed in the Department's own letters written in connection with the Federal Environmental Review. The Department specifically raised concerns about the alternatives analysis which had led to rejection of the NED. The State of Minnesota wrote:

The alternative analysis and screening conducted as part of the federal EIS has been a significant source of concern and has received many comments from the public and agencies (DNR included). Review of Appendix O has generated several questions around the cost benefit analysis and alternative screening. As part of State EIS scoping the MDNR needs to verify and document the information that was used in the various phases of the federal EIS. In order to complete the MDNR's administrative record for the State EIS, we will need an independent review and documentation of the key decision steps and the information that was used to make the decisions. This detailed review and documentation will either confirm selection of alternatives in the federal FEIS or identify other alternatives that should be evaluated as part of the State EIS.

The DNR explained that the State:

remains committed to flood protection in the Red River valley and appreciates the opportunity to review the SDEIS, however; it's apparent that significant additional work is needed to demonstrate that the selected alternative is:

ecologically sustainable, the least impact solution, one in which adverse effects can and will be mitigated, and consistent with other standards, ordinances, and resource plans of local and regional governments.

This information will be necessary for both the state environmental review and permitting process.

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Minnesota had a right to determine whether it would support the NED or the LPP or some other configuration or no project at all, and that right could not be confined by the predetermination of the project purpose. Yet, when the State EA was prepared, DA incorrectly asserted that the DA could force Minnesota to accept the redefinition of the project purpose and thus force Minnesota to evaluate only alternatives which fulfill the project purpose defined without Minnesota's participation. This limitation cannot be imposed on Minnesota, its political subdivisions and its citizens. Both MEPA and MERA allow permitting jurisdictions to deny permits when a project inflicts unacceptable environmental damage. Evidently, the new staff assigned to the environmental review simply mechanically treated the EA as if it were being submitted by a landowner seeking to use its own land, and failed to recognize that the EIS was to advise the state and local governments as to which project purpose would be acceptable.

The DEIS should fulfill the purpose that Governor Dayton anticipated: it should describe the relative environmental impacts of the LPP, the NED, and the various options which reduce Red River flows in sustainable ways, so that the Governor has the information he needs to make policy choices.

Minnesota's initiation of an EIS to review the change in purpose and elimination of sustainability principles, reflected in the August 2010 letter must be followed up, as the letter makes clear, in both the environmental review and the permitting reviews that follow. Permitting authorities cannot perform their statutory function unless they look at alternatives as required by Section 116D.04, because the decision whether to alter the course and current of a major river system is not driven by a local county's desire to develop the floodplain; it is driven by governmental policy choices. Putting aside EO 11988, North Dakota may choose to allow Fargo to develop floodplain, but it has no right to announce that Minnesota and Wilkin County are required to accept that purpose as valid.

Assistant Secretary Darcy gave only conditional approval to the Locally Preferred Project, but her approval was condition upon confirmation of the accuracy of Corps estimates of downstream impacts. Those estimates turned out to be wildly inaccurate. At this point, the Diversion Authority decided that fostering development in the 50 square miles of agricultural floodplain outside of Fargo was so important, that it would dump that water on those who live to the Southern part of Cass and Clay Counties and the Northern parts of Richland and Wilkin Counties.

When the Diversion Authority selected the Locally Preferred Project, the State of Minnesota sent official objections. Those objectives warned that the Federal EIS "fails to sustain the conclusion that the [LPP] project is ecologically sustainable, the least impact solution, one in which adverse effects can and will be mitigated, and consistent with other standards, ordinances, and resource plans of local and regional governments." As stated above, the DNR warned that the development of floodplain represented a deviation from the announced purpose of the project. It would be a gross perversion of Minnesota law if the City of Fargo were to be able to tie the hands of Minnesota state and local government simply by redefining the project purpose to

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exclude what was correctly determined to be the least impactful, most cost effective alternative.

MEPA says:

“Where a proposed action is likely to cause pollution, impairment, or destruction of water, land or other natural resources within the state, they are prohibited, so long as there is a feasible and prudent alternative consistent with the reasonable requirements of the public health, safety, and welfare and the state's paramount concern for the protection of its air, water, land and other natural resources from pollution, impairment, or destruction.

MEPA doesn't say that a feasible and prudent alternative must be consistent with the Diversion Authority's demand to build the project exactly where and how it wants to do so. If that were the way MEPA works, any project proposer can change the project purpose to prevent you from looking at alternatives.

Local governments and the DNR have a right to review whether the NED, for example, is a feasible and prudent alternative consistent with the reasonable requirements of the public health, safety, and welfare and the state's paramount concern for the protection of its air, water, land and other natural resources from pollution, impairment, or destruction. The final EIS should assist them in that process, by recognizing that the NED is, in fact, a lawful feasible alternative. Any other action would be arbitrary and capricious in the extreme. We can find no authority that suggests that a Responsible Government Unit can allow a project proposer to rule out consideration of the very project alternative that was, after extensive study, found to be the most cost effective feasible, least environmentally impactful alternative.

In Conclusion, we are concerned that the Draft EIS is not faithful to the issues raised by the Department itself. The Department's letters clearly point out:

- (a) That DA radically altered the project purpose that procured Congressional authorization of the feasibility study
- (b) That the new approach to the project was a violation of agreed upon sustainability principles found in the mediated settlement agreement
- (c) That this issue must be addressed in the Minnesota Environmental Review so that Minnesota could determine whether the revision of purposes was consistent with Minnesota law and policy

USACE and DA have not provided a credible, legally sustainable confrontation of the Department's own concerns. It is true that the USACE claims that developing 50 square miles of agricultural floodplain is somehow not an EO 11988 violation, but that position is frankly preposterous and embarrassingly indefensible.

V. **The FEIS Must Acknowledge that the LPP Violates EO 11988, Federal Regulations, and the Sustainability Provisions of the Water Resources Development Act.**

There is a stark difference between the way in which the DEIS scrupulously respects federal policies like the Endangered Species Act, and the Clean Water Act, on the one hand, and treats the floodplain protection provisions of EO 11988 with almost cavalier disregard. EO 11988 is one of the most important environmental policy provisions affecting the Red River Valley. Because the DEIS evidences a lack of understanding of its importance to ecology and hydrology of the Red River Basin, we have included in the Appendix A lengthy explanation of five decades of evolution of this policy. Since the Carter administration, a series of legally binding actions have one by one, sought to stamp out efforts by the engineering arms of the United States Government, to pretend that EO 11988 can be ignored any time there is an opportunity to staff up a District office and spend hundreds of millions of dollars.

A. Numerous Stakeholders Objected to the Proposed EO violations contemplated by the LPP.

Numerous DEIS comments from other impacted stakeholders regarding elimination of floodplain storage capacity expressed the same concerns as Minnesota DNR. How could the USACE be eliminating 50 square miles of floodplain storage to promote development, when EO 11988 clearly prohibited it? What was the justification for transferring water from the floodplain onto farms and communities that had been built above the floodplain?

The City of Oxbow, which was going to be completely flooded by the waters removed from the floodplain, retained a national firm with a highly respected environmental law department and wrote:

The Corps selected a plan that affects 25,000 more acres of floodplain acres than the FCP but did not explain how it plans to minimize adverse effects to floodplain function. When building in the floodplain is determined to be the only practicable alternative, EO 11988 requires that the agency "design or modify its action in order to minimize potential harm to or within the floodplain consistent with regulations issued in accord with Section 2(d) of this Order." EO 11988, § 2(a)(2). The courts have interpreted this EO as requiring federal agencies to "take steps to minimize any flood hazard posed by the project." See e.g., Daingerfield Island Protective Soc'y v. Babbitt, 40 F.3d 442, 447 (D.C. Cir. 1994).

The Corps' implementing regulations further require that prior to authorizing an activity in the floodplain, the Corps must "ensure, to the maximum extent practicable, that the impacts of potential flooding on human health, safety, and welfare are minimized, the risks of flood losses are minimized, and, whenever practicable the natural and beneficial values served by floodplains are restored and preserved." 3 C.F.R. § 320.4(/)(2); see also E.R. 1165-2-26 (Mar. 30, 1984).

Oxbow's letter continued:

Instead of demonstrating actions to minimize adverse effects to the floodplain, the Corps summarily and arbitrarily insists that "[a]ny floodplain impacts created by any of the possible alternatives will be minimized as much as possible." Appendix O at 95. An analysis consistent with EO 11988, however, would ensure that 1) the beneficial values of the floodplain will be preserved; 2) adverse floodplain impacts of the project will be minimized; and 3) that any adverse human health, safety and welfare impacts to the residents of Oxbow and other affected communities are reduced. The Corps' selection of the LPP also runs counter to its requirement to avoid selecting an alternative that would indirectly support floodplain development. EO No. 11988. While the Corps is well aware of the potential unintended consequence that structural flood diversion projects might provide a false sense of security and actually encourage more floodplain development (Appendix P, at 3), by selecting the LPP, the Corps actually helps the local sponsors actually plan for it.

In its letter challenging the legality of the LPP on EO 11988 grounds, the MnDak Upstream Coalition expressed similar concerns that EO 11988 violations were shifting water onto upstream communities:

As proposed, the Tentatively Selected Plan violates Executive Order 11988. Executive Order 11988 requires federal agencies to avoid to the extent possible the long and short-term adverse impacts associated with the occupancy and modification of flood plains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. In accomplishing this objective, "each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by flood plains in carrying out its responsibilities" for the following actions: acquiring, managing, and disposing of federal lands and facilities; providing federally-undertaken, financed, or assisted construction and improvements; and conducting federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulation, and licensing activities.

The letter pointed out that EO 11988 implementing regulations prohibit USACE from completing project approval without conducting an 8-step administrative process culminating in issuance of administrative findings:

The guidelines address an eight-step process that agencies should carry out as part of their decision-making on projects that have potential impacts to or within the floodplain. The eight steps, which are summarized below, reflect the decision-making process required in Section 2(a) of the Order.

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Despite all of these well documented letters, the USACE essentially ignored the substantive requirements of EO 11988.

Our position in this regard was completely vindicated in April of 2015, when we received the administrative record from the Federal environmental review. Over and over again, injured parties in Minnesota and North Dakota question how it was possible that the USACE could ignore regulations and statutes which prohibit federal funds from being used in this way. Then, buried in the administrative record, but nowhere even remotely mentioned in the federal Environmental Impact Statement or any of its appendixes, we discovered material which showed that, in fact, the USACE had actually ruled that development of even the 20 square miles of floodplain south of Fargo was unlawful and prohibited by Executive Order 11988. As soon as we discovered these documents, we attempted to convey them to the Department, but our submission was rejected on the grounds that the Department will not consider information that it receives from anyone other than the project proponent during the environmental review. We now formally resubmit that information as an appendix to these comments. In addition, in the following section B, we show that the USACE itself vindicated the views of the State of Minnesota, JPA and others, that the LPP represents a blatant violation of EO 11988.

B. USACE itself correctly ruled that developing even the 20 square miles of floodplain south of Fargo violates federal law, and it thus follows with greater force that the LPP's proposed development of 50 square miles is also unlawful.

Before the 2009 flood, Fargo and Cass County commissioned a study of a "Southside project," separate from the project under federal study. The Southside project would open 20 square miles of agricultural floodplain south of I-94 to development. The Southside project would protect the floodplain located east of Horace from floodwaters that overflowed the banks of the five tributaries. (Horace and West Fargo were already protected from flooding by the Horace-Sheyenne diversion.) Once this protection was provided, Fargo could then rezone the land for commercial and residential development, handing a huge windfall to landowners. The Southside project proposed to mitigate the loss of floodplain by building internal storage in the floodplain itself. As originally conceived, the Southside project would be locally funded, but it would still require federal permits, and consequently it needed to pass an EO 11988 review.

In 2009, perceiving that the recent flood created the political atmosphere in which Senators Conrad and Dorgan could use their considerable power to expand the one-billion dollar project even further, Southside project sponsors asked USACE to add the Southside project to the Fargo-Moorhead project. May 2009 Congressional hearings were scheduled for Fargo, and to prepare for the hearings, USACE arranged a meeting at the Senate Office building with ND Senator Byron Dorgan, and Governors Hoeven and Pawlenty. The attendance list included Senator Klobuchar, Representative Peterson and two North Dakota Congressmen, and eight key USACE representatives, including Major General Walsh.

A USACE "Read-ahead" (provided with our CD) was prepared to brief the participants

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on both the USACE diversion and local Southside project. The document went through at least seven drafts. Although USACE has tried to explain away this document on the grounds that it was authored by an unauthorized anonymous staffer, that contention is preposterous. The Read-ahead document with USACE's EO 11988 findings was presented to senior USACE officials, including the lead USACE engineer, and the Major General who was to testify at the hearings and before two Governors. All of the versions in the administrative record contain the following or similar statement:

The Fargo Southside project as currently proposed would not be in compliance with executive Order 11988 as a Federal project, because it facilitates development of over 20 square miles of undeveloped floodplain. Legislation would be necessary to exempt the Southside project from this executive order. The Corps NED plan may include alternative measures to protect existing development in the area.

The Southside project plainly violated EO 11988. It sought to promote development in the floodplain. There is plenty of land available for alternative development. This USACE ruling decisively contradicts USACE's current position that the project flood protecting the same lands complies with EO 11988. At the Congressional Hearings themselves Major General Walsh, reflecting the thrust of the preparatory meeting he had recently attended, testified that state and local government had an obligation to use planning and zoning to keep development out of the floodplain, stating:

The first step in minimizing future flood damage is to restrict development - urban, rural, agricultural, industrial, and commercial - in the areas within the flood plain. We urge communities responsible for making land-use decisions to act wisely in this regard, and restrict development in areas that are known to be at high flood risk. If communities can limit development within the flood plain, the largest and most expensive issue related to flood risk management has been resolved before it ever has become a problematic issue. See USACE Administrative Record 0000656(AR); see also Congressional Hearing 55140, pg.36, par.2-3 AR0000705.

Senator Dorgan recognized the importance of this same policy. At the hearing, he stated:

But rather than trying to provide protection for something that doesn't yet exist, the Corps would much prefer that if there is a risk to that area that they move elsewhere and build where there is not such a risk. Congressional Hearing, P 44. AR0000714

The 2009 hearings show that USACE's EO 11988 determination sustains our position; that the USACE leadership, and even powerful Congressional advocates for Fargo, recognized that EO 11988 required Fargo to channel development elsewhere; and that they all had just been told that there was an EO 11988 violation in the Southside project.

In its 2010 and 2011 letters, the Department recognized that the DA's change in project purpose represented a fundamental change in direction that unnecessarily floods Minnesota towns and communities. The Department should recognize that its principles

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are deeply embedded in both federal and state water policy, and that this project represents a massive violation of EO 11988's sustainable flood control principles on a scale unprecedented in the past three decades. The area of floodplain which this project seeks to drain and ultimately develop is equal to the area of the City of Minneapolis, almost double the surface area of all wetlands in Cass County North Dakota, and the elimination of the floodplain storage is inconsistent with the underlying project purpose, which is to protect the developed Fargo-Moorhead metropolitan area from floods. The floodplain elimination component reduces the basin's flood storage capacity, when clearly, the basin needs more storage, not less.

The cost of modifying the NED and turning it into the LPP so that 50 square miles of floodplain can be developed is staggering. The price difference is roughly one-billion dollars. *If one allocates only half of that billion dollars as a cost of protecting 50 square miles of floodplain, the cost per acre of merely building the infrastructure that drains the floodplain would be more than \$15,000 per acre.* And so, it is a fair inference that the taxpayers of the United States are spending at least \$15,000 per acre to subsidize commercial, industrial and residential development of the floodplain. The economic effect of this venture is to attract development away from high ground within the city of Fargo and away from high ground in Minnesota where plenty of high ground in the Moorhead vicinity is available for development. In addition, the effect of this venture is to remove 50 square miles of flood storage capacity from the Red River and force USACE to erect a dam to intentionally flood portions of four counties in the two states.

We advocate for the following changes in the Draft EIS:

1. Recognize that EO 11988 represents fundamental environmental sustainability principles, principles which result from decades of ecological and engineering scholarship, and that the EO 11988 principles are expressly imported into Minnesota law by MEPA, by public waters permit regulations, and into local land and surface water permitting.
2. Recognize that the primary EO 11988 violation is the promotion of development in approximately 20 square miles of floodplain south of Fargo and 30 square miles of floodplain to the North. Thus, the primary insult to EO 11988's sustainability principles is not the location of the diversion channel, as DA suggests, but rather its use to promote development and to eliminate floodplain storage.
3. Recognize that the USACE itself correctly ruled that developing even the 20 square miles of floodplain south of Fargo violates federal law, and it thus follows with greater force that the LPP's proposed development of 50 square miles is also unlawful.

4. Recognize that the impact of removing floodplain storage is to rob the basin of much needed storage, despite the fact that USACE predicts that larger floods are more likely in the next two decades.

5. Recognize that there are multiple alternatives to floodplain development and the proposed storage removal. They include (a) development on existing high ground in North Dakota and Minnesota (b) compliance with Fargo's comprehensive plan, which requires increased density and infill development and prohibits diffuse development (c) use of the floodplain for internal storage (d) selection of the NED (e) relocation of the proposed dam to the North.

6. Recognize that this project removes floodplain storage in North Dakota to induce development while flooding Minnesota to make that possible. It provides a taxpayer funded subsidy to facilitate illegal development in agricultural areas outside Fargo so as to encourage economic development in North Dakota, and consequently to attract that development away from Moorhead. In this connection, recognize that EO 11988 violations are legally binding, and that Minnesota cannot lawfully issue public waters permits to flood Minnesota communities resulting from development in the floodplain.

7. Acknowledge and defend the DNR's repeated recognition that the change in purpose is an unlawful change in purpose, inconsistent with Minnesota law and policy.

VI. The DEIS's Treatment of Planning Issues is Fundamentally Wrong.

With respect to the Department, the material that addresses municipal planning issues is deeply flawed. It fails to recognize fundamental planning principles accepted in the field of land use and municipal planning. It completely misstates the content of Fargo's own municipal plan. We recognize that the Department is not funded by the legislature to develop expertise in urban planning. It is no indictment of the Department if it lacks a person with expertise and with time to devote to reviewing this topic. Often outside consulting engineering firms also lack this expertise, because the structure of an engineering firm is based on a hierarchy with civil engineers at the top. For this reason, we urge the Department to give over the treatment of municipal growth and municipal development to a review by an independent qualified expert in municipal land use and planning. There are many very strong firms in the Twin Cities metropolitan area with expertise in urban planning. One could choose any of those firms, and receive very useful input, but what one could not find at any of these firms is a trained urban planner who would advocate that it promotes the public health and safety to promote diffuse development over an undeveloped area the size of Minneapolis in a city that is already one of the most – if not the most – sparsely occupied urban areas in the nation, described in its own growth plan as “a very low density city.”

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- Author: Medopera Subject: Comment on Text Date: 4/7/2016 8:49:36 AM
Comment ID: 97e
Topic: Alternatives, Alternatives: Many
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- Author: Medopera Subject: Comment on Text Date: 4/7/2016 8:48:48 AM
Comment ID: 97f
Topic: Alternatives, NED Plan
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- Author: Medopera Subject: Highlight Date: 4/20/2016 9:11:29 AM
Comment ID: 97g
Topic: Land Use, Chapter Inadequacy

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At section 3.14.2.1.3 (“Cities Affected by Project”) the DEIS makes the remarkable statement that development in the floodplain South of Fargo and Northwest is “consistent with the City of Fargo Growth Plan” because it would aid “planned Growth within the F-M urban area.” Even Fargo’s own leadership recognizes that this suggestion is completely erroneous. If this part of our comments seem strident, it is because in the field of land use planning, one of the most fundamental principles is that development should not be spread diffusely outside of a metropolitan area, in the way that the DEIS suggests in this section. The approach suggests that either the reviewer responsible for the authorship of this section decided to whitewash the planning issue entirely so as to favor the project, or that that the assignment was delegate to an author working outside his or her field of expertise. Suggesting that development of the floodplain is consistent with the Fargo growth plan is like asserting that driving through a red light is consistent with transportation objectives, because it moves traffic through the intersection more expeditiously than making it stop.

We’ve included in our Appendix CD, sections of Fargo’s Growth Plan, its Comprehensive Plan and a number of newspaper articles, all of which recognize our position and totally contradict the DNR’s incorrect statement that developing 50 square miles of floodplain by a city with a population of just over 100,000 is sound planning. Fargo doesn’t need more development room: in fact it desperately needs to use less room.

The section in the DEIS does not even acknowledge the relevant portions of the Growth Plan or the City’s comprehensive plan. It makes the assertion, which is contrary to land use planning principles, that stimulating growth in the outskirts of the city promotes the “health, safety and general welfare,” when clearly that is contrary to recognized planning principles. At page 3-197 of the DEIS, it is asserted incorrectly:

The Project would be consistent with the City of Fargo Growth Plan 2007 by reducing flood risk, and therefore, aiding planned growth within the F-M urban area. The Project would also comply with the Fargo Land Development Code by working “to protect the health, safety, and general welfare of the citizens of Fargo” by reducing flooding within the Fargo municipality.

This statement is advanced without any citation to authority, and it is flat out wrong. Fargo doesn’t need 50 square miles of floodplain to develop⁵. All that is doing is allowing people with land that everyone knows should be farmed to make a big killing on development at taxpayer expense.

Fargo’s Comprehensive plan states that the City should:

⁵ See the recent article in the Fargo Forum regarding the consequences of leapfrog and scattered development. <http://www.inforum.com/news/3868652-how-far-south-should-fargo-grow-costs-may-require-limits>

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Promote Infill Develop policies to promote infill and density within areas that are already developed and are protected by a flood resiliency strategy. Control sprawl and focus on areas outside of the floodplain.

Attached are several pages from the Comprehensive plan that show that you are actually subsidizing development that runs completely counter to Fargo's own comprehensive plan, which appears to have been drafted with actual planning expertise. The plan says:

- The downtown neighborhood has the potential to become more dense with infill development and incorporate a broader mix of uses including residential, neighborhood services, retail, and offices. (Comp plan page 35)
- Mixed use areas have the potential to become denser. (Comp plan page 35)
- Dense development lowers infrastructure costs because each mile of road or sewer line serves more development. Mixing uses also creates infrastructure efficiencies because it eliminates the need to provide parallel infrastructure systems to residential and nonresidential areas. (Comp plan page 38)
- Dense, mixed-use development generates more revenue and fewer costs for the city budget. Multifamily housing produces more tax revenue and requires less infrastructure and service costs per unit. Denser retail and office developments also produce more property and sales tax revenue. (Comp plan page 38)
- Dense development consumes less land and saves open space for agriculture and habitat. Studies from around the country have found that dense development alternatives consume between 10-40 percent less land. (Comp plan page 38)
- Dense mixed use development wastes less energy, especially gasoline through fewer vehicle trips. Comp Plan page 39)
- Analyzing the existing City of Fargo we find that the current average density is just under 10 people per net developable acre. For a comparison, density figures in some urban areas in this country can top 100 people per acre. These areas are not overcrowded and offer a tremendous quality of life for their residents. Fargo is a very low density city.
- Fargo will promote infill development, planned growth, and increasing density and vitality in its established neighborhoods. (Fargo Growth Plan, Appendix 1, page 72.)
- [Fargo should] Quit building on the richest farmland in the world. Create a better planning and zoning base and work within our current limits to create better use of the land. Planning should be looking long term and creating a better structure and infrastructure. (Fargo Comp Plan 218)
- Controlling the expansion of infrastructure is one way that the city can assure responsible, sustainable growth in a fiscally sound way. Limiting land development to tier one within the next 25 years is important because it allows the city to increase the density of the city, create walkable environments, and fight the onslaught of sprawl. Sprawl is expensive and demands unrealistic levels of expenditure, resource use, and pollution. (Fargo Growth Plan, Page 75.)
- One of the main concerns with rural non-farm development in the City's extraterritorial area is the proliferation of individual on-site septic systems for the treatment of sewage. (Fargo Growth Plan, Page 76.)

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In light of the above statements taken directly from Fargo's own plan, adoption of the DEIS as written would be arbitrary and capricious. Fargo's growth plan estimates that "Recent development patterns in Fargo have resulted in approximately 266 acres being built on every year." Fargo Growth Plan Page 71 (attached). At that rate, if none of that was infill development and all of that development took place in the floodplain south of I-94, it would consume about 8 square miles over twenty years. Why then does the EIS uncritically accept USACE's assumption that development would consume 50 square miles of floodplain? Only if Fargo allows and encourages development to be scattered throughout the floodplain, in a manner inconsistent with its own Comp Plan, could this happen. This is important, because upstream individuals and communities are being asked to endure periodic flooding on their land, so that Fargo can foster development in the floodplain that should not be taking place.

In an article in the Washington Times, a Fargo city official is quoted as warning that the City is creating major financial problems should it continue its low density growth:

We're basically incentivizing sprawl, but the people who are living in the core are paying the same tax rate of the people who are requiring a higher cost rate for delivery of services," Williams said. "So it really matters how you grow and where you grow."

Fargo's growth plan admits that at a high rate of growth the city could absorb all of its growth until 2020 within the city limits. At a more modest rate, that growth could be accommodated until 2040. (Fargo Growth Plan, page 72). In 2009, Major General Walsh testified before a Congressional Committee holding hearings across the river. He said:

The first step in minimizing future flood damage is to restrict development - urban, rural, agricultural, industrial, and commercial - in the areas within the flood plain. We urge communities responsible for making land-use decisions to act wisely in this regard, and restrict development in areas that are known to be at high flood risk. If communities can limit development within the flood plain, the largest and most expensive issue related to flood risk management has been resolved before it ever has become a problematic issue.

At those hearings, Senator Dorgan stated:

But rather than trying to provide protection for something that doesn't yet exist, the Corps would much prefer that if there is a risk to that area that they move elsewhere and build where there is not such a risk. Congressional Hearing, P 44.

The Diversion's attempt to foster development in the floodplain violates these fundamental principles.

Another way of looking at this is to start with the proposition that the DA and USACE have both recognized that at most, Fargo is likely to need 266 acres per year of land for development. See USACE FEIS administrative record AR0001704-07. Fifty square miles is the

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area of the entire city of Minneapolis, a city that easily accommodated a Big Ten University and a population more than four times larger than Fargo's population today.⁶ See also FMM Feasibility Economics, February 2010. Fifty square miles is 32,000 acres. Moreover, the Fargo-Moorhead metropolitan area has plenty of additional land in which to expand above the floodplain on the Moorhead side of the river, and plenty of land for the infill development lauded as necessary by Fargo's own comprehensive plan. See Appendix P for Agency Technical Review (Phase 2), January 2010, AR 0002907; Brazfield declaration Exhibit D. If Fargo were to confine its development to high ground above the floodplain, at the rate of 266 acres per year, it could accommodate all of that development for 20 years, without needing any floodplain at all.

Spreading 266 acres of new development across 32,000 acres of land is a recipe for economic, social and urban planning disaster. Already, we've shown that the initial cost of simply modifying the project to flood protect those 32,000 acres exceeds \$15,000 per acre. But even if there were no flood protection cost, allowing that development to spread across 50 square miles requires local taxpayers to pay the cost of extended roads, bridges, sanitary and storm sewers and other municipal infrastructure, over an area the size of Minneapolis.

The DEIS sections on the Fargo Growth plan and planning principles deserve a complete rewrite. The contention that developing floodplain promotes the public health and safety is contrary to basic planning principles and contrary to Fargo's own adopted plan. There is no demonstrated need for 50 square miles of development into the floodplain.

VII. The DEIS treatment of local and regional ordinance compliance is inadequate.

The purpose of this section is to address the application of local zoning and permitting to this project and that permits under 103G and implementing regulations (dam permit and course, current and cross section changes of public waters) cannot be granted for a project that violates local ordinance. In fact, the DNR's comments to the USACE in 2010 and 2011 repeatedly made that clear by stating that the Federal EIS had failed to demonstrate that the LPP was:

consistent with other standards, ordinances, and resource plans of local and regional governments.

We had assumed, based upon the DNR's assertion that the federal EIS was defective, that the DNR would examine in consultation with Wilkin County and its County Attorney, and with the other permitting authorities, (for example Buffalo Red River Watershed District) to determine

⁶ According to U.S. Census Bureau data, as of 2010, the population of Fargo was 105,549, and the total land area in square miles was 48.82. For comparison, at a similar land area of 53.97 square miles, the City of Minneapolis had a population of 382,578 in 2010. Functionally, removing an additional 50 square miles of largely undeveloped agricultural lands from the floodplain on the outskirts of Fargo would give Fargo twice the space of Minneapolis for roughly a quarter the population.

what permitting information might be necessary and whether the LPP was, in fact, consistent with other standards, ordinances, and resource plans of local and regional governments. This inquiry must ultimately take place when permits are sought. But it was our expectation that more diligence would occur in supplying the information that could be used by permitting authorities. We acknowledge that by agreement, project proponents will not be seeking local permits or other necessary authorizations within a 30-day time frame. The purpose of this section is to make JPA's views on the permitting requirements for Wilkin County and Buffalo Red River Watershed District. In both cases, the information provided in the DEIS fails to demonstrate that the LPP is consistent with the standards, ordinances and resource plans of local and regional governments.

A. Wilkin County

The Wilkin County ordinance is an exercise of the powers granted by the State of Minnesota to Wilkin County to control land use and manage its surface waters. In passing the ordinance, the County issued legislative findings that

Intentional flooding of Wilkin County by creation of large impoundments is likely to have major negative economic, social, public health, environmental, and political impacts. Such flooding will negatively impact the County's tax base, harm agriculture essential to Wilkin County's economic vitality, create uncertainty regarding the County's future, and stifle development. Such flooding is likely to damage public infrastructure including roads and drainage systems. Intentional flooding may cause pollution by carrying chemicals into the groundwater and to neighboring lands⁷

The ordinance defines "large surface water impoundments" as follows:

"Large Surface Water Impoundment" is defined as an area exceeding 640 acres devoted to the purpose of flood water storage, staging or retention. For purposes of the definition, multiple impoundments serving the same purpose or project shall be included as a single impoundment. An impoundment includes water stored within a dike, behind a dam, or otherwise intentionally filling a surface area devoted to that purpose on a temporary or permanent basis. .

Language in the DEIS incorrectly suggests that application of this ordinance depends upon, and might be triggered only by some form of construction. That is clearly not the

⁷ See Ordinance Amendment Finding 1. This section governing construction or maintenance of surface water impoundments is based on the powers granted to Counties to provide for the public health, safety, and welfare, including the powers granted in Chapter 394, 103B, 145A and 373, as well as Minnesota's Water Policy Chapters 103A-F, and the Minnesota Environmental Policy Act, Chapter 106D. Minnesota Statutes Section 394.21 grants Wilkin County the power to carry on planning and zoning. Sections 103B.325, et. seq., recognizes powers and responsibilities of Counties to implement water management plans and official controls that implement its water plan.

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case. Section 3.03 of the ordinance actually prohibits any land use not in conformity with the Ordinance. Land uses that were not listed in the ordinance were prohibited, the “large surface water impoundment” usage was not listed as a permitted use.

(3) No land use shall be permitted in any manner which is not in conformity with this Ordinance. This Ordinance divides the County into zoning districts in which only specified permitted and conditionally permitted uses are allowed. Land uses are further regulated with standards relating to some activities and most physical development. Provisions are provided for amending the regulations and for variances to some provisions. If a use is not listed in a district as a permitted, conditional, or interim use, the use is prohibited.

Under the Wilkin County zoning ordinance, a proposal for land use is made by application for a zoning permit:

(4) Permits. Zoning Permits, Conditional Use Permits, and Variances are issued on the basis of approved plans and applications authorize only the use, arrangement, and construction set forth in such approved plans and applications, and no other use, arrangement, or construction. Any use, arrangement, or construction at variance with that authorized, shall be deemed a violation of this Ordinance. (Section 3.03(4)).

Nonetheless, in fairness to the project, the JPA has decided to make its views known regarding the application of the ordinances of political subdivisions. Some of this material is adapted from statements submitted at the public hearing on behalf of Wilkin County. The Wilkin County ordinance is an exercise of the powers granted by the State of Minnesota to Wilkin County to control land use and manage its surface waters. In passing the ordinance, the County issued legislative findings that

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Language in the DEIS incorrectly suggests that application of this ordinance might be triggered only by some form of construction. That is clearly not the case. Section 3.03 of the ordinance prohibits any land use not in conformity with the Ordinance. Land uses that were not listed in the ordinance were prohibited, the “large surface water impoundment” usage was never not listed as a permitted use. The ordinance states:

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Currently, the LPP is not permissible in Wilkin County. Wilkin County’s ordinance has recognized that each County must contribute fairly to water storage across the basin. The ordinance provides a list of factors which would be considered in processing a zoning amendment to allow storage in the County. Currently, there has been no effort by the project proponent to engage the County in a dialog about whether those requirements might be met. The County’s efforts to communicate with the Department on this topic have been rejected on the grounds that the Department does not discuss such issues with permitting jurisdictions in the context of the environmental review. As a result, it appears that the only remaining forum to have this dialog will be in the context of the zoning process. To this end, the following concerns may be relevant:

- Insufficient information has been developed to satisfy the County’s concerns regarding the impacts of the LPP on agriculture. An NDSU study has evidently been conducted. The local permitting authorities should have access to that study. We have grave

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limitations on the scope and constraints imposed on that study.

- The County's environmental service officer reports that he lacks sufficient information to analyze the impacts on county infrastructure, on drainage and water conveyance systems, and on overland sheet flooding.
- The County is not able to do a full evaluation of the amount of affected acres in Wilkin County.
- Before any final analysis can be performed on impact on the County, it is critical that local governments be provided with a copy of the study so that it can be scrutinized.
- The majority of the staging area acres in Wilkin County are productive cropland. Loss of soil productivity and cleanup of flood debris from cropland is a major unaddressed concern.
- The impacts on Wolverton Creek corridor have not been addressed. The County is concerned that the DA and environmental documents are built on the fault assumption that because the USACE has redefined the 100 year flood, that areas that do not flood are being treated as if they do. There are flood insurance impacts that are not suitably addressed by simply promising that some entity will come up with substitute insurance. There are costs associated with septic system maintenance and operation during a flood event. Septic tanks would need to be pumped before placed back into service and flood proofing of septic tanks and drain-fields. Individual homeowner wells would also need to be protected due to flood water inundation and none of this has been addressed.
- Impacts to County roads and Townships roads has not been addressed.
- The project is plainly out of compliance with numerous requirements in the ordinance that seek to assure that the County is not being used to store water in order to promote some other County's development of floodplain. There has been no demonstration that the LPP is minimizing impact, nor that the impacts won't be vastly greater than represented in future years.

The concerns in the Wilkin County Ordinance must be addressed. The suggestion that the ordinance is not triggered except upon actual flooding or construction is just plain wrong. Acquisition of land for this use, recordation of easements for this use, commencement of construction of a dam, or attempts to permit one, so that Wilkin County can be flooded would all constitute unlawful steps to use the land for this purpose. The suggestion that a project can be permitted by the State of Minnesota that promotes an unlawful use, because the use will only occur subsequent to the permitting is completely wrong.

B. Buffalo Red Watershed District

The Buffalo Red Watershed District is properly recognized as a regional permitting authority. A significant portion of the proposed flooding would occur within the District. Minnesota Watershed Districts operate under the aegis of a Watershed Plan that is official adopted and "prescribed" by the BWSR. The Staging and storage area impacts the "Western Planning Region" of the Watershed District. The plan does not propose or authorize the flooding of any portion of the region.

The Watershed District requires permits. No person or public corporation shall undertake the construction, removal or abandonment of any reservoir for the impoundment of water without a permit. No person or public corporation shall construct, alter, repair or remove any dike without a permit from the Board of Managers. The underlying driving force of flood control management according to the District's current plan is the Flood Damage Reduction Mediation Agreement dated 1998. Since the DNR specifically found that the LPP was developed according to principles which significantly deviate from that agreement, the granting of a Watershed District permit is by no means assured. We see no evidence that the environmental review consulted with the Watershed District in a meaningful way and if that is true, that should be remedied.

VIII. The DEIS Does not Explore the Economic, Social and Environmental Impacts of USACE and DA's Attempt Unilaterally to Change the Base Floodplain Above FEMA's Established Elevations.

DA's plans depend upon significant unofficial changes in the base floodplain. The assumptions driving every aspect of this project significantly contradicts even FEMA map revisions recently implemented. The changes are not based upon science, but rather upon guesstimates triggered by a desire to change the cost benefit equation in favor of the project and justify assertions that lands and communities that have not been flooded are actually flood prone. The change in base floodplain incorporated into the project assumptions does not derive from local conditions, but stems rather from statistical assertions about the climate as it impacts the entire Red River Valley. Neither federal nor Minnesota's EIS examine the impacts of these changed assumptions. While USACE justifies these changes on probabilistic assertions that the former 100 year floodplain must now be the 50 year floodplain, because there have been a couple of recent floods approaching 100 year elevations, it fails to explain why no flood has approach the new 100 year elevation.

Changing the base floodplain is circumstantially beneficial to the project, of course. Those inside the new protections actually receive greater protection at vastly greater cost than would be justified by existing floodplain designations. The cost of maintaining those protections, not covered by federal subsidies, will be proportionately greater. But the rest of the valley in both Minnesota and North Dakota, not so protected will be now branded with USACE's sweeping unofficial determination that they are now flood vulnerable. Homes and businesses previously built outside the floodplain will now be branded as flood vulnerable. Levees and

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diversions constructed elsewhere as providing 100 year protection, will now be deemed not to provide that protection. There has been no study, let alone consideration of the economic impact on homeowners throughout the basin, or upon communities, to be magically placed in below the base floodplain.

It is equally remarkable, that although the USACE asserts that flooding will be higher and the volume of water to be managed correspondingly greater, that USACE sees this as somehow justifying the elimination of 50 square miles of floodplain. The need for storage is greater, according to USACE, dramatically greater, but USACE is claiming that the first thing which should be done in response is to promote construction on even lower ground and to impose sweeping elimination of existing floodplain storage!

Any changes to the floodplain will have impacts throughout the basin. State and local floodplain zoning is universally pegged to the 100 year floodplain. Lending practices and flood insurance are pegged to floodplain determinations. Many federal regulations are also pegged to the 100-year floodplain. Examples include:

- The area of special flood hazard (aka special flood hazard area or SFHA) within the National Flood Insurance Program and mandatory flood insurance purchase requirements (44 C.F.R. § 59.1);
- FEMA property elevation assistance grants (44 C.F.R. § 209.6(b)(2)(ii));
- National Environmental Protection Act Categorical Exclusion eligibilities (7 C.F.R. § 650.6);
- USDA Farm Loan Programs (7 C.F.R. § 761);
- USDA Housing Preservation Grant requirements (7 C.F.R. § 1944.672(e)(2));
- USDA Rural Development loan approval requirements (7 C.F.R. 3555.5(d)(7));
- Direct Multi-Family Housing Loan and Grant eligibility (7 C.F.R. 3560.58(e)(2));
- Loans in areas having special flood hazards (12 C.F.R. § 22, 172, 208, 339, 614, 760)
- HUD FHA Program construction requirements (24 C.F.R. § 200.926d);
- Eligibility of mortgages covering manufactured homes (24 C.F.R. § 203.73f(c)(i));
- Siting requirements for public drinking water systems (40 C.F.R. § 141.5(b)) solid waste disposal facilities (40 C.F.R. § 257.8(a)), and municipal solid waste landfills (40 C.F.R. § 258.11(b)(1));

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- Critical habitat designations for endangered and threatened species under the Endangered Species Act (50 C.F.R. § 17.95);

The Red River has a limited capacity and that limited capacity in the Red River Valley is a precious resource that should not be arrogated unnecessarily to one community. The natural storage capacity for a given flood is determined by the extent of the floodplain to which the water rises during that flood. All of this capacity is interdependent and represents a hydrologically complex resource that should not lightly be disturbed. Minnesota and North Dakota have learned the hard way that flood dynamics across the basin are interdependent and must be managed on a basin wide basis.

Floodplain revisions should be conducted through a lengthy deliberative process involving public notice and participation of all impacted communities. Because changes in any of these policies on one side of the river could have dramatic impacts on the other, the Minnesota and North Dakota have signed a Congressionally approved interstate compact in the management of Red River waters, recognizing the obligation of each state to implement uniform sustainable flood management practices, establish mutually acceptable criteria for both agricultural and municipal levees, and require uniform criteria for floodplain designation. The Compact is enforceable by either State or by individual aggrieved parties, and in fact, has been enforced by North Dakota in the federal courts against Minnesota actors attempting to raise the level of protection to Minnesota lands above the mutually agreed level of protection.

The Compact as amended includes the following agreements:

1. **Dike Construction and Floodplain Criteria:** “to adopt criteria for the approval of dike construction along the Red River of the North and the Bois de Sioux mutually applicable in both states. Such criteria may include designation of a floodplain and floodway and specifications for maximum dike elevations. Such criteria may include designation of a floodplain and floodway and specifications for maximum dike elevations.”
2. **Joint Management:** “to conduct “joint management and regulation of the boundary rivers....to exhibit good faith and best efforts to closely cooperate, enlisting the assistance of the U. S. Army Corps of Engineers whenever appropriate, to jointly resolve the flooding problems.”
3. **Comprehensive Management:** “to provide for total and comprehensive water management of the entire Red River Basin. Comprehensive water management includes both structural and nonstructural measures and requires involvement and participation at all levels of government. This agreement ensures that both states will provide for uniform and consistent flood plain management along the Red River of the North and Bois De Sioux River and that both states are totally committed to long-range water management objectives over the entire Red River watershed.”

4. **Agricultural Diking Approach:** “to provide for a comprehensive approach to all agricultural dikes impacting agricultural lands along the Red River”

Uniform Municipal Diking: ...to develop diking criteria for urban and municipal areas which will have uniform application on both sides of the Red River. Therefore the parties hereby agree in conjunction with and in cooperation with local water management officials and appropriate municipalities, to adopt mutually applicable criteria for the approval of dike construction along the Red River of the North and the Bois de Sioux in the urban and municipal areas in both states. Such criteria may include designation of a floodplain and floodway and specifications for maximum dike elevations.”

- The draft EIS does not adequately explore the consequences of allowing one community unilaterally to change the definition of the base floodplain in ways that impact the entire basin
- The draft EIS does not recognize that the proposed revisions are inconsistent with the letter and spirit of the Compact.
- The draft EIS does not recognize the consequences of allowing one community in the basin to apply situational hydrological principles based on local considerations

IX. Conclusion

We conclude by emphasizing that The Draft EIS has completely lost track of the original purpose that triggered Minnesota’s Environmental Impact Statement. Minnesota’s environmental review was launched when the Diversion Authority (DA) rejected the USACE’s selection of the Minnesota 35K diversion plan, and chose instead a plan which Minnesota regarded as environmentally unsound. Minnesota asked USACE to address these concerns in the Federal EIS, but the USACE refused to do so, because USACE and DA wanted to rush a Chief’s letter to the Congress.

The DNR must recognize that a local government does not have the right to tell a sovereign state what project purpose is acceptable, and that a North Dakota local government does not have the right to force a Minnesota County or township to accept floodwaters diverted in order to foster development in the floodplain.

Sincerely,

/s/ Gerald W. VonKorff

Gerald W. Von Korff
Attorney for Richland-Wilkin County Joint Powers Authority
JVK/dvf

Attachments

ATTACHMENT A



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October 27, 2015

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Re: Draft Environmental Impact Statement, Fargo-Moorhead Flood Risk Management Project

Dear Ms. Townley:

I have been asked by the MND&K Upstream Coalition to review the Draft Minnesota Environmental Impact Statement (DEIS) to help ensure that it contains accurate and adequate information for review of the proposed Fargo-Moorhead Flood Risk Management Project particularly as it relates to upstream impacts within the staging area.

Background

I think it is important to begin with some fundamental principles applicable to flood control. The highly developed areas of Fargo -Moorhead need improved flood protection. However, the selected protection strategy should not encourage development of floodplain land and should not unnecessarily increase flooding elsewhere.

There are three commonly used methods to provide improved flood protection: (a) Build/raise levees; (b) Store floodwater upstream and (c) Increase conveyance by channel improvement or diversion. All three of these methods may adversely impact flooding elsewhere. Levees may increase water levels upstream by encroaching on floodway flow areas and/or increase downstream flood levels by reducing natural floodplain storage. Upstream floodwater storage raises water levels in the designated storage areas. Increasing conveyance increases flood flow raising water elevation downstream from the conveyance improvement.

The magnitude of adverse impacts is generally proportional to the volume of water no longer stored in the natural floodplain in and around the targeted protection area. Therefore, the selected strategy should be one that minimizes, to the extent practical, the reduction of natural flood plain storage. Three principles should be followed to accomplish this objective.

- a. Levee alignments should follow the outline of highly developed areas and not include green spaces such as parks, golf courses, agricultural land and other undeveloped areas. Such areas may be protected during lower flood events, but not during major events.



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- b. Upstream storage should be located, where practical, on lands that are currently flood-prone or on lands where a large volume of storage can be efficiently placed on a small area. It should also be located and designed to provide flood control to as large an area as practical and multipurpose benefits such as wildlife habitat, streamflow maintenance, and water supply.
- c. Conveyance improvements should be located to minimize draining lands additional to the targeted protection area.

The current USACE plan includes all three methods, which is good, but they have not done a good job in locating and optimizing the application of each method

General

The project includes three primary components: A 30 mile diversion channel; levee improvements; and an upstream staging area dam. These three components operate in concert to meet the flood control purposes of the project. In addition to providing a significant element of flood control, the staging area is also used to store water to prevent some of the increased flow caused by levee improvements and the diversion, which would otherwise cause downstream impacts. The project began as a simple diversion channel around the F-M metropolitan area and has since evolved into a more complicated project. It is still commonly thought of and referred to as a diversion project. The DEIS fails to clarify the role of all three primary components and explain how they work together to accomplish the project purposes.

The stated purpose of the project is to reduce flood risk, flood damages, and flood protection costs related to flooding in the F-M metropolitan area. (DEIS, Appendix B, page 3). The purpose articulated in the DEIS is further defined by three anticipated results: 1. Reduced flood risks on local streams including the Red, Wild Rice, Sheyenne, Maple, and Rush Rivers; 2. 100 year flood protection for substantial portions of the F-M metropolitan area; and 3. Reduced risks from greater floods.

There appears to be an unstated purpose of providing flood protection for developing land within the existing floodplain area. This is evident in the selection of the LLP diversion alignment instead of the lower downstream impact NED diversion alignment and in the design and alignment of other LLP features. In my opinion development of floodplain areas, protected or not, is unwise and contrary to current public policy. The implications of the project promoting floodplain development should be discussed in the EIS along with the relationship between the additional volume of displaced floodplain water and the magnitude of offsite flooding impacts.

Alternatives

The DEIS includes detailed analysis of the proposed project and a Northern Alignment Alternative, which is the same as the proposed project with a slightly modified alignment of the staging area dam. Two versions of the obligatory "no action" alternative were also considered.



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They include existing and funded flood protection projects with and without implementation of emergency measures as have been carried out during historic floods.

Discussed in the DEIS but dismissed from further evaluation were the Distributed Storage Alternative and a More-Flows-Through-Town-Alternative. The alignment of the diversion channel featured in the NED was dismissed as providing no additional benefits compared to the LPP diversion alignment even though its downstream impacts had been shown to be substantially less. These alternatives, especially if combined, would significantly reduce the magnitude of offsite flooding impacts without compromising the ability to protect the developed areas of metropolitan Fargo and Moorhead.

Proposed Project

As mentioned above, the proposed project includes three primary components. Two of those components, diversion channel and levees, cause significant flooding downstream. The third component, storage, is used in part to reduce downstream impacts. The DEIS fails to recognize and describe feasible and practicable opportunities to modify impact-causing components to reduce their downstream impacts. Using strategies to reduce impacts would correspondingly reduce the need to use storage in the upstream staging area for downstream mitigation.

Diversion Channel

The LPP places the diversion channel within the extensive floodplain area west of Fargo. The effect of that alignment choice is increased and uncontrolled drainage of floodplain water from that area. The resulting loss of floodplain storage is a major cause of the project's potential downstream impacts. An alternative alignment, identified early on as the NED project, places the diversion outside the floodplain. That alignment avoided floodplain drainage resulting in far less downstream impacts. The EIS should include evaluation of a non-floodplain diversion alignment

Levees

Levees and ring dikes are used to protect areas within the floodplain. An effect of this protection is a loss of floodplain storage which, in turn, results in potential increased downstream impacts. The existing levees and funded levee improvements protect, for the most part, existing highly developed areas. Arguably, protection of such areas is justified by their high value, regional significance, and the social impacts of flooding.

However, the proposed project extends levee protection far beyond the existing highly developed area. This is especially true in the area south of Fargo. The alignment of the diversion channel, with its associated east side levee, and the staging area dam, outline the west and south side perimeter of the levee protected area. This includes large areas of relatively undeveloped land. In my opinion, the levee protected areas should be kept to a practical minimum, thereby minimizing the loss of natural floodplain storage and future development within existing floodplain areas.



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The Northern Alignment Alternative reduces the proposed levee protected area but only to a very limited extent.

The EIS should include evaluation of a levee/dam alignment that minimizes the protected floodplain area.

Distributed Storage Alternative

Development of distributed storage throughout the Red River Basin has long been a priority of water management districts in both Minnesota and North Dakota. The strategy is consistent with the principles articulated in the mediated settlement agreement. Distributed storage provides local benefits within watersheds where the storage is located, thus reducing local flooding, while also providing basin wide benefits in combination with storage across the basin. Distributed storage affords greater ability to locate storage where it minimizes impacts to agriculture and homes and provides opportunities for multipurpose benefits. Working for watershed districts in Minnesota, I have personally been involved with several constructed impoundment projects with a total storage capacity of about 100,000 acre-feet. None of them impacted residences and all provided multipurpose benefits in addition to local and regional flood control. Several more projects are in the planning stage.

The Red River Basin Commission (RRBC) included distributed storage as an integral component of its Long Term Flood Solution (LTFS). Its goal is to reduce Red River Main-stem 100 year peak flows by 20%. The RRBC has supported several modeling efforts in developing its plan. The recently completed Halstad Upstream Retention Study (HUR) identified and modeled the downstream effects of 96 impoundment sites in the Red River Basin upstream from Halstad Minnesota with a total storage capacity of about 560,000 acre-feet. As a signatory of that report, I fully support its content and recommend its use as a reference in planning water resource projects within the Red River Basin.

However, the USACE and the DEIS have distorted the amount of distributed upstream storage needed to provide flood relief at Fargo by suggesting that all 96 sites would need to be constructed. In fact, only 40 sites with a combined storage capacity of about 226,000 acre-feet are upstream from the Fargo gage. An additional 26 sites with a combined storage capacity of about 120,500 acre-feet are within the watersheds of the Sheyenne, Maple, and Rush Rivers which do affect flooding north and west of Fargo. The remaining 30 sites with a combined capacity of about 213,000 acre-feet enter the Red River well downstream of Fargo.

The USACE and the DEIS eliminated distributed storage as a practical alternative by stressing the fact that the distributed storage would not, by itself, meet the project purpose. It would however, by itself, reduce the average annual damages in the F-M area on the order of 50%. The DEIS does indicate that DSA would substantially reduce flood risk to the F-M area as well as flood damage reduction throughout the basin area and recommends that it continue to be



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pursued. However, the DEIS treats it as a competing strategy to the proposed project. The DEIS fails to point out that not including distributed storage as an integral component of the F-M project reduces the practicality of its implementation within the upstream basin and therefore diminishes the probability that the basin wide benefits of the envisioned 20% flow reduction will ever be realized.

The benefits of distributed storage are further downplayed by unsubstantiated speculation that less than 20% peak flow reduction would result during larger than USACE-wet 100 year flood events or during events that had less evenly distributed runoff than modeled in the HUR study. The rationale is that heavier runoff amounts would overwhelm the storage capacity of the impoundments and that, when full, the impoundments would no longer be effective. That seems intuitively logical if one assumes a hypothetical basin wide flood of extraordinarily low probability. However, within the reasonable range of floods that I have modeled the drop off in effectiveness has not been significant. That is due to the location and design of the typical impoundments included in the HUR study. They typically have total capacity similar to 100 year runoff so they do not fill until late in the flood event. As they also tend to be located high within the watershed, it is usually the early runoff from their drainage areas that contributes to the mainstem peaks. The storage capacity is not exceeded until later, even during much larger flood events.

I disagree, then, with the USACE's belief that distributed storage would have significantly diminished effectiveness during the USACE 100 year (wet) flood. However, it would be a mistake to neglect the benefits of distributed storage to lower more frequent flood elevations as well. The USACE -wet 100 year flood is a flood significantly greater than the floods of 2009 and 1997. The USACE (wet) 50 year flood is approximately equivalent to the 2009 flood. Under the proposed operating plan, the floodgates would be closed when flood-flows reach the ten year (ten percent probability) level. As a result about sixty percent of the floods that would trigger storage operations would be in the ten year to twenty-five year range. About eighty percent of the floods that will trigger storage operations would be 50 year floods or below. Reducing flood flows in these ranges would be of significant benefit to the towns and agricultural lands upstream of any proposed Red River dam.

It is reasonable to raise the question of distributed storage effectiveness in very large and non-uniform flood events. However, the tools that were developed and used in the HUR study are capable of answering these questions and should be used to determine the validity of the unsupported assertions found in the DEIS.

Distributed storage is an ongoing program, actively supported by state agencies and local units of government. The FIS should consider the effectiveness of any alternative with and without that distributed storage. I understand the difficulty in certifying 100 year flood protection that depends on construction of multiple upstream impoundments. However, its inclusion would reduce the staging area storage volume during any given flood event by making all floods



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smaller and could also increase flood protection to a 500 year level and beyond as suggested in the LTFS.

Operation

Statements in the DEIS that project operations will not begin until the flow rate reaches 17,000 cfs can easily be misinterpreted to mean that the project will have no effect on smaller floods. Although the staging area control gates may not be operated during lesser floods, the diversion channel certainly will operate as it does so automatically without any means of manual intervention other than the gate at its very upstream end. As currently proposed, the diversion will tend to increase downstream flooding by draining floodplain areas along the diversion and along the tributaries that the diversion intercepts providing an improved outlet for tributary flood flows.

The operation of the staging area outlet gates on the Red and Wild Rice Rivers to control flows on the Red River through Fargo is clearly presented in the DEIS. However, the operation of the staging area outlet gate at the inlet to the diversion channel is totally obscure. Presumably, its operation is dictated by the need to mitigate the downstream impacts of increased flows caused by the diversion channel and levees. This should be clearly stated. I understand that its operation may be complicated in its details. But at least the operating objective should clearly be presented, which I think is to release as much water from the staging area as possible without increasing downstream flood peaks relative to what they would have been without the project. Appendix A to the DEIS contains operation rules based, at least in part, on a "power law" relationship between storage and discharge. The relevance of the power law function in this application is not explained. What does follow is 10 pages of decision logic. I tried to follow the logic through representative scenarios, but there are references to tables that were not provided. The EIS needs to include a much clearer presentation of the operating objectives and parameters. The project is not ready for public review without a comprehensible operating plan!

Operation of the control gates will determine future upstream and downstream impacts as well as the beneficial impacts within the Metro area. The DEIS states that the Diversion Authority will own and operate the project. It also refers to operation by "adaptive management". Who will have the authority to make those management decisions and how will they be made. What are the standards or sideboards that establish the limits of adaptive management flexibility? Is it possible for the operator significantly to alter operations in ways that would increase the duration or frequency of flooding beyond that described in the DEIS and operating plan?

Upstream and Downstream Impacts

The anticipated water elevations of the project and evaluated alternatives are reasonably well presented as stage hydrographs at representative locations upstream, within, and immediately downstream from the staging area.

The flood impacts of the project downstream from Fargo are not presented at all. Can it be assumed that there are no downstream impacts? Or are there downstream impacts that are not



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considered significant by the USACE? The DEIS does not say. The EIS should include stage and flow hydrographs at representative downstream locations.

Along with the larger floods, the presented results should include smaller less frequent floods which can cause significant agricultural damages when they occur during the growing season. It is very important to understand that the project's downstream impacts are not projected to be directly mitigated by storage in the staging area during less than 17,000 cfs flood events. Project operations call for no restriction of Red River flows during smaller events even though the diversion channel and levees will be functioning to decrease floodplain storage and consequently increasing downstream flows. The EIS should present this information along with a rationale explaining why these impacts need not be mitigated. If these impacts come as a surprise to downstream interests, there will be pressure to provide mitigation which would have additional impacts within the staging area.

LPP Violates Basic Flood Management Principles

At the beginning of this report, I described three fundamental principles of flood protection that minimize impacts:

- (a) Levee alignments should follow the outline of highly developed areas only;
- (b) Upstream storage should be strategically located to provide maximum benefit at minimum practicable impact,
- (c) Conveyance improvements should be aligned to minimize draining lands additional to the targeted protection area.

Levee protection proposed for the LPP extends well beyond the existing highly developed area which increases offsite impacts due to loss of natural floodplain storage. The staging area dam will serve as a levee on the south side of the FM area. The area inside (north of) that levee is largely undeveloped floodplain and that alignment increases the impacts. The other parts of the Metro levee system should be reviewed by the EIS to identify the least impact solution.

The USACE has only been willing to consider as a viable option the storage they plan to build themselves in the staging area. They have thus inappropriately ruled out any measures outside the project location for both the 100 year (USACE-wet) level of protection and for additional protection to attain desired higher goals (500 year).

The chosen alignment of the conveyance improvement, a diversion channel on the North Dakota side, flows through a floodplain area and intercepts four major tributaries. So its effect is not only to reduce flows on the Red River through town, but also to greatly reduce floodplain storage in the area along the diversion and up each tributary.

An alternate strategy also incorporating all 3 methods but modifying their application to minimize the loss of floodplain storage and the need for mitigation storage would be as follows:



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- a. Move the south levee alignment as far north as practical thereby minimizing the protected future development area and the loss of natural floodplain storage south of FM.
- b. Include distributed storage upstream from Fargo as identified in the Halstad Upstream Study in the design to supplement the other methods.
- c. Relocate conveyance improvements to avoid/minimize the loss of natural floodplain storage.
 - i. Increase capacity of the floodway along the Red River through town by setting back levees and enlarging the floodway (not the channel) cross-section through restricted areas. Existing levees have already removed the natural floodplain storage along the Red River through town so there would be little potential for additional adjacent floodplain drainage.
 - ii. Reroute the diversion outside of the floodplain thereby eliminating the potential for drainage of natural floodplain storage. The only practical locations appear to be on the Minnesota side.

CONCLUSION

In summary, I offer the following recommendations respecting the Draft EIS:

- **Address Floodplain Development:** The implications of the project promoting floodplain development should be discussed in the EIS along with the relationship between the additional volume of displaced floodplain water and the magnitude of offsite flooding impacts.
- **Discuss and Quantify Benefits of Modifications to Confine Protection to Highly Developed Areas:** The EIS should describe how the project could be modified to implement the first of the three flood control principles described above: "Levee alignments should follow the outline of highly developed areas only, and not include green spaces such as parks, golf courses, ag land and other undeveloped areas. Such areas may be protected during lower flood events, but not during major events." The EIS should describe and quantify the benefits of implementing this principle for consideration by permitting authorities.
- **Discuss and Quantify Benefits of Upstream Distributed Storage:** The EIS should describe how the project could be modified to implement the second of the three flood control principles: "Upstream storage should be located, where practical, on lands that are currently flood prone or on lands where a large volume of storage can be efficiently placed on a small area. It should also be located and designed to provide to as large an area as practical and multipurpose benefits. The EIS should describe the benefits of implementing this principle on a large scale, so that policy makers can consider whether



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distributed storage should become a part of the project and for consideration by permitting authorities.

- **The tools that were developed and used in the HUR study should be used to determine the validity of the currently unsupported assertions found in the DEIS regarding the effectiveness of DSA in very high flood events.** The EIS should recognize that the vast majority of storage operations under the operating plan would be triggered by floods well under the base (100 year) flood.
- **Discuss and Quantify Benefits of Relocating the Diversion Channel.** The EIS should describe how the project could be modified to implement the third of the three flood control principles: "Conveyance improvements should be aligned to minimize draining lands additional to the targeted protection area." The EIS should recognize that the most practical method of implementing this alternative is to adopt the Minnesota diversion alternative. The EIS should describe and quantify the benefits of implementing this principle for consideration by permitting authorities.
- **The EIS should include evaluation of a levee/dam alignment that minimizes the protected floodplain area.**
- **The EIS should not be regarded as complete without a comprehensible operating plan that not only addresses the protections provided to Fargo-Moorhead but also to the upstream and downstream areas.** The project is not ready for public review without a comprehensible operating plan.
- **Clear principles governing operation of the control gates should be established.**
- **Discuss and Quantify Benefits of Including Strategies that Reduce Impacts.** The EIS should quantify the total reduction in storage required for mitigation of downstream impacts that would result from implementing strategies to reduce downstream impacts of levees and diversion.

Sincerely,

Widseth Smith Nolting & Assoc., Inc.

Charlie Anderson, PE

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

Date 10-27-2015 Reg. No. 12775

ATTACHMENT B

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Appendix A

EO 11988 embodies fundamental enforceable environmental sustainability principles, principles which result from decades of ecological and engineering scholarship, and the EO 11988 principles must be applied in Minnesota public waters permitting, as informed by a sufficient environmental review.

The purpose of this Appendix is to urge that the EIS should recognize that Executive Order 11988 establishes a legally binding sustainability principle, and that the draft EIS fails to apply it correctly. EO 11988 results from decades of engineering research and public policy analysis leading to recognition that big-engineering structural solutions designed to expand development into the floodplain (levees, channel modifications, diversions, and dams) increase flood risks. Even when development is located behind certified levees, floodplain development encourages development on low ground, and that development is exposed to risk when future generations fail to maintain the levees, or when the hydrology of the region changes. Development of floodplain removes flood storage and exacerbates flooding in the remainder of the basin.

EO 11988 was issued by the Carter-Mondale administration, because previous efforts had failed to reign in the USACE and Bureau of Reclamation's propensity to build large, environmentally damaging, costly engineering water control projects to economically benefit local sponsors. Starting in the 1940's, with the groundbreaking scholarship of water engineer Gilbert White, it became recognized that encouragement of development into the natural floodplain (as Diversion Authority proposes here) by providing floodplain protection through levees and other devices was not cost-effective, was actually exacerbating floods, and was increasing the cost to taxpayers of flood relief.¹ White and others showed that preservation of natural floodplain storage was critical to maintaining river and watershed storage capacity during major storm events and snowmelts. By constructing levees around these natural floodplains, thereby attracting development into low-lying floodprone areas, federal and state water projects were creating more flooding, not less, and were locating capital projects in low areas vulnerable to flooding.

Combined with massive federal flood insurance subsidies, the approval of water resource development projects that offered protection to undeveloped floodplain was encouraging development in places vulnerable to flooding and simply shifting floodwaters onto others. Despite a growing consensus that national floodplain policy must shift to a strategy of floodplain preservation, Congress continued to receive, and then approve, pork barrel Corps projects that failed to take these principles into account.

¹ See, e.g., Gilbert White, *Human Adjustment to Floods: A Geographic Approach to the Flood Problem in the United States*. (1942); Hoyt and Langbein, *Floods*, (1955); White, et al, *Changes in Urban Occupancy of Flood Plains in the United States* (1958). White's landmark work, beginning with his 1942 University of Chicago doctoral dissertation "Human Adjustment to Floods," challenged the notion that natural hazards are best addressed by engineering solutions.

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In the Flood Control Act of 1960, Congress stressed the need for guidance in reducing flood losses by controlling development of floodplains. PL 86-645. Then, in 1966, President Lyndon Johnson's Task Force on Federal Flood Control Policy issued "A *Unified National Program for Managing Flood Losses*." Concurrently, President Johnson issued the first floodplain Executive Order, 11296, directing federal agencies to provide leadership in preventing uneconomic use and development of floodplains and reducing flood losses². Still, the National Water Commission's report "Water Policies for the Future" warned that floodplain development continued unabated:

Citizens in all parts of the Nation have been content to see billions of dollars spent to help fellow citizens subject to loss of life or fortune. But, throughout the many years that this benevolent effort has been under way, other individuals have been busily developing other flood plain areas in such ways that the initial goal of rescuing those unfortunate enough to be endangered by floods has become less and less attainable.

1973: National Water Commission, Water Policies for the Future.

Despite a growing consensus that national flood control policy should be based upon sustainable solutions, instead of big engineering and floodplain development, agencies like the USACE continued to sponsor project after project connected to floodplain development. Local and state sponsors proved unable to resist the intense pressures to pursue local profits for land speculators realized when federal funds paid for the conversion of floodplain for development.

Two years after the National Water Commission's report, the Comptroller General issued a report warning that as a result of inertia favoring costly structural engineering solutions, federal agencies had still failed effectively to implement national policy regarding floodplains and called for redoubled efforts. Comptroller General, *National Attempts To Reduce Losses From Floods By Planning For And Controlling The Uses Of Flood-Prone Lands (1975)*. The report explained,

Historically, the primary method to reduce flood damage has been through structural measures such as dams, reservoirs, dikes, levees, channel improvements, and watershed treatment. In the past decade, however, greater emphasis has been placed on planning and regulating the use of floodplains to curtail flood damages.

Despite this emphasis, the report concluded:

² In *National Attempts to Reduce Losses from Floods by Planning for and Controlling Uses of Flood-Prone Lands*, the GAO reported that federal agencies do not adequately evaluate flood hazards in their programs. Many of the agencies, the report noted, did not have or properly implement their flood-related procedures. In addition, the report observed, Executive Order 11296 had had limited effect in reducing flood losses due lack of implementing procedures and, among agencies that did have procedures, there was limited compliance.

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Some agencies. . . encourage unwise use and development of flood-prone areas, which may be used to justify the construction of flood control projects that would not be necessary if such use and development had not occurred. Comptroller Report, Id. pages 10-11. . . Although the need for reducing flood losses through more rational use of flood-prone lands has long been recognized, we found that only limited progress has been made in achieving this goal. 1975 Comptroller Report, p. 47.

The resilience of inertia in the federal bureaucracy to resist implementation of new sustainable floodplain policy required some form of policing function to ensure that floodplain preservation policies were being observed, the Report continued:

We believe that the lack of progress by Federal agencies in considering flood hazards in their own programs demonstrates a need for OMB to take a more active role in monitoring Federal efforts and for Water Resources Council to fulfill its leadership role more promptly. Id. at page 40-41.

If national floodplain policy were to reverse course, it would require a mechanism to ensure that proposals to invade or destroy natural floodplain would be identified as such to the public, to Congress, and to those within the executive branch charged with accountability functions. In 1977, President Carter, citing the National Environmental Policy Act, (NEPA), the National Flood Insurance Act, and the Flood Disaster Protection Act, issued a new and strengthened Executive Order, 11988, to foster agency implementation of national floodplain policy.

Across the executive branch, all agencies were required to implement EO 11988 policies in their administrative regulations, thus giving the sustainability principles the force of law. This is the fundamental error in the approach that USACE and DA have taken in this project. The local St. Paul District treated EO 11988 as a value, to be weighed along with other values at the discretion of the project proponents. They have repeatedly cited EO 11988 as something that could be overridden, and even ignored, depending upon whether the St. Paul District believes that in a specific instance, some other competing policy outweighs the requirement that floodplain be preserved.

On the contrary, EO 11988 requires that a federal project “must avoid direct or indirect support of floodplain development wherever there is a practicable alternative” to development in the floodplain. The purpose of the order is not fulfilled by “considering” floodplain development, nor is it fulfilled by “considering alternatives.” The order requires avoiding direct or indirect support of floodplain development wherever there is a practicable alternative. The language of the order contains the following key words³:

Avoid: The project *must* avoid direct or indirect support of floodplain development.
(Here the project provides direct and indirect support of floodplain development)

³ See Written Comments of Tim Fox, Wilkin County Attorney, October 12, 2015.

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Whenever: Direct or indirect support of floodplain development must be avoided whenever there is a practicable alternative

Practicable alternative: The project must not support floodplain development if development can occur somewhere else. (Here, as discussed below, there are plainly practicable alternatives to development of the floodplain).

Providing flood protection to the floodplains south and north of metropolitan Fargo violates the principles of EO 11988. The USACE itself made that determination in 2009, but failed to acknowledge that determination in the Federal EIS. When we discovered this determination in the administrative record, the Department ruled that we could not submit it until the comment period. We now do so.

Despite passage of regulations giving EO 11988 the force of law, USACE and some other agencies continued to advance projects like this one that blatantly violate both the regulations and the Executive Order itself. In 2003-2004, a series of reports confirmed agencies continued to promote projects that were not cost effective by distorting the relative costs and benefits of these projects and by promoting continued development of natural floodplains. A coalition of environmental groups and budget conservatives called for redoubled Congressional support for EO 11988 principles. The National Wildlife Federation and Taxpayers for Common Sense captured this sentiment in their "Crossroads Report," published in 2004. The report called for Congress to strengthen the implementation of EO 11988 in the coming Water Resources Development Act, ultimately passed in 2007:

There is a long history of USACE manipulation of hydrological, economic, and other data to justify the highly engineered massive flood control projects. While USACE projects have produced some positive economic benefits for the nation, they have also caused significant environmental harm. Large-scale structural projects planned and constructed by the USACE have also increased flood risks for many communities, reduced water quality, impaired recreational opportunities, and damaged economies that rely on a healthy environment. *See Crossroads, Congress, the Corps of Engineers, and the Future of America's Water Resources, National Wildlife Federation and Taxpayers for Common Sense (2004).*

Damage caused by USACE projects encompassed both initial projects and ongoing operations, according to the report.

During the past decade, the National Academy of Sciences, the Government Accountability Office, the Army Inspector General, federal agencies, and Independent experts have issued a flood of studies highlighting a pattern of stunning flaws in Corps project planning and urging substantial changes to the Corps' planning process. Two National Academy of Sciences panels and the Department of the Army Inspector General concluded that the Corps has an institutional bias for approving large and environmentally damaging structural projects, and that its' planning process lacks adequate environmental safeguards.

ATTACHMENT B

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Less environmentally damaging, less costly, nonstructural measures that would result in the same or better outcomes are routinely ignored or given short shrift. This results in projects that are unnecessarily destructive, costly, and, in many cases, simply not needed. *See Id. See also* Houck, Breaking The Golden Rule: Judicial Review Of Federal Water Project Planning, *65 Rutgers Law Review* 1 (2012).

In section 1036 of the Water Resources Development Act of 2007, Congress responded to these concerns by including recognition of a national policy fully supportive of EO 11988's requirements. The WRDA amendments stated:

It is the policy of the United States that all water resources projects should reflect national priorities, encourage economic development, and protect the environment by (1) seeking to maximize sustainable economic development; (2) seeking to avoid the unwise use of floodplains and flood-prone areas and minimizing adverse impacts and vulnerabilities in any case in which a floodplain or flood-prone area must be used; and (3) protecting and restoring the functions of natural systems and mitigating any unavoidable damage to natural systems.

In explaining the purpose of this amendment, the chair of the Senate Environment and Public Works Committee stated:

The bill will also establish a new policy that gives a stronger emphasis on protecting the environment and the natural systems that provide critical natural flood protection to communities. It also directs that there be a comprehensive study of the nation's flood risks and flood management programs. 153 Cong. Rec. S11974-02, 153 Cong. Rec. S11974-02, 2007 WL 2767477.

The DEIS parrots the USACE's contention that the EO 11988 issue is simply a matter of the location of the Diversion itself. It states:

The USACE and the Diversion Authority have concluded that a diversion channel is the alternative that best meets the project purpose (as stated in Section 2.5 of the FFREIS) "to reduce flood risk, flood damages and flood protection costs related to the flooding in the Fargo-Moorhead Metropolitan Area," that there is not a practicable alternative located outside the floodplain and, as such, Executive Order 11988 requires that impacts to the floodplain be minimized. The diversion alignment of the selected plan removes some land from the floodplain and leaves other areas in the floodplain.

The issue is not the location of the Diversion itself: the issue is whether the Diversion is going to be allowed to eliminate floodplain storage.

ATTACHMENT C

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Wilkin County ***Resubmission of July 2015 Comments***

In July of 2015, we urged the Department to consider the concerns of Wilkin County during the environmental review process. The County believed that the Department had an obligation to consult actively with impacted local governments, to make sure that the regulatory concerns that those governments had would be addressed. We urged that allowing the project proponents special access to the process, to supply data and opinions throughout the process, but to refuse to receive parallel information from other impacted governments was inconsistent with the letter and spirit of the environmental review process. Wilkin County sought to submit its concerns in written form, but the Department ruled that it could not. For this reason, we are not re-submitting a revised version of those concerns for consideration at this time.

In June of 2011, Minnesota DNR urged the USACE to *address potential inconsistencies between the Locally Preferred Plan (LPP) and "standards, ordinances, and resource plans of local and regional governments."* DNR explained that *"This information will be necessary for both the state environmental review and permitting process."* . In August of 2010, the Department's letter urged that (a) that DA had radically altered the project purpose that procured Congressional authorization of the feasibility study; (b) That the new approach to the project was a violation of agreed upon sustainability principles found in the mediated settlement agreement; (c) That this issue must be addressed in the Minnesota Environmental Review so that Minnesota could determine whether the revision of purposes was consistent with Minnesota law and policy

Wilkin County, believes that the LPP remains inconsistent with local ordinances, standards and resource plans. They believe that local governments should have a collaborative role in making sure that those inconsistencies are addressed and that better and more communication between local governments and the environmental review process is necessary. If this project cannot receive permits, the sooner that is recognized, the sooner an acceptable plan can be adopted and implemented.

The LPP threatens to flood large portions of four counties. Our primary goal is to develop a shared understanding of how local government will be involved in addressing issues of concern throughout the balance of the environmental and permitting process. This document lists some major areas of concern.

- 1) ***Four Key Environmental Criteria:*** *How will the DNR's four key environmental criteria (ecological sustainability, least impact solution, mitigation, and compliant with local standards) be addressed in the EIS and State Permitting and Local Government Permitting?*

In June 2011 comments to the Federal Environmental Impact Statement, State of Minnesota wrote the following –

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“It’s apparent that significant additional work is needed to demonstrate that the selected alternative is:

- ecologically sustainable,*
- the least impact solution,*
- one in which adverse effects can and will be mitigated, and*
- consistent with other standards, ordinances, and resource plans of local and regional governments.*

This information will be necessary for both the state environmental review and permitting process.”

These four key criteria should have been addressed in the federal environmental review, because they are “action-forcing” criteria directly tied to the key choices made at the federal level—(NED versus LPP, proposal to develop floodplain, elimination of distributed storage). Diversion Authority (“DA”) has justified the failure to address these issues in the federal environmental review by asserting that they would be addressed in the State environmental and permitting review. The potential for increased downstream flood flow (or resulting mitigation requirement) is directly related to the loss of flood plain storage resulting from the project. Therefore, in comparing alternatives, each should be evaluated as to the loss of natural flood plain storage.

For this reason, we feel it is absolutely critical that these four key environmental criteria must play a central role in the state environmental and permitting process. We are uncertain whether these four key criteria are going to be directly addressed in the final EIS, and are not clear about how the DNR intends to address them in the permitting process. In particular:

- What are the legal and policy standards that will be followed in addressing each of these key environmental criteria? What is the data that has been accumulated to address these questions?*
- Who is determining the legal and policy standards that will be applied and what is the forum where they will be made transparent?*
- Is the DNR willing to engage in dialog on these key environmental criteria before the EIS draft is issued?*
- Has DNR leadership given instructions to the outside consultants and to DNR staff on the DNR’s interpretation of these four criteria so that there is clarity on how the criteria should be applied?*

This page contains no comments

2) **Least Impact—Project Purpose Manipulation:** *We are concerned that DA and USACE are attempting to manipulate the project purpose definition in order to evade Minnesota’s requirement that the least impact solution must be selected.*

This issue arises because NEPA is a procedural statute which requires due diligence to disclose the environmental consequences of each potential alternative. NEPA is an “action-forcing” process, because it supplies information about environmental consequences which, in turn, operates in the context of other statutes which have substantive requirements. For example, when the EIS discovers impacts on endangered species, the Endangered Species Act (ESA) forces the project proposer to comply with ESA’s substantive requirements (as occurred with the snail – darter and the Tellico Dam). The 8-step process for floodplain impact disclosure similarly operates in connection with the substantive floodplain protection provisions in the Water Resources Development Act of 2007 (discussed below) and the regulations implementing EO 11988. Thus NEPA discloses the consequences of floodplain loss, but WRDA and EO 11988 demand that floodplain development must be avoided.

USACE concluded that the NED project meets the project purpose, has the best cost-benefit ratio, and the least environmental impact. But, USACE allowed DA to select the LPP project, (unlawfully, we believe), because DA wanted to develop 50 square miles of floodplain. NEPA alone would not bar the DA from selecting the LPP: it merely requires an action forcing disclosure. But the fact that USACE allows selection of a very damaging environmental alternative cannot be allowed to override MEPA and should not have been allowed to override EO 11988.

We are concerned that USACE is attempting to evade MEPA by altering the project purpose so as to convince Minnesota to disregard the least impact solution.

- *The USACE’s selection of the NED project after extensive Congressionally authorized review establishes that the NED project by definition meets the project purpose. Protecting the floodplain from flooding by the five tributaries is not a project purpose, it is a rationalization for selecting a more costly, more damaging, less beneficial project choice.*
- *Allowing a project proponent to eliminate an alternative for purpose of section 116D.04 simply by redefining the project purpose would gut MEPA’s substantive protection of the environment.*
- *Local permitting authorities, like Wilkin County, are not required to allow their citizens to be flooded by a project that is not the least impact solution.*
- *Minn. Regs. Section 6115.0410, subpart 8, requires a dam applicant to prove that there is “a lack of other suitable feasible and practical alternative sites” for the project. The NED project meets that criteria.*

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- *The 8-step sequencing process, which is required by law, is dispositive on the existence of other projects which may accommodate urban growth without invading the floodplain.*

The fact that the second-dam location is being considered does not negate the requirement that in the permitting process, MEPA requires that permitting authorities must determine whether the proposed project is the *least impact* solution, precisely as the State of Minnesota’s June 2011 comments indicate. The NED project has been reviewed in the Federal EIS. It has been found by the USACE to be feasible and determined to be the project which best meets the project objectives. Permits must be denied to the LPP, because developing floodplain and eliminating existing floodplain storage is not a legitimate project purpose, and because it causes avoidable harm.

- 3) *We would like to establish better ground-rules for communications between Wilkin County (and other impacted Minnesota jurisdictions) and the DNR on issues of importance to those jurisdictions.* Our letter to Jill Townley explains the legal basis for those discussions. See Minnesota Statutes Section 116D.04 subdivision 2a (where practicable, joint development of information needed for state and local permitting); EQB Rule 4410.0400 Subpart. 2 (RGU responsibility for verifying accuracy of environmental documents); EQB Rule 4410.2200 (governmental unit role in providing information).

It doesn’t seem appropriate that the hydrological impacts should be shared and discussed exclusively with the DA, and released to impacted jurisdictions at the whim of the DA. The negative impacts of the proposal fall upon the upstream counties. It is clear that the DA has ready access to the environmental review process. They obtain drafts before we do; they freely distributed portions of those drafts before we see them, the data that they supply is included and considered. When we request copies of what the DA has, we are forced to file data practices requests and receive the documents only after paying fees and waiting for the data practices processing delays.

We have now received preliminary draft appendixes including hydrological information. It has been suggested that if we discover errors in that data, that our information or concerns cannot be shared until the comment period. However, at some point, we expect that the DA will be seeking local permits, rezoning or other local authorities. Wilkin County has adopted an ordinance prohibiting the use of Wilkin County for massive flood water storage without rezoning. Holy Cross is engaged in a similar process. The environmental review process should involve all local authorities equally.

We have a number of major concerns on reviewing the preliminary draft EIS and appendixes regarding hydrological issues. We think there is mutual benefit to establishing lines of communication to resolve and clarify those issues.

- 4) *Distributed Storage.*
- If the rationale for refusing to consider distributed storage as a mechanism to reduce or eliminate the need for the Red River dam is that local governments in

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Minnesota will not voluntarily implement distributed storage, then doesn't that same principle apply to the massive storage being contemplated in Wilkin County? If, on the other hand, the DA can be granted the power to flood farmsteads and communities, why then can it not be granted the power to establish distributed storage in smaller unoccupied distributed locations?

- Distributed storage should be considered a method of mitigation to be used to supplement other mitigation strategies, such as maintaining existing floodplain storage.
- If the underlying rationale for eliminating distributed storage is that it will take 20 years to complete distributed storage, isn't that inconsistent with the fact that it will take more than 50 years to use up all of the high ground for Fargo's urban development before it could possibly need to grow into floodplain?
- The Halstad Upstream Retention Study (HUR) identified a total of 96 project sites with a 100-year storage capacity of 559,220 acre-feet (AF). This number of sites and storage volume is incorrectly referred to as the amount of distributed storage required to provide 20% flow reduction at Fargo. In fact, only 40 of those sites with combined storage capacity of 225,970 AF are upstream of the Red River gaging station in Fargo. An additional 26 sites with a combined capacity of 120,490 AF are located in the Maple/Rush/Sheyenne watershed that directly affects the northwest FM area. The remaining 30 sites with a combined capacity of 212,760 AF enter the Red River far downstream from the FM area. They would have no impact on FM area flows and very limited potential impact on FM area flood stages.
- The efforts to minimize the impact of distributed storage seem like rationalizations, rather than reasons. The USACE historically prefers big engineering solutions. Congress specifically legislated against this historic preference, when it passed the sustainability requirements in 42USC §1962-3 which provides that ([projects should] "maximize sustainable economic development, avoid unwise use of floodplains and flood-prone areas, minimize adverse impacts and vulnerabilities in any case in which a floodplain or flood-prone area must be used; and protect and restore the functions of natural systems...")

5) ***Other Hydrology and Engineering Issues.***

The draft appendices contain additional detail regarding operations and hydrology. There has as yet been little communication with communities proposed for flooding about the implications of the proposal. The appendices seem to acknowledge also that the hydrology is so complicated that some form of experiential "adaptive management" will be required. When and how is there going to be an exchange of information on the meaning of the current proposals, the range of possible adaptations, and who will control adaptations? There is a concern that adaptive management means that more water will be diverted onto upstream communities as circumstances dictate, with the decisions always favoring the DA's needs and suppressing the negative impacts as insignificant in comparison to further development goals of Fargo

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communities. How can proposed flooded jurisdictions be expected to consider the consequences in their own permitting regimens without dialog?

Our engineer says that the hydrology is very complex and he needs more information to consider and explain. What is the process available to us to engage in that exchange?

Operating plans seem to identify a specific limited subset of scenarios which may occur. However, future flooding scenarios may markedly differ from these scenarios. Shouldn't there be a wider more representative set of hydrographs, and operating scenarios? Or, is the project proponent intending to purchase flood easements that essentially give the operator carte blanche to operate the gates at its complete discretion?

A preliminary draft appendix says that staging will begin at the 10 year flood. Is the definition of 10 year flood subject to re-definition depending on future circumstances? How will the operations change if the alleged wet cycle ends?

The history of other water projects has suggested that the operator of the project is vulnerable to pressure to modify its purpose so as to expand the project purpose to the detriment of less populous regions. Are future decisions about operations going to be predicated on the concept that the politically powerful regions can always supplant politically less powerful regions?

We are concerned that the preliminary draft EIS does not adequately address federal and state law that require use of sustainable flood control approaches. This project eliminates 50 square miles of floodplain storage to free up that land for development. In presentations to the Governor of Minnesota, the USACE stated that developing that floodplain would be unlawful. There has never been any showing that 50 square miles of floodplain is needed for development; unimpeachable evidence shows that there is more than adequate high ground available for development. What is the rationale for removing floodplain storage and diverting those floodwaters onto homes and communities? The following provisions seem to play virtually no part in Diversion Authority's analysis of the project.

October 27, 2015

Direct Dial: 320-656-3508
jvonkorff@RinkeNoonan.com

Townley
Project Manager Environmental Policy and Review Unit
Minnesota Department of Natural Resources
25 Ecological and Water Resources Division, DNR 500 Lafayette Road
St. Paul, MN 55155-4025

OVERNIGHT MAIL:

Fargo-Moorhead Flood Risk management Project Draft Environmental Impact Statement (DEIS) – Comment Attachments

Dear Jill:

I enclosed please find a set of attachments on CD to the comments of the Richland-Wilkin Joint Waters Authority's comments regarding the DNR's Draft Environmental Impact Statement. Some of the attachments are rather large and we felt it would be easier for you to receive these in CD form rather than to receive them by email.

The CD also contains the material that we attempted to submit to the Department back in May 2015 when we first discovered it in the Federal administrative record. We wanted you to have it, because the material completely undercut the statements of the USACE in its own EIS as well as in to you in the state process. The state's DEIS would have greatly benefited from including this material at the time; we trust that it will now be considered.

I would like to remind you in this connection that in August of 2010, the DNR notified the USACE that it is concerned that the LPP represented a fundamental departure from the project principles that were developed during the initial project stages. Indeed, it was those principles that resulted in the USACE's selection of the Minnesota 35K diversion as superior from both an environmental and cost benefit perspective. When the LPP was advanced, the DNR warned that Minnesota had not agreed to the LPP as a suitable project alternative. One of the purposes of the Minnesota Environmental Review was to advise the Governor on whether he should object to a major change in purpose. Our comments tomorrow will make it clear that we expect that in the permitting phase, the Governor's original expectation that he will be provided with a comparison of LPP and NED will be honored, because it certainly has not been honored by the current EIS. §

Commenter 97 cont.

Summary of Comments on 97a-jcont_JPAGeraldVonKorff_Mail1.pdf

Page: 1

Author: cagreeso Subject: Text Box Date: 4/22/2016 12:06:09 PM
Commenter 97 cont.

Author: cagreeso Subject: Sticky Note Date: 4/22/2016 12:09:59 PM
Cover letter that details attachments provided to the DNR (on file) in support of comments provided in October 28th submittal.

1 Fownley
October 27, 2015
page 2

We've also provided some resources that may assist your staff in understanding the importance of Executive Order 11988 and its implementation.

We will provide our comments tomorrow electronically by email.

Sincerely,



Gerald W. Von Korff
K&Kb
closures

This page contains no comments

This page contains no comments

APPENDIX TO COMMENTS – EXHIBIT LIST:

1. Costs may require limits _ INFORUM :
<http://www.inforum.com/news/3868652-how-far-south-should-fargo-grow-costs-may-require-limits>
2. Fargo mulls huge \$180 million water storage project _INFORUM
<http://www.inforum.com/news/3869379-fargo-mulls-huge-180-million-water-storage-project>
3. BigDitch-WPictures - Television story on "Big Ditch"
4. Declaration of Kim Chapman 12/09/14
5. AR0000722 - Read Ahead - RE: 11988 Southside Issues
6. Aaland Flood Plain Reduction Option - Cash Aaland Letter 8/13/15 to Jill Townley – RE: Comment for DEIS, Fargo-Moorhead Flood Risk Management Project
7. Star Tribune 8/2/15 – Streetscapes: *The true costs of sprawl*- by Thomas Fisher
8. Fargo Growth Plan Appendix 1 and 2
9. Fargo Comprehensive Plan -- extracted page - Neighborhoods, Infill, and New Development
10. Lindquist&Vennum PLLP, on behalf of the City of Hendrum, Letter 8/9/10 to Aaron Snyder (USACE) - RE: Comments on Fargo-Moorhead Metropolitan Area Flood Risk Management Draft Feasibility Report and Environmental Impact Statement (May 2010)
11. Ruke Noonan, on behalf of MnDak Upstream Coalition, Letter 6/20/11 to Aaron Snyder (USACE) - RE: Comments of the MnDak Upstream Coalition to the Fargo-Moorhead Metropolitan Area Flood Risk Management Supplemental Draft Feasibility Report and Environmental Impact Statement of April 2011
12. FMMFS Phase 1 - Figure 2 - Southside Flood Control Project Area Protected
13. DNR Letter 8/6/2010 to USACE - Comments on: Planning Objective and Constraints
14. Stoel Rives LLP, on behalf of the City of Oxbow, Letter 6/20/11 to Aaron Snyder (USACE) - RE: Supplemental Draft Feasibility Report and Environmental Impact Statement – Fargo-Moorhead Metropolitan Area Flood Risk Management
15. Associated Press - New leaders mull direction of Fargo's rapid growth

This page contains no comments

16. FFRMS Talking Points 3/9/15

17. Wilkin County Land Use Ordinance and Comp Plan

18. 8-Step Process from PBS Floodplain Management Desk Guide

19. March 2004 Crossroads Report - Congress, The Corps of Engineers and the Future of America's Water Resources

20. Water Resources Development Act - Oliver Houck's Judicial Review of Water Projects 2012

21. JPA letter to DNR regarding E.O. 11988 submitted in May of 2015 and rejected as premature. We resend this letter now within the comment period. §

From: [Darlene Finken](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS - Comments
Date: Wednesday, October 28, 2015 4:07:27 PM
Attachments: [Letter to Jill Townley FINAL Comments DEIS and Attach10_28_20.pdf](#)

Commenter 97 cont.



Please find attached to this email the comments submitted on behalf of the Richland-Wilkin Joint Powers Authority. Thank you.

Darlene V. Finken
Paralegal

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Summary of Comments on JPA_GeraldVonKorff_Commenter97k_Email2.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/10/2015 11:20:02 AM -06'00'
Commenter 97 cont.

Author: Medopera Subject: Sticky Note Date: 4/20/2016 9:30:42 AM
All comments/statements highlighted in this version are Comment ID: 97k

Topic: Comment Received, Misinterpretation or Inaccurate Comment

Comment ID: a-j are identified in a separate document.

Author: Date: Indeterminate

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October 28, 2015

Direct Dial: 320-656-3508
Jvonkorff@RinkeNoonan.com

Jill Townley
Project Manager Environmental Policy and Review Unit
Minnesota Department of Natural Resources
Box 25 Ecological and Water Resources Division, DNR 500 Lafayette Road
St. Paul, MN 55155-4025

SENT VIA EMAIL: environmentalrev.dnr@state.mn.us

**Re: Fargo-Moorhead DEIS
Comments of Richland-Wilkin Joint Powers Authority**

Dear Ms. Townley:

I. Introduction

These are the comments of the Richland-Wilkin Joint Powers Authority (JPA). The JPA is a Minnesota-North Dakota joint powers authority formed by Richland and Wilkin Counties with governmental members located in Cass and Clay County as well. Its members include a number of towns and cities in both states. The JPA has worked collaboratively with the Minnesota North Dakota Upstream Coalition (MnDak) to ensure that the views of communities and individuals located upstream of the proposed Red River dam are heard.

At the outset, we appreciate the efforts of the State of Minnesota and the Department of Natural Resources to examine the impacts of the Locally Preferred Project (LPP). While we have a number of concerns about the content of the Draft EIS, we think that taken together, the Minnesota Draft EIS and the Federal Final Environmental Impact Statement are sufficient to establish that the conditions necessary for State and local permitting have not been met. We recognize that the authors of a Minnesota EIS are not charged with making this ultimate permitting decision, however we believe that the Draft EIS could do a significantly better job of exploring the environmental facts that are necessary to inform the judgment of permitting authorities.

Although the document has many strengths, it fails utterly to deal with the central issues that caused the DNR to demand an EIS in the first place: the rationale and justification for what the DNR described as a "drastic" departure from the original agreed template principles for the Fargo-Moorhead project. We will turn to this issue in subsequent sections. **The DNR's central**

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[2171868] Letter to Jill Townley FINAL Comments DEIS 10 28 20
10/28/2015 3:47 PM

objection to the LPP was that by seeking to promote massive floodplain development and removing 50 square miles of floodplain storage in violation of EO 11988, the Locally Preferred Project (LPP) drastically deviated from the original Feasibility Study Planning Objectives and Constraints. As discussed below, the DNR's August 2010 letter, and subsequent letters in 2011, specifically focused upon the Diversion Authority's (DA) radical departure from the original developed inter-state understanding of the guiding principles to be utilized in developing flood control for the metropolitan area. One key reason why this State Environmental Review was initiated, was to assist the State of Minnesota in determining whether it could support deviation from those principles, or whether it would insist that the guiding principles would be restored.

It is therefore extremely disappointing that the Draft EIS virtually ignores this important issue. It is almost as if the Department got lost in the underbrush of minutia and detail, and forgot completely why it entered the EIS forest in the first place.

We will argue in these comments that the Final EIS must recognize:

- (a) That by drastically deviating from the original project purpose, the LPP unnecessarily impairs a critical natural resource, the flood water storage and conveyance capacity of the Red River and its floodplains, to a massive extent which cannot be justified by the legitimate need to protect the Fargo-Moorhead metropolitan area.
- (b) That the USACE's designation of the Minnesota 35K diversion as the NED project establishes that there exists an alternative which provides outstanding protection to the Fargo-Moorhead metropolitan area at a lesser cost and with significantly less environmental impacts. The dismissal of this project by project proponents as an acceptable alternative represents a violation of Minnesota Statutes Section 116D.04 subdivision 6 and effectively sabotages the Department's ability to fully investigate an alternative which meets MEPA's standards. It further sabotages the Governor's decision that he would exercise his statutory function under 33 USC § 701-1.
- (c) That the modification of the project purpose by the Diversion Authority is designed to accomplish an illegal objective: the elimination of 50 square miles of floodplain storage to promote development south and north of Fargo, which as a consequence inflicts unnecessary flooding on Minnesota.
- (d) That the statements of the Department in its June and November 2011 letters to the USACE remain as true today as they were then: that the Draft Environmental Impact Statement fails to demonstrate: that the LPP is ecologically sustainable, that it represents the least impact solution, that it has consequences that can be mitigated without inflicting unacceptable consequences on others, and that it meets the legal permitting requirements of the State and its political subdivisions. Nothing in the Draft EIS undercuts these conclusions.
- (e) That the LPP improperly eliminates major opportunities to preserve the flood

Author: jitownle Subject: Highlight Date: 12/10/2015 11:46:35 AM -06'00'
Inaccurate: DNR did not state an objection to the LPP and did not state that it would be a violation of EO 11988.

Author: Medopera Subject: Highlight Date: 12/10/2015 11:47:32 AM -06'00'
Inaccurate: State env. review was triggered by the Class I dam feature.

storage and flood conveyance functions of the Red River.

(f) That, while the original concept plan agreed to during the feasibility approach “fit within the ‘basin-wide approach’ as described in the 1998 Mediation Agreement...the tentatively preferred alternative [LPP] drastically deviates from the Feasibility Study Planning Objectives and Constraints.” August 6, 2010 DNR Letter objecting to LPP, incorporated and restated in July 2011 DNR letter.

In addition to the text of these comments, we requested a report from engineer Charles Anderson of WSN. Mr. Anderson provides numerous examples of the ways in which the project could be improved dramatically, reducing the volume of water that needs to be managed. The EIS should explore and describe these alternatives and convey those options to the Governor and permitting authorities so that they can each perform their statutory functions under 33 USC 701-1 and under MEPA. Mr. Anderson’s report provides further evidence that the LPP is not the least impact solution; that there are alternatives that can reduce or prevent the flooding of upstream communities. The Report is attached to our comments as an appendix.

II. The Draft EIS Fails Utterly to Address the DNR’s Original Objection to the LPP--- That it Modified the Original Project Purpose in Order to Justify Violations of Environmental Principals and Foster Illegal Development of the Floodplain.

The Draft EIS has completely lost track of the original purpose that triggered Minnesota’s Environmental Impact Statement. Minnesota’s environmental review was launched when the Diversion Authority (DA) rejected the USACE’s selection of the Minnesota 35K diversion plan, and chose instead a plan which Minnesota regarded as environmentally unsound. Minnesota asked USACE to address these concerns in the Federal EIS, but the USACE refused to do so, because USACE and DA wanted to rush a Chief’s letter to the Congress. Consequently, USACE and DA agreed to postpone the Minnesota’s concerns to the Minnesota environmental review. The Draft EIS has completely lost track of this original purpose. The point of the postponement was to provide a review of the implications of changing the project from NED to LPP, including the violations of EO 11988 and the mediated settlement principles contained in the LPP. The DA and USACE’s position that despite the undertaking in the federal EIS, Minnesota is now bound to review only the narrow purpose behind the LPP is completely unfounded and unsustainable.

In 1998, after much study and in order to resolve a hotly disputed generic environmental review, Minnesota and the USACE signed a so-called mediated settlement agreement designed to base Red River basin flood control on sustainable flood control principles. When the Congress authorized studies to develop a consensus plan which would provide massive federal aid to protect the Fargo-Moorhead Metropolitan area, all interested parties accepted sustainable flood control as the foundation of planning. Those principles were identified as the agreed “template” for flood control planning in the DNR’s August 2010 letter. Any flood control project would:

- Author: Medopera Subject: Highlight Date: 12/10/2015 11:48:56 AM -06'00'
Inaccurate: DNR did not state an objection to the LPP nor did it state the LPP violates EO 11988.
- Author: jtownle Subject: Highlight Date: 12/7/2015 10:38:04 AM -06'00'
- Author: Medopera Subject: Highlight Date: 12/10/2015 11:49:47 AM -06'00'
- Author: Medopera Subject: Highlight Date: 12/10/2015 11:50:06 AM -06'00'

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- Reduce flood risk and flood damages in the Fargo-Moorhead metropolitan area,
- Restore or improves degraded riverine and riparian habitat in and along the Red River of the North, Wild Rice River (North Dakota), Sheyenne River (North Dakota), and Buffalo River (Minnesota) in conjunction with other flood risk management features,
- Provide additional wetland habitat in conjunction with other flood risk management features,
- Provides recreational opportunities in conjunction with other flood risk management features.
- Avoid increasing peak Red River flood stages, either upstream or downstream
- Minimize loss of floodplain in accordance with Executive Order 11988

In 2009, when USACE completed an alternatives review, the Minnesota 35K flood diversion was selected as the National Economic Development project based upon these principles. The NED project -- which retained a great deal more natural floodplain storage than the LPP -- constituted the best solution to meeting the project objectives. The NED designation identifies:

“(T)he alternative plan with the greatest net national economic benefit consistent with protecting the nation’s environment (the NED plan).”

As discussed below, in 2009, Fargo and Cass County tried to convince the USACE to depart from these principles by attaching the so-called Southside project to the proposed project. The Southside project would have developed only 20 square miles of floodplain, but USACE emphatically rejected the proposal, declaring officially that development of floodplain would be unlawful because it violated Executive Order 11988. The federal EIS failed to discuss this fact, and we discovered the USACE’s ruling only recently when the record of decision was transmitted to the Federal Court. In fact, when Congress authorized a feasibility study of a flood control project that would protect the Fargo-Moorhead metropolitan area, both North Dakota and USACE both represented that the project would be designed without inflicting harm on upstream and downstream communities and that it would be accomplished in a sustainable way. This commitment to sustainable flood control approaches is what purchased Minnesota’s support for Congressional studies.

Then, in 2010, members of the Diversion Authority convinced the USACE to dramatically increase the scope and cost of the diversion project, approving the so-called Locally Preferred Project (LPP). The LPP violated the agreed principles and sought to develop not just the 20 square miles previously found to be illegal, but 50 extra square miles of floodplain.

It is at this point that the DNR demanded scrutiny in the federal environmental review. DNR itself recognized that USACE and DA had engaged in a massively consequential change in project purpose by slipping in the floodplain development objective. In its August 2010 letter objecting to that change, the Department pointed out that the original project purpose was based upon the above described template. A copy of the DNR’s description of the original

understanding is contained in our electronic appendix. The NED was based upon an agreed template for sustainable and ecologically sound flood management. Under that agreed template, the Department reminded, any flood control project would be required to:

Avoid increasing peak Red River flood stages, either upstream or downstream
Minimize loss of floodplain in accordance with Executive Order 11988, Floodplain Management¹

This original project purpose, said the Department, “would better fit within the ‘basin-wide approach’” as described in the 1998 Mediation Agreement. **“However, the tentatively preferred alternative drastically deviates from the Feasibility Study Planning Objectives and Constraints².”**

The NED was rejected and LPP locally selected for parochial local reasons—to allow Fargo to double its geographic size to double that of Minneapolis, with a fraction of the population, behind federally subsidized levees. The locally selected project cost vastly more money, it inflicted vastly more environmental damage, and the primary benefit that justified this extra expense was that it facilitated development of 50 square miles of floodplain in North Dakota in violation of EO 11988. It was a drastic deviation from the original purpose and principles that justified the project.

To address this concern, Minnesota demanded that the Federal EIS justify this fundamental change in purpose in the environmental review. Eliminating floodplain storage would fundamentally alter the Red River and its floodplain. DNR complained:

The DEIS has not identified how the ACOE has complied with executive Order 11988 on floodplains.

¹ The other principles, taken from the DNR letter are listed above: Reduce flood risk and flood damages in the Fargo-Moorhead metropolitan area, Restore or improves degraded riverine and riparian habitat in and along the Red River of the North, Wild Rice River (North Dakota), Sheyenne River (North Dakota), and Buffalo River (Minnesota) in conjunction with other flood risk management features, Provide additional wetland habitat in conjunction with other flood risk management features, Provides recreational opportunities in conjunction with other flood risk management features.

² DNR demanded that the USACE respond to these concerns in its four letters, but the USACE simply stated that it would respond to those concerns in the State EIS. However, when the State EIS process commenced, under the supervision of new environmental review staff, the USACE said that the new project purpose eliminated any need to discuss this drastic deviation. One is left with the impression that the DA is seeking to hoodwink the DNR out of addressing the central issue which caused the commencement of the environmental review in the first place.

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Inaccurate: our letter states that those two bullets would be “a better fit” within the basin-wide approach. See quoted text below.

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The Department objected to the LPP's "drastic deviation" from the sustainability principles found in the 1998 Mediated Settlement Agreement.

*Such a project [the one now supplanted by the LPP] would better fit within the "basin-wide approach" as described in the 1998 Mediation Agreement. **However, the tentatively preferred alternative drastically deviates from the Feasibility Study Planning Objectives and Constraints.** (Emphasis added).*

This complaint was repeatedly incorporated in the three letters from the Department that followed. The August 2010 letter concluded:

This project is estimated in excess of \$1.4 billion and will be with us for a very long time. Accordingly, the Corps' and local sponsors must ensure on the front end, the best design possible that protects the Fargo-Moorhead Area, downstream communities, and addresses the array of environmental concerns, is the design selected.

It is critically important that DNR staff recognize precisely what happened at this point. Governor Dayton has authority under 33 USC § 701-1 to reject Fargo's attempt to flood Minnesota to develop floodplain. The issue was not the best way to implement the LPP: the issue was whether Minnesota would allow North Dakota interests to use federal funds in violation of EO 11988, to arrogate to the City of Fargo the Red River's flood conveyance and storage capacity, a scarce resource that is part of a precious riverine resource which protected the basin against flooding. Minnesota was asking that the Federal environmental review make these issues transparent, so that the public, local governments, regional governments and the State of Minnesota could consider, not just how to implement Fargo's objectives, but whether they would allow that purpose in the first place.

This was not a federal versus State issue: it was an issue of whether Fargo's local parochial development objectives, to protect undeveloped floodplain for future development, would be allowed to push that floodwater off of the natural floodplain and into Minnesota flooding cemeteries, communities, and farmsteads. The USACE did not recommend the LPP, but had found the NED to be superior.

USACE and DA sought to postpone the analysis Minnesota requested, because they wanted to rush a Chief's Report to Congress, but they committed to revisiting these issues in the Minnesota Environmental review. But, no sooner was the ink dry on the President's signature on the authorization bill, that the DA reneged its promise, and asserted that Minnesota's environmental review was bound only to consider the specific project purpose of the LPP. This was a blatant attempt to hoodwink Minnesota and Minnesotans, as well of the Governor, out of their right to examine the choice between LPP and NED and to examine not just the way that the LPP would be implemented but the actual choice of project purpose in the first place.

The Final EIS must perform the function that initiated the State EIS in the first place. That function was to examine the comparative environmental impacts of all

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Inaccurate: DNR quote is a statement not an objection.

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alternatives, not just the alternative that Fargo seeks to impose on Minnesotans. This function is all the more important, because Governor Dayton in his letter to Secretary Darcy made it crystal clear that the Governor has reserved his right to stop the LPP in its tracks, and he is counting on the comparative environmental analysis and permitting functions to provide him information on whether it is in Minnesota's interest to permit the LPP or whether instead to insist on the NED or other alternative.

To accomplish this objective the DEIS, and then the permitting process, must both harken back to the initial questions posted by the DNR: whether this project is ecologically sustainable, whether it is the least impact solution, whether it is consistent with state and local law.

III. The EIS Should More Clearly Recognize that the Red River's Water Storage and Conveyance Capacity is a protected natural resource under Chapter 116D and 116B and under the Wacouta Test.

The Final EIS must recognize that the Red River and its floodplains represent a unique and critical protectable natural resource under section 116B.02 subdiv.4 and 116D.04 subdiv.1a(a). In contrast to its treatment of floodplain, the Draft EIS does a reasonably good job of identifying the importance of rare and endangered species, of fish, and the need to avoid invasive species. In fact, the Red River and its floodplains represent an especially important natural resource, because they provide irreplaceable, unique flood protection resources for the entire Red River basin. The DEIS disappoints because it fails to recognize the protected status of floodplain resources. Rivers and their floodplains are dynamic and complex natural systems that provide important societal benefits, both economic and environmental. Floodplains provide a natural ecologically based response to the natural phenomenon of flooding. They reduce the loss of life and property, protect critical natural and cultural resources, and contributes to the sustainable development of our communities.

"In towns and cities across the nation, protecting and restoring floodplain resources will enhance the quality of life for this and future generations into the 21st century, and beyond."
FEMA: *PROTECTING FLOODPLAIN RESOURCES A Guidebook for Communities.*

The FEMA floodplain guidebook continues:

The term "natural resources" often brings to mind products, such as timber or fossil fuels that may be extracted from their natural environments and sold as commodities for profit. But the natural values of floodplains are different; their value lies not in their removal and sale, but in the functions that they perform within the floodplain environment.
Id. at 5.

River systems and their floodplains have ecological functions³ that make them a critical

³ "Undeveloped floodplain land provides many natural resources and functions of considerable
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and irreplaceable natural resource from a biological perspective. *Id.* at 6. But they also provide critical natural flood and erosion control, by providing flood storage and conveyance, reduced flood velocities, reduced peak flows, and reduced sedimentation. *Id.* at 9. The draft EIS exhibits an almost cavalier disregard for the importance of floodplain and river system as a protectable natural resource. Elimination of 50 square miles of floodplain storage impairs a natural resource just as surely as eliminating a wetland or large chain of lakes. The Draft EIS seemingly disregards a half century of recognized engineering and hydrological research that eliminating natural floodplains – and the corresponding legal frameworks implemented to protect natural floodplains – is complete folly.

The floodwater conveyance and storage function of the Red River and its floodplains is a protected resource under the modified five-part *Wacouta* test. *State ex rel. Wacouta Tp. v. Brunkow Hardwood Corp.*, 510 N.W.2d 27 (Minn. App. 1993). The Red River and its floodplains represent a rare, unique, and endangered resource. They are the only resource available to convey water from the entire basin; they are carrying water from numerous tributaries northward, eventually to the Hudson Bay and there is no other natural resource available to meet that function. When development is allowed to destroy that natural function, a unique and precious resource is being destroyed. Because of its unique configuration, lying as it does in extremely flat country, its limited capacity must be preserved, husbanded and carefully managed. Wasting its water carrying and storing capacity is just as foolish and environmentally unsound as squandering water in a desert. The LPP will have long term adverse effects on natural resources, and the river system's capacity is irreplaceable.

The DA claims that moving the water off the floodplain and placing it on farms and communities mitigates that destruction, but that is not so. That is destroying two natural resources instead of one. Water is being moved off of a floodplain, so that the owners of that land can reap profits at taxpayer expense to engage in subsidized development in locations that must be permanently protected, not just for the next few decades, but for centuries to come. If at any time, North Dakota fails to maintain the infrastructure (for example, when its oil wealth diminishes) the development that occurs in this low lying area will face vastly enhanced damages. Developing the floodplain is a form of “gambling against the river,” gambling which is completely unnecessary, because there is clearly higher ground available in the Fargo-Moorhead metropolitan area.

economic, social, and environmental value. Nevertheless, these and other benefits are often overlooked when local land-use decisions are made. . . . The nation's coastal and riverine floodplains support large and diverse populations of plants and animals. In addition, they provide habitat and critical sources of energy and nutrients for organisms in adjacent and downstream terrestrial and aquatic ecosystems. The wide variety of plants and animals supported directly or indirectly by floodplains constitutes an extremely valuable, renewable resource important to economic welfare, enjoyment, and physical well-being. The variety of floodplains and associated wetlands across the country create habitat for many forms of fish and wildlife. Many spend their entire lives in floodplain wetland.” FEMA, Floodplain Natural Resources and Functions.

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The LPP proposes to eliminate 50 square miles of undeveloped floodplain storage, a modification to the natural hydrological function that is as breathtaking as it is unprecedented in scope. The result will be to dramatically impair a critical function of a natural resource in both states, reducing the ability of this resource to store and carry water in times of flood. The proposed removal of floodplain occurs at the very time that the USACE has asserted that the ensuing decades are likely to experience increased flooding – and if that is true, then preservation of the basin’s storage function is all the more critical. Elimination of floodplain storage has significant consequential effects on other natural resources, and it is now being proposed at the very time when national policy has called for a redoubled effort to preserve floodplain storage. If water problems increase, will USACE simply try to expand the storage further into the agricultural areas to the south, having learned that urban development in the floodplain always trumps the rights of agriculture and rural communities? The storage capability of the Red needs to be husbanded and saved. If Minnesota approves the concept that Fargo can expand into its floodplain and use Minnesota as its flood storage reservoir, what is the principled rule that will prevent this from happening again and again?

The EIS should fully recognize that the LPP proposes an unprecedented impairment of a protected natural resource, the flood protection and water carrying capacity of the Red River system. The magnitude of the proposed impairment dwarfs other impairments of natural resources which have been considered in MEPA cases. *State ex rel. Swan Lake Area Wildlife Ass'n v. Nicollet County Bd. of County Com'rs*, 711 N.W.2d 522 (Minn. App. 2006), (small, shallow, partially drained, and dammed lake); *State ex rel. Wacouta Tp. v. Brunkow Hardwood Corp.*, 510 N.W.2d 27 (Minn. App. 1993) (Bald eagles and trees in which they roost); *Minnesota Public Interest Research Group v. White Bear Rod and Gun Club*, 257 N.W.2d 762 (Minn. 1977) (single lake and surrounding wetlands); *Corwine v. Crow Wing County*, 244 N.W.2d 482 (1976) (Nokay Lake); *County of Freeborn v. Bryson*, 210 N.W.2d 290 (Minn. 1973) (single lake); *State v. Archabal v. County of Hennepin*, 495 N.W.2d 416 (Minn. 1993) (armory building).

IV. North Dakota Cities and Counties Cannot Impose Environmental Destruction upon Minnesota by Redefining a Proposed Project Purpose to Force Development of the Floodplain.

JPA wants to make it clear that both federal and state law prohibit North Dakota cities and counties from attempting to force state and local governments to violate EO 11988 by concocting a project purpose that shifts floodwaters off of the floodplain and onto other cities, towns or counties. A project purpose definition cannot force Minnesota governments to violate MEPA, nor can it force the State of Minnesota or its local governments to impair public waters, nor can it force them to violate state and federal water policy.

The EIS should make it clear that the fact that the local sponsor has sought to limit the project purpose does not mean that permits must be granted for a narrow purpose which causes unjustified environmental damage. There are several aspects to these concerns:

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- (a.) Selection of the LPP was accompanied by the DA's attempt to narrow the project purpose so as to eliminate the alternative designated by the USACE as the NED project.
- (b.) The narrowing of purpose is tailored to justify a violation of Executive Order 11988 and is manifestly unreasonable.
- (c.) The selection of the LPP intentionally destroys an environmental resource, the capacity of the Red River to handle floodwaters, in ways that force those floodwaters to be diverted onto flood-free lands and communities.
- (d.) The selection of the LPP was accomplished *before* completion of the federal and state environmental reviews, thus depriving Minnesota agencies, counties, towns and citizens of a transparent and full comparative review of the policy choices involved in selection of the LPP. Neither North Dakota nor the USACE could tie Minnesota (or that of its local governments) hands in exercising their management of natural resources in the public domain.
- (e.) DA is not a landowner seeking to exercise its right to develop lands, as for example in an application of a conditional use permit. DA is seeking permission to alter the course, current and flow of a major public resource and divert its waters onto southern Clay and Cass Counties and Northern Richland and Wilkin Counties. DA cannot force Minnesota and its political subdivisions to permit that flooding simply by narrowing a project purpose in such a way as to make the project accomplishable only in one way.

As discussed above, federal law recognizes the sovereign right of States to impact, and even veto, the defined purpose of a locally sponsored flood control project. Moreover, federal law recognizes the right of local governments to apply their permitting laws to locally sponsored projects. In this regard, Minnesota --- and local government permitting authorities --- stand in a very different legal position from that of, say, a gravel company that seeks a conditional use permit to extract gravel under a zoning ordinance. The gravel company owns its gravel and it gets to define the purpose of its project. If the gravel company proposes as part of its project purpose to deposit tailings next to a stream or wetland, the permitting agency can reject the proposal for environmental reasons and impose conditions, but the zoning authority does not have power over the way in which the gravel company defines its purpose. If the purpose selected by the applicant is manipulative, designed to prevent evaluations of reasonable alternatives for siting the tailings, the permitting authority can reject the permit and condition it on returning with a suitable alternative. The problem here is that the DA is presenting its proposal as if it is an owner of the Red River seeking a permit based upon a claim of right and asserts that the State of Minnesota has no legitimate right to participate in the formation of the project purpose itself. Minnesota is a sovereign with the right to refuse to support Fargo's proposed purpose. If it were otherwise, Cities in one state could appropriate waters from another state, or divert waters to another state, simply by launching a local project with the support of a powerful Congressman.

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This is a fundamental error in the conception of this environmental review, and we discuss it in considerable detail in this section. The state of Minnesota has a federal statutory right to participate in the formation of the purpose for this project, in addition to its regulatory authority for the granting of permits. The point we are making in this section is that when the Governor and the DNR both raised concerns about the project purpose, DA and USACE deferred that discussion to the Minnesota Environmental Impact review. The Governor has written that he expected that the environmental review conducted by Minnesota would address foundational issues: whether the project was ecologically sustainable, whether it was the least impact solution, whether its features could be mitigated, and so on.

The Governor had a right to information that would help him decide whether the NED or the LPP or some modification of either was in Minnesota's interest so that he and the Department could make a policy judgment about whether to support or reject either of those proposals. Similarly, local permitting authorities have a right to environmental information with which to evaluate whether the LPP will be permitted at all. They can conclude that they are unwilling to permit the LPP to flood their localities, when the NED can provide even a superior flood control function with lesser impacts. Fargo has no right to flood Wilkin County. Fargo cannot demand the right to flood Wilkin County because Fargo has decided that it will only do flood control if it is allowed to develop 50 square miles of floodplain.

USACE and DA had no right to tie the Governor's hands by insisting that the state environmental review should be limited to the new project purpose that they defined. This would be like telling the Department of Transportation that it must run a new highway through a wetland because the proposers of the new highway have defined the purpose of the highway project as going from St. Cloud to Fargo in a straight line, because a straight line is the shortest distance between two points.

We recognize that purpose-narrowing in this way cannot prejudice the MEPA least impact analysis by entities with permitting power. Project purpose cannot prejudice the permitting process. However, we nonetheless believe that it is important that the environmental review explicitly recognize the fact that DA has attempted to narrow the project purpose in order to achieve an environmentally damaging project. Moreover, if the EIS is to fulfill the purpose that the Governor envisioned – to assist him in exercising the right of the Governor to impact Congressional authorization and appropriation – the EIS should be comparing the LPP to the NED project and making transparent the positives and negatives of each. By ruling out the NED for environmental review, the DA has deprived the Governor of the information that he needs to perform his duties under the color of state sovereignty.

One cannot justify the development of floodplain by claiming that keeping floodwaters out of the floodplain is "managing the five tributaries." Water gets into the floodplain when a river overflows. If you could justify developing the floodplain by claiming that you are merely keeping water from overflowing river banks during floods, why then there would be nothing left of the Executive Order's floodplain protection. It would be like justifying filling a wetland by saying, I'm not filling the wetland: that's not my purpose; I just have to find a place to put all my

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extra dirt. When flood conditions send more water than rivers can handle, the water overflows the banks of those rivers and flows out into the adjoining floodplains. EO 11988 bars development of those floodplains, because floodplains are nature's safety valve to accept the water that cannot be accommodated by the river channel. They are called floodplains because the rivers that run through them flood into the adjoining plains.

In 2009, the USACE had ruled that Fargo and Cass County could not lawfully use a federal project to foster development in the floodplain. (See below). Undeterred by that ruling, they decided to redefine the project purpose in such a way as to define the cheapest, most economically and environmentally sound project alternative. They couldn't announce that the purpose was to develop 50 square miles of floodplain, so they concocted an alternative framing of that purpose which did the same thing, but didn't make the EO 11988 violation obvious. They said we are trying to keep the five tributaries from flooding into the floodplain – we must control the five tributaries. When this happened, the City of Oxbow and others negatively affected by the LPP objected:

The Corps elevated the LPP over other practicable alternatives, and in so doing, altered its definition of the project purpose. Selectively modifying the project purpose to elevate one alternative above all others is prohibited by NEPA. The stated purpose of the proposed action is to “reduce flood risk, flood damages and flood protection costs related to the flooding in the Fargo-Moorhead Metropolitan Area,” SDFR&EIS at 30. The Corps is obligated to consider reasonable alternatives that accomplish this stated purpose and need. 40 C.F.R. § 1502.14.

At DA's behest, USAC was confining the project purpose to eliminate alternatives that were less environmentally damaging, Oxbow continued:

Perhaps in an attempt to “cogently explain” its rationale for selecting the LPP over the Federal Comparable Plan (“FCP”) — the Minnesota diversion alternative — the Corps points to the fact that the LPP reduces flood stages in five specifically identified North Dakota tributaries to the Sheyenne River. See e.g., SDFR&EIS at 92 (discussing “completeness”), at 101 (discussing EO 11988 impacts) Attachment 1 at 2 (discussing why the LPP was selected over the FCP despite the FCP being more cost effective). See also letter from Beth S. Ginsberg to Aaron Snyder re: Corps' CWA Section 404(b)(1) analysis dated June 13, 2011 at 2. Nowhere, however, is reducing flood stages in these specific tributaries identified in the purpose and need section. Instead, the purpose and need statement is explicitly worded much more broadly to enable the Corps to reasonably compare the LPP against a reasonable range of alternatives that would accomplish its stated goal of “reduc[ing] flood risk, flood damages and flood protections costs related to the flooding in the Fargo-Moorhead Metropolitan Area.” The Corps did not limit its options to those that specifically address flooding on the Sheyenne River and its tributaries.

This device to define away the NED and force development of the floodplain was unlawful from a federal perspective, as Oxbow explained:

In any event, the Corps' narrowing of its project purpose and need necessarily makes a North

Dakota alignment the only plan capable of meeting this new project purpose because it crosses all of these tributaries where the others do not. The courts, however, have ruled that an agency cannot define the objectives of its own actions in terms so unreasonably narrow that only one alternative from among those in the agency's power would accomplish the goals of the agency's action, rendering the EIS a foregone formality. See, e.g., Nat'l Parks & Conservation Ass'n v. BLM, 586 F.3d 725, 746 (9th Cir. 2009).

This narrowing of purpose did not occur with the consent or participation of the State of Minnesota. It was imposed unilaterally by the Diversion Authority as a local preference before the federal environmental review was complete and at time when Minnesota's own comments had not been answered. In other words, Minnesota's concerns were simply read out of the selection of project purpose. By so doing, the USACE and DA were seeking to evade Minnesota's federally protected right. After the Supreme Court ruled in 1941⁴ that the commerce clause power could be used to flood Oklahoma over the Governor's objection, Congress commenced a series of reforms designed to protect state sovereignty. The 1944 Flood Control Act was amended to afford the Governor of a state a virtual veto over flood control projects. 33 U.S.C. § 701-1. See also Corps EP-1165-7-1 Paragraph 3-3. Governor Dayton elected to defer his decision under section 701-1 until completion of the environmental review.

The sovereign right of the Governor to impact the purpose of the project, and not just the manner of achieving the purpose, results from repeated abuses of the earmarking process in which powerful Senators or Congressmen trade approval of a wasteful or harmful project for some other favor. Without this right, Congress recognized that Senators like Conrad or Dorgan might use their influence to inflict damage on Minnesota through the earmarking process, or the Senate majority leader could use his power over earmarks to obtain changes in the Ohio River damaging to Ohio upstream and Missouri downstream. Cincinnati should not be able to use Boehner's power to flood Kentucky, and Kentucky should not be able to use McConnell's power to flood Ohio.

Dayton's letter of August 21, 2014 makes it clear that he expected that the environmental review process should focus on what he recognized was a central issue: Whether the LPP should be allowed to flood Minnesota farms and communities in order to make a development profit for persons who own previously undeveloped floodplain:

I have very serious concerns about the Project. Much of the land in the staging area has not previously been flooded, even in the worst floods of record. Since Moorhead is currently protected to the 42-foot river stage, less than 10% of the Project's benefits will accrue to Minnesota. The Fargo area will receive over 90% of the Project's benefits, including the protection for future economic development of an undeveloped flood plain on the south side of Fargo. In fact, a major feature of the Project's design appears to be the flooding of Minnesota (and North Dakota) farmland in order to assure North Dakota developers that their investments will be safeguarded.

⁴ *State of Oklahoma ex rel. Phillips v. Guy F. Atkinson Co.*, 313 U.S. 508 (1941)

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Misinterpretation. Quote doesn't support statement regarding expectations in env. review.

The Governor was seeking to afford a form of due process to the applicants. As Governor, he might have exercised an unreviewable power to notify Congress that he had determined that the project should not be authorized. But he chose instead to seek information from the environmental review process. As his letter explains:

The State of Minnesota has voiced concerns with the Project on four separate occasions, with informal comments in 2009 and three formal comment letters during the federal environmental review process. Because Minnesota planned to address its issues in its EIS, the Corps communicated that those issues would not be part of the federal review. Indeed, a number of the Corps' responses to comments in the Federal Supplemental Draft Environmental Impact Statement stated that "[the Corps] recognizes the need for a Minnesota State EIS for this project and has been coordinating with the Minnesota Department of Natural Resources and project sponsors for the development of this EIS."

Governor Dayton's concerns were likewise echoed in the Department's own letters written in connection with the Federal Environmental Review. The Department specifically raised concerns about the alternatives analysis which had led to rejection of the NED. The State of Minnesota wrote:

The alternative analysis and screening conducted as part of the federal EIS has been a significant source of concern and has received many comments from the public and agencies (DNR included). Review of Appendix O has generated several questions around the cost benefit analysis and alternative screening. As part of State EIS scoping the MDNR needs to verify and document the information that was used in the various phases of the federal EIS. In order to complete the MDNR's administrative record for the State EIS, we will need an independent review and documentation of the key decision steps and the information that was used to make the decisions. This detailed review and documentation will either confirm selection of alternatives in the federal FEIS or identify other alternatives that should be evaluated as part of the State EIS.

The DNR explained that the State:

remains committed to flood protection in the Red River valley and appreciates the opportunity to review the SDEIS, however; it's apparent that significant additional work is needed to demonstrate that the selected alternative is:

ecologically sustainable, the least impact solution, one in which adverse effects can and will be mitigated, and consistent with other standards, ordinances, and resource plans of local and regional governments.

This information will be necessary for both the state environmental review and permitting process.

Minnesota had a right to determine whether it would support the NED or the LPP or some other configuration or no project at all, and that right could not be confined by the predetermination of the project purpose. Yet, when the State EA was prepared, DA incorrectly asserted that the DA could force Minnesota to accept the redefinition of the project purpose and thus force Minnesota to evaluate only alternatives which fulfill the project purpose defined without Minnesota's participation. This limitation cannot be imposed on Minnesota, its political subdivisions and its citizens. Both MEPA and MERA allow permitting jurisdictions to deny permits when a project inflicts unacceptable environmental damage. Evidently, the new staff assigned to the environmental review simply mechanically treated the EA as if it were being submitted by a landowner seeking to use its own land, and failed to recognize that the EIS was to advise the state and local governments as to which project purpose would be acceptable.

The DEIS should fulfill the purpose that Governor Dayton anticipated: it should describe the relative environmental impacts of the LPP, the NED, and the various options which reduce Red River flows in sustainable ways, so that the Governor has the information he needs to make policy choices.

Minnesota's initiation of an EIS to review the change in purpose and elimination of sustainability principles, reflected in the August 2010 letter must be followed up, as the letter makes clear, in both the environmental review and the permitting reviews that follow. Permitting authorities cannot perform their statutory function unless they look at alternatives as required by Section 116D.04, because the decision whether to alter the course and current of a major river system is not driven by a local county's desire to develop the floodplain; it is driven by governmental policy choices. Putting aside EO 11988, North Dakota may choose to allow Fargo to develop floodplain, but it has no right to announce that Minnesota and Wilkin County are required to accept that purpose as valid.

Assistant Secretary Darcy gave only conditional approval to the Locally Preferred Project, but her approval was condition upon confirmation of the accuracy of Corps estimates of downstream impacts. Those estimates turned out to be wildly inaccurate. At this point, the Diversion Authority decided that fostering development in the 50 square miles of agricultural floodplain outside of Fargo was so important, that it would dump that water on those who live to the Southern part of Cass and Clay Counties and the Northern parts of Richland and Wilkin Counties.

When the Diversion Authority selected the Locally Preferred Project, the State of Minnesota sent official objections. Those objectives warned that the Federal EIS "fails to sustain the conclusion that the [LPP] project is ecologically sustainable, the least impact solution, one in which adverse effects can and will be mitigated, and consistent with other standards, ordinances, and resource plans of local and regional governments." As stated above, the DNR warned that the development of floodplain represented a deviation from the announced purpose of the project. It would be a gross perversion of Minnesota law if the City of Fargo were to be able to tie the hands of Minnesota state and local government simply by redefining the project purpose to

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Inaccurate: The purpose of env. review is not to advise on the acceptability of a stated project purpose. Each governmental authority is responsible to make those determinations as applicable.

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exclude what was correctly determined to be the least impactful, most cost effective alternative.

MEPA says:

“Where a proposed action is likely to cause pollution, impairment, or destruction of water, land or other natural resources within the state, they are prohibited, so long as there is a feasible and prudent alternative consistent with the reasonable requirements of the public health, safety, and welfare and the state's paramount concern for the protection of its air, water, land and other natural resources from pollution, impairment, or destruction.

MEPA doesn't say that a feasible and prudent alternative must be consistent with the Diversion Authority's demand to build the project exactly where and how it wants to do so. If that were the way MEPA works, any project proposer can change the project purpose to prevent you from looking at alternatives.

Local governments and the DNR have a right to review whether the NED, for example, is a feasible and prudent alternative consistent with the reasonable requirements of the public health, safety, and welfare and the state's paramount concern for the protection of its air, water, land and other natural resources from pollution, impairment, or destruction. The final EIS should assist them in that process, by recognizing that the NED is, in fact, a lawful feasible alternative. Any other action would be arbitrary and capricious in the extreme. We can find no authority that suggests that a Responsible Government Unit can allow a project proposer to rule out consideration of the very project alternative that was, after extensive study, found to be the most cost effective feasible, least environmentally impactful alternative.

In Conclusion, we are concerned that the Draft EIS is not faithful to the issues raised by the Department itself. The Department's letters clearly point out:

- (a) That DA radically altered the project purpose that procured Congressional authorization of the feasibility study
- (b) That the new approach to the project was a violation of agreed upon sustainability principles found in the mediated settlement agreement
- (c) That this issue must be addressed in the Minnesota Environmental Review so that Minnesota could determine whether the revision of purposes was consistent with Minnesota law and policy

USACE and DA have not provided a credible, legally sustainable confrontation of the Department's own concerns. It is true that the USACE claims that developing 50 square miles of agricultural floodplain is somehow not an EO 11988 violation, but that position is frankly preposterous and embarrassingly indefensible.

V. The FEIS Must Acknowledge that the LPP Violates EO 11988, Federal Regulations, and the Sustainability Provisions of the Water Resources Development Act.

There is a stark difference between the way in which the DEIS scrupulously respects federal policies like the Endangered Species Act, and the Clean Water Act, on the one hand, and treats the floodplain protection provisions of EO 11988 with almost cavalier disregard. EO 11988 is one of the most important environmental policy provisions affecting the Red River Valley. Because the DEIS evidences a lack of understanding of its importance to ecology and hydrology of the Red River Basin, we have included in the Appendix A lengthy explanation of five decades of evolution of this policy. Since the Carter administration, a series of legally binding actions have one by one, sought to stamp out efforts by the engineering arms of the United States Government, to pretend that EO 11988 can be ignored any time there is an opportunity to staff up a District office and spend hundreds of millions of dollars.

A. Numerous Stakeholders Objected to the Proposed EO violations contemplated by the LPP.

Numerous DEIS comments from other impacted stakeholders regarding elimination of floodplain storage capacity expressed the same concerns as Minnesota DNR. How could the USACE be eliminating 50 square miles of floodplain storage to promote development, when EO 11988 clearly prohibited it? What was the justification for transferring water from the floodplain onto farms and communities that had been built above the floodplain?

The City of Oxbow, which was going to be completely flooded by the waters removed from the floodplain, retained a national firm with a highly respected environmental law department and wrote:

The Corps selected a plan that affects 25,000 more acres of floodplain acres than the FCP but did not explain how it plans to minimize adverse effects to floodplain function. When building in the floodplain is determined to be the only practicable alternative, EO 11988 requires that the agency "design or modify its action in order to minimize potential harm to or within the floodplain consistent with regulations issued in accord with Section 2(d) of this Order." EO 11988, § 2(a)(2). The courts have interpreted this EO as requiring federal agencies to "take steps to minimize any flood hazard posed by the project." See e.g., Daingerfield Island Protective Soc'y v. Babbitt, 40 F.3d 442, 447 (D.C. Cir. 1994).

The Corps' implementing regulations further require that prior to authorizing an activity in the floodplain, the Corps must "ensure, to the maximum extent practicable, that the impacts of potential flooding on human health, safety, and welfare are minimized, the risks of flood losses are minimized, and, whenever practicable the natural and beneficial values served by floodplains are restored and preserved." 3 C.F.R. § 320.4(f)(2); see also E.R. 1165-2-26 (Mar. 30, 1984).

Oxbow's letter continued:

Instead of demonstrating actions to minimize adverse effects to the floodplain, the Corps summarily and arbitrarily insists that "[a]ny floodplain impacts created by any of the possible alternatives will be minimized as much as possible." Appendix O at 95. An analysis consistent with EO 11988, however, would ensure that 1) the beneficial values of the floodplain will be preserved; 2) adverse floodplain impacts of the project will be minimized; and 3) that any adverse human health, safety and welfare impacts to the residents of Oxbow and other affected communities are reduced. The Corps' selection of the LPP also runs counter to its requirement to avoid selecting an alternative that would indirectly support floodplain development. EO No. 11988. While the Corps is well aware of the potential unintended consequence that structural flood diversion projects might provide a false sense of security and actually encourage more floodplain development (Appendix P, at 3), by selecting the LPP, the Corps actually helps the local sponsors actually plan for it.

In its letter challenging the legality of the LPP on EO 11988 grounds, the MnDak Upstream Coalition expressed similar concerns that EO 11988 violations were shifting water onto upstream communities:

As proposed, the Tentatively Selected Plan violates Executive Order 11988. Executive Order 11988 requires federal agencies to avoid to the extent possible the long and short-term adverse impacts associated with the occupancy and modification of flood plains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. In accomplishing this objective, "each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by flood plains in carrying out its responsibilities" for the following actions: acquiring, managing, and disposing of federal lands and facilities; providing federally-undertaken, financed, or assisted construction and improvements; and conducting federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulation, and licensing activities.

The letter pointed out that EO 11988 implementing regulations prohibit USACE from completing project approval without conducting an 8-step administrative process culminating in issuance of administrative findings:

The guidelines address an eight-step process that agencies should carry out as part of their decision-making on projects that have potential impacts to or within the floodplain. The eight steps, which are summarized below, reflect the decision-making process required in Section 2(a) of the Order.

Despite all of these well documented letters, the USACE essentially ignored the substantive requirements of EO 11988.

Our position in this regard was completely vindicated in April of 2015, when we received the administrative record from the Federal environmental review. Over and over again, injured parties in Minnesota and North Dakota question how it was possible that the USACE could ignore regulations and statutes which prohibit federal funds from being used in this way. Then, buried in the administrative record, but nowhere even remotely mentioned in the federal Environmental Impact Statement or any of its appendixes, we discovered material which showed that, in fact, the USACE had actually ruled that development of even the 20 square miles of floodplain south of Fargo was unlawful and prohibited by Executive Order 11988. As soon as we discovered these documents, we attempted to convey them to the Department, but our submission was rejected on the grounds that the Department will not consider information that it receives from anyone other than the project proponent during the environmental review. We now formally resubmit that information as an appendix to these comments. In addition, in the following section B, we show that the USACE itself vindicated the views of the State of Minnesota, JPA and others, that the LPP represents a blatant violation of EO 11988.

B. USACE itself correctly ruled that developing even the 20 square miles of floodplain south of Fargo violates federal law, and it thus follows with greater force that the LPP's proposed development of 50 square miles is also unlawful.

Before the 2009 flood, Fargo and Cass County commissioned a study of a "Southside project," separate from the project under federal study. The Southside project would open 20 square miles of agricultural floodplain south of I-94 to development. The Southside project would protect the floodplain located east of Horace from floodwaters that overflowed the banks of the five tributaries. (Horace and West Fargo were already protected from flooding by the Horace-Sheyenne diversion.) Once this protection was provided, Fargo could then rezone the land for commercial and residential development, handing a huge windfall to landowners. The Southside project proposed to mitigate the loss of floodplain by building internal storage in the floodplain itself. As originally conceived, the Southside project would be locally funded, but it would still require federal permits, and consequently it needed to pass an EO 11988 review.

In 2009, perceiving that the recent flood created the political atmosphere in which Senators Conrad and Dorgan could use their considerable power to expand the one-billion dollar project even further, Southside project sponsors asked USACE to add the Southside project to the Fargo-Moorhead project. May 2009 Congressional hearings were scheduled for Fargo, and to prepare for the hearings, USACE arranged a meeting at the Senate Office building with ND Senator Byron Dorgan, and Governors Hoeven and Pawlenty. The attendance list included Senator Klobuchar, Representative Peterson and two North Dakota Congressmen, and eight key USACE representatives, including Major General Walsh.

A USACE "Read-ahead" (provided with our CD) was prepared to brief the participants

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on both the USACE diversion and local Southside project. The document went through at least seven drafts. Although USACE has tried to explain away this document on the grounds that it was authored by an unauthorized anonymous staffer, that contention is preposterous. The Read-ahead document with USACE's EO 11988 findings was presented to senior USACE officials, including the lead USACE engineer, and the Major General who was to testify at the hearings and before two Governors. All of the versions in the administrative record contain the following or similar statement:

The Fargo Southside project as currently proposed would not be in compliance with executive Order 11988 as a Federal project, because it facilitates development of over 20 square miles of undeveloped floodplain. Legislation would be necessary to exempt the Southside project from this executive order. The Corps NED plan may include alternative measures to protect existing development in the area.

The Southside project plainly violated EO 11988. It sought to promote development in the floodplain. There is plenty of land available for alternative development. This USACE ruling decisively contradicts USACE's current position that the project flood protecting the same lands complies with EO 11988. At the Congressional Hearings themselves Major General Walsh, reflecting the thrust of the preparatory meeting he had recently attended, testified that state and local government had an obligation to use planning and zoning to keep development out of the floodplain, stating:

The first step in minimizing future flood damage is to restrict development - urban, rural, agricultural, industrial, and commercial - in the areas within the flood plain. We urge communities responsible for making land-use decisions to act wisely in this regard, and restrict development in areas that are known to be at high flood risk. If communities can limit development within the flood plain, the largest and most expensive issue related to flood risk management has been resolved before it ever has become a problematic issue. See USACE Administrative Record 0000656(AR); see also Congressional Hearing 55140, pg.36, par.2-3 AR0000705.

Senator Dorgan recognized the importance of this same policy. At the hearing, he stated:

But rather than trying to provide protection for something that doesn't yet exist, the Corps would much prefer that if there is a risk to that area that they move elsewhere and build where there is not such a risk. Congressional Hearing, P 44. AR0000714

The 2009 hearings show that USACE's EO 11988 determination sustains our position; that the USACE leadership, and even powerful Congressional advocates for Fargo, recognized that EO 11988 required Fargo to channel development elsewhere; and that they all had just been told that there was an EO 11988 violation in the Southside project.

In its 2010 and 2011 letters, the Department recognized that the DA's change in project purpose represented a fundamental change in direction that unnecessarily floods Minnesota towns and communities. The Department should recognize that its principles

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are deeply embedded in both federal and state water policy, and that this project represents a massive violation of EO 11988's sustainable flood control principles on a scale unprecedented in the past three decades. The area of floodplain which this project seeks to drain and ultimately develop is equal to the area of the City of Minneapolis, almost double the surface area of all wetlands in Cass County North Dakota, and the elimination of the floodplain storage is inconsistent with the underlying project purpose, which is to protect the developed Fargo-Moorhead metropolitan area from floods. The floodplain elimination component reduces the basin's flood storage capacity, when clearly, the basin needs more storage, not less.

The cost of modifying the NED and turning it into the LPP so that 50 square miles of floodplain can be developed is staggering. The price difference is roughly one-billion dollars. *If one allocates only half of that billion dollars as a cost of protecting 50 square miles of floodplain, the cost per acre of merely building the infrastructure that drains the floodplain would be more than \$15,000 per acre.* And so, it is a fair inference that the taxpayers of the United States are spending at least \$15,000 per acre to subsidize commercial, industrial and residential development of the floodplain. The economic effect of this venture is to attract development away from high ground within the city of Fargo and away from high ground in Minnesota where plenty of high ground in the Moorhead vicinity is available for development. In addition, the effect of this venture is to remove 50 square miles of flood storage capacity from the Red River and force USACE to erect a dam to intentionally flood portions of four counties in the two states.

We advocate for the following changes in the Draft EIS:

1. Recognize that EO 11988 represents fundamental environmental sustainability principles, principles which result from decades of ecological and engineering scholarship, and that the EO 11988 principles are expressly imported into Minnesota law by MEPA, by public waters permit regulations, and into local land and surface water permitting.
2. Recognize that the primary EO 11988 violation is the promotion of development in approximately 20 square miles of floodplain south of Fargo and 30 square miles of floodplain to the North. Thus, the primary insult to EO 11988's sustainability principles is not the location of the diversion channel, as DA suggests, but rather its use to promote development and to eliminate floodplain storage.
3. Recognize that the USACE itself correctly ruled that developing even the 20 square miles of floodplain south of Fargo violates federal law, and it thus follows with greater force that the LPP's proposed development of 50 square miles is also unlawful.

4. Recognize that the impact of removing floodplain storage is to rob the basin of much needed storage, despite the fact that USACE predicts that larger floods are more likely in the next two decades.

5. Recognize that there are multiple alternatives to floodplain development and the proposed storage removal. They include (a) development on existing high ground in North Dakota and Minnesota (b) compliance with Fargo's comprehensive plan, which requires increased density and infill development and prohibits diffuse development (c) use of the floodplain for internal storage (d) selection of the NED (e) relocation of the proposed dam to the North.

6. Recognize that this project removes floodplain storage in North Dakota to induce development while flooding Minnesota to make that possible. It provides a taxpayer funded subsidy to facilitate illegal development in agricultural areas outside Fargo so as to encourage economic development in North Dakota, and consequently to attract that development away from Moorhead. In this connection, recognize that EO 11988 violations are legally binding, and that Minnesota cannot lawfully issue public waters permits to flood Minnesota communities resulting from development in the floodplain.

7. Acknowledge and defend the DNR's repeated recognition that the change in purpose is an unlawful change in purpose, inconsistent with Minnesota law and policy.

Author: Medopera Subject: Highlight Date: 12/14/2015 9:49:08 AM -06'00'

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Inaccurate: DNR did not make the statement that the change in project purpose was in violation of a law or policy.

VI. The DEIS's Treatment of Planning Issues is Fundamentally Wrong.

With respect to the Department, the material that addresses municipal planning issues is deeply flawed. It fails to recognize fundamental planning principles accepted in the field of land use and municipal planning. It completely misstates the content of Fargo's own municipal plan. We recognize that the Department is not funded by the legislature to develop expertise in urban planning. It is no indictment of the Department if it lacks a person with expertise and with time to devote to reviewing this topic. Often outside consulting engineering firms also lack this expertise, because the structure of an engineering firm is based on a hierarchy with civil engineers at the top. For this reason, we urge the Department to give over the treatment of municipal growth and municipal development to a review by an independent qualified expert in municipal land use and planning. There are many very strong firms in the Twin Cities metropolitan area with expertise in urban planning. One could choose any of those firms, and receive very useful input, but what one could not find at any of these firms is a trained urban planner who would advocate that it promotes the public health and safety to promote diffuse development over an undeveloped area the size of Minneapolis in a city that is already one of the most – if not *the* most – sparsely occupied urban areas in the nation, described in its own growth plan as “a very low density city.”

At section 3.14.2.1.3 ("Cities Affected by Project") the DEIS makes the remarkable statement that development in the floodplain South of Fargo and Northwest is "consistent with the City of Fargo Growth Plan" because it would aid "planned Growth within the F-M urban area." Even Fargo's own leadership recognizes that this suggestion is completely erroneous. If this part of our comments seem strident, it is because in the field of land use planning, one of the most fundamental principles is that development should not be spread diffusely outside of a metropolitan area, in the way that the DEIS suggests in this section. The approach suggests that either the reviewer responsible for the authorship of this section decided to whitewash the planning issue entirely so as to favor the project, or that that the assignment was delegate to an author working outside his or her field of expertise. Suggesting that development of the floodplain is consistent with the Fargo growth plan is like asserting that driving through a red light is consistent with transportation objectives because it moves traffic through the intersection more expeditiously than making it stop.

We've included in our Appendix CD, sections of Fargo's Growth Plan, its Comprehensive Plan and a number of newspaper articles, all of which recognize our position and totally contradict the DNR's incorrect statement that developing 50 square miles of floodplain by a city with a population of just over 100,000 is sound planning. Fargo doesn't need more development room: in fact it desperately needs to use less room.

The section in the DEIS does not even acknowledge the relevant portions of the Growth Plan or the City's comprehensive plan. It makes the assertion, which is contrary to land use planning principles, that stimulating growth in the outskirts of the city promotes the "health, safety and general welfare," when clearly that is contrary to recognized planning principles. At page 3-197 of the DEIS, it is asserted incorrectly:

The Project would be consistent with the City of Fargo Growth Plan 2007 by reducing flood risk, and therefore, aiding planned growth within the F-M urban area. The Project would also comply with the Fargo Land Development Code by working "to protect the health, safety, and general welfare of the citizens of Fargo" by reducing flooding within the Fargo municipality.

This statement is advanced without any citation to authority, and it is flat out wrong. Fargo doesn't need 50 square miles of floodplain to develop⁵. All that is doing is allowing people with land that everyone knows should be farmed to make a big killing on development at taxpayer expense.

Fargo's Comprehensive plan states that the City should:

⁵ See the recent article in the Fargo Forum regarding the consequences of leapfrog and scattered development. <http://www.inforum.com/news/3868652-how-far-south-should-fargo-grow-costs-may-require-limits>

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Author: Medopera Subject: Highlight Date: 12/10/2015 1:14:10 PM -06'00'
DNR did not receive comment from Fargo that there was an error.

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Misinterpretation: The DNR did not make this statement.

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Promote Infill Develop policies to promote infill and density within areas that are already developed and are protected by a flood resiliency strategy. Control sprawl and focus on areas outside of the floodplain.

Attached are several pages from the Comprehensive plan that show that you are actually subsidizing development that runs completely counter to Fargo's own comprehensive plan, which appears to have been drafted with actual planning expertise. The plan says:

- The downtown neighborhood has the potential to become more dense with infill development and incorporate a broader mix of uses including residential, neighborhood services, retail, and offices. (Comp plan page 35)
- Mixed use areas have the potential to become denser. (Comp plan page 35)
- Dense development lowers infrastructure costs because each mile of road or sewer line serves more development. Mixing uses also creates infrastructure efficiencies because it eliminates the need to provide parallel infrastructure systems to residential and nonresidential areas. (Comp plan page 38)
- Dense, mixed-use development generates more revenue and fewer costs for the city budget. Multifamily housing produces more tax revenue and requires less infrastructure and service costs per unit. Denser retail and office developments also produce more property and sales tax revenue. (Comp plan page 38)
- Dense development consumes less land and saves open space for agriculture and habitat. Studies from around the country have found that dense development alternatives consume between 10-40 percent less land. (Comp plan page 38)
- Dense mixed use development wastes less energy, especially gasoline through fewer vehicle trips. Comp Plan page 39)
- Analyzing the existing City of Fargo we find that the current average density is just under 10 people per net developable acre. For a comparison, density figures in some urban areas in this country can top 100 people per acre. These areas are not overcrowded and offer a tremendous quality of life for their residents. Fargo is a very low density city.
- Fargo will promote infill development, planned growth, and increasing density and vitality in its established neighborhoods. (Fargo Growth Plan, Appendix 1, page 72.)
- [Fargo should] Quit building on the richest farmland in the world. Create a better planning and zoning base and work within our current limits to create better use of the land. Planning should be looking long term and creating a better structure and infrastructure. (Fargo Comp Plan 218)
- Controlling the expansion of infrastructure is one way that the city can assure responsible, sustainable growth in a fiscally sound way. Limiting land development to tier one within the next 25 years is important because it allows the city to increase the density of the city, create walkable environments, and fight the onslaught of sprawl. Sprawl is expensive and demands unrealistic levels of expenditure, resource use, and pollution. (Fargo Growth Plan, Page 75.)
- One of the main concerns with rural non-farm development in the City's extraterritorial area is the proliferation of individual on-site septic systems for the treatment of sewage. (Fargo Growth Plan, Page 76.)

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In light of the above statements taken directly from Fargo's own plan, adoption of the DEIS as written would be arbitrary and capricious. Fargo's growth plan estimates that "Recent development patterns in Fargo have resulted in approximately 266 acres being built on every year." Fargo Growth Plan Page 71 (attached). At that rate, if none of that was infill development and all of that development took place in the floodplain south of I-94, it would consume about 8 square miles over twenty years. Why then does the EIS uncritically accept USACE's assumption that development would consume 50 square miles of floodplain? Only if Fargo allows and encourages development to be scattered throughout the floodplain, in a manner inconsistent with its own Comp Plan, could this happen. This is important, because upstream individuals and communities are being asked to endure periodic flooding on their land, so that Fargo can foster development in the floodplain that should not be taking place.

In an article in the Washington Times, a Fargo city official is quoted as warning that the City is creating major financial problems should it continue its low density growth:

We're basically incentivizing sprawl, but the people who are living in the core are paying the same tax rate of the people who are requiring a higher cost rate for delivery of services," Williams said. "So it really matters how you grow and where you grow."

Fargo's growth plan admits that at a high rate of growth the city could absorb all of its growth until 2020 within the city limits. At a more modest rate, that growth could be accommodated until 2040. (Fargo Growth Plan, page 72). In 2009, Major General Walsh testified before a Congressional Committee holding hearings across the river. He said:

The first step in minimizing future flood damage is to restrict development - urban, rural, agricultural, industrial, and commercial - in the areas within the flood plain. We urge communities responsible for making land-use decisions to act wisely in this regard, and restrict development in areas that are known to be at high flood risk. If communities can limit development within the flood plain, the largest and most expensive issue related to flood risk management has been resolved before it ever has become a problematic issue.

At those hearings, Senator Dorgan stated:

But rather than trying to provide protection for something that doesn't yet exist, the Corps would much prefer that if there is a risk to that area that they move elsewhere and build where there is not such a risk. Congressional Hearing, P 44.

The Diversion's attempt to foster development in the floodplain violates these fundamental principles.

Another way of looking at this is to start with the proposition that the DA and USACE have both recognized that at most, Fargo is likely to need 266 acres per year of land for development. See USACE FEIS administrative record AR0001704-07. Fifty square miles is the

area of the entire city of Minneapolis, a city that easily accommodated a Big Ten University and a population more than four times larger than Fargo's population today.⁶ See also FMM Feasibility Economics, February 2010. Fifty square miles is 32,000 acres. Moreover, the Fargo-Moorhead metropolitan area has plenty of additional land in which to expand above the floodplain on the Moorhead side of the river, and plenty of land for the infill development lauded as necessary by Fargo's own comprehensive plan. See Appendix P for Agency Technical Review (Phase 2), January 2010, AR 0002907; Brazfield declaration Exhibit D. If Fargo were to confine its development to high ground above the floodplain, at the rate of 266 acres per year, it could accommodate all of that development for 20 years, without needing any floodplain at all.

Spreading 266 acres of new development across 32,000 acres of land is a recipe for economic, social and urban planning disaster. Already, we've shown that the initial cost of simply modifying the project to flood protect those 32,000 acres exceeds \$15,000 per acre. But even if there were no flood protection cost, allowing that development to spread across 50 square miles requires local taxpayers to pay the cost of extended roads, bridges, sanitary and storm sewers and other municipal infrastructure, over an area the size of Minneapolis.

The DEIS sections on the Fargo Growth plan and planning principles deserve a complete rewrite. The contention that developing floodplain promotes the public health and safety is contrary to basic planning principles and contrary to Fargo's own adopted plan. There is no demonstrated need for 50 square miles of development into the floodplain.

VII. The DEIS treatment of local and regional ordinance compliance is inadequate.

The purpose of this section is to address the application of local zoning and permitting to this project and that permits under 103G and implementing regulations (dam permit and course, current and cross section changes of public waters) cannot be granted for a project that violates local ordinance. In fact, the DNR's comments to the USACE in 2010 and 2011 repeatedly made that clear by stating that the Federal EIS had failed to demonstrate that the LPP was:

consistent with other standards, ordinances, and resource plans of local and regional governments.

We had assumed, based upon the DNR's assertion that the federal EIS was defective, that the DNR would examine in consultation with Wilkin County and its County Attorney, and with the other permitting authorities, (for example Buffalo Red River Watershed District) to determine

⁶ According to U.S. Census Bureau data, as of 2010, the population of Fargo was 105,549, and the total land area in square miles was 48.82. For comparison, at a similar land area of 53.97 square miles, the City of Minneapolis had a population of 382,578 in 2010. Functionally, removing an additional 50 square miles of largely undeveloped agricultural lands from the floodplain on the outskirts of Fargo would give Fargo twice the space of Minneapolis for roughly a quarter the population.

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what permitting information might be necessary and whether the LPP was, in fact, consistent with other standards, ordinances, and resource plans of local and regional governments. This inquiry must ultimately take place when permits are sought. But it was our expectation that more diligence would occur in supplying the information that could be used by permitting authorities. We acknowledge that by agreement, project proponents will not be seeking local permits or other necessary authorizations within a 30-day time frame. The purpose of this section is to make JPA's views on the permitting requirements for Wilkin County and Buffalo Red River Watershed District. In both cases, the information provided in the DEIS fails to demonstrate that the LPP is consistent with the standards, ordinances and resource plans of local and regional governments.

A. Wilkin County

The Wilkin County ordinance is an exercise of the powers granted by the State of Minnesota to Wilkin County to control land use and manage its surface waters. In passing the ordinance, the County issued legislative findings that

Intentional flooding of Wilkin County by creation of large impoundments is likely to have major negative economic, social, public health, environmental, and political impacts. Such flooding will negatively impact the County's tax base, harm agriculture essential to Wilkin County's economic vitality, create uncertainty regarding the County's future, and stifle development. Such flooding is likely to damage public infrastructure including roads and drainage systems. Intentional flooding may cause pollution by carrying chemicals into the groundwater and to neighboring lands⁷

The ordinance defines "large surface water impoundments" as follows:

"Large Surface Water Impoundment" is defined as an area exceeding 640 acres devoted to the purpose of flood water storage, staging or retention. For purposes of the definition, multiple impoundments serving the same purpose or project shall be included as a single impoundment. An impoundment includes water stored within a dike, behind a dam, or otherwise intentionally filling a surface area devoted to that purpose on a temporary or permanent basis. .

Language in the DEIS incorrectly suggests that application of this ordinance depends upon, and might be triggered only by some form of construction. That is clearly not the

⁷ See Ordinance Amendment Finding 1. This section governing construction or maintenance of surface water impoundments is based on the powers granted to Counties to provide for the public health, safety, and welfare, including the powers granted in Chapter 394, 103B, 145A and 373, as well as Minnesota's Water Policy Chapters 103A-F, and the Minnesota Environmental Policy Act, Chapter 106D. Minnesota Statutes Section 394.21 grants Wilkin County the power to carry on planning and zoning. Sections 103B.325, et. seq., recognizes powers and responsibilities of Counties to implement water management plans and official controls that implement its water plan.

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case. Section 3.03 of the ordinance actually prohibits any land use not in conformity with the Ordinance. Land uses that were not listed in the ordinance were prohibited, the “large surface water impoundment” usage was not listed as a permitted use.

(3) No land use shall be permitted in any manner which is not in conformity with this Ordinance. This Ordinance divides the County into zoning districts in which only specified permitted and conditionally permitted uses are allowed. Land uses are further regulated with standards relating to some activities and most physical development. Provisions are provided for amending the regulations and for variances to some provisions. If a use is not listed in a district as a permitted, conditional, or interim use, the use is prohibited.

Under the Wilkin County zoning ordinance, a proposal for land use is made by application for a zoning permit:

(4) Permits. Zoning Permits, Conditional Use Permits, and Variances are issued on the basis of approved plans and applications authorize only the use, arrangement, and construction set forth in such approved plans and applications, and no other use, arrangement, or construction. Any use, arrangement, or construction at variance with that authorized, shall be deemed a violation of this Ordinance. (Section 3.03(4)).

Nonetheless, in fairness to the project, the JPA has decided to make its views known regarding the application of the ordinances of political subdivisions. Some of this material is adapted from statements submitted at the public hearing on behalf of Wilkin County. The Wilkin County ordinance is an exercise of the powers granted by the State of Minnesota to Wilkin County to control land use and manage its surface waters. In passing the ordinance, the County issued legislative findings that

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“Large Surface Water Impoundment” is defined as an area exceeding 640 acres devoted to the purpose of flood water storage, staging or retention. For purposes of the definition, multiple impoundments serving the same purpose or project shall be included as a single impoundment. An impoundment includes water stored within a dike, behind a dam, or otherwise intentionally filling a surface area devoted to that purpose on a temporary or permanent basis. .

Language in the DEIS incorrectly suggests that application of this ordinance might be triggered only by some form of construction. That is clearly not the case. Section 3.03 of the ordinance prohibits any land use not in conformity with the Ordinance. Land uses that were not listed in the ordinance were prohibited, the “large surface water impoundment” usage was never not listed as a permitted use. The ordinance states:

(3) No land use shall be permitted in any manner which is not in conformity with this Ordinance. This Ordinance divides the County into zoning districts in which only specified permitted and conditionally permitted uses are allowed. Land uses are further regulated with standards relating to some activities and most physical development. Provisions are provided for amending the regulations and for variances to some provisions. If a use is not listed in a district as a permitted, conditional, or interim use, the use is prohibited.

Under the Wilkin County zoning ordinance, a proposal for land use is made by application for a zoning permit:

(4) Permits. Zoning Permits, Conditional Use Permits, and Variances are issued on the basis of approved plans and applications authorize only the use, arrangement, and construction set forth in such approved plans and applications, and no other use, arrangement, or construction. Any use, arrangement, or construction at variance with that authorized, shall be deemed a violation of this Ordinance. (Section 3.03(4)).

Currently, the LPP is not permissible in Wilkin County. Wilkin County’s ordinance has recognized that each County must contribute fairly to water storage across the basin. The ordinance provides a list of factors which would be considered in processing a zoning amendment to allow storage in the County. Currently, there has been no effort by the project proponent to engage the County in a dialog about whether those requirements might be met. The County’s efforts to communicate with the Department on this topic have been rejected on the grounds that the Department does not discuss such issues with permitting jurisdictions in the context of the environmental review. As a result, it appears that the only remaining forum to have this dialog will be in the context of the zoning process. To this end, the following concerns may be relevant:

- Insufficient information has been developed to satisfy the County’s concerns regarding the impacts of the LPP on agriculture. An NDSU study has evidently been conducted. The local permitting authorities should have access to that study. We have grave

limitations on the scope and constraints imposed on that study.

- The County's environmental service officer reports that he lacks sufficient information to analyze the impacts on county infrastructure, on drainage and water conveyance systems, and on overland sheet flooding.
- The County is not able to do a full evaluation of the amount of affected acres in Wilkin County.
- Before any final analysis can be performed on impact on the County, it is critical that local governments be provided with a copy of the study so that it can be scrutinized.
- The majority of the staging area acres in Wilkin County are productive cropland. Loss of soil productivity and cleanup of flood debris from cropland is a major unaddressed concern.
- The impacts on Wolverton Creek corridor have not been addressed. The County is concerned that the DA and environmental documents are built on the faulty assumption that because the USACE has redefined the 100 year flood, that areas that do not flood are being treated as if they do. There are flood insurance impacts that are not suitably addressed by simply promising that some entity will come up with substitute insurance. There are costs associated with septic system maintenance and operation during a flood event. Septic tanks would need to be pumped before placed back into service and flood proofing of septic tanks and drain-fields. Individual homeowner wells would also need to be protected due to flood water inundation and none of this has been addressed.
- Impacts to County roads and Townships roads has not been addressed.
- The project is plainly out of compliance with numerous requirements in the ordinance that seek to assure that the County is not being used to store water in order to promote some other County's development of floodplain. There has been no demonstration that the LPP is minimizing impact, nor that the impacts won't be vastly greater than represented in future years.

The concerns in the Wilkin County Ordinance must be addressed. The suggestion that the ordinance is not triggered except upon actual flooding or construction is just plain wrong. Acquisition of land for this use, recordation of easements for this use, commencement of construction of a dam, or attempts to permit one, so that Wilkin County can be flooded would all constitute unlawful steps to use the land for this purpose. The suggestion that a project can be permitted by the State of Minnesota that promotes an unlawful use, because the use will only occur subsequent to the permitting is completely wrong.

B. Buffalo Red Watershed District

The Buffalo Red Watershed District is properly recognized as a regional permitting authority. A significant portion of the proposed flooding would occur within the District. Minnesota Watershed Districts operate under the aegis of a Watershed Plan that is official adopted and "prescribed" by the BWSR. The Staging and storage area impacts the "Western Planning Region" of the Watershed District. The plan does not propose or authorize the flooding of any portion of the region.

The Watershed District requires permits. No person or public corporation shall undertake the construction, removal or abandonment of any reservoir for the impoundment of water without a permit. No person or public corporation shall construct, alter, repair or remove any dike without a permit from the Board of Managers. The underlying driving force of flood control management according to the District's current plan is the Flood Damage Reduction Mediation Agreement dated 1998. Since the DNR specifically found that the LPP was developed according to principles which significantly deviate from that agreement, the granting of a Watershed District permit is by no means assured. We see no evidence that the environmental review consulted with the Watershed District in a meaningful way and if that is true, that should be remedied.

VIII. The DEIS Does not Explore the Economic, Social and Environmental Impacts of USACE and DA's Attempt Unilaterally to Change the Base Floodplain Above FEMA's Established Elevations.

DA's plans depend upon significant unofficial changes in the base floodplain. The assumptions driving every aspect of this project significantly contradicts even FEMA map revisions recently implemented. The changes are not based upon science, but rather upon guesstimates triggered by a desire to change the cost benefit equation in favor of the project and justify assertions that lands and communities that have not been flooded are actually flood prone. The change in base floodplain incorporated into the project assumptions does not derive from local conditions, but stems rather from statistical assertions about the climate as it impacts the entire Red River Valley. Neither federal nor Minnesota's EIS examine the impacts of these changed assumptions. While USACE justifies these changes on probabilistic assertions that the former 100 year floodplain must now be the 50 year floodplain, because there have been a couple of recent floods approaching 100 year elevations, it fails to explain why no flood has approach the new 100 year elevation.

Changing the base floodplain is circumstantially beneficial to the project, of course. Those inside the new protections actually receive greater protection at vastly greater cost than would be justified by existing floodplain designations. The cost of maintaining those protections, not covered by federal subsidies, will be proportionately greater. But the rest of the valley in both Minnesota and North Dakota, not so protected will be now branded with USACE's sweeping unofficial determination that they are now flood vulnerable. Homes and businesses previously built outside the floodplain will now be branded as flood vulnerable. Levees and

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diversions constructed elsewhere as providing 100 year protection, will now be deemed not to provide that protection. There has been no study, let alone consideration of the economic impact on homeowners throughout the basin, or upon communities, to be magically placed in below the base floodplain.

It is equally remarkable, that although the USACE asserts that flooding will be higher and the volume of water to be managed correspondingly greater, that USACE sees this as somehow justifying the elimination of 50 square miles of floodplain. The need for storage is greater, according to USACE, dramatically greater, but USACE is claiming that the first thing which should be done in response is to promote construction on even lower ground and to impose sweeping elimination of existing floodplain storage!

Any changes to the floodplain will have impacts throughout the basin. State and local floodplain zoning is universally pegged to the 100 year floodplain. Lending practices and flood insurance are pegged to floodplain determinations. Many federal regulations are also pegged to the 100-year floodplain. Examples include:

- The area of special flood hazard (aka special flood hazard area or SFHA) within the National Flood Insurance Program and mandatory flood insurance purchase requirements (44 C.F.R. § 59.1);
- FEMA property elevation assistance grants (44 C.F.R. § 209.6(b)(2)(ii));
- National Environmental Protection Act Categorical Exclusion eligibilities (7 C.F.R. § 650.6);
- USDA Farm Loan Programs (7 C.F.R. § 761);
- USDA Housing Preservation Grant requirements (7 C.F.R. § 1944.672(e)(2));
- USDA Rural Development loan approval requirements (7 C.F.R. 3555.5(d)(7));
- Direct Multi-Family Housing Loan and Grant eligibility (7 C.F.R. 3560.58(e)(2));
- Loans in areas having special flood hazards (12 C.F.R. § 22, 172, 208, 339, 614, 760)
- HUD FHA Program construction requirements (24 C.F.R. § 200.926d);
- Eligibility of mortgages covering manufactured homes (24 C.F.R. § 203.73f(c)(i));
- Siting requirements for public drinking water systems (40 C.F.R. § 141.5(b)) solid waste disposal facilities (40 C.F.R. § 257.8(a)), and municipal solid waste landfills (40 C.F.R. § 258.11(b)(1));

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- Critical habitat designations for endangered and threatened species under the Endangered Species Act (50 C.F.R. § 17.95);

The Red River has a limited capacity and that limited capacity in the Red River Valley is a precious resource that should not be arrogated unnecessarily to one community. The natural storage capacity for a given flood is determined by the extent of the floodplain to which the water rises during that flood. All of this capacity is interdependent and represents a hydrologically complex resource that should not lightly be disturbed. Minnesota and North Dakota have learned the hard way that flood dynamics across the basin are interdependent and must be managed on a basin wide basis.

Floodplain revisions should be conducted through a lengthy deliberative process involving public notice and participation of all impacted communities. Because changes in any of these policies on one side of the river could have dramatic impacts on the other, the Minnesota and North Dakota have signed a Congressionally approved interstate compact in the management of Red River waters, recognizing the obligation of each state to implement uniform sustainable flood management practices, establish mutually acceptable criteria for both agricultural and municipal levees, and require uniform criteria for floodplain designation. The Compact is enforceable by either State or by individual aggrieved parties, and in fact, has been enforced by North Dakota in the federal courts against Minnesota actors attempting to raise the level of protection to Minnesota lands above the mutually agreed level of protection.

The Compact as amended includes the following agreements:

1. **Dike Construction and Floodplain Criteria:** “to adopt criteria for the approval of dike construction along the Red River of the North and the Bois de Sioux mutually applicable in both states. Such criteria may include designation of a floodplain and floodway and specifications for maximum dike elevations. Such criteria may include designation of a floodplain and floodway and specifications for maximum dike elevations.”
2. **Joint Management:** “to conduct “joint management and regulation of the boundary rivers....to exhibit good faith and best efforts to closely cooperate, enlisting the assistance of the U. S. Army Corps of Engineers whenever appropriate, to jointly resolve the flooding problems.”
3. **Comprehensive Management:** “to provide for total and comprehensive water management of the entire Red River Basin. Comprehensive water management includes both structural and nonstructural measures and requires involvement and participation at all levels of government. This agreement ensures that both states will provide for uniform and consistent flood plain management along the Red River of the North and Bois De Sioux River and that both states are totally committed to long-range water management objectives over the entire Red River watershed.”

4. **Agricultural Diking Approach:** "to provide for a comprehensive approach to all agricultural dikes impacting agricultural lands along the Red River"

Uniform Municipal Diking: "...to develop diking criteria for urban and municipal areas which will have uniform application on both sides of the Red River. Therefore the parties hereby agree in conjunction with and in cooperation with local water management officials and appropriate municipalities, to adopt mutually applicable criteria for the approval of dike construction along the Red River of the North and the Bois de Sioux in the urban and municipal areas in both states. Such criteria may include designation of a floodplain and floodway and specifications for maximum dike elevations."

- The draft EIS does not adequately explore the consequences of allowing one community unilaterally to change the definition of the base floodplain in ways that impact the entire basin
- The draft EIS does not recognize that the proposed revisions are inconsistent with the letter and spirit of the Compact.
- The draft EIS does not recognize the consequences of allowing one community in the basin to apply situational hydrological principles based on local considerations

IX. Conclusion

We conclude by emphasizing that The Draft EIS has completely lost track of the original purpose that triggered Minnesota's Environmental Impact Statement. Minnesota's environmental review was launched when the Diversion Authority (DA) rejected the USACE's selection of the Minnesota 35K diversion plan, and chose instead a plan which Minnesota regarded as environmentally unsound. Minnesota asked USACE to address these concerns in the Federal EIS, but the USACE refused to do so, because USACE and DA wanted to rush a Chief's letter to the Congress.

The DNR must recognize that a local government does not have the right to tell a sovereign state what project purpose is acceptable, and that a North Dakota local government does not have the right to force a Minnesota County or township to accept floodwaters diverted in order to foster development in the floodplain.

Sincerely,

/s/ Gerald W. VonKorff

Gerald W. Von Korff
Attorney for Richland-Wilkin County Joint Powers Authority
JVK/dvf

Attachments

ATTACHMENT A



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Re: Draft Environmental Impact Statement, Fargo-Moorhead Flood Risk Management Project

Dear Ms. Townley:

I have been asked by the MND&K Upstream Coalition to review the Draft Minnesota Environmental Impact Statement (DEIS) to help ensure that it contains accurate and adequate information for review of the proposed Fargo-Moorhead Flood Risk Management Project particularly as it relates to upstream impacts within the staging area.

Background

I think it is important to begin with some fundamental principles applicable to flood control. The highly developed areas of Fargo -Moorhead need improved flood protection. However, the selected protection strategy should not encourage development of floodplain land and should not unnecessarily increase flooding elsewhere.

There are three commonly used methods to provide improved flood protection: (a) Build/raise levees; (b) Store floodwater upstream and (c) Increase conveyance by channel improvement or diversion. All three of these methods may adversely impact flooding elsewhere. Levees may increase water levels upstream by encroaching on floodway flow areas and/or increase downstream flood levels by reducing natural floodplain storage. Upstream floodwater storage raises water levels in the designated storage areas. Increasing conveyance increases flood flow raising water elevation downstream from the conveyance improvement.

The magnitude of adverse impacts is generally proportional to the volume of water no longer stored in the natural floodplain in and around the targeted protection area. Therefore, the selected strategy should be one that minimizes, to the extent practical, the reduction of natural flood plain storage. Three principles should be followed to accomplish this objective.

- a. Levee alignments should follow the outline of highly developed areas and not include green spaces such as parks, golf courses, agricultural land and other undeveloped areas. Such areas may be protected during lower flood events, but not during major events.

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- b. Upstream storage should be located, where practical, on lands that are currently flood-prone or on lands where a large volume of storage can be efficiently placed on a small area. It should also be located and designed to provide flood control to as large an area as practical and multipurpose benefits such as wildlife habitat, streamflow maintenance, and water supply.
- c. Conveyance improvements should be located to minimize draining lands additional to the targeted protection area.

The current USACE plan includes all three methods, which is good, but they have not done a good job in locating and optimizing the application of each method

General

The project includes three primary components: A 30 mile diversion channel; levee improvements; and an upstream staging area dam. These three components operate in concert to meet the flood control purposes of the project. In addition to providing a significant element of flood control, the staging area is also used to store water to prevent some of the increased flow caused by levee improvements and the diversion, which would otherwise cause downstream impacts. The project began as a simple diversion channel around the F-M metropolitan area and has since evolved into a more complicated project. It is still commonly thought of and referred to as a diversion project. The DEIS fails to clarify the role of all three primary components and explain how they work together to accomplish the project purposes.

The stated purpose of the project is to reduce flood risk, flood damages, and flood protection costs related to flooding in the F-M metropolitan area. (DEIS, Appendix B, page 3). The purpose articulated in the DEIS is further defined by three anticipated results: 1. Reduced flood risks on local streams including the Red, Wild Rice, Sheyenne, Maple, and Rush Rivers; 2. 100 year flood protection for substantial portions of the F-M metropolitan area; and 3. Reduced risks from greater floods.

There appears to be an unstated purpose of providing flood protection for developing land within the existing floodplain area. This is evident in the selection of the LLP diversion alignment instead of the lower downstream impact NED diversion alignment and in the design and alignment of other LLP features. In my opinion development of floodplain areas, protected or not, is unwise and contrary to current public policy. The implications of the project promoting floodplain development should be discussed in the EIS along with the relationship between the additional volume of displaced floodplain water and the magnitude of offsite flooding impacts.

Alternatives

The DEIS includes detailed analysis of the proposed project and a Northern Alignment Alternative, which is the same as the proposed project with a slightly modified alignment of the staging area dam. Two versions of the obligatory "no action" alternative were also considered.



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They include existing and funded flood protection projects with and without implementation of emergency measures as have been carried out during historic floods.

Discussed in the DEIS but dismissed from further evaluation were the Distributed Storage Alternative and a More-Flows-Through-Town-Alternative. The alignment of the diversion channel featured in the NED was dismissed as providing no additional benefits compared to the LPP diversion alignment even though its downstream impacts had been shown to be substantially less. These alternatives, especially if combined, would significantly reduce the magnitude of offsite flooding impacts without compromising the ability to protect the developed areas of metropolitan Fargo and Moorhead.

Proposed Project

As mentioned above, the proposed project includes three primary components. Two of those components, diversion channel and levees, cause significant flooding downstream. The third component, storage, is used in part to reduce downstream impacts. The DEIS fails to recognize and describe feasible and practicable opportunities to modify impact-causing components to reduce their downstream impacts. Using strategies to reduce impacts would correspondingly reduce the need to use storage in the upstream staging area for downstream mitigation.

Diversion Channel

The LPP places the diversion channel within the extensive floodplain area west of Fargo. The effect of that alignment choice is increased and uncontrolled drainage of floodplain water from that area. The resulting loss of floodplain storage is a major cause of the project's potential downstream impacts. An alternative alignment, identified early on as the NED project, places the diversion outside the floodplain. That alignment avoided floodplain drainage resulting in far less downstream impacts. The EIS should include evaluation of a non-floodplain diversion alignment

Levees

Levees and ring dikes are used to protect areas within the floodplain. An effect of this protection is a loss of floodplain storage which, in turn, results in potential increased downstream impacts. The existing levees and funded levee improvements protect, for the most part, existing highly developed areas. Arguably, protection of such areas is justified by their high value, regional significance, and the social impacts of flooding.

However, the proposed project extends levee protection far beyond the existing highly developed area. This is especially true in the area south of Fargo. The alignment of the diversion channel, with its associated east side levee, and the staging area dam, outline the west and south side perimeter of the levee protected area. This includes large areas of relatively undeveloped land. In my opinion, the levee protected areas should be kept to a practical minimum, thereby minimizing the loss of natural floodplain storage and future development within existing floodplain areas.



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The Northern Alignment Alternative reduces the proposed levee protected area but only to a very limited extent.

The EIS should include evaluation of a levee/dam alignment that minimizes the protected floodplain area.

Distributed Storage Alternative

Development of distributed storage throughout the Red River Basin has long been a priority of water management districts in both Minnesota and North Dakota. The strategy is consistent with the principles articulated in the mediated settlement agreement. Distributed storage provides local benefits within watersheds where the storage is located, thus reducing local flooding, while also providing basin wide benefits in combination with storage across the basin. Distributed storage affords greater ability to locate storage where it minimizes impacts to agriculture and homes and provides opportunities for multipurpose benefits. Working for watershed districts in Minnesota, I have personally been involved with several constructed impoundment projects with a total storage capacity of about 100,000 acre-feet. None of them impacted residences and all provided multipurpose benefits in addition to local and regional flood control. Several more projects are in the planning stage.

The Red River Basin Commission (RRBC) included distributed storage as an integral component of its Long Term Flood Solution (LTFS). Its goal is to reduce Red River Main-stem 100 year peak flows by 20%. The RRBC has supported several modeling efforts in developing its plan. The recently completed Halstad Upstream Retention Study (HUR) identified and modeled the downstream effects of 96 impoundment sites in the Red River Basin upstream from Halstad Minnesota with a total storage capacity of about 560,000 acre-feet. As a signatory of that report, I fully support its content and recommend its use as a reference in planning water resource projects within the Red River Basin.

However, the USACE and the DEIS have distorted the amount of distributed upstream storage needed to provide flood relief at Fargo by suggesting that all 96 sites would need to be constructed. In fact, only 40 sites with a combined storage capacity of about 226,000 acre-feet are upstream from the Fargo gage. An additional 26 sites with a combined storage capacity of about 120,500 acre-feet are within the watersheds of the Sheyenne, Maple, and Rush Rivers which do affect flooding north and west of Fargo. The remaining 30 sites with a combined capacity of about 213,000 acre-feet enter the Red River well downstream of Fargo.

The USACE and the DEIS eliminated distributed storage as a practical alternative by stressing the fact that the distributed storage would not, by itself, meet the project purpose. It would however, by itself, reduce the average annual damages in the F-M area on the order of 50%. The DEIS does indicate that DSA would substantially reduce flood risk to the F-M area as well as flood damage reduction throughout the basin area and recommends that it continue to be



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pursued. However, the DEIS treats it as a competing strategy to the proposed project. The DEIS fails to point out that not including distributed storage as an integral component of the F-M project reduces the practicality of its implementation within the upstream basin and therefore diminishes the probability that the basin wide benefits of the envisioned 20% flow reduction will ever be realized.

The benefits of distributed storage are further downplayed by unsubstantiated speculation that less than 20% peak flow reduction would result during larger than USACE-wet 100 year flood events or during events that had less evenly distributed runoff than modeled in the HUR study. The rationale is that heavier runoff amounts would overwhelm the storage capacity of the impoundments and that, when full, the impoundments would no longer be effective. That seems intuitively logical if one assumes a hypothetical basin wide flood of extraordinarily low probability. However, within the reasonable range of floods that I have modeled the drop off in effectiveness has not been significant. That is due to the location and design of the typical impoundments included in the HUR study. They typically have total capacity similar to 100 year runoff so they do not fill until late in the flood event. As they also tend to be located high within the watershed, it is usually the early runoff from their drainage areas that contributes to the mainstem peaks. The storage capacity is not exceeded until later, even during much larger flood events.

I disagree, then, with the USACE's belief that distributed storage would have significantly diminished effectiveness during the USACE 100 year (wet) flood. However, it would be a mistake to neglect the benefits of distributed storage to lower more frequent flood elevations as well. The USACE -wet 100 year flood is a flood significantly greater than the floods of 2009 and 1997. The USACE (wet) 50 year flood is approximately equivalent to the 2009 flood. Under the proposed operating plan, the floodgates would be closed when flood-flows reach the ten year (ten percent probability) level. As a result about sixty percent of the floods that would trigger storage operations would be in the ten year to twenty-five year range. About eighty percent of the floods that will trigger storage operations would be 50 year floods or below. Reducing flood flows in these ranges would be of significant benefit to the towns and agricultural lands upstream of any proposed Red River dam.

It is reasonable to raise the question of distributed storage effectiveness in very large and non-uniform flood events. However, the tools that were developed and used in the HUR study are capable of answering these questions and should be used to determine the validity of the unsupported assertions found in the DEIS.

Distributed storage is an ongoing program, actively supported by state agencies and local units of government. The FIS should consider the effectiveness of any alternative with and without that distributed storage. I understand the difficulty in certifying 100 year flood protection that depends on construction of multiple upstream impoundments. However, its inclusion would reduce the staging area storage volume during any given flood event by making all floods



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smaller and could also increase flood protection to a 500 year level and beyond as suggested in the LTFS.

Operation

Statements in the DEIS that project operations will not begin until the flow rate reaches 17,000 cfs can easily be misinterpreted to mean that the project will have no effect on smaller floods. Although the staging area control gates may not be operated during lesser floods, the diversion channel certainly will operate as it does so automatically without any means of manual intervention other than the gate at its very upstream end. As currently proposed, the diversion will tend to increase downstream flooding by draining floodplain areas along the diversion and along the tributaries that the diversion intercepts providing an improved outlet for tributary flood flows.

The operation of the staging area outlet gates on the Red and Wild Rice Rivers to control flows on the Red River through Fargo is clearly presented in the DEIS. However, the operation of the staging area outlet gate at the inlet to the diversion channel is totally obscure. Presumably, its operation is dictated by the need to mitigate the downstream impacts of increased flows caused by the diversion channel and levees. This should be clearly stated. I understand that its operation may be complicated in its details. But at least the operating objective should clearly be presented, which I think is to release as much water from the staging area as possible without increasing downstream flood peaks relative to what they would have been without the project. Appendix A to the DEIS contains operation rules based, at least in part, on a "power law" relationship between storage and discharge. The relevance of the power law function in this application is not explained. What does follow is 10 pages of decision logic. I tried to follow the logic through representative scenarios, but there are references to tables that were not provided. The EIS needs to include a much clearer presentation of the operating objectives and parameters. The project is not ready for public review without a comprehensible operating plan!

Operation of the control gates will determine future upstream and downstream impacts as well as the beneficial impacts within the Metro area. The DEIS states that the Diversion Authority will own and operate the project. It also refers to operation by "adaptive management". Who will have the authority to make those management decisions and how will they be made. What are the standards or sideboards that establish the limits of adaptive management flexibility? Is it possible for the operator significantly to alter operations in ways that would increase the duration or frequency of flooding beyond that described in the DEIS and operating plan?

Upstream and Downstream Impacts

The anticipated water elevations of the project and evaluated alternatives are reasonably well presented as stage hydrographs at representative locations upstream, within, and immediately downstream from the staging area.

The flood impacts of the project downstream from Fargo are not presented at all. Can it be assumed that there are no downstream impacts? Or are there downstream impacts that are not



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considered significant by the USACE? The DEIS does not say. The EIS should include stage and flow hydrographs at representative downstream locations.

Along with the larger floods, the presented results should include smaller less frequent floods which can cause significant agricultural damages when they occur during the growing season. It is very important to understand that the project's downstream impacts are not projected to be directly mitigated by storage in the staging area during less than 17,000 cfs flood events. Project operations call for no restriction of Red River flows during smaller events even though the diversion channel and levees will be functioning to decrease floodplain storage and consequently increasing downstream flows. The EIS should present this information along with a rationale explaining why these impacts need not be mitigated. If these impacts come as a surprise to downstream interests, there will be pressure to provide mitigation which would have additional impacts within the staging area.

LPP Violates Basic Flood Management Principles

At the beginning of this report, I described three fundamental principles of flood protection that minimize impacts:

- (a) Levee alignments should follow the outline of highly developed areas only;
- (b) Upstream storage should be strategically located to provide maximum benefit at minimum practicable impact,
- (c) Conveyance improvements should be aligned to minimize draining lands additional to the targeted protection area.

Levee protection proposed for the LPP extends well beyond the existing highly developed area which increases offsite impacts due to loss of natural floodplain storage. The staging area dam will serve as a levee on the south side of the FM area. The area inside (north of) that levee is largely undeveloped floodplain and that alignment increases the impacts. The other parts of the Metro levee system should be reviewed by the EIS to identify the least impact solution.

The USACE has only been willing to consider as a viable option the storage they plan to build themselves in the staging area. They have thus inappropriately ruled out any measures outside the project location for both the 100 year (USACE-wet) level of protection and for additional protection to attain desired higher goals (500 year).

The chosen alignment of the conveyance improvement, a diversion channel on the North Dakota side, flows through a floodplain area and intercepts four major tributaries. So its effect is not only to reduce flows on the Red River through town, but also to greatly reduce floodplain storage in the area along the diversion and up each tributary.

An alternate strategy also incorporating all 3 methods but modifying their application to minimize the loss of floodplain storage and the need for mitigation storage would be as follows:



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- a. Move the south levee alignment as far north as practical thereby minimizing the protected future development area and the loss of natural floodplain storage south of FM.
- b. Include distributed storage upstream from Fargo as identified in the Halstad Upstream Study in the design to supplement the other methods.
- c. Relocate conveyance improvements to avoid/minimize the loss of natural floodplain storage.
 - i. Increase capacity of the floodway along the Red River through town by setting back levees and enlarging the floodway (not the channel) cross-section through restricted areas. Existing levees have already removed the natural floodplain storage along the Red River through town so there would be little potential for additional adjacent floodplain drainage.
 - ii. Reroute the diversion outside of the floodplain thereby eliminating the potential for drainage of natural floodplain storage. The only practical locations appear to be on the Minnesota side.

CONCLUSION

In summary, I offer the following recommendations respecting the Draft EIS:


- **Address Floodplain Development:** The implications of the project promoting floodplain development should be discussed in the EIS along with the relationship between the additional volume of displaced floodplain water and the magnitude of offsite flooding impacts.
- **Discuss and Quantify Benefits of Modifications to Confine Protection to Highly Developed Areas:** The EIS should describe how the project could be modified to implement the first of the three flood control principles described above: "Levee alignments should follow the outline of highly developed areas only, and not include green spaces such as parks, golf courses, ag land and other undeveloped areas. Such areas may be protected during lower flood events, but not during major events." The EIS should describe and quantify the benefits of implementing this principle for consideration by permitting authorities.
- **Discuss and Quantify Benefits of Upstream Distributed Storage:** The EIS should describe how the project could be modified to implement the second of the three flood control principles: "Upstream storage should be located, where practical, on lands that are currently flood prone or on lands where a large volume of storage can be efficiently placed on a small area. It should also be located and designed to provide to as large an area as practical and multipurpose benefits. The EIS should describe the benefits of implementing this principle on a large scale, so that policy makers can consider whether




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- distributed storage should become a part of the project and for consideration by permitting authorities.
- The tools that were developed and used in the HUR study should be used to determine the validity of the currently unsupported assertions found in the DEIS regarding the effectiveness of DSA in very high flood events.** The EIS should recognize that the vast majority of storage operations under the operating plan would be triggered by floods well under the base (100 year) flood.
- Discuss and Quantify Benefits of Relocating the Diversion Channel.** The EIS should describe how the project could be modified to implement the third of the three flood control principles: "Conveyance improvements should be aligned to minimize draining lands additional to the targeted protection area." The EIS should recognize that the most practical method of implementing this alternative is to adopt the Minnesota diversion alternative. The EIS should describe and quantify the benefits of implementing this principle for consideration by permitting authorities.
- The EIS should include evaluation of a levee/dam alignment that minimizes the protected floodplain area.**
- The EIS should not be regarded as complete without a comprehensible operating plan that not only addresses the protections provided to Fargo-Moorhead but also to the upstream and downstream areas.** The project is not ready for public review without a comprehensible operating plan.
- Clear principles governing operation of the control gates should be established.**
- Discuss and Quantify Benefits of Including Strategies that Reduce Impacts.** The EIS should quantify the total reduction in storage required for mitigation of downstream impacts that would result from implementing strategies to reduce downstream impacts of levees and diversion.

Sincerely,
Widseth Smith Nolting & Assoc., Inc.


Charlie Anderson, PE

I do hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

Date 10-27-2015 Reg. No. 12775

ATTACHMENT B

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Appendix A

EO 11988 embodies fundamental enforceable environmental sustainability principles, principles which result from decades of ecological and engineering scholarship, and the EO 11988 principles must be applied in Minnesota public waters permitting, as informed by a sufficient environmental review.

The purpose of this Appendix is to urge that the EIS should recognize that Executive Order 11988 establishes a legally binding sustainability principle, and that the draft EIS fails to apply it correctly. EO 11988 results from decades of engineering research and public policy analysis leading to recognition that big-engineering structural solutions designed to expand development into the floodplain (levees, channel modifications, diversions, and dams) increase flood risks. Even when development is located behind certified levees, floodplain development encourages development on low ground, and that development is exposed to risk when future generations fail to maintain the levees, or when the hydrology of the region changes. Development of floodplain removes flood storage and exacerbates flooding in the remainder of the basin.

EO 11988 was issued by the Carter-Mondale administration, because previous efforts had failed to reign in the USACE and Bureau of Reclamation's propensity to build large, environmentally damaging, costly engineering water control projects to economically benefit local sponsors. Starting in the 1940's, with the groundbreaking scholarship of water engineer Gilbert White, it became recognized that encouragement of development into the natural floodplain (as Diversion Authority proposes here) by providing floodplain protection through levees and other devices was not cost-effective, was actually exacerbating floods, and was increasing the cost to taxpayers of flood relief.¹ White and others showed that preservation of natural floodplain storage was critical to maintaining river and watershed storage capacity during major storm events and snowmelts. By constructing levees around these natural floodplains, thereby attracting development into low-lying floodprone areas, federal and state water projects were creating more flooding, not less, and were locating capital projects in low areas vulnerable to flooding.

Combined with massive federal flood insurance subsidies, the approval of water resource development projects that offered protection to undeveloped floodplain was encouraging development in places vulnerable to flooding and simply shifting floodwaters onto others. Despite a growing consensus that national floodplain policy must shift to a strategy of floodplain preservation, Congress continued to receive, and then approve, pork barrel Corps projects that failed to take these principles into account.

¹ See, e.g., Gilbert White, *Human Adjustment to Floods: A Geographic Approach to the Flood Problem in the United States*. (1942); Hoyt and Langbein, *Floods*, (1955); White, et al, *Changes in Urban Occupancy of Flood Plains in the United States* (1958). White's landmark work, beginning with his 1942 University of Chicago doctoral dissertation "Human Adjustment to Floods," challenged the notion that natural hazards are best addressed by engineering solutions.

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In the Flood Control Act of 1960, Congress stressed the need for guidance in reducing flood losses by controlling development of floodplains. PL 86-645. Then, in 1966, President Lyndon Johnson's Task Force on Federal Flood Control Policy issued "A *Unified National Program for Managing Flood Losses*." Concurrently, President Johnson issued the first floodplain Executive Order, 11296, directing federal agencies to provide leadership in preventing uneconomic use and development of floodplains and reducing flood losses². Still, the National Water Commission's report "Water Policies for the Future" warned that floodplain development continued unabated:

Citizens in all parts of the Nation have been content to see billions of dollars spent to help fellow citizens subject to loss of life or fortune. But, throughout the many years that this benevolent effort has been under way, other individuals have been busily developing other flood plain areas in such ways that the initial goal of rescuing those unfortunate enough to be endangered by floods has become less and less attainable.

1973: National Water Commission, Water Policies for the Future.

Despite a growing consensus that national flood control policy should be based upon sustainable solutions, instead of big engineering and floodplain development, agencies like the USACE continued to sponsor project after project connected to floodplain development. Local and state sponsors proved unable to resist the intense pressures to pursue local profits for land speculators realized when federal funds paid for the conversion of floodplain for development.

Two years after the National Water Commission's report, the Comptroller General issued a report warning that as a result of inertia favoring costly structural engineering solutions, federal agencies had still failed effectively to implement national policy regarding floodplains and called for redoubled efforts. Comptroller General, *National Attempts To Reduce Losses From Floods By Planning For And Controlling The Uses Of Flood-Prone Lands (1975)*. The report explained,

Historically, the primary method to reduce flood damage has been through structural measures such as dams, reservoirs, dikes, levees, channel improvements, and watershed treatment. In the past decade, however, greater emphasis has been placed on planning and regulating the use of floodplains to curtail flood damages.

Despite this emphasis, the report concluded:

² In *National Attempts to Reduce Losses from Floods by Planning for and Controlling Uses of Flood-Prone Lands*, the GAO reported that federal agencies do not adequately evaluate flood hazards in their programs. Many of the agencies, the report noted, did not have or properly implement their flood-related procedures. In addition, the report observed, Executive Order 11296 had had limited effect in reducing flood losses due lack of implementing procedures and, among agencies that did have procedures, there was limited compliance.

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Some agencies. . . encourage unwise use and development of flood-prone areas, which may be used to justify the construction of flood control projects that would not be necessary if such use and development had not occurred. Comptroller Report, Id. pages 10-11. . . Although the need for reducing flood losses through more rational use of flood-prone lands has long been recognized, we found that only limited progress has been made in achieving this goal. 1975 Comptroller Report, p. 47.

The resilience of inertia in the federal bureaucracy to resist implementation of new sustainable floodplain policy required some form of policing function to ensure that floodplain preservation policies were being observed, the Report continued:

We believe that the lack of progress by Federal agencies in considering flood hazards in their own programs demonstrates a need for OMB to take a more active role in monitoring Federal efforts and for Water Resources Council to fulfill its leadership role more promptly. Id. at page 40-41.

If national floodplain policy were to reverse course, it would require a mechanism to ensure that proposals to invade or destroy natural floodplain would be identified as such to the public, to Congress, and to those within the executive branch charged with accountability functions. In 1977, President Carter, citing the National Environmental Policy Act, (NEPA), the National Flood Insurance Act, and the Flood Disaster Protection Act, issued a new and strengthened Executive Order, 11988, to foster agency implementation of national floodplain policy.

Across the executive branch, all agencies were required to implement EO 11988 policies in their administrative regulations, thus giving the sustainability principles the force of law. This is the fundamental error in the approach that USACE and DA have taken in this project. The local St. Paul District treated EO 11988 as a value, to be weighed along with other values at the discretion of the project proponents. They have repeatedly cited EO 11988 as something that could be overridden, and even ignored, depending upon whether the St. Paul District believes that in a specific instance, some other competing policy outweighs the requirement that floodplain be preserved.

On the contrary, EO 11988 requires that a federal project “must avoid direct or indirect support of floodplain development wherever there is a practicable alternative” to development in the floodplain. The purpose of the order is not fulfilled by “considering” floodplain development, nor is it fulfilled by “considering alternatives.” The order requires avoiding direct or indirect support of floodplain development wherever there is a practicable alternative. The language of the order contains the following key words³:

Avoid: The project *must* avoid direct or indirect support of floodplain development.
(Here the project provides direct and indirect support of floodplain development)

³ See Written Comments of Tim Fox, Wilkin County Attorney, October 12, 2015.

ATTACHMENT B

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Whenever: Direct or indirect support of floodplain development must be avoided whenever there is a practicable alternative

Practicable alternative: The project must not support floodplain development if development can occur somewhere else. (Here, as discussed below, there are plainly practicable alternatives to development of the floodplain).

Providing flood protection to the floodplains south and north of metropolitan Fargo violates the principles of EO 11988. The USACE itself made that determination in 2009, but failed to acknowledge that determination in the Federal EIS. When we discovered this determination in the administrative record, the Department ruled that we could not submit it until the comment period. We now do so.

Despite passage of regulations giving EO 11988 the force of law, USACE and some other agencies continued to advance projects like this one that blatantly violate both the regulations and the Executive Order itself. In 2003-2004, a series of reports confirmed agencies continued to promote projects that were not cost effective by distorting the relative costs and benefits of these projects and by promoting continued development of natural floodplains. A coalition of environmental groups and budget conservatives called for redoubled Congressional support for EO 11988 principles. The National Wildlife Federation and Taxpayers for Common Sense captured this sentiment in their "Crossroads Report," published in 2004. The report called for Congress to strengthen the implementation of EO 11988 in the coming Water Resources Development Act, ultimately passed in 2007:

There is a long history of USACE manipulation of hydrological, economic, and other data to justify the highly engineered massive flood control projects. While USACE projects have produced some positive economic benefits for the nation, they have also caused significant environmental harm. Large-scale structural projects planned and constructed by the USACE have also increased flood risks for many communities, reduced water quality, impaired recreational opportunities, and damaged economies that rely on a healthy environment. *See Crossroads, Congress, the Corps of Engineers, and the Future of America's Water Resources, National Wildlife Federation and Taxpayers for Common Sense (2004).*

Damage caused by USACE projects encompassed both initial projects and ongoing operations, according to the report.

During the past decade, the National Academy of Sciences, the Government Accountability Office, the Army Inspector General, federal agencies, and Independent experts have issued a flood of studies highlighting a pattern of stunning flaws in Corps project planning and urging substantial changes to the Corps' planning process. Two National Academy of Sciences panels and the Department of the Army Inspector General concluded that the Corps has an institutional bias for approving large and environmentally damaging structural projects, and that its' planning process lacks adequate environmental safeguards.

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Less environmentally damaging, less costly, nonstructural measures that would result in the same or better outcomes are routinely ignored or given short shrift. This results in projects that are unnecessarily destructive, costly, and, in many cases, simply not needed. *See Id. See also* Houck, Breaking The Golden Rule: Judicial Review Of Federal Water Project Planning, *65 Rutgers Law Review 1 (2012)*.

In section 1036 of the Water Resources Development Act of 2007, Congress responded to these concerns by including recognition of a national policy fully supportive of EO 11988's requirements. The WRDA amendments stated:

It is the policy of the United States that all water resources projects should reflect national priorities, encourage economic development, and protect the environment by (1) seeking to maximize sustainable economic development; (2) seeking to avoid the unwise use of floodplains and flood-prone areas and minimizing adverse impacts and vulnerabilities in any case in which a floodplain or flood-prone area must be used; and (3) protecting and restoring the functions of natural systems and mitigating any unavoidable damage to natural systems.

In explaining the purpose of this amendment, the chair of the Senate Environment and Public Works Committee stated:

The bill will also establish a new policy that gives a stronger emphasis on protecting the environment and the natural systems that provide critical natural flood protection to communities. It also directs that there be a comprehensive study of the nation's flood risks and flood management programs. 153 Cong. Rec. S11974-02, 153 Cong. Rec. S11974-02, 2007 WL 2767477.

The DEIS parrots the USACE's contention that the EO 11988 issue is simply a matter of the location of the Diversion itself. It states:

The USACE and the Diversion Authority have concluded that a diversion channel is the alternative that best meets the project purpose (as stated in Section 2.5 of the FFREIS) "to reduce flood risk, flood damages and flood protection costs related to the flooding in the Fargo-Moorhead Metropolitan Area," that there is not a practicable alternative located outside the floodplain and, as such, Executive Order 11988 requires that impacts to the floodplain be minimized. The diversion alignment of the selected plan removes some land from the floodplain and leaves other areas in the floodplain.

The issue is not the location of the Diversion itself: the issue is whether the Diversion is going to be allowed to eliminate floodplain storage.

ATTACHMENT C

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Wilkin County ***Resubmission of July 2015 Comments***

In July of 2015, we urged the Department to consider the concerns of Wilkin County during the environmental review process. The County believed that the Department had an obligation to consult actively with impacted local governments, to make sure that the regulatory concerns that those governments had would be addressed. We urged that allowing the project proponents special access to the process, to supply data and opinions throughout the process, but to refuse to receive parallel information from other impacted governments was inconsistent with the letter and spirit of the environmental review process. Wilkin County sought to submit its concerns in written form, but the Department ruled that it could not. For this reason, we are not re-submitting a revised version of those concerns for consideration at this time.

In June of 2011, Minnesota DNR urged the USACE to *address potential inconsistencies between the Locally Preferred Plan (LPP) and “standards, ordinances, and resource plans of local and regional governments.”* DNR explained that *“This information will be necessary for both the state environmental review and permitting process.”* . In August of 2010, the Department’s letter urged that (a) that DA had radically altered the project purpose that procured Congressional authorization of the feasibility study; (b) That the new approach to the project was a violation of agreed upon sustainability principles found in the mediated settlement agreement; (c) That this issue must be addressed in the Minnesota Environmental Review so that Minnesota could determine whether the revision of purposes was consistent with Minnesota law and policy

Wilkin County, believes that the LPP remains inconsistent with local ordinances, standards and resource plans. They believe that local governments should have a collaborative role in making sure that those inconsistencies are addressed and that better and more communication between local governments and the environmental review process is necessary. If this project cannot receive permits, the sooner that is recognized, the sooner an acceptable plan can be adopted and implemented.

The LPP threatens to flood large portions of four counties. Our primary goal is to develop a shared understanding of how local government will be involved in addressing issues of concern throughout the balance of the environmental and permitting process. This document lists some major areas of concern.

- 1) ***Four Key Environmental Criteria:*** *How will the DNR's four key environmental criteria (ecological sustainability, least impact solution, mitigation, and compliant with local standards) be addressed in the EIS and State Permitting and Local Government Permitting?*

In June 2011 comments to the Federal Environmental Impact Statement, State of Minnesota wrote the following –

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“It’s apparent that significant additional work is needed to demonstrate that the selected alternative is:

- ecologically sustainable,*
- the least impact solution,*
- one in which adverse effects can and will be mitigated, and*
- consistent with other standards, ordinances, and resource plans of local and regional governments.*

This information will be necessary for both the state environmental review and permitting process.”

These four key criteria should have been addressed in the federal environmental review, because they are “action-forcing” criteria directly tied to the key choices made at the federal level—(NED versus LPP, proposal to develop floodplain, elimination of distributed storage). Diversion Authority (“DA”) has justified the failure to address these issues in the federal environmental review by asserting that they would be addressed in the State environmental and permitting review. The potential for increased downstream flood flow (or resulting mitigation requirement) is directly related to the loss of flood plain storage resulting from the project. Therefore, in comparing alternatives, each should be evaluated as to the loss of natural flood plain storage.

For this reason, we feel it is absolutely critical that these four key environmental criteria must play a central role in the state environmental and permitting process. We are uncertain whether these four key criteria are going to be directly addressed in the final EIS, and are not clear about how the DNR intends to address them in the permitting process. In particular:

- What are the legal and policy standards that will be followed in addressing each of these key environmental criteria? What is the data that has been accumulated to address these questions?*
- Who is determining the legal and policy standards that will be applied and what is the forum where they will be made transparent?*
- Is the DNR willing to engage in dialog on these key environmental criteria before the EIS draft is issued?*
- Has DNR leadership given instructions to the outside consultants and to DNR staff on the DNR’s interpretation of these four criteria so that there is clarity on how the criteria should be applied?*

This page contains no comments

2) **Least Impact—Project Purpose Manipulation:** *We are concerned that DA and USACE are attempting to manipulate the project purpose definition in order to evade Minnesota’s requirement that the least impact solution must be selected.*

This issue arises because NEPA is a procedural statute which requires due diligence to disclose the environmental consequences of each potential alternative. NEPA is an “action-forcing” process, because it supplies information about environmental consequences which, in turn, operates in the context of other statutes which have substantive requirements. For example, when the EIS discovers impacts on endangered species, the Endangered Species Act (ESA) forces the project proposer to comply with ESA’s substantive requirements (as occurred with the snail – darter and the Tellico Dam). The 8-step process for floodplain impact disclosure similarly operates in connection with the substantive floodplain protection provisions in the Water Resources Development Act of 2007 (discussed below) and the regulations implementing EO 11988. Thus NEPA discloses the consequences of floodplain loss, but WRDA and EO 11988 demand that floodplain development must be avoided.

USACE concluded that the NED project meets the project purpose, has the best cost-benefit ratio, and the least environmental impact. But, USACE allowed DA to select the LPP project, (unlawfully, we believe), because DA wanted to develop 50 square miles of floodplain. NEPA alone would not bar the DA from selecting the LPP: it merely requires an action forcing disclosure. But the fact that USACE allows selection of a very damaging environmental alternative cannot be allowed to override MEPA and should not have been allowed to override EO 11988.

We are concerned that USACE is attempting to evade MEPA by altering the project purpose so as to convince Minnesota to disregard the least impact solution.

- *The USACE’s selection of the NED project after extensive Congressionally authorized review establishes that the NED project by definition meets the project purpose. Protecting the floodplain from flooding by the five tributaries is not a project purpose, it is a rationalization for selecting a more costly, more damaging, less beneficial project choice.*
- *Allowing a project proponent to eliminate an alternative for purpose of section 116D.04 simply by redefining the project purpose would gut MEPA’s substantive protection of the environment.*
- *Local permitting authorities, like Wilkin County, are not required to allow their citizens to be flooded by a project that is not the least impact solution.*
- *Minn. Regs. Section 6115.0410, subpart 8, requires a dam applicant to prove that there is “a lack of other suitable feasible and practical alternative sites” for the project. The NED project meets that criteria.*

This page contains no comments

- *The 8-step sequencing process, which is required by law, is dispositive on the existence of other projects which may accommodate urban growth without invading the floodplain.*

The fact that the second-dam location is being considered does not negate the requirement that in the permitting process, MEPA requires that permitting authorities must determine whether the proposed project is the *least impact* solution, precisely as the State of Minnesota’s June 2011 comments indicate. The NED project has been reviewed in the Federal EIS. It has been found by the USACE to be feasible and determined to be the project which best meets the project objectives. Permits must be denied to the LPP, because developing floodplain and eliminating existing floodplain storage is not a legitimate project purpose, and because it causes avoidable harm.

3) ***We would like to establish better ground-rules for communications between Wilkin County (and other impacted Minnesota jurisdictions) and the DNR on issues of importance to those jurisdictions.*** Our letter to Jill Townley explains the legal basis for those discussions. See Minnesota Statutes Section 116D.04 subdivision 2a (where practicable, joint development of information needed for state and local permitting); EQB Rule 4410.0400 Subpart. 2 (RGU responsibility for verifying accuracy of environmental documents); EQB Rule 4410.2200 (governmental unit role in providing information).

It doesn’t seem appropriate that the hydrological impacts should be shared and discussed exclusively with the DA, and released to impacted jurisdictions at the whim of the DA. The negative impacts of the proposal fall upon the upstream counties. It is clear that the DA has ready access to the environmental review process. They obtain drafts before we do; they freely distributed portions of those drafts before we see them, the data that they supply is included and considered. When we request copies of what the DA has, we are forced to file data practices requests and receive the documents only after paying fees and waiting for the data practices processing delays.

We have now received preliminary draft appendixes including hydrological information. It has been suggested that if we discover errors in that data, that our information or concerns cannot be shared until the comment period. However, at some point, we expect that the DA will be seeking local permits, rezoning or other local authorities. Wilkin County has adopted an ordinance prohibiting the use of Wilkin County for massive flood water storage without rezoning. Holy Cross is engaged in a similar process. The environmental review process should involve all local authorities equally.

We have a number of major concerns on reviewing the preliminary draft EIS and appendixes regarding hydrological issues. We think there is mutual benefit to establishing lines of communication to resolve and clarify those issues.

4) ***Distributed Storage.***

- If the rationale for refusing to consider distributed storage as a mechanism to reduce or eliminate the need for the Red River dam is that local governments in

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Minnesota will not voluntarily implement distributed storage, then doesn't that same principle apply to the massive storage being contemplated in Wilkin County? If, on the other hand, the DA can be granted the power to flood farmsteads and communities, why then can it not be granted the power to establish distributed storage in smaller unoccupied distributed locations?

- Distributed storage should be considered a method of mitigation to be used to supplement other mitigation strategies, such as maintaining existing floodplain storage.
- If the underlying rationale for eliminating distributed storage is that it will take 20 years to complete distributed storage, isn't that inconsistent with the fact that it will take more than 50 years to use up all of the high ground for Fargo's urban development before it could possibly need to grow into floodplain?
- The Halstad Upstream Retention Study (HUR) identified a total of 96 project sites with a 100-year storage capacity of 559,220 acre-feet (AF). This number of sites and storage volume is incorrectly referred to as the amount of distributed storage required to provide 20% flow reduction at Fargo. In fact, only 40 of those sites with combined storage capacity of 225,970 AF are upstream of the Red River gaging station in Fargo. An additional 26 sites with a combined capacity of 120,490 AF are located in the Maple/Rush/Sheyenne watershed that directly affects the northwest FM area. The remaining 30 sites with a combined capacity of 212,760 AF enter the Red River far downstream from the FM area. They would have no impact on FM area flows and very limited potential impact on FM area flood stages.
- The efforts to minimize the impact of distributed storage seem like rationalizations, rather than reasons. The USACE historically prefers big engineering solutions. Congress specifically legislated against this historic preference, when it passed the sustainability requirements in 42USC §1962-3 which provides that ([projects should] "maximize sustainable economic development, avoid unwise use of floodplains and flood-prone areas, minimize adverse impacts and vulnerabilities in any case in which a floodplain or flood-prone area must be used; and protect and restore the functions of natural systems...")

5) ***Other Hydrology and Engineering Issues.***

The draft appendices contain additional detail regarding operations and hydrology. There has as yet been little communication with communities proposed for flooding about the implications of the proposal. The appendices seem to acknowledge also that the hydrology is so complicated that some form of experiential "adaptive management" will be required. When and how is there going to be an exchange of information on the meaning of the current proposals, the range of possible adaptations, and who will control adaptations? There is a concern that adaptive management means that more water will be diverted onto upstream communities as circumstances dictate, with the decisions always favoring the DA's needs and suppressing the negative impacts as insignificant in comparison to further development goals of Fargo

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communities. How can proposed flooded jurisdictions be expected to consider the consequences in their own permitting regimens without dialog?

Our engineer says that the hydrology is very complex and he needs more information to consider and explain. What is the process available to us to engage in that exchange?

Operating plans seem to identify a specific limited subset of scenarios which may occur. However, future flooding scenarios may markedly differ from these scenarios. Shouldn't there be a wider more representative set of hydrographs, and operating scenarios? Or, is the project proponent intending to purchase flood easements that essentially give the operator carte blanche to operate the gates at its complete discretion?

A preliminary draft appendix says that staging will begin at the 10 year flood. Is the definition of 10 year flood subject to re-definition depending on future circumstances? How will the operations change if the alleged wet cycle ends?

The history of other water projects has suggested that the operator of the project is vulnerable to pressure to modify its purpose so as to expand the project purpose to the detriment of less populous regions. Are future decisions about operations going to be predicated on the concept that the politically powerful regions can always supplant politically less powerful regions?

We are concerned that the preliminary draft EIS does not adequately address federal and state law that require use of sustainable flood control approaches. This project eliminates 50 square miles of floodplain storage to free up that land for development. In presentations to the Governor of Minnesota, the USACE stated that developing that floodplain would be unlawful. There has never been any showing that 50 square miles of floodplain is needed for development; unimpeachable evidence shows that there is more than adequate high ground available for development. What is the rationale for removing floodplain storage and diverting those floodwaters onto homes and communities? The following provisions seem to play virtually no part in Diversion Authority's analysis of the project.

From: [kathy.carik](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 2:43:49 PM

Commenter 98

Summary of Comments on KathleenCarik_Commenter98a_Email1.pdf

Page: 1

To Whom It May Concern:

I am of the opinion that permanent flood protection is needed for the Fargo-Moorhead metro area, but the Northern Alignment Alternative is a poor option.

Moving the staging area to the north into a more developed and populated area would not be in the best interest of many more families and property owners.

The NAA Project, with its close proximity to Fargo and Horace greatly inhibits the growth of these communities. This would cause an even greater negative impact to the entire region, including Moorhead, Sabin and other localities that are currently experiencing economic growth.

The substantial increase in costs, greater negative impact to the entire region and major delays in providing flood protection makes the NAA an unfavorable choice.

I believe that the Fargo Moorhead Diversion Project is the best solution for permanent flood protection. This project has received full authorization by the US Corps of Engineers and Congress. After 6 years of intensive planning and study it is time to move forward with the FM Diversion Project.

Sincerely,

Kathleen S. Carik
4490 Woodhaven Drive South
Fargo, ND 58104

Author: Medopera Subject: Text Box Date: 11/18/2015 8:12:00 AM -06'00'
Commenter 98

Author: Medopera Subject: Highlight Date: 4/5/2016 8:18:14 AM
Comment ID: 98a
Topic: Northern Alignment Alternative, General Opposition
Unsubstantive

From: [Kathleen Lingen](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo Moorhead Flood Risk Management Project DEIS
Date: Monday, October 26, 2015 2:30:19 PM

Commenter 99

Summary of Comments on KathleenLingen_Commenter99a-i_Email1.pdf

Page: 1

Kathleen Lingen
204 Plum Tree Road
Hickson, ND 58047

October 14, 2015

Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road, St. Paul, Minnesota, 55155-4025

Dear Ms. Townley,

My name is Kathleen Lingen, and I am writing to you regarding my concerns for the Fargo-Moorhead Flood Diversion project.

The decision to use upstream retention to mitigate the impacts of the Diversion downstream is overwhelming and has left those of us in the communities, schools and townships affected by this decision scrambling for answers. In addition to living in this area for the past 14 years, I have taught in the Kindred Public School District for 29 years, and I can't imagine the devastating affect this could have on our school system. We've worked hard to build a solid school district.

I am asking for your involvement in answering some questions that at this time are not clear:

- <!--[if !supportLists]--> <!--[endif]-->What will the economic impacts on the Kindred School District be? With 23% of the tax base and 125 of the students potentially affected, it is a significant concern.
- <!--[if !supportLists]--> <!--[endif]-->What will the true economic impact of this decision be for the county, the township, the schools and surrounding areas? The tax base could potentially be eliminated and the communities destroyed.
- <!--[if !supportLists]--> <!--[endif]-->How will the individuals affected by this project be protected and taken care of?
- <!--[if !supportLists]--> <!--[endif]-->What care has been taken to assure no loss of life and our general quality of life?
- <!--[if !supportLists]--> <!--[endif]-->What about transportation concerns and the possibility of roads being washed out?
- <!--[if !supportLists]--> <!--[endif]-->What will the environmental impacts of this decision be?
- <!--[if !supportLists]--> <!--[endif]-->How can it be justified to potentially put 10 feet of water on cemeteries?
- <!--[if !supportLists]--> <!--[endif]-->How could the loss of 50,000 acres of farmland ever be acceptable?

Author: Medopera Subject: Text Box Date: 11/18/2015 8:14:39 AM -06'00'
Commenter 99

Author: Medopera Subject: Highlight Date: 4/5/2016 8:24:11 AM
Comment ID: 99a
Topic: Socioeconomics, Kindred School District Economic Impacts

Author: Medopera Subject: Highlight Date: 4/5/2016 8:24:28 AM
Comment ID: 99b
Topic: Socioeconomics, Economic Impacts to Staging Area Communities

Author: Medopera Subject: Highlight Date: 4/5/2016 8:25:21 AM
Comment ID: 99c
Topic: Socioeconomics, Mitigation

Author: Medopera Subject: Highlight Date: 4/5/2016 8:26:26 AM
Comment ID: 99d
Topic: Dam Safety, Risk and Loss of Life Concerns

Author: Medopera Subject: Highlight Date: 4/19/2016 3:07:00 PM
Comment ID: 99e
Topic: Infrastructure and Public Services, Flood Impacts to Roadways, Ditches and Culverts

Author: Medopera Subject: Highlight Date: 4/5/2016 8:27:37 AM
Comment ID: 99f
Topic: Environmental Impacts, General Environmental Impacts

Author: Medopera Subject: Highlight Date: 4/5/2016 8:28:29 AM
Comment ID: 99g
Topic: Socioeconomics, Project is Immoral
Unsubstantive

<!--[if !supportLists]--> <!--[endif]-->What is the true cost of this project with the current plan?
<!--[if !supportLists]--> <!--[endif]-->Have other options been explored and studied?

Thank you for your attention to our concerns. It is reassuring to know that our questions and doubts of the project are being heard.

Sincerely,

Kathleen Lingen
204 Plum Tree Road
Hickson, ND 58047

Page: 2

Author: Medopera Subject: Highlight Date: 4/5/2016 8:28:36 AM
Comment ID: 99h
Topic: Socioeconomics, Project Cost

Author: Medopera Subject: Highlight Date: 4/5/2016 8:29:36 AM
Comment ID: 99i
Topic: Alternatives, Alternative: Alternative Screening

From: [Keith Kragerud](#)
To: ["Review, Environmental \(DNR\)](#)
Cc: [norma.kragerud@nbinternet.com](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 1:03:02 AM

Commenter 100

Summary of Comments on Keith&NormaKragerud_Commenter100a_Email1.pdf

Page: 1

Jill Townley or whom it may concern,

My wife and I are just one of many that will be forced to leave the land that we love and our home if this project goes through as currently designed because we will be inundated with 3 to 5 feet of water on our main level. We purposely built our home where it is today because we knew we would be safe from the ragging Red. We never imagined that it would be a man made flood based on big city greed that would some day take us down.

We can not understand how the current plan for flood protection ever got this far along. How can we or anybody make sense out of the fact that Fargo wants everyone else to sacrifice for them so they have room to develop a flood plain? Our thought is that Fargo has really not sacrificed anything to help their cause. One can not count the numerous homes that have been bought out and moved because they never should have been allowed to build on the lower elevations in the first place.

It has been constant stress in our lives ever since we found out about the dam part of the plan. We also drive by the wealthy peoples golf course most days on our way to work where tens of millions of dollars have been spent to buy out the rich in Oxbow and question the ethics of the group behind this project.

Enough is enough. If Fargo wants to be seen as a big city through our nations eyes then it's time for them to build up with taller buildings and stop sprawling into the last natural floodplain south of the city. There is plenty of high and dry land to the east of the Red south of Moorhead and west of the Sheyenne on the North Dakota side. Why spend billions on a dam just to develop a natural low area (between two rivers). My grandfather that was proud of his farm and farmstead just south of Comstock, MN used to joke with me when I was a teenager and say a wise old Indian once said: "Only white man foolish enough to build between two rivers". I now think about that and ask why do we keep on developing between these rivers then?

One other comment I would like to make is about the old oak trees along the Red. I have been cutting wood every fall for 20 years and have noticed with the recent high water history that many of the 100 to 150 year old oaks, and also some ash, box elder, elm, hackberry, and other trees are falling victim to rotting bark at their bases and dying prematurely. One can only assume that as time goes on not only will there be no people to inhabit the staging area but there will not be as many mature trees around as well.

Thank you for taking the time to read this and all you do for Minnesota nature and wildlife.

Keith and Norma Kragerud
1007 100th avenue
Wilkin County
Moorhead, MN 56560

Author: Medopera Subject: Text Box Date: 11/18/2015 8:37:43 AM -06'00'
Commenter 100

Author: Medopera Subject: Highlight Date: 4/5/2016 8:31:26 AM
Comment ID: 100a
Topic: Proposed Project, General Opposition
Unsubstantive

From: [Keno Kragerud](#)
To: ["Review, Environmental \(DNR\)"](#)
Cc: norma.kragerud@nbinternet.com
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 2:19:51 AM

Commenter 100 cont.

Summary of Comments on Keith&NormaKragerud_Commenter100b_Email2.pdf

Page: 1

Jill Townley or whom it may concern,

The Diversion Authority claims that this is a project for the entire region and I am not drinking their Kool-Aid and going along with this idea. If Fargo and their DA were all about regional protection, why would they need to dam the river to keep water off the natural floodplain south of Fargo. Wouldn't they want to participate in sacrifice and just give up the idea of development in these low lying areas? They have already carelessly allowed the building of a school and residential development in an area that was under water during the last big flood which most likely helped save parts of the southern city back then.

If this project is for the region then I believe we as a region need to stay out of natural floodplains and build on higher grounds no matter what side of the river or state that land is located. The "region" will still benefit with growth south and east of Moorhead, west of West Fargo, or north of Fargo. There are other plans out there to protect the current Fargo footprint without the "dam for development" plan. There building in the floodplain needs to come to a screeching halt but how does one get that through to them. It starts with not accepting this current plan.

The Diversion Authority has been bullying their way along and its time they meet their match. We do not need this type of politics in our region. We need to work together.

Thank you,

Keith and Norma Kragerud
1007 100th avenue
Wilkin County
Moorhead, MN 56560

Author: Medopera Subject: Text Box Date: 11/18/2015 8:44:09 AM -06'00'
Commenter 100 cont.

Author: Medopera Subject: Highlight Date: 4/5/2016 8:32:45 AM
Comment ID: 100b
Topic: Land Use, Fargo's Comprehensive Plan

From: kelly.d@juno.com
To: [*Review_Environmental_\(DNR\)](mailto:*Review_Environmental_(DNR))
Cc: kelly.d@juno.com
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 1:25:15 PM

Commenter 101 cont.



Summary of Comments on KellyDuchscherer_Commenter101aandbcont_Email2.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/18/2015 8:54:15 AM -06'00'
Commenter 101 cont.

Author: Medopera Subject: Sticky Note Date: 11/18/2015 8:54:45 AM -06'00'
See Comments 101a and 101b. Same submission with address.

I am kindly resubmitting this with my property address:
Brian & Kelly Duchscherer
17538 50th St. SE
Hickson, ND 58047

My name is Kelly Duchscherer and we own property that is in the proposed staging area of the FM diversion. Our homestead is well over 100 years old and in the course of time, the area where the home sits has NEVER flooded, not once. We look out our window and can easily see Minnesota across the river. We have an abundance of wildlife that cross from one side of the river to the other side all year long. We also have numerous trees on the property and along the river. We had close to 2000 trees planted this summer alone to help sustain the environment. We have been told by the Diversion Authority that our property would have 10 feet of water or more on it when the flood gates open. So my questions are:

A.) How will this effect the wildlife with that much standing water?

B.) What will happen to the new and existing trees?

Heavy rains mean flooding

<https://ad.doubleclick.net/ddm/clk/296043998;123050234;f>

From: kelly.d@juno.com
To: [*Review, Environmental \(DNR\)](mailto:kelly.d@juno.com)
Cc: kelly.d@juno.com
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 1:14:34 PM

Commenter 101

Summary of Comments on KellyDuchscherer_Commenter101a-b_Email1.pdf

Page: 1

My name is Kelly Duchscherer and we own property that is in the proposed staging area of the FM diversion. Our homestead is well over 100 years old and in the course of time, the area where the home sits has NEVER flooded, not once. We look out our window and can easily see Minnesota across the river. We have an abundance of wildlife that cross from one side of the river to the other side all year long. We also have numerous trees on the property and along the river. We had close to 2000 trees planted this summer alone to help sustain the environment. We have been told by the Diversion Authority that our property would have 10 feet of water or more on it when the flood gates open. So my questions are:

A.) How will this effect the wildlife with that much standing water?

B.) What will happen to the new and existing trees?

Extended Stay America

<https://ad.doubleclick.net/ddm/clk/280917141;116012128;q?http://www.extendedstayamerica.com/?mid=dis-fix-0-aol-tex>

Author: Medopera Subject: Text Box Date: 11/18/2015 8:50:20 AM -06'00'
Commenter 101

Author: Medopera Subject: Highlight Date: 4/5/2016 9:47:45 AM
Comment ID: 101a
Topic: Wildlife and Wildlife Habitat, Flood Impacts to Wildlife and Wildlife Habitat

Author: Medopera Subject: Highlight Date: 4/5/2016 9:51:27 AM
Comment ID: 101b
Topic: Stream Stability, Flood Impacts to Trees

From: kelly.d@juno.com
To: [*Review, Environmental \(DNR\)](#)
Cc: kelly.d@juno.com
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 1:31:08 PM

Commenter 101 cont.

Under the Executive Order of 11988, how is the FIM Diversion allowed to flood my property when it has never flooded in the past?

Brian and Kelly Duhscherer
17538 50th St. SE
Hickson, ND 58047

American Express Travel

<https://ad.doubleclick.net/ddm/clk/287733985;113997546;g>

Summary of Comments on KellyDuhscherer_Commenter101c_Email3.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/18/2015 8:55:34 AM -06'00'
Commenter 101 cont.

Author: Medopera Subject: Highlight Date: 4/5/2016 9:53:14 AM
Comment ID: 101c
Topic: Federal Executive Order 11988, Violation

From: kelly.d@juno.com
To: [*Review, Environmental \(DNR\)](mailto:kelly.d@juno.com)
Cc: kelly.d@juno.com
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 2:33:57 PM

Commenter 101 cont.

Summary of Comments on KellyDuchscherer_Commenter101d_Email4.pdf

Page: 1

We are currently home owners in the proposed staging waters of the EM Diversion and Dam. As Cass County citizens we have had zero representation from our county commission or local county government. All members of the commission are in favor of flooding out the farmers and homeowners who lie in the path of their plan to save only the residents of Fargo. Fargo authorities have had numerous opportunities to build flood protection for the city yet they continue to distribute their funds to build a new golf course, club house and swimming pool for Oxbow, a community which has never flooded and has their own flood protection in place if need be. Fargo continues to build in the flood plains of south Fargo intentionally knowing that they are putting people in harms way. Disturbing the natural flood plains has forced water onto those who otherwise would have never received them. The Diversion Authority refuses to compromise and continues to move in any direction they want whether it be legal or not in order to assist themselves and their dam. They are doing damage to both North Dakota and Minnesota by being allowed to move forward.

Kelly and Brian Duchscherer
17538 50th St. SE
Hickson, ND 58047

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Author: Medopera Subject: Text Box Date: 11/18/2015 8:57:23 AM -06'00'
Commenter 101 cont.

Author: Medopera Subject: Highlight Date: 4/22/2016 9:43:44 AM
Comment ID: 101d
Topic: Communication Concerns, General
Unsubstantive

From: [Aimee Flaa](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 11:48:58 AM
Attachments: [doc01977920151028120324.pdf](#)

Commenter 102

Summary of Comments on KellyMiller_Commenter102a-c_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/18/2015 12:28:13 PM -06'00'

Commenter 102

Author: Date: Indeterminate

Attached is a comment from Kelly Miller on the DEIS.

Thanks,

Aimee Flaa

KTM Farm

7345 177 Ave SE

Wahpeton, ND 58075

phone: [701-642-8286](tel:701-642-8286) | fax: [701-642-4481](tel:701-642-4481)

www.ktmfarm.com

Kelly T. Miller

7345 177 AVE SE
WAHPETON, ND 58075
PHONE: 701-642-8286 FAX: 701-642-4481

Page: 2

-
- Author: Medopera Subject: Highlight Date: 4/5/2016 10:04:51 AM
Comment ID: 102a
Topic: Proposed Project and Northern Alignment Alternative, General Opposition
Unsubstantive
-
- Author: Medopera Subject: Highlight Date: 4/5/2016 10:05:26 AM
Comment ID: 102b
Topic: Alternatives, Alternative: North Dakota/South Dakota Retention Project
-
- Author: Medopera Subject: Highlight Date: 4/5/2016 10:05:39 AM
Comment ID: 102c
Topic: Permitting Approval, Permitting Process

October 27, 2015

Minnesota DNR
500 Lafayette Road
Saint Paul, MN 55155-4025
Fax: 651-296-1811

To whom it may concern:

I cannot believe a diversion of this magnitude is being considered financially, it will tap the state and community, it is beyond common sense. There should be a dam on the Wild Rice River, Antelope Creek and/or the Red River on the South Dakota border. Past Fargo Mayor Dennis Walaker has said it doesn't help that much and yet he has said that the crest has been lower because of the Wild Rice River not coming through with enough water as planned for the crest prediction.

The DNR and Army Core of Engineers is so against farmers cleaning some natural water ways and yet they are going to allow a massive canal like this and hold water back on farmers and farmland? And they are doing all of this without downstream approval. Why then are farmers in Richland County getting permits and signatures from people we are supposedly draining on and adjacent farms and farmers? If this is true they should have to get our signatures or we could quit obtaining signatures on our side.

A few years ago a group of farmers and Wilkin County met in Minnesota to discuss cleaning out a waterway that flows into the Red River by Kent, MN. At that meeting a DNR and Army Core of Engineers person stood up and said it would not be allowed – end of story! They think they are above the law. Fargo area developers and planners have been building in the flood plain for years and continue to do so. It will be a financial burden for the entire State of North Dakota.

Sincerely,



Kelly T. Miller

From: [Ken Regan](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project
Date: Friday, October 23, 2015 10:56:27 AM
Attachments: [Fargo Moorhead Flood Risk Mgmt Project.pdf](#)

Commenter 103

Summary of Comments on KennethRegan_Commenter103a_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/18/2015 1:51:27 PM -06'00'
Commenter 103

Author: Date: Indeterminate

Dear Jill,

Please see my attached letter requesting your prompt approval of the Fargo-Moorhead Flood Risk Management Project.

Thank you in advance for your efforts to promptly accomplish this.

Sincerely,

Kenneth P. Regan

October 21, 2015

Author: Medopera Subject: Highlight Date: 4/5/2016 10:13:18 AM
Comment ID: 103a
Topic: Permitting Approval, Approve the Project
Unsubstantive

Jill Townley
Environmental Policy and Review Unit
Box 25 Ecological and Water Resources Division, DNR
500 Lafayette Rd.
St. Paul, MN 55155-4025

Re: Fargo-Moorhead Flood Risk Management Project

Dear Ms. Townley,

Thank you and your team for the work you do in safeguarding Minnesota's environment and natural resources. This work has again been reflected in your evaluation of the Fargo-Moorhead Flood Risk Management Project. It's now time you follow up on your good work by approving the proposed project, just as the U.S. Army Corps of Engineers has.

It is important that this project be approved and initiated as soon as possible. The merits are many and significant. The project will already take around 8 years to complete. Further delay could push that date out even more, leaving the region without protection. It is also important to start the project so that the FEMA flood maps do not have to be updated. If they are, it is likely that the flood plain will rise and encompass a large number of new homes, decreasing their value and increasing the cost of insurance. This will bring severe financial hardships on many, many families and small business owners.

The U.S. Army Corps of Engineers has done a quality job of evaluating this proposed project and weighing its environmental risks against the benefits, to the projects favor. Your agency has done an equally fine job in your own analysis. Approval of the project is the logical next step.

I'd strongly and respectfully request your prompt approval.

Sincerely,


Kenneth P. Regan

KPR:kpr

From: [Bakko, Kevin J](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Monday, October 26, 2015 10:38:26 PM

Commenter 104

Summary of Comments on Kevin&KristinBakko_Commenter104a_Email1.pdf

Page: 1

We ask the DNR to reject the Northern Alignment Alternative (NAA) in favor of the proposed, federally authorized plan. Since it has not been evaluated by the responsible federal agency, the NAA would by law require a whole new environmental review, analysis, and Environmental Impact Statement from the Corps of Engineers. There is no reason to waste time and public money and resources on doing an environmental review on this alternative, when one has already been done on the proposed project. Selecting the NAA would be an enormous waste of resources.

The main feature of the NAA would be to shift the impoundment downstream 1.5 miles, moving it north into more developed areas. In doing so, more homes will be affected. Even if a handful of homes will be spared impact by adopting the NAA over the proposed alternative, this benefit would be offset and more by the fact that as many as 60 additional homes would be impacted under the NAA than would under the proposed plan. In addition, a number of businesses, and more farmland would be affected by the NAA than by the proposed action.

The NAA would also place one of our region's most historic landmarks in jeopardy - St. Benedicts Catholic Church, the oldest Roman Catholic Church in the area. Also the whole town of Rustad, MN where I live including the Hoff Lutheran Church where I go to Church every Sunday. All of this for an additional price tag of \$81 million. The NAA is not worth it, and should be rejected by the DNR.

Sincerely,

Kevin & Kristin Bakko
10631 18th St S (This address is in)
Moorhead, MN 56560 (the City of Rustad)
KBakko7178@aol.com



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Author: Medopera Subject: Text Box Date: 11/18/2015 1:54:52 PM -06'00'

Commenter 104

Author: Medopera Subject: Highlight Date: 4/5/2016 10:20:25 AM
Comment ID: 104a
Topic: Northern Alignment Alternative, General Opposition
Unsubstantive

From: [Kristy Olsgaard](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Tuesday, October 27, 2015 5:13:34 PM

Commenter 105

Summary of Comments on KristyOlsgaard_Commenter105a-g_Email1.pdf

Page: 1

Jill Townley:

Owning land in this country is a right. It is our privilege to live on a farmstead on Section 34 of Kurtz Township in Clay County and to farm land in Kurtz and Holy Cross Townships in Clay County, and Wolverton Township in Wilkin County. Therefore, it is our right and duty to file a comment on the Fargo-Moorhead Flood Risk Management Project DEIS.

We are **opposed** to both plans suggested at the October 14 meeting in Moorhead. There are **NO** benefits to Minnesota landowners within the proposed impacted area yet huge potential impacts threaten us. Here are issues that concern us:

- Our livelihood could experience devastating ramifications.

<!--[if !supportLists]-->◦ <!--[endif]-->What happens when we can't plant within growing periods, or insurance dates? And then what happens to the value and productivity of the land? Has the regional economic impact of a failed agricultural community been calculated?

- Overland flooding from proposed tieback levees could wash out roads denying access to home and/or fields.

<!--[if !supportLists]-->◦ <!--[endif]-->Who will pay for repair or reconstruction of roads? Will we be unduly assessed to pay for the damage from this project (which we do not support)?

<!--[if !supportLists]-->• <!--[endif]-->Water is erosive. Potential problems include degradation of the Red River and state and county drains.

<!--[if !supportLists]-->◦ <!--[endif]-->Who pays for these damages?

<!--[if !supportLists]-->• <!--[endif]-->Home properties could experience unprecedented flooding and well contamination.

<!--[if !supportLists]-->◦ <!--[endif]-->What measures will ensure flooding doesn't result in unhealthy changes to wells and aquifers?

The proposed diversion and alternative proposals are based in theory and are not practical solutions. Fargo has a long history of water issues, which need to be addressed within their political boundaries and budget. They should not be allowed to pass their problems onto others who never have had flooding problems. The end does not justify the means. Let Fargo implement solutions that are not to the detriment of Minnesotans.

Please deny both plans.

Sincerely,

Kevin and Kristy Olsgaard

11549 40th Street South

Moorhead, MN 56560

"A people that values its privileges above its principles soon loses both." President Dwight D. Eisenhower

Author: Medopera Subject: Text Box Date: 11/18/2015 1:55:53 PM -06'00'
Commenter 105

Author: Medopera Subject: Highlight Date: 4/5/2016 10:23:09 AM
Comment ID: 105a
Topic: Proposed Project and Northern Alignment Alternative, General Opposition
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/5/2016 10:23:59 AM
Comment ID: 105b
Topic: Socioeconomics, Agriculture Impacts and Mitigation (Planting Delays)

Author: Medopera Subject: Highlight Date: 4/5/2016 10:24:34 AM
Comment ID: 105c
Topic: Socioeconomics, Agriculture Impacts on Local Economy

Author: Medopera Subject: Highlight Date: 4/19/2016 3:26:56 PM
Comment ID: 105d
Topic: Infrastructure and Public Services, Flood Impacts to Roadways, Ditches and Culverts

Author: Medopera Subject: Highlight Date: 4/19/2016 3:28:21 PM
Comment ID: 105e
Topic: Infrastructure and Public Services, Flood Impacts to Roadways, Ditches and Culverts

Author: Medopera Subject: Highlight Date: 4/21/2016 8:49:39 AM
Comment ID: 105f
Topic: Socioeconomics, Wells and Groundwater Quality

Author: Medopera Subject: Highlight Date: 11/18/2015 2:07:18 PM -06'00'
Comment ID: 105a cont.

Author: Medopera Subject: Highlight Date: 4/5/2016 10:27:24 AM
Comment ID: 105g
Topic: Permitting Approval, Reject Both Plans

From: [Townley, Jill \(DNR\)](#)
To: [Magnuson, Caroline \(DNR\)](#)
Subject: FW: DEIS comment
Date: Tuesday, October 27, 2015 11:02:32 AM
Attachments: [MNDNR Comment.pdf](#)

Commenter 106



Summary of Comments on LarryLuik_2015 1027_Commenter106a_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/18/2015 2:09:34 PM -06'00'
Commenter 106

Author: Medopera Subject: Sticky Note Date: 4/5/2016 10:29:27 AM
Comment ID: 106a (entire submittal)
Topic: Alternatives, Alternative: DSA

Author: Date: Indeterminate

Jill Townley

Planner Principal, EIS Project Manager
Environmental Policy and Review Unit
Division of Ecological and Water Resources
MN Department of Natural Resources
500 Lafayette Road, Box 25
St. Paul, MN 55155
651-259-5168

Please consider the environment before printing this e-mail.

From: Luick, Larry E. [mailto:lluick@nd.gov]
Sent: Tuesday, October 27, 2015 9:29 AM
To: Townley, Jill (DNR)
Subject: DEIS comment

Jill, attached please find my comment for the alternative possibilities for the Fargo project in question. There is a lot more information that I could have provided but it was getting lengthy as it is. Sorry. My true feeling is that we all need to consider the environment and how we can better it with the decisions we make today. I think that my plan addresses more of those concerns and can still provide protection for more people and property.
Thank you for this opportunity Jill.

Sincerely,

Larry Luick



NORTH DAKOTA SENATE

STATE CAPITOL
600 EAST BOULEVARD
BISMARCK, ND 58505-0360



COMMITTEES:
Agriculture
Judiciary

Senator Larry Luick
District 25
17945 101st Street SE
Fairmount, ND 58030-9522
Residence: 701-474-5959
Business: 701-474-5959
lluick@nd.gov

This page contains no comments

October 26, 2015

Dear Ms. Townley and Minnesota Department of Natural Resources;

To begin with I would like to say thank you for this opportunity to share with you some other view points and some alternative ideas for flood protection in not only the Red River Valley but neighboring areas as well. These ideas could have huge benefits in multi-facet form. As we look at the needs of problem fixing, we would be better persons if we collectively shared information and identify how these benefits can be achieved. We don't need to have winners and losers. There are ways that everyone could come out a winner.

I am not an engineer or scholar, but rather someone that has worked with soils and water my entire life as an excavating contractor and a farmer. Mother Nature has wonderful opportunities for us to share her good graces if we choose to take advantage of them. I have learned volumes from trial and error and I tend to remember most of them.

My efforts of this comment are to try to encourage any and all parties to evaluate every possible alternative so that all possible benefits are achieved. For the most part I am staying away from the legal aspect of the controversy because I have not been exposed to the legal issues as much as the physical ones. Others, I am sure, will comment on the legal topics of concern. My focus is on a better plan. More time consuming, maybe. More costly, maybe. More work to

This page contains no comments

achieve, maybe. The more truly valuable, useful, and desirable something is tends to extend creation time to achieve. The costs and time to construct are unknowns at this time for both this plan and the proposed project. We must work with our natural resources, such as topography, erosion, nutrient losses, soil and plant health, water shed velocities, and water management to create this better plan. This plan as I stated earlier has several facets but it will be well worth the time and money spent. No one part is a fix to the problems (yes, problems, not one problem but several) but rather an idea that if combined with other ideas that myself or others come up with would have a much larger and a more regional, state, national, and international benefit. The solution that is being considered today that involves the dam and staging area solves only one problem and creates many, many more. We need to do better.

I have always been told the staging area south of Fargo is designed to have a capacity of 200,000 acre feet. During a recent Water Topics Meeting in Bismarck we were told that number was 150,000 acre feet; I believe, if my memory is correct, in a letter to the MNDNR it was referenced at 150,000 acre feet also. The numbers vary and that's okay, but for my example I will be using the 200,000 acre feet data. The difference of 50,000 acre feet is workable into my plan.

Facet One: Inclusion of the research that went into the Energy and Environment Research Center's (EERC) Waffle Plan, and then reconstituted by the International Water Institute (IWI), that shows there are obvious major benefits to this concept. The first drafts of this plan were to reduce the flow to the bottom of the basin by 20%. I believe that this can be achieved with proper guidance. But let's say that a 10% or 15% reduction is a more feasible and doable amount. That is a large amount of water out of the base flood levels that can help other communities as well. This reduction in flow into the staging area would be equivalent to 20,000

This page contains no comments

to 40,000 acre ft of water south of Fargo, depending on the effectiveness (10% - 20%). For example purposes, I am going to use the average of 15% which, at 200,000 acre feet, equates to a 30,000 acre feet reduction in water flow. This leaves 170,000 acre feet of problem water.

Reducing flows basin-wide in this manner will have added benefits across the entire area.

Facet Two: The incorporation of agricultural field tiling and its benefits. The soil profile has a huge amount of reservoir capacity that can hold a tremendous amount of water. Different soil types have different abilities in this regard simply because of soil particle sizes and air gaps between those particles. The larger the soil particle the larger the air voids. So even in the clayey type soils in the Red River Valley, a soil that is predominantly clay still has the capability of storing three to four inches of water per vertical foot of soil profile. In context of a tilled field that has been tilled with the tile runs at 3 to 4 feet deep that equates to 9 to 16 inches of surface water that is now being stored in the soil. On a larger scale it equates to 1 foot of water per acre (conservatively) on every acre of farmland that is tilled. I have always contended that every acre in this basin that needs to be tilled, should be tilled. This should be done for a variety of reasons, and I also will say that there are some areas that should not be tilled. Let's say that we tilled 200,000 acres south, east, and west of Fargo (the area contributing to the flooding problem). That alone, if managed properly, is the size of the staging area's capacity by itself.

Right now there are mixed views on tiling as to the way it works and if it has this much of a benefit since the ground is frozen and how would the water percolate down into the soil profile. As I had mentioned earlier, the predominate soil type in our Red River Valley is clay; many different types of clays. Most if not all of these clays expand when they get wet and shrink when they dry out, and they do this at different rates of expansion. You may have seen this if you have seen soils pull away from basement walls, or large cracks in the ground or in your

This page contains no comments

lawn. This is from the contraction or shrinking of these clay soil particles as they dry out. On the other side of the spectrum is when these clay particles get wet, they expand. Some of the clays in the clay soil types can expand up to 8 times their dried out dimension. An example of this is heaving of sidewalks or roadways. So if a soil profile is drained and the excess water removed from this soil in the fall of the year, these clays are given the opportunity to dry down and shrink which will create fissures in the soil that will remain through the frozen season and be available for water percolation in the spring. An untiled field that sits with a “full tank” of water going into the frozen season is subjected to a “barrier” of another means also. Besides the profile being full of this excess water, the clay particles expand from being wet, which causes less ability for percolation into the soil. In addition, the water itself will expand as it freezes. This creates a very water tight scenario and most all of the surface water has to run off the field. It cannot soak into the soil at all when it freezes up while wet. A benefit of a highly aerated soil is that air works as an insulator, so the more pore space between soil particles there are the less freezing depth occurs and the density of the of the frozen ground is less. When the soils stay warmer they thaw more quickly and can take on water more readily which increases water holding capacities. There is a huge difference in freezing events and water reactions when the ground freezes wet versus dry. As a contractor, that has had to excavate for various reasons in the winter, I dread the chore of digging in the years when we freeze up with a wet soil condition in the fall. If the fall and soil are both dry and the clays are not swollen, then the fissures that open up and remain open will make it easier to break open the trench. A good example of what people expected to happen and what did happen was the expected flood of 2013. The alarm was sounded, sandbagging efforts got under way, and then the water disappeared. Why? Because we

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froze up in the fall of 2012 dry. The holding capacity was there and available. Some of the other benefits a controlled soil water height can provide are:

1. Better aerated soil so that aerobic bacteria can thrive, this is the beneficial bacteria that non-aquatic plants need to survive and flourish. The higher the count of these little helpers – the better the health of the soil, resulting in higher organic matter which also adds to the ability of water retention in the soil. For every 1% increase in organic matter an extra 25,000 gallons of water can be retained per acre (USDA’s research). So that calculates out to more than 28,000 acre feet (conservatively) which is calculated on only 375,000 farmland acres – tilled or untilled. This is above and beyond what I had mentioned earlier about the profiles 3-4 inches per foot. It is vitally important for us to improve on our organic matter percentages for other reasons as well but that is too lengthy for this comment. One that does have a direct reason that we need to increase tilled acres is better control of nutrient losses from farm fields. Phosphorus is causing a huge problem, especially with our Canadian friends and this is a problem that we have the ability to fix. This goes hand-in-hand with increasing aerobic bacteria, organic matter, soil health, better crops, less of a need for high applications of fertilizers, which would also help in the control of phosphorus run off. The Discovery Farms from the University of Minnesota (UMN) has shown in their research that the phosphorus loss in surface runoff from an untilled field is 10 times higher than the phosphorus loss from surface runoff of a tilled field with conditions being the same in side by side studies. This is huge.
2. Decreases compaction or hardpan issues which in turn increases percolation rates.
3. Raising healthy crops requires increased water uptake by those plants.

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4. The ability to store water or add water to the soil profile for possible sub irrigation needs.
5. Increased ability for varying crop selections.
6. Increases crop production and efficiencies across the spectrum of agriculture which can return significant revenue increases on every tiled acre. Basin-wide this is in the billions of dollars in crop production alone. Revenue generation instead of expensive continued maintenance.
7. Current and past practice on untilled fields was/is to laser ditch everything to get all of the water off the field as quickly as possible. I myself was hired to do that task with my equipment. I know exactly how that works. With tile in the ground it is a different story. There is more of a tolerance of getting every drop off quickly because water can now soak into the soil profile easier and quicker. Even quicker than running off the field. This contributes to less erosion, water retention, lessening phosphorus losses, and more.
8. There are many other benefits to tiling but those benefits are more directly related with farming practices and I will not go into those here and now.

Facet Three: The studies of areas for water detention. Today there are many projects being considered in both North Dakota and Minnesota. There are some that have been completed since the 200,000 acre feet staging area figure was devised. My thoughts are that these areas are extremely important and necessary. In my conversations with NRCS officials and other engineers in regard to their efforts to expand funding and assistance for the PL-566 program and the new RCPP program, new detention areas are being brought to the table now

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more than ever before and with good reason. The cooperative effort and the landowner incentives are more attractive than they were in the past and flood control, erosion control, nutrient management into waterways, property damages (both personal & public) roads, etc. are being looked at more closely than ever before. I know that the collaborative effort will be heightened going forward. These sites not only have local benefits, but also detain water from the Fargo flood area. This creates a two-fold benefit or more. These sites, as I mentioned, are extremely important and are currently being looked at now to a greater extent.

Some of the potential sites have holding capacities of 4,000 to 6,000 acre feet each. I am told that there are 6 more potential sites of good standing south of Fargo on the North Dakota side of the river. That is 30,000 to 36,000 acre feet of detention. There are several sites on the Minnesota side of the river, two that are in use today and a third that is under construction that have a direct result on Fargo flood water amounts. The two combined detain about 20,000 acre feet. Other sites in MN and ND have been located and are being considered, some as large as 100,000 acre feet. This is where the focus needs to go. These detention areas can provide local benefits and provide a means to keep more water out of the Fargo flood area as well. Please see attachment A at the end of this comment.

An itemization of the reductions I've listed so far are:

- 200,000 acre feet (water capacity of staging area)
- 30,000 acre feet (Waffle Plan Project)
- 200,000 acre feet (tiling only 200,000 acres)
- 28,000 acre feet 25,000 gallons/acre (with 1% OM increase)

calculated on only

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375,000 acres. This works on tiled or
untilled farmland so

this is extremely conservative.

- 36,000 acre feet ND detention possibilities south of Fargo
= a negative 94,000 acre feet acre feet out of the total flood problem

The Minnesota detention projects are not yet included for a reason, I will get to that later.

I personally believe that we as a society are not obligated to succumb to wishes of a few so that a community can continue to grow and prosper, especially at the cost or loss to others. I believe this also with education and classroom sizes. The bigger they are the more problems that can be created and the quality of education (quality of life of afflicted area) goes down. In either scenario, a more mediocre size classroom or community shows more benefit to all. To promote the agenda of expecting flood protection for vacant farmland with eyes on future development is not something I believe in, nor should it be a number one priority. However, hear me out. In this particular case, I feel that the needs for the smaller communities, say in a 50 mile radius of Fargo in MN and ND, should be given the opportunity to increase their sizes to get to that more mediocre size that I believe is more beneficial.

Right now, as I am told, there are approximately 69 miles of river shoreline through the FM area that has needed sandbag or levee protection. Approximately 49 miles of this is now protected to 42.5 feet. This leaves around 20 miles that need to be completed and I am told that half of those miles will be completed by the end of 2016 if not sooner. So the dire need for very quick action on this staging structure is not necessary at all. If we needed to fight a 2009 or 1997 equivalent flood today we should be able to do that without too much trouble. Will it be unwelcomed work? Yes definitely, but we can handle that. As weather projections look, we

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may find this out in the spring of 2016. We are supposed to see a wetter than normal winter, but if we continue with a dry fall maybe it will not be a problem. This will be a good test for the researchers looking at tiling and frozen ground percolation rates. It really depends on how all those “untiled” acres freeze up. Wet or dry.

Some place south of Fargo the contours of elevation could be found to determine where development could continue and at what elevation it is too low. Today it seems that building in the natural flood plain is acceptable as long as enough fill is hauled in to elevate the desired structure. Each cubic yard of fill hauled into that area displaces one cubic yard equivalent of water which is 201.97 gallons, and lets’ say that the needed elevation was to add 5’ of material. The calculations are endless because of different sizes of homes, garages, driveways, outbuildings, slopes, etc. But let’s look at a generic 2500 sq ft home with a 30’ X 30’ garage (900 sq ft) equaling 3400 sq ft total plus the fill berm around the structure at 5’ sloping down and away. The displacement of water from this single structure could be 700 to 800,000 gallons. This does not include the driveway fill and is a conservative slope on the fill around the structure. There are 325,851 gallons in one acre foot of water, so for each area constructed, or fill hauled into this flood plain equivalent to this size structure, 2 1/2 acre feet of water is displaced somewhere else. Why are the needs for higher and higher protection really needed? What is really the cause of this increase? I believe it is called encroachment.

If a contour elevation is near elevations of the levees on the south end of Fargo and a reasonable berm was built paralleling the Wild Rice and the Red Rivers thereby allowing only recreational use and farm practices in the area on the lower flood plain side. Determine the elevation of this reasonable height berm and there should be many, many years of growth ability on the higher ground. The consideration of a smaller staging area would work well into this plan

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also, but needs to happen within the already indentified natural flood plain not pushed up onto others on higher ground that chose not to build in the flood plain. It is no one's fault that we have a flood plain to deal with, we need to respect it, plan around it, and figure out the best options for all to live with it. Maybe we can also avert the problem of the amended Executive Order 11988 and Executive Order 13690.

Next is the possible construction of a detention pond south of Fargo. This could provide an excellent back up for internal protection. Removed material could be used for the construction of the berm that I referred to earlier.

Facet Four: Many concerns and studies have focused around a possible new dam on the ND and SD state line. I am questioned about this continually. Mother Nature has given us an awesome area for water detention and yet we choose to not think it through and make it work to our advantage. This area has a huge potential. My idea is the consideration of a new dam 1/2 mile into ND that could easily detain 285,000 acre feet of water by itself. This dam would allow for the shutdown of the flow of water in the Bois de Sioux River from March 1st of each year until the flood peak flows at Fargo are passed or near passed, 100% shutdown or as needed. This detention site would take approximately 1200 square miles out of the watershed that feeds the flood problem at Fargo. 1200 square miles is a very large area. This site alone has more holding capacity by 85,000 acre feet than the complete staging area by itself. With the other alternatives we were conservatively at a negative 94,000 acre feet and now if we reduce that by another 200,000 – 285,000 acre feet, that takes 294,000 to 380,000 acre feet out of the base flood numbers entirely. This creates the possibility of total removal of 400,000 to 500,000 acre feet (conservatively) of water away from the problem area. This detention site would also benefit the flooding along the Bois de Sioux south of Wahpeton, take concerns away that I have about the

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integrity of the CP Rail Bridge and rail bed east of Fairmount which serves as a pinch point and holds back a tremendous amount of water. If this rail bed were to fail when the water was high and with one of the many trains crossing this bridge on top of it, Wahpeton and Breckenridge and many others would see severe damages. This detention area could possibly alleviate the problem the Chahinkapa Zoo faces today with the current levee and the USACE. The efforts of this project include the waters of the three Minnesota projects – in the Bois de Sioux watershed and I am not doubling up on total detention amounts. The concern of the timing of water flows has been considered and the modeling done in my head tells me that if you are removing 100% of the flow – 100% of the sum of the water is removed from total calculations, hence timing in some cases is not relevant, the peak flows don't happen from the detained water areas.

I know these ideas need some work, but with the condition of completion of the levees in Fargo, we do have time to put together a better plan that has benefits for more people, communities, and property. We also can meld together the natural resource benefits attributable to better soil and water management practices. This is not a difficult problem to fix. It may look beyond comprehension and massive but what I like to do is look at these big problems I face and just break them down into smaller pieces. Fix a portion of it at a time. It works quite well.

A few more ideas of water management are: 1) increase the numbers and sizes of ditches perpendicular to the main stem river to more quickly and effectively remove the early water into the main channel and maybe some of the intermediate water before there are concerns of peak flows, and 2) cost share for tiling projects.

In summary, I would like to say that even as complicated as some of this looks or sounds, I know it is doable, practical and much better than the current “one-community benefits” plan. As I have mentioned, I know each of these ideas need further revision but I assure you that

This page contains no comments

enough consideration and study has already been performed on most of these by university studies, engineers and industry professionals to warrant implementing rather than the current plan. This plan is multi-faceted because consideration of water control from different areas is imminent.

Possible detention areas that I have not mentioned yet are on the Sheyenne River, the Maple River, and a possible 100,000 acre feet project in Minnesota. There are more projects under consideration as well, again see Attachment A. To say that detention is not going to be the answer may be an understatement and what we need to do is get all the information gathered (in due time) and then reevaluate the situation. Other benefits that I have not mentioned that deserve mentioning are: 1) due to lowering the base flood water levels at Fargo from the alternatives removing so much water from the mix, cemeteries would have less of an impact as is now a huge problem for the staging area, 2) lowering the amount of water in all of the rivers, creeks, and altered staging area may reduce the base flood levels for flood insurance and could lessen the amount of homes required to purchase flood insurance. This is a new problem for everyone close to the rivers and creeks all the way through Wahpeton and Breckenridge, not just Fargo and Moorhead. I would also think that that insurance change will affect homes along all of the tributaries. 3) There was a concern by the USACE of getting an alternative plan through Congressional Authorization. My thinking is that, yes, you have the authorization on the first plan, but you also have the lawsuits, and the State of MN and the MNDNR not happy with your plan, or the way it has all been handled, all of the Joint Powers Authority (JPA) members which consists of 35 different groups of officials from counties, school boards, townships, fire departments, law enforcements, etc. from MN and ND are fighting your plan. There are hundreds if not thousands of individuals against your plan. You do not have the funding and the

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chances of that happening when there is all this turmoil is lessened. The estimates of cost for the plan are way too old to even be at all viable and those were essentially numbers for an unfinished plan with still no answers for some very crucial decisions and expenses. Why not consider a plan that more entities, officials, the State of MN, the MNDNR, more of the State of ND, JPA members, private persons, affected property owners up and down the valley, maybe even Manitoba and Canadian officials can get behind and instead of cussing you out, maybe you would get a pat on the back for the considerations sought after and made work. We are simple folks that don't want an elaborate, expensive, and complicated remedy that very easily could freeze up, sink, and/or be cost prohibitive to maintain in the future. We need a plan with more benefits to more people and property. We need a better plan.

I am hopeful that due to the more widespread benefits of these and other alternatives a rejection be considered in the issuing the MNDNR permit of this ill-thought out project because we can do better. Thank you for reading and considering my comment.

Sincerely,



Senator Larry Luick, ND District #25
17945 101st ST SE
Fairmount, ND 58030
Home Phone: (701) 474-5959
Cell Phone: (701) 640-2389
E-mail: lluick@nd.gov

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Attachment A
Red River Basin Commission

RRBC Ex Officio Meeting
September 3, 2015

US Farm Bill Update Regional Conservation Partnership Program (RCPP)

- On June 17th Red River Retention Authority approved moving forward on funding for “Technical Assistance” to complete 20 RCPP watershed plans.

- 6 ND Watersheds
 - ✓ Cass County Joint WRD – Swan Creek Watershed
 - ✓ Cass County Joint WRD – Upper Maple River Sub Watershed
 - ✓ Cass County Joint WRD – Rush River Watershed
 - ✓ Richland County WRD – North Branch Antelope Creek – Tributary of Wild Rice River
 - ✓ Park River Joint WRD – North Branch Park River Watershed
 - ✓ Walsh County WRD – Forest River Watershed

- 14 MN Watersheds
 - ✓ Bois de Sioux Watershed – Five Mile Creek
 - ✓ Bois de Sioux Watershed – Rabbit River
 - ✓ Bois de Sioux Watershed – Bois de Sioux Direct
 - ✓ Roseau River Watershed – Roseau Lake Bottom
 - ✓ Roseau River Watershed – Beltrami Island Area Water Management Project
 - ✓ Wild Rice Watershed – Green Meadow Sub Watershed
 - ✓ Wild Rice Watershed – South Branch of WRR Sub Watershed
 - ✓ Wild Rice Watershed – Moccasin Creek Sub Watershed
 - ✓ Sand Hill River Watershed – Upper Sand Hill River Watershed
 - ✓ Two Rivers Watershed District – Klondike Clean Water Retention Project #11
 - ✓ Middle-Snake-Tamarac Rivers Watershed – J.D. #14 FDR Project
 - ✓ Middle-Snake-Tamarac Rivers Watershed – J.D. #19 FDR Project
 - ✓ Red Lake Watershed – Four Legged Lake Watershed
 - ✓ Red Lake Watershed – Pine Lake Watershed

From: [Rogne, Leah](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Tuesday, October 27, 2015 12:50:58 PM
Attachments: [Rogne Corps comment Oct 2015.docx](#)

Commenter 107

Summary of Comments on LeahRogne_Commenter107a-d_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/18/2015 2:33:49 PM -06'00'
Commenter 107

Author: Date: Indeterminate

Author: Medopera Subject: Highlight Date: 4/5/2016 10:33:59 AM
Comment ID: 107a
Topic: Federal Executive Order 11988, Violation

Attached and below are my comments on the DEIS:

Leah Rogne, Ph.D.
3460 N. Range Line Road
Gheen, MN 55771
Email: leah.rogne@mnsu.edu

I would like to comment on two important areas I do not think were adequately addressed in the DNR's Draft EIS for the FM Flood Risk Management project:

- 1. Misinterpretation of the legal implications of Executive Order 11988.**
- 2. The lack of good data on the agricultural impacts.**

1. Misinterpretation of the legal implications of Executive Order 11988.

Executive Order 11988 prohibits a funding of a federal project if the project supports "direct or indirect support of floodplain development" if there is a "practicable alternative." But that practicable alternative should not allow floodplain development if development is possible somewhere else.

The Fargo-Moorhead area has ample land for development. It just may not be in the area on which south Fargo developers want to build and thus maximize their investment on flood-prone land.

It is not the role of the Minnesota DNR or the Corps of Engineers to support bad investments on the part of local developers. There is plenty of land to support development in Moorhead, which has (through the wise investment of the city and the State of Minnesota) essentially taken care of its flooding problems through buyouts, levees, and rezoning. There is also plenty of land in West Fargo, which has been protected by the West Fargo Diversion.

Ultimately, the issue is whether we are to give the weight of law to Executive Order 11988 or whether we consider it just to be a suggestion to project planners. It is indeed an "order," an order that federal agencies "avoid" support of floodplain development.

According to Corps documents, the Corps itself stated that an earlier proposal that called

for the development of 20 square miles south of Highway 94 would violate EO 11988. Therefore, it is clear that the current project that foresees 50 square miles of development is a violation of the Order.

Further, by not considering, in its examination of alternatives, the diversion on the Minnesota side (which was identified as the most economic solution), the DNR has left out a major practicable alternative.

In summary, I believe that the Draft EIS needs to examine more fully how Executive Order 11988 legally prohibits developers from using federal dollars to support unwise floodplain development.

2. The lack of good data on the agricultural impacts.

The recent North Dakota State University study of potential agricultural impacts of the dam and staging area calls attention to the lack of good information on what the impacts would be on agricultural land flooded by the project's staging area.

Without a full assessment of these impacts, it is impossible to determine what is the least impact proposal.

The authors of the NDSU study acknowledged the shortcomings of their study, stating the following:

"Study limitations and omissions of scope render these annualized values inappropriate for policy or financial use."

So if the agricultural study cannot be used for "policy" or "financial" use, it means that we still do not know what the agricultural impacts will be. Therefore, it is impossible to say that the current project including a dam, diversion, and staging area is the least impactful project.

A fundamental flaw in all the planning by the Corps and by the NDSU study is the lack of consideration of the impact of the barriers created by county and townships roads and frozen culverts while the staging area is being used. The Corps' calculations of how long the water would be staged on agricultural land are grossly underestimated because of their failure to examine the real dynamics of how the water flows off the land when it is inundated.

A related issue for Minnesota and Minnesota landowners is the fact that the Corps continues to refuse to quantify impacts that would occur outside the "red box" that delineates the staging area. They acknowledge that there may be impacts outside the box, but landowners outside the box will be required to prove that impacts are the result

Page: 2

Author: Medopera Subject: Highlight Date: 11/18/2015 2:35:29 PM -06'00'
Comment ID: 107a cont.

Author: Medopera Subject: Highlight Date: 4/5/2016 10:34:48 AM
Comment ID: 107b
Topic: Socioeconomics, Agriculture Mitigation

Author: Medopera Subject: Highlight Date: 4/19/2016 2:11:33 PM
Comment ID: 107c
Topic: Hydrology and Hydraulics, NDSU Initial Agricultural Risk Impact Study

Author: Medopera Subject: Highlight Date: 4/5/2016 10:36:08 AM
Comment ID: 107d
Topic: Socioeconomics, Agriculture Impacts and Mitigation (Planting Delays)

of the operation of the diversion. As a Minnesota resident and North Dakota landowner with land affected by the project but "outside the box," I need the protection of the DNR and its permitting process to assure that I will not be unfairly denied the use of my property during planting season without a practicable method for receiving just compensation.

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Author: Medopera Subject: Highlight Date: 11/18/2015 2:54:20 PM -06'00'
Comment ID: 107d cont.

Leah Rogne, Ph.D.
Professor Emerita of Sociology
Minnesota State University, Mankato
3460 N. Range Line Rd.
Gheen, MN 55771
Phone: 218-787-2212 (h) 612-570-0188 (c)
Email: leah.rogne@mnsu.edu

This page contains no comments

TO: MN DNR

FROM:

Leah Rogne, Ph.D.
3460 N. Range Line Road
Gheen, MN 55771
Email: leah.rogne@mnsu.edu

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A related issue for Minnesota and Minnesota landowners is the fact that the Corps continues to refuse to quantify impacts that would occur outside the "red box" that delineates the staging area. They acknowledge that there may be impacts outside the box, but landowners outside the box will be required to prove that impacts are the result of the operation of the diversion. As a Minnesota resident and North Dakota landowner with land affected by the project but "outside the box," I need the protection of the DNR and its permitting process to assure that I will not be unfairly denied the use of my property during planting season without a practicable method for receiving just compensation.

From: [Lori Kinskey](#)
To: ["Review, Environmental \(DNR\)](#)
Cc: [Jenny Ly](#)
Subject: Fargo-Moorhead Risk Management Project DEIS
Date: Tuesday, October 27, 2015 9:44:48 PM

Commenter 108

Summary of Comments on LoriKinskey_Commenter108a_Email1.pdf

Page: 1

Oct. 27, 2015

Jill Townley, Project Manager
Environmental Policy and Review Unit
Box 25, Ecological and Water Resources Division
MNDNR
500 Lafayette Rd
St. Paul, MN 55155-4025

Re: Fargo-Moorhead Flood Risk Management Project

Dear Ms. Townley,

This proposed Flood Risk Management Project is critically important for the Fargo-Moorhead region. We have a long history of flooding in the area from several streams, including the Red River of the North and the Sheyenne River, along with others. This project will reduce the risk of flooding from these streams causing massive economic damage, and risking people's lives.

Nearly everyone in the region agrees that flood control is vital. Experts at all levels have identified the risk, and agree that the proposed solution is the best. The U.S. Army Corps of Engineers, who are the federal sponsors of this project, in cooperation with the Fargo-Moorhead Flood Diversion Authority, studied this risk and the proposed solution in depth – including the potential environmental impacts – and have approved it. The Governor, after speaking with the Corps of Engineers on the topic, has even said he has learned a lot about the risk and what is needed to be done to control it.

There are other benefits to approving this project aside from the obvious and most important one of providing flood protection and safeguarding property and lives. This project will qualify substantial portions of the Fargo-Moorhead area for 100 year flood accreditation from FEMA under the National Flood Insurance Program. Conversely, delaying or denying this project would result in FEMA re-drawing their flood plain map, which will place several more homes within the flood plain. These homeowners would then be saddled with much higher insurance premiums, and find it considerably more difficult to sell their properties or ever get their investment out of them, as the value of their properties will plummet.

There are some legitimate concerns that have been raised about the proposed project, but these are being mitigated. For communities that are located within the proposed staging area, ring levees will be built around them to protect them. For other homes and farms located within the inundation area, acquisition or relocation will be done in a manner consistent with federal and state law. Buyouts will be offered before any other consideration, and mitigations such as

Author: Medopera Subject: Text Box Date: 11/18/2015 3:07:25 PM -06'00'
Commenter 108

Author: Medopera Subject: Highlight Date: 4/5/2016 10:47:36 AM
Comment ID: 108a
Topic: Permitting Approval, Approve the Project
Unsubstantive

elevation, landscaping and flood proofing will be required before issuing a Letter of Map Revision.

This is a good, and needed project, which has taken all factors into consideration. Please help protect our region by approving the proposed alternative and allowing the project to be put into motion.

Sincerely,

Lori Kinskey
4218 2nd St. S.
Moorhead, MN 56560
Cell: 701-729-6450
E-mail: lorikinskey@gmail.com

Page: 2

Author: Medopera Subject: Highlight Date: 11/18/2015 3:09:12 PM -06'00'
Comment ID: 108a cont.

From: [Luke Brakke](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 1:58:58 PM

Commenter 109

Summary of Comments on LukeBrakke_Commenter109a-g_Email1.pdf

Page: 1

To: Jill Townley, Project Manager Environmental Policy and Review Unit, Ecological and Water Resources Division, DNR

Dear Ms Townley, and MN DNR,

Thank you for your due diligence on assessing the Environmental impacts of the proposed FM Diversion. I have a few concerns with the project that I'd like you to further study, including the damage to local cemeteries, historical flood figures, and damage to farmland and rural economies in the affected staging area.

I am a 5th generation farmer in the Comstock, MN area. I am concerned that the environmental impacts of flooding my farmland are not being considered to their fullest effect. Many plant pathogens and weed seeds are transported through surface water. Plant disease and weed resistance are the biggest issues I face on my farm, and one of the best practices to combat these problems is with adequate drainage and crop rotations. If my land is flooded, it is not only going to spread these pathogens and resistant weed seeds to my entire farm, it is going to make them virtually impossible to control.

Also, the flooding is going to put an unjust strain on the economies of this area. We cherish our rural living, small towns and way of life. With the impacts of the farm economy in this region, it will make the area uninhabitable. There has been little to no answers given to the mitigation we would incur to take on the problem of urban sprawl into the flood plain of south fargo. I don't want to see developers get rich off of my misfortune. Roads will be flooded and damaged making travel nearly impossible and 5 generation family farms will be wiped out.

As the chairperson for our local Hoff Lutheran Church cemetery committee, I have received very insubstantial information as to the mitigation that our cemetery will receive for being inundated with 12 feet of floodwater. We have been told that the graves of our dearly beloved won't become unearthed due to our "special soil" in the region, yet the USACE has not put a probe in the ground to tell me what type of soil is present in my cemetery. I've seen too many national media stories from Texas and South Carolina in the past month to see that this is a very substantial problem.

Lastly, I'd like the MNDNR to study the historical flood figures that the USACE has come up with to justify this project and the Cost/Benefit ratio. We have areas of land that have never been flooded in the history of the earth, yet they claim in a "100 yr flood" they will see

Author: Medopera Subject: Text Box Date: 11/18/2015 3:10:23 PM -06'00'
Commenter 109

Author: Medopera Subject: Highlight Date: 4/5/2016 10:49:42 AM
Comment ID: 109a
Topic: Socioeconomics, Agriculture Impacts

Author: Medopera Subject: Highlight Date: 4/5/2016 10:50:07 AM
Comment ID: 109b
Topic: Socioeconomics, Agriculture Impacts on Local Economy

Author: Medopera Subject: Highlight Date: 4/22/2016 9:44:49 AM
Comment ID: 109c
Topic: Communication Concerns, General Unsubstantive

Author: Medopera Subject: Highlight Date: 4/19/2016 3:31:44 PM
Comment ID: 109d
Topic: Infrastructure and Public Services, Flood Impacts to Roadways, Ditches and Culverts

Author: Medopera Subject: Highlight Date: 4/21/2016 11:29:50 AM
Comment ID: 109e
Topic: Cultural Resources, Cemetery Mitigation Communication

Author: Medopera Subject: Highlight Date: 4/19/2016 1:18:25 PM
Comment ID: 109f
Topic: Hydrology and Hydraulics, Expert Opinion Evaluation Panel

flooding. This doesn't add up! Furthermore, these fictitious flood figures are exacerbating the need for flood insurance in many areas to justify the need to develop the flood plain of south Fargo.

There are many corrupt practices taking place with the USACE and FM Diversion Authority to sell this project, I ask the MN DNR and State of MN to be the source we can trust to give the public the straight and honest answers. It is wrong to build a project that has no funding and will impact so many peoples livelihoods in rural Minnesota for one simple cause, the future development of south Fargo. I want my boys to be able to say that they are the 6th generation to take on the family farm.

Thank you for hearing my concerns Ms. Townley, Commissioner Landwehr and others at the MN DNR.

Yours Truly,

Luke Brakke

Page: 2

Author: Medopera Subject: Highlight Date: 11/18/2015 3:27:18 PM -06'00'
Comment ID: 109f cont.

Author: Medopera Subject: Highlight Date: 4/5/2016 10:53:00 AM
Comment ID: 109g
Topic: Proposed Project, Project is Immoral
Unsubstantive

From: [Lynn Larsen](#)
To: [*Review, Environmental \(DNR\)](#)
Cc: [Richard Geurts](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 9:33:29 AM
Attachments: [This is a response to the Minnesota DNR EIS response.coulees.docx](#)

Commenter 110

Summary of Comments on LynnLarsen&RichardGeurts_Commenter110a_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/18/2015 3:30:20 PM -06'00'
Commenter 110

Attached is our response to the input and feedback session. Thank you for this opportunity.

Author: Date: Indeterminate

--
Lynn Larsen and Richard Geurts

This is a response to the Minnesota Department of Natural Resources EIS regarding the Fargo Flood Diversion project as proposed by the Diversion Authority (DA). This response references the DA provided "Residential Levee Map Land Owners: Richard A. Geurts and Lynn C. Larsen Site 213 pin 200000348100" and Farm and Home Plat Directory, 2015, Plat T-136-N, R-49-W, as well as first hand observations from 1996 to the present by the above landowners. Our address is 5539 171 Avenue SE, Christine ND. The areas of concern are sections 3 and 4, 10 and 9, 15 and 16, 22 and 21. Copies of these documents can be provided to the DNR.

We are commenting on information that is missing as well as items requiring more analysis. Our concern are that the Class I high hazard dam will back up water at Highway 46. This water will enter a series of coulees between Highway 46 and 58th Street SE. These areas have been submerged in flood water in all the floods since 1997. The coulees are located at: section 3 crossing into section 4, section 10 crossing into section 9, section 15 crossing into section 16, and section 22 crossing into section 21. The northern most coulee at section 3 is the first to flood and each coulee to the south subsequently floods as more water is backed up. This traps all residents on this four mile road. These spots are impassible for longer than the flood duration. We believe that there was inadequate study done of the impact the dam will have on this road, especially access to the road from the south since the existing access to Highway 46 will be impassible.

This road has 12 houses on it. It is a school bus route for the public school. There are 11 children that live on this stretch of road. The flooding of these coulees will render necessary services such as the fire, ambulance service, and mail delivery impossible. There will be no safe way to get children to and from school. With flood waters at or near the freezing point will make it unsafe to try to boat out.

This issue was brought to the attention of the DA at a private meeting held in Fargo in the summer of 2014. The DA has offered no remedy for the residents. As a result, we ask the road bed to be raised the entire 4 miles of 171 Avenue SE to ensure that local residents are not trapped as a result of the Fargo Flood Diversion. A second suggestion is to construct bridges at each flood prone location so that school buses, emergency equipment, utility vehicles can safely have access to our homes during a flood situation.

For this reason we ask for more analysis of the flood impact on the residents of 171 Avenue SE.

Thank you,

Lynn C Larsen and Richard A Geurts

701-261-9587 701-238-2237

From: [Lynn Larsen](#)
To: ["Review, Environmental \(DNR\): Richard Geurts](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 9:37:06 AM
Attachments: [DNR EIS 2nd.docx](#)

Commenter 110

Summary of Comments on LynnLarsen&RichardGeurts_Commenter110a_Email2.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/18/2015 3:38:17 PM -06'00'
Commenter 110

Author: Date: Indeterminate

This is our response to the public meeting held in Moorhead, MN in September, 2015. Thank you for this opportunity to comment.

--
Lynn Larsen and Richard Geurts

This is a response to the Minnesota Department of Natural Resources EIS regarding the Fargo Flood Diversion project as proposed by the Diversion Authority. We are commenting on missing information and information that requires more analysis.

Army Corp of Engineers executive order 11988 was ignored. Less costly plans that provided flood protection were never pursued because the city of Fargo wanted to use the flood diversion project to enhance development for the city of Fargo only. The ACoE Water Resources Policies and Authorities direct the ACoE to:

"Avoid development in the base flood plain unless it is the only practicable alternative;

Reduce the hazard and risk associated with floods;

Minimize the impact of floods on human safety, health and welfare; and restore and preserve the natural and beneficial values of the base flood plain." Executive Order 11988 regulation #1165-2-26.

The current Diversion Plan includes a class I High Hazard dam which will be an attractive nuisance and has the potential of loss of life. It creates new flood plains while removing existing flood plains. It encourages development in the base flood plain for no other reason other than to encourage urban spread in a specific area.

The Diversion Authority must adhere to the existing regulations for flood control as outlined by the United States government.

Sincerely,

Lynn C Larsen and Richard A Geurts

701-261-9587 701-238-2237

From: marcus.larson@exhostmail.com
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo Moorhead Flood Risk Management Project DEIS
Date: Friday, October 23, 2015 8:12:34 PM
Attachments: [DNR Comments - Marcus Larson \(Minnesota Impacts\) 2015-10-21.pdf](#)
[DNR Comments - Marcus Larson \(EOE\) 2015-10-14.pdf](#)

Comment 111

Summary of Comments on MarcusLarson_Commenter111a-g_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/19/2015 8:00:07 AM -06'00'
Comment 111

Author: Date: Indeterminate

Author: Date: Indeterminate

Dear Project Manager,

Attached are two comments regarding the Fargo Moorhead Flood Risk Management Project DEIS.

Thank you for considering my comments.

Respectfully submitted,

Marcus Larson
513 7th St
Hickson, ND 58047
701-588-4412 home
701-893-6975 cell

October 14, 2015

Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road
St. Paul, Minnesota, 55155-4025

RE: Fargo Moorhead Flood Risk Management Project DEIS

Author: Medopera Subject: Highlight Date: 4/19/2016 1:21:36 PM
Comment ID: 111a
Topic: Hydrology and Hydraulics, Expert Opinion Evaluation Panel

On September 28-29, 2009, the USACE conducted an expert opinion elicitation (EOE).

"Page 9 Appendix A1b - EOE: To prepare for the EOE, expert panel members and observers were sent a read-ahead package following recommendations in the Technical guide. The EOE began with a description of the EOE process and a review of the goals to be accomplished."

The entire Fargo Dam and FM Diversion project relies on "theoretical assumptions" contained within the EOE (expert opinion elicitation) to justify to scale, scope, and stated level of desired protection and relocation of flood impacts.

The EOE has been used to conceal significant impacts both upstream and downstream by obfuscating historical FEMA benchmarks with "theoretical assumptions" presented within the EOE which breaks the period of record (POR) into two portions, resulting in generally defining the dry period as 1901-1941 and the wet period as 1942-2009 and were instructed to weight the probability of wet conditions at 0.8, and dry conditions at 0.2.

These "theoretical assumptions" rely heavily on stream flow discharge records that are limited and precipitation records that were divided into "preferential sets" to return results that compliment the stated project purpose but have failed to quantify the total effects of natural flood plain encroachment and flood reduction benefit provided by the natural flood plains upstream of the F-M area.

Basing the EOE primarily upon stream flow discharge without equally quantifying and integrating natural flood plain reduction and precipitation records upstream of the F-M area, suggests the credibility and objectivity of the EOE is compromised and biased towards the goals of the USACE and non-federal local sponsor.

Further complicating confidence in the EOE "theoretical assumptions" is the Fargo USGS gage, which has had six different locations since May 27, 1901 which contains a disparity of 10.35 feet, according to the USGS, and does not appear to be noted in the EOE study.

Review of precipitation records for the Fargo Moorhead area from 1881-2014 represents findings contrary to "theoretical assumptions" of a "wet cycle" postulated by the EOE, USACE and local sponsors.

The 134 period of precipitation records contains an average annual precipitation of 21.41 inches.

- 73 of 134 years were "below average" years
- 45 of those below average years have been since 1942 (during alleged "wet cycle")

The greatest precipitation year from 1881-2014 was year 2000 at 34.75 inches. Which was a summer crest (22.82 feet) with a peak stream flow nearly 22,000 cfs LOWER than the 2009 event. This suggests that higher precipitation does not necessarily mean a flood event will occur with any predicted certainty, however, without precipitation it is difficult to manifest flooding.

The key disconnects within the EOE and USACE assumptions are:

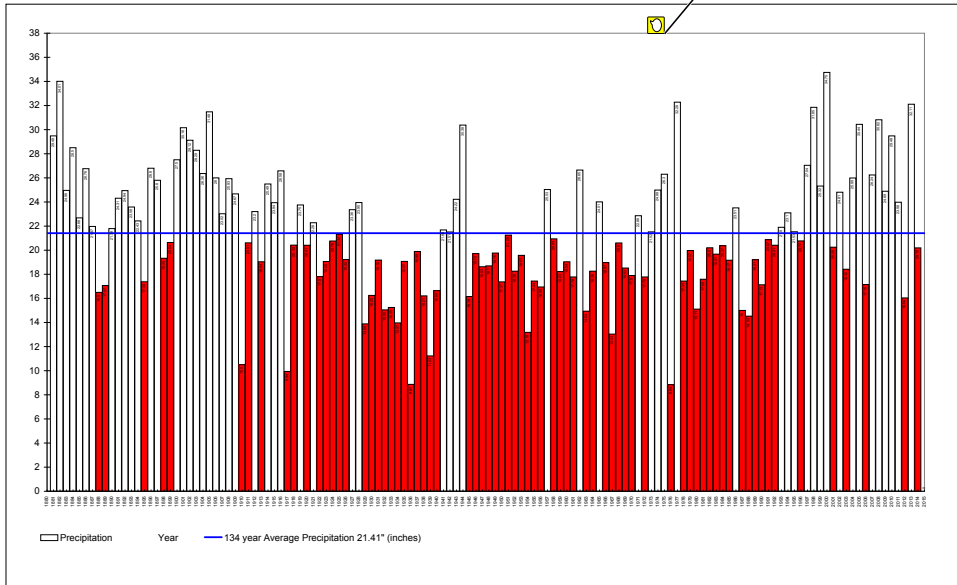
- a failure to provide a credible basis of how the F-M area would achieve stream flows capable of manifesting the theorized flood events without significant precipitation input.
- a failure to consider the possibility of the F-M area having reached an apex event.
- a failure to include FEMA decision makers in the EOE process.

The EOE is based upon imperfect data sets, assembled by proxy for a goal oriented "best guess". Remarkably, revision 8 of hydraulic modeling on the overall project is being finalized, yet, the EOE was concluded within 2 days without the benefit of the revisions to modeling, and we are expected to accept the EOE at face value?

I sincerely urge the Minnesota DNR to take a close look at disconnects created by the EOE, the quantified disparity to historical records and FEMA benchmarks which have been ignored and will invariably result as impacts to MN interests.

Sincerely,

Marcus E. Larson
513 7th ST
Hickson, ND 58047
701-588-4412



05054000 RED RIVER OF THE NORTH AT FARGO, ND



LOCATION - Lat 46°51'40", long 96°47'00" referenced to North American Datum of 1927, in NW 1/4 NE 1/4 sec.18, T.139 N., R.48 W., Cass County, ND, Hydrologic Unit 09020104, 0.7 mi upstream of Midtown Dam, 25 mi upstream from mouth of Sheyenne River, and at mile 453.
DRAINAGE AREA - 6,800 mi², approximately.

Page: 5

Author: Medopera Subject: Sticky Note Date: 11/19/2015 8:03:32 AM -06'00'
Comment ID: 111a cont. - supporting documentation

SURFACE-WATER RECORDS

PERIOD OF RECORD - DAILY DISCHARGE--June 1901 to current year. Published as "at Moorhead, MN.", 1901. Monthly discharge only for some periods, published in WSP 1308.

PERIOD OF RECORD.--DAILY GAGE-HEIGHT--October 2000 to current year.

REVISED RECORDS - WSP 1308: 1902-4, 1906-7, 1910-14, 1916, 1918, 1924. WSP 1388: 1905-6, 1917-20(M), 1935(M), 1938-39(M), 1943.

GAGE - Water-stage recorder and concrete control from October 1, 1962 to present, datum of gage is 861.8 ft above National Geodetic Vertical Datum of 1929. Previous locations and datums are as follows:

Staff gage on timber breakwater of old Front Street bridge (now Main Avenue) 1.8 mi downstream from May 27, 1901 to August 31, 1914. Datum was 860.75 ft above NGVD of 1929.

Staff gage on trees above former dam 1.0 mile downstream from September 1, 1914 to July 31, 1928. Datum was 871.1 ft above NGVD of 1929.

Staff gage in vicinity of Fargo Municipal Water Plant 1.0 mile downstream from August 1, 1928 to April 11, 1959. Datum was 867.4 ft above NGVD of 1929.

Continuous recorder in concrete stilling well on downstream side of Interstate 94 bridge 2.0 mile upstream from April 12, 1959 to September 30, 1960. Datum was 867.4 ft above NGVD of 1929.

Continuous recorder in Fargo Municipal Water Plant at current location from October 1, 1960 to September 30, 1962. Datum was 867.4 ft above NGVD of 1929.

REMARKS - 10/01/13-09/30/14: Records good except for estimated daily discharges, which are poor.

REGULATION.--Flow regulated by: Orwell Reservoir, flood storage capacity, 13,300 acre-ft at elevation 1,070 ft above mean sea level, adjustment of 1912; Mud Lake, flood storage capacity, 78,600 acre-ft at elevation 981 ft above mean sea level, adjustment of 1912; Lake Traverse, flood storage capacity, 75,100 acre-ft at elevation 981 ft above mean sea level, adjustment of 1912; and numerous other controlled lakes, ponds and several powerplants.

DIVERSIONS.--Figures of daily discharge do not include diversions to cities of Fargo and Moorhead, MN, from the Sheyenne River



build the levee and floodwall system that was supposed to protect the city — but clearly did not. Ongoing operation of Corps projects can also lead to devastating results. A U.S. District Court recently ruled that the Corps’ “gross negligence” in maintaining the Mississippi River Gulf Outlet, a Corps-built navigation channel, also played a major role in the breaching of many New Orleans area levees during Hurricane Katrina.

During the past decade, the National Academy of Sciences, the Government Accountability Office, the Army Inspector General, federal agencies, and independent experts have issued a flood of studies highlighting a pattern of stunning flaws in Corps project planning and urging substantial changes to the Corps’ planning process. Two National Academy of Sciences panels and the Department of the Army Inspector General concluded that the Corps has an institutional bias for approving large and environmentally damaging structural projects, and that its planning process lacks adequate environmental safeguards. Less environmentally damaging, less costly, nonstructural measures that would result in the same or better outcomes are routinely ignored or given short shrift. This results in projects that are unnecessarily destructive, costly, and, in many cases, simply not needed.

In 2006, the Government Accountability Office told Congress that recent Corps studies were “fraught with errors, mistakes, and miscalculations, and used invalid assumptions and outdated data.” The problems were so pervasive that the studies “did not provide a reasonable basis for decision-making.” The Government Accountability Office also told Congress that the problems at the Corps were “systemic in nature” and “prevalent throughout the Corps’ Civil Works portfolio.”

In 2007, Congress enacted important Corps Reform legislation designed to address some of these problems. These reforms, which require modernization of the Corps’ planning guidelines, impose strict mitigation requirements on Corps projects and require outside independent peer review of costly or controversial Corps projects are discussed at length in Chapter 2. Ensuring strict compliance with the Corps Reform provisions and with the environmental protection laws and policies discussed in Chapters 3 and 6 will do much to improve Corps projects and permits.

As communities and wildlife suffer the floods, droughts, storms, and increasing sea levels fueled by climate change, it is more important than ever to improve Corps projects and permitting decisions. The Corps must begin immediately to aggressively protect and restore the nation’s rivers, wetlands, and coastlines — resources that provide the first line of defense against flooding, improve water quality, recharge groundwater, provide outstanding recreational opportunities, provide vital habitat for fish and wildlife, and are essential for making our communities more resilient to the effects of climate change.

October 21, 2015

Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road
St. Paul, Minnesota, 55155-4025

RE: Fargo Moorhead Flood Risk Management Project DEIS

Subject: Minnesota Impacts and the EOE

There are two schools of thought associated with the Fargo Dam and FM Diversion Project (Fargo Moorhead Flood Risk Management Project) flood levels.

- 1) Recorded Historical Observations
- 2) Theoretical Assumptions

Recorded Historical Observations: The USGS has considerable data and gage datum recording historical streamflows and peak flood stages along the Red River mainstem and its tributaries.

Theoretical Assumptions: The USACE (U.S. Army Corps of Engineers) solicited an EOE (Expert Opinion Elicitation) on September 28-29, 2009. The context of the EOE was to parse fragmentary data to support project advancement and intentionally obfuscate existing conditions" by creating an alternate benchmark fraught with errors, mistakes, miscalculations, invalid assumptions and inconsistent data to conceal project impacts and overstate need for the overall project and its various components.

Problems and disconnects created by the EOE are so pervasive that the EOE study does not provide a reasonable basis for decision-making.

As follows:

Page 37 of the MN DNR EIS states:

Staging Area: A defined area immediately upstream of the tieback embankment. When the Project is operated, water would be temporarily detained in the staging area *to minimize impacts downstream*. The staging area encompasses the area where the Project increases the 100-year flood water surface elevation by approximately one foot or more over existing conditions and encroachment must be prevented to preserve operability of the Project. The staging area is a Project component that is being used as a management tool for land use/development and application of mitigation by the United States Army Corps of Engineers (USACE), such as property acquisition, easements, and programmatic agreements, and it does not constitute the total area affected by Project operation.

Page 61 of the MN DNR EIS states:

"Project operation on the rising limb of the flood hydrograph (i.e., flood discharges are increasing) is *based on minimizing downstream impacts*, and therefore, the diversion inlet control structure gates would be opened only after the initial diversion tributary (Sheyenne River, Maple River, Lower Rush River, and Rush River) flow peaks have made it to the diversion. Project operation on the falling limb of the flood hydrograph (i.e., flood discharges are decreasing) is based on minimizing the duration of upstream impacts without causing upstream stages to fall faster than what has been experienced during historic floods. If the staging area elevations drop too quickly, it could cause environmental concerns (e.g., fish stranding and streambank instability)."

The objective to minimize downstream impacts is **not achieved** with the Fargo Dam and FM Diversion project.

Page: 7

Author: Medopera Subject: Highlight Date: 11/19/2015 8:14:11 AM -06'00'
Comment ID: 111a cont.

Author: Medopera Subject: Highlight Date: 4/19/2016 12:33:55 PM
Comment ID: 111b
Topic: Hydrology and Hydraulics, Downstream Impacts

"Existing Conditions" are generally accepted as a "benchmark" which has been historically observed as a condition that pre-existed any theory or unique set of conditions that are being compared to the aforementioned benchmark.

"Existing Conditions" have been used to distort references including but not limited to:

- Project Need
- Map Illustrations
- Socio Economic Impacts
- Estimated Damages
- Loss of Life
- Cost Benefit
- Biological Connectivity
- Hydrographs
- Arrival and Receding of Event
- Overall Impacts of the Project

In early to mid 2009, the USACE postulated a theory that flow records at the Fargo gage could no longer be considered stationary and solicited an EOE (Expert Opinion Elicitation), however, the USACE theory should be summarily rejected because it fails to quantify the net effects of encroachment into floodways and adjacent floodplains which directly and indirectly compromises flow records.

Example: Take two funnels with the exact same outflow; one with a collection cone half the size of the other. The largest collection cone represents the natural flood plain and the smaller collection cone represents an encroached flood plain. If liquid is poured through each funnel at the maximum rate the largest funnel can handle, the smaller funnel will become overwhelmed because there is less area to attenuate the flow entering the collection cone. This does not mean the outflow is not stationary.

The USACE has arbitrarily and capriciously misrepresented "existing conditions", which has ranged from 39.5 feet to 42.4 feet in a 1 percent (100 year) event.

The illustration to the right is excerpted from the July 2011 USACE main FEIS report (page 75).

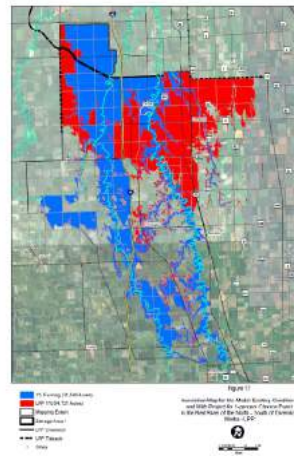
The "existing conditions" are not accurately represented above (north) of the proposed alignment.

The area shaded in red, specifically in Minnesota, are new impacts as a result of tens of thousands of acre feet of displaced water from the natural flood plain north of the alignment, which Fargo has targeted for future development, at the expense of others outside their jurisdictional boundaries.

Persons unfamiliar with the proposed project or project area would not easily comprehend that "existing conditions" of the natural flood plain, depicted in blue, reach another 10 miles north to I94.

Again, a benchmark is a fixed point of reference, however, inconsistencies tied to USACE "existing conditions" and "EOE" iterations further invalidate the stated project need for a Class 1 High Hazard Dam and confidence in all related facets of the project currently being considered by the MN DNR.

Figure 12 - 1 percent chance event inundation map - showing existing conditions (blue) and with LPP (red)



Fargo-Moorhead Metro Feasibility Report and Environmental Impact Statement July 2011

Far Reaching Impacts

Minnesota and North Dakota share a border that extends from South Dakota to the U.S – Canada border.

Despite dubious claims that the proposed project would “*minimize impacts downstream*”, it appears the exact opposite would occur based upon information provided by the USACE to Minnesota in the Draft Supplemental Assessment for the Fargo Moorhead Risk Management project.

The following table compares the highest recorded flood event at various USGS gages along the Red River in reference to impacts to Minnesota as a result of the VE13A alignment, based upon data provided by the USACE.

Potential Downstream Impacts Caused by Fargo Dam and FM Diversion Flood Protection				
All Elevations Reference 1988 NAVD				
Gage Location & Number	Base River Gage (in feet)	Record Crest (in feet)	VE13A Impact (in feet)	Impact Amount
Drayton, ND USGS Gage 05092000	756.178	801.728	803.14	+ 16.944 inches
Oslo, MN USGS Gage 05083500	773.769	812.139	813.26	+ 13.452 inches
Grand Forks, ND USGS Gage 05082500	780.070	** 829.930	833.40	+ 41.64 inches
Thompson, ND USGS Gage 05070000	780.076	845.256	847.58	+ 27.888 inches
Halstad, MN USGS Gage 05064500	827.739	868.479	869.09	+ 7.332 inches
		** Peak Crest Since Floodwall Completion		

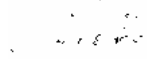
In short, Minnesota could potentially experience negative impacts along 380 river miles bordering North Dakota as a result of the Class 1 High Hazard Dam and without discharge controls along the nearly 30 miles of diversion channel from the Sheyenne River south of Horace to the outlet near Georgetown, MN.

The USACE has not clearly or transparently quantified the cumulative effect of riverbank degradation upstream, ag impact and other socio-economic impacts upstream or downstream of the Fargo project area, which Minnesota should extensively study to ensure further reaching complications and impacts, unintended or unanticipated, do not occur.

Attached is a Red River analysis for further consideration comparing highest recorded flood events to potential impacts disseminated by the USACE.

The stated need or project purpose is excessive and not beneficial to Minnesota. Combining several alternatives such as running more water via Fargo, basin wide retention sites across the entire Red River basin, removal of the Class 1 High Hazard Dam feature, a smaller diversion channel, tighter flood plain regulation and preservation of the natural flood plain immediately upstream of Fargo are just a few options that could provide the Fargo – Moorhead area with robust flood protection without impacts along river border that Minnesota shares with North Dakota

Respectfully submitted,



Marcus Larson
513 7th St
Hickson, ND 58047

- Author: Medopera Subject: Highlight Date: 11/19/2015 8:17:11 AM -06'00'
Comment ID: 111b cont.

- Author: Medopera Subject: Highlight Date: 4/21/2016 9:32:39 AM
Comment ID: 111c
Topic: Stream Stability, Stream and Soil Stability Impacts

- Author: Medopera Subject: Highlight Date: 4/5/2016 11:11:38 AM
Comment ID: 111e
Topic: Socioeconomics, Socioeconomics

- Author: Medopera Subject: Highlight Date: 4/5/2016 11:11:10 AM
Comment ID: 111d
Topic: Socioeconomics, Agriculture Impacts

- Author: Medopera Subject: Highlight Date: 4/20/2016 11:18:29 AM
Comment ID: 111f
Topic: Proposed Purpose and Need, Purpose and Need too Narrow and/or Excessive

- Author: Medopera Subject: Highlight Date: 4/5/2016 11:14:03 AM
Comment ID: 111g
Topic: Alternatives, Alternative: Basinwide Retention, No dam, More flows



**Analysis of Red River of the North
FMM VE13A-Bundled
vs
Record Flood
or
FEMA 100 year - July 2012 Study**

All gage elevations adjusted to VERTCON 1988 NAVD

VERTCON: is a computer program that computes the modeled difference in orthometric height ("height above sea level") between the North American Vertical Datum of 1988 (NAVD 88) and the National Geodetic Vertical Datum of 1929 (NGVD 29) for a location in the contiguous United States.

The parameters required are the latitude and longitude of the location.

All "Gage 0" Datum displayed as "Converted to NAVD 88 height", which represents the base elevation of the river gage.

Link to VERTCON

http://www.ngs.noaa.gov/cgi-bin/VERTCON/vert_con.prl

This analysis includes Red River of the North Gages

USGS 05092000 RED RIVER OF THE NORTH AT DRAYTON, ND
USGS 05083500 RED RIVER OF THE NORTH AT OSLO, MN
USGS 05082500 RED RIVER OF THE NORTH AT GRAND FORKS, ND
USGS 05070000 RED RIVER OF THE NORTH NEAR THOMPSON, ND
USGS 05064500 RED RIVER OF THE NORTH AT HALSTAD, MN
USGS 05054000 RED RIVER OF THE NORTH AT FARGO, ND
USGS 05051522 RED RIVER OF THE NORTH AT HICKSON, ND

Cited sources:

USGS, NGS.NOAA, Federal Emergency Management Agency Flood Insurance Study Number 38017CV000A (July 27th, 2012) and Grand Forks Letter of Map Revision (LOMR) effective August 2nd, 2007.

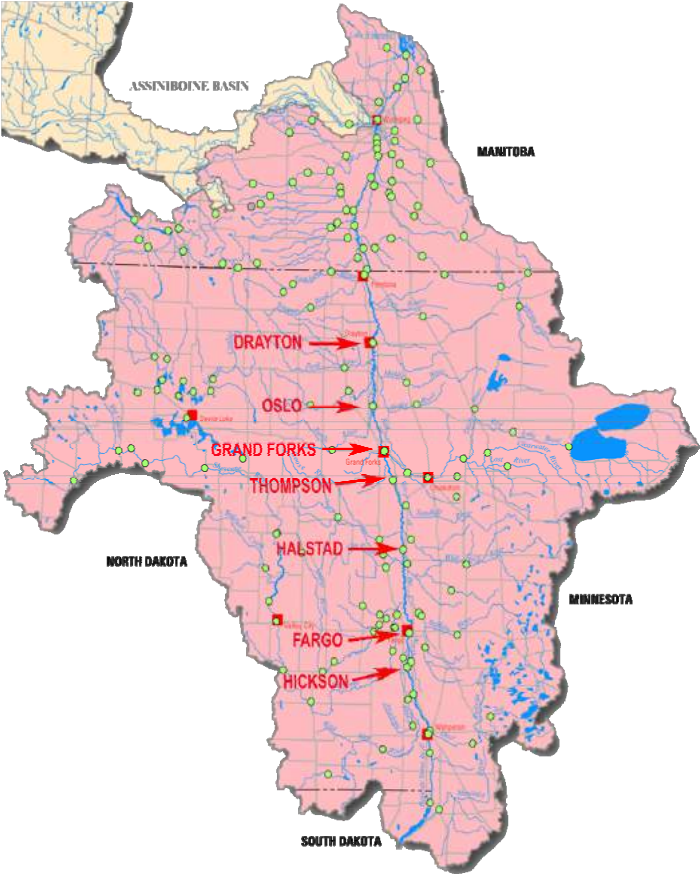
This page contains no comments

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HALSTAD, MNpage 9
FARGO, ND page 10

This page contains no comments

RED RIVER USGS RIVER GAGE LOCATIONS



This page contains no comments

Intent: To evaluate impacts caused by the Fargo-Moorhead Metropolitan Area Flood Risk Management Project (FMM) to entities along the Red River main stem.

Rejected Assumptions: The U.S. Army Corps of Engineers conducted an EOE (Expert Opinion Elicitation) during the SDEIS (Supplemental Draft Environmental Impact Study) and is summarily rejected in this analysis for the follow reasons:

- 1) Inconsistent with FEMA 100 yr and historical data.
- 2) The EOE was conducted after the FMM EIS commenced, compromising the integrity of the initial DEIS (Draft Environmental Impact Study).
- 3) The EOE disproportionally weights historical gage data to establish an artificial benchmark that supports the FMM.
- 4) The EOE suppresses impacts by disregarding historical USGS observations by comparing EOE based "existing conditions" with EOE projections.
- 5) The EOE was utilized to establish a more favorable cost benefit ratio than using existing non-weighted historical river data.
- 6) The EOE attempts to theorize precipitation conditions beyond any rational or scientific basis of accuracy.

Summary: The proposed FMM project creates significant impacts up to 22.5 miles upstream of Fargo and beyond Drayton, ND. The U.S. Army Corps of Engineers was unable to minimize impacts downstream and solicited an EOE study to increase the theorized hydraulics and hydrology modeling of the Red River of the North. This alteration relies heavily upon a disproportionate increase of CFS discharge flows and gage elevation to reduce impacts in relation to FMM project objectives and related reduction of natural flood plain development for development purposes.

Any net reductions in flood levels are in relation to EOE benchmarks and require all components to work in unison for timing of crests and to provide the stated reduction benefit. The proposed project has primarily three component phases. ****NOTE**** relocation of flood water capacity from the natural flood plain occurs with each phase of construction.

- 1) northern reach from I-94 to Red River outlet capturing the Sheyenne, Maple and Rush rivers.
- 2) Western reach from Sheyenne aqueduct to the northern reach crossing at I-94.
- 3) Southern reach from the Sheyenne aqueduct eastward 12.5 mile, 5.5 miles of that reach into MN.

Bad Scenario: A problematic scenario for populations downstream of Fargo, ND would be the construction of the northern reach prior to the lawsuit and the DNR issues being resolved, as there are no control structures to limit discharge of captured water from the Sheyenne, Maple and Rush rivers into the Red River mainstem.

This page contains no comments

Worst Case Scenario: If only the northern reach and southern reach components are constructed, populations downstream of Fargo, ND would experience full discharge of the staging/storage area immediately upstream of Fargo to preserve the metro area. Combining full discharge of flood water upstream of Fargo and uncontrolled discharge of the northern reach, populations downstream of Fargo could realize impacts greater than those stated in the Supplemental Environmental Assessment.

Net Effects: Populations downstream of Fargo, ND could experience an increase in water impacts and a reduction of existing rated level of protection, which could initiate and increase in requirement for flood insurance coverage.

This page contains no comments

Drayton

USGS 05092000 RED RIVER OF THE NORTH AT DRAYTON, ND
Pembina County, North Dakota
Hydrologic Unit Code 09020311
Latitude 48°34'20", Longitude 97°08'50" NAD27
Drainage area 34,800 square miles
Gage datum 755.0 feet above NGVD29

VERTCON

Latitude: 48 34.20
Longitude: 097 08.50
NAVD 88 height: 755.00 ft
Datum shift (NAVD 88 minus NGVD 29): 1.178 feet
Converted to NAVD 88 height: 756.178 feet

Benchmark

USGS 05092000
Date: 1997-04-24
CFS : 124000
Gage: 45.55

756.178 feet (1998 NAVD)
45.55 record crest

801.728 feet (1998 NAVD)
803.14 FMM VE13A-Bundled 100 yr Event (1988 NAVD)

1.412 feet higher than 1997 record
16.944 inches higher than 1997 record

Drayton Summary: USGS gage 05092000 located at Drayton, ND has a base elevation of 756.178 feet when converted to NAVD 88 datum. The USGS recorded an April 24, 1997 peak crest of 45.55 feet at 124,000 CFS of discharge reflecting 801.728 feet at the gage. The proposed VE13A alignment of the FMM indicates projected impacts could reach 803.14 feet, which exceeds the 1997 record crest of 801.728 feet by 1.412 feet (16.944 inches).

This page contains no comments

Oslo

USGS 05083500 RED RIVER OF THE NORTH AT OSLO, MN
Marshall County, Minnesota
Hydrologic Unit Code 09020306
Latitude 48°11'38", Longitude 97°08'25" NAD27
Drainage area 31,200 square miles
Contributing drainage area 27,400 square miles
Gage datum 772.65 feet above NGVD29

VERTCON

Latitude: 48 11.38
Longitude: 097 08.25
NGVD 29 height: 772.65 ft
Datum shift(NAVD 88 minus NGVD 29): 1.119 feet
Converted to NAVD 88 height: 773.769 feet

Benchmark

USGS 05083500
Date: 1997-04-23
CFS : 120000
Gage: 38.00

USGS 05083500
Date: 2009-04-01
CFS : 80600
Gage: 38.37

773.769 feet (1998 NAVD)
38.37 record crest

812.139 feet (1998 NAVD)
813.26 FMM VE13A-Bundled 100 yr Event (1988 NAVD)

1.121 feet higher than 2009 record
13.452 inches higher than 2009 record

Oslo Summary: USGS gage 05083500 located at Oslo, MN has a base elevation of 773.769 feet when converted to NAVD 88 datum. The USGS recorded an April 1, 1997 peak crest of 38.37 feet at 80,600 CFS of discharge but also an April 23, 1997 crest of 38.00 feet at 120,600 CFS of discharge. Although the CFS discharge was lower on the April 1, 1997 reading the higher gage crest was used. The proposed VE13A alignment of the FMM indicates projected impacts could reach 813.26 feet, which exceeds the 1997 record crest of 812.139 feet by 1.121 feet (13.452 inches).

This page contains no comments

Grand Forks

USGS 05082500 RED RIVER OF THE NORTH AT GRAND FORKS, ND
Grand Forks County, North Dakota
Hydrologic Unit Code 09020301
Latitude 47°55'37", Longitude 97°01'44" NAD27
Drainage area 30,100 square miles
Contributing drainage area 26,300 square miles
Gage datum 779.0 feet above NGVD29

VERTCON

Latitude: 47 55.37
Longitude: 097 01.44
NGVD 29 height: 779.0 ft
Datum shift(NAVD 88 minus NGVD 29): 1.070 feet
Converted to NAVD 88 height: 780.070 feet

Benchmark

USGS 05082500
Date: 1997-04-18
CFS : 137000
Gage: 52.04

Date: 1997-04-22
Gage: 54.35

780.070 feet (1998 NAVD)
54.35 record crest

834.42 feet (1998 NAVD)
833.40 FMM VE13A-Bundled 100 yr Event (1988 NAVD)

-1.02 feet lower than 1997 record
-12.24 inches lower than 1997 record

Alternate Benchmark

832.2 feet 2003 FEMA 100 yr (1998 NAVD)
833.40 FMM VE13A-Bundled 100 yr Event (1988 NAVD)

1.2 feet higher than FEMA 100 yr
14.4 inches higher than FEMA 100 yr

833.3 feet 2010 FEMA 100 yr (1998 NAVD)
833.40 FMM VE13A-Bundled 100 yr Event (1988 NAVD)

.10 feet higher than FEMA 100 yr
1.2 inches higher than 2010 FEMA 100 yr

This page contains no comments

Alternate Benchmark

USGS 05082500
Date: 2011-04-14
CFS : 87500
Gage: 49.86

780.070 feet (1998 NAVD)
49.86 highest crest since floodwall completion

829.93 feet (1998 NAVD)
833.40 FMM VE13A-Bundled 100 yr Event (1988 NAVD)

3.47 feet higher since floodwall completion
41.64 inches lower since floodwall completion

Grand Forks Summary: USGS gage 05082500 located at Grand Forks, ND has a base elevation of 780.070 feet when converted to NAVD 88 datum. Grand Forks presents issues that are unique and systemic. There is historical gage data prior to implementation of flood walls as well as historical crests since flood wall completion. The Grand Forks location also experienced two BFE (base flood elevation) changes since 2003. The first occurred in 2003 when FEMA requested the U.S. Army Corps of Engineers to evaluate the Grand Forks region and another in December 2010 after the FMM EIS had commenced. ** NOTE ** Any raise of the BFE decreases the maximum efficacy rating of related flood protection measures. When comparing the upstream Thompson, ND gage and downstream Oslo, MN gage to the Grand Forks, ND gage data - the 2010 BFE revision is inconsistent with conditions in the region.

The USGS recorded an April 22, 1997 peak crest of 54.35 feet at 137,00 CFS of discharge. The proposed VE13A alignment of the FMM indicates projected 100 year impacts could reach 833.40 feet, which is below the 1997 record crest of 834.42 feet by 1.02 feet (12.24 inches). This data suggests that the 1997 event was considerably higher than a 100 year flood event.

The 100 year BFE adopted in 2003 of 832.2 feet when compared to the proposed VE13A alignment of the FMM indicates projected impacts could reach 833.40 feet, which exceeds the 1997 record crest of 832.2 feet by 1.2 feet (14.4 inches).

The 2010 revision of the 100 year BFE to 833.3 feet was rejected in this analysis because it reduces the 250 year rating of Grand Forks flood protection and occurred during the FMM EIS to reduce impacts related to the U.S. Army Corps of Engineers EOE modeling.

Grand Forks Summary – with Flood Wall: USGS gage 05082500 located at Grand Forks, ND has a base elevation of 780.070 feet when converted to NAVD 88 datum. The highest recorded crest since flood wall completion occurred April 14, 2011 with a peak crest of 54.35 feet at 87,500 CFS of discharge. The proposed VE13A alignment of the FMM indicates projected impacts could reach 833.40 feet, which exceeds the 2011 record crest of 829.93 feet by 3.47 feet (41.64 inches).

This page contains no comments

Thompson

USGS 05070000 RED RIVER OF THE NORTH NEAR THOMPSON, ND
Latitude 47°45'32", Longitude 96°56'37" NAD27
Grand Forks County, North Dakota, Hydrologic Unit 09020301
Drainage area: 24,010 square miles
Datum of gage: 779 feet above NGVD29.

VERTCON

Latitude: 47 45.32
Longitude: 096 56.37
NGVD 29 height: 779.00 ft
Datum shift(NAVD 88 minus NGVD 29): 1.076 feet
Converted to NAVD 88 height: 780.076 feet

Benchmark

USGS 05070000
Date: 2011-04-13
CFS : 72000
Gage: 65.18

780.076 feet (1998 NAVD)
65.18 record crest

845.256 feet (1998 NAVD)
847.58 FMM VE13A-Bundled 100 yr Event (1988 NAVD)

2.324 feet higher than 2011 record
27.888 inches higher than 2011 record

Thompson Summary: USGS gage 05070000 located at Thompson, ND has a base elevation of 780.076 feet when converted to NAVD 88 datum. The USGS recorded an April 13, 2011 peak crest of 65.18 feet at 72,000 CFS of discharge reflecting 845.256 feet at the gage. The proposed VE13A alignment of the FMM indicates projected impacts could reach 847.58 feet, which exceeds the 1997 record crest of 845.256 feet by 2.324 feet (27.888 inches).

This page contains no comments

Halstad

USGS 05064500 RED RIVER OF THE NORTH AT HALSTAD, MN
Traill County, North Dakota
Hydrologic Unit Code 09020107
Latitude 47°21'07", Longitude 96°50'36" NAD27
Drainage area 21,800 square miles
Gage datum 826.65 feet above NGVD29

VERTCON

Latitude: 47 21.07
Longitude: 096 50.36
NGVD 29 height: 826.65 ft
Datum shift(NAVD 88 minus NGVD 29): 1.089 feet
Converted to NAVD 88 height: 827.739 feet

Benchmark

USGS 05064500
Date: 1997-04-19
CFS : 71500
Gage: 40.74

827.739 feet (1998 NAVD)
40.74 record crest

868.479 feet (1998 NAVD)
869.09 FMM VE13A-Bundled 100 yr Event (1988 NAVD)

.611 feet higher than 1997 record
7.332 inches higher than 1997 record

Halstad Summary: USGS gage 05064500 located at Halstad, ND has a base elevation of 780.076 feet when converted to NAVD 88 datum. The USGS recorded an April 19, 1997 peak crest of 40.74 feet at 71,500 CFS of discharge reflecting 868.479 feet at the gage. The proposed VE13A alignment of the FMM indicates projected impacts could reach 869.09 feet, which exceeds the 1997 record crest of 868.479 feet by .611 feet (7.332 inches).

This page contains no comments

Fargo

USGS 05054000 RED RIVER OF THE NORTH AT FARGO, ND
Cass County, North Dakota
Hydrologic Unit Code 09020104
Latitude 46°51'40", Longitude 96°47'00" NAD27
Drainage area 6,800 square miles
Gage datum 861.8 feet above NGVD29

VERTCON

Latitude: 46 51.40
Longitude: 096 47.00
NGVD 29 height: 861.8 ft
Datum shift(NAVD 88 minus NGVD 29): 0.942 feet
Converted to NAVD 88 height: 862.742 feet

Benchmark

USGS 05054000
Date 2009-03-28
CFS: 29500
Gage: 40.84

862.742 feet (1998 NAVD)
40.84 record crest

903.582 feet (1998 NAVD)
903.59 FMM Existing Condition as of March 2013 (1988 NAVD)

.008 feet higher than 2009 record
.096 (less than 1/10 inch higher than 2009 record using EOE data)

Alternate Benchmark

862.742 feet (1998 NAVD)
40.84 record crest

903.582 feet (1998 NAVD)
902.64 FEMA July 2012 Cass County Flood Study (1988 NAVD)

.942 feet - 2009 crest exceeded new FEMA 100 yr flood elevation
11.304 inches - 2009 crest exceeded new FEMA 100 yr flood elevation

This page contains no comments

Fargo Summary: USGS gage 05054000 located at Fargo, ND has a base elevation of 780.076 feet when converted to NAVD 88 datum. The USGS recorded an March 28, 2009 peak crest of 40.84 feet at 29,500 CFS of discharge reflecting 903.582 feet at the gage. FEMA released a Cass County Study in July 2012 indicating a 100 year BFE of 902.64 feet, which is below the 2009 record crest of 903.582 feet by .942 feet (11.304 inches).

This data suggests that Fargo, ND has exceeded both the previous and most recent 100 year FEMA BFE.

Information provided by CH2MHill, FMM project manager, indicated that the disparity between a 100 year and 500 year event approximately 2.25 miles upstream of the Red River and Wild Rice confluence at the Lower Wild Rice & Red River Cemetery (LWRRRC) 1500 feet south of the intersection of Hwy 81 and Cass 16 to be 1.1 feet (13.2 inches). During the 2009 flood event water reached a lidar elevation of 913.4 feet with the 2012 FEMA 100 year BFE being 912.2 feet LWRRRC.

It would be inconsistent with available data to apply a flood rating in the 2009 flood event at Fargo to be lower than a 100 year flood event considering the 100 year BFE was exceeded at the Fargo and LWRRRC locations.

This further supports that any application of EOE data was used to downgrade the Fargo, ND 2009 historic flood and will subsequently downgrade existing flood protection(s) downstream placing considerably higher numbers of property below the 100 year BFE.

This page contains no comments

Hickson

Cass County, North Dakota
Hydrologic Unit Code 09020104
Latitude 46°39'35", Longitude 96°47'44" NAD27
Drainage area 4,300 square miles
Gage datum 876.38 feet above NGVD29

VERTCON

Latitude: 46 39.35
Longitude: 096 47.44
NGVD 29 height: 876.38
Datum shift(NAVD 88 minus NGVD 29): 1.053 feet
Converted to NAVD 88 height: 877.433 feet

Benchmark

USGS 05051522
Date: 2009-03-26
CFS : 23,700
Gage: 39.04

877.433 feet (1998 NAVD)
39.04 record crest

916.473 feet (1998 NAVD)
915.8 FEMA 100 yr Event (1988 NAVD)

.673 feet higher than 1997 record
8.076 inches higher than 1997 record

Hickson Summary: USGS gage 05051522 located at Hickson, ND has a base elevation of 877.433 feet when converted to NAVD 88 datum. The USGS recorded a March 26, 2009 peak crest of 39.04 feet at 23,700 CFS of discharge reflecting 916.473 feet at the gage. The FEMA 100 year flood BFE from the July 2012 FEMA Flood Insurance Number 38017CV000A (Cass County) is 915.8 feet, which is lower than the 2009 record crest of 916.473 feet by .673 feet (8.076 inches).

From: marcus.larson@exhostmail.com
To: [*Review, Environmental \(DNR\)](#)
Subject: Fargo Moorhead Flood Risk Management Project DEIS - Zero Impact Alternative
Date: Saturday, October 24, 2015 11:23:53 PM
Attachments: [DNR Comments - Marcus Larson \(Zero Impact Alternative\) 2015-10-24.pdf](#)

Commenter 111 cont.



Dear Project Manager,

Attached is a Zero Impact Alternative to the the Fargo Moorhead Flood Risk Management Project.

Thank you for considering my comments.

Respectfully submitted,

Marcus Larson
513 7th St
Hickson, ND 58047
701-588-4412 home
701-893-6975 cell

Summary of Comments on MarcusLarson_Commenter111h_Email2.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/19/2015 8:31:21 AM -06'00'
Commenter 111 cont.

Author: Medopera Subject: Sticky Note Date: 4/5/2016 11:22:07 AM
Comment ID: 111h (entire submittal)
Topic: Alternatives, Alternative: Zero Impact Alternative

Author: Date: Indeterminate

This page contains no comments

October 24, 2015

Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road
St. Paul, Minnesota, 55155-4025

RE: Fargo Moorhead Flood Risk Management Project DEIS

Subject: Zero Impact Alternative

The purpose of this letter is to outline one of several alternatives not explored by the USACE and the non-federal local sponsors.

There is currently in excess of 100,000 acre feet of storage capacity possible between Hwy 46 and 52nd ave without construction of multiple Class 1 High Hazard dam control structures and levees as proposed in the September 2011 FEIS drafted by the USACE.

Adding 1' foot of storage to the current capacity of the natural flood plain south of Fargo in conjunction with internal flood protection to 42.5' + 1.5' of freeboard, distributed upstream retention and a Zero Impact Alternative (Wild Rice Weir Inlet, Richland County) that is different than one previously presented by the project sponsor, which would provide necessary flood protection to the metro area with minimal impact to Minnesota and both upstream and downstream interests to the metro area.

A Zero Impact Alternative (Wild Rice Weir Inlet, Richland County) in conjunction with distributed upstream storage, internal Fargo flood protection to 42.5' + 1.5' of freeboard in conjunction with distributed upstream retention and a Zero Impact Alternative (Wild Rice Weir Inlet, Richland County) alternative would provide necessary flood protection to the metro area with minimal impact to Minnesota and both upstream and downstream interests.

Handling the Wild Rice river water, which is a known wildcard, will change the timing of water impacts at Fargo from the Wild Rice. Dealing with early water via the diversion would provide minimal impacts downstream due to the timing of the water being ahead of the general peak crest on the Red River. The peak crest threat will be converted into a slightly longer but manageable lower crest providing additional benefit to all interests along the Red River mainstem.

Both Fargo and the USACE have argued that peak crests that occur simultaneously present the greatest threat to the region. However, the USACE FEIS did not model a simultaneous flood event of the Red, Wild Rice, Sheyenne, Maple and Rush rivers.

By changing the timing of when and how much volume of water reaches the confluence of the Wild Rice and Red River, dramatically reduces the flood risk entering the metro area.

The USACE scoping area also did not include flood impacts to areas outside the original USACE scoping document study area that are a direct result of the proposed project contained within the original USACE scoping document study area. The USACE scoping study and FEIS did not explore crest timing and retention in upstream sites as an alternative.

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Basic of this alternative include:

- Inlet Relocation
- Flood Plain Development Restrictions
- Removal of Class 1 High Hazard Dams on the Wild Rice and Red River
- Need for River Setback Requirement in relation to elevation and distance from floodway
- Need for Fargo to complete internal floodwalls, dikes and levees to a minimum of 1.5 feet above the FEMA 100 year BFE

Benefits of this alternative include:

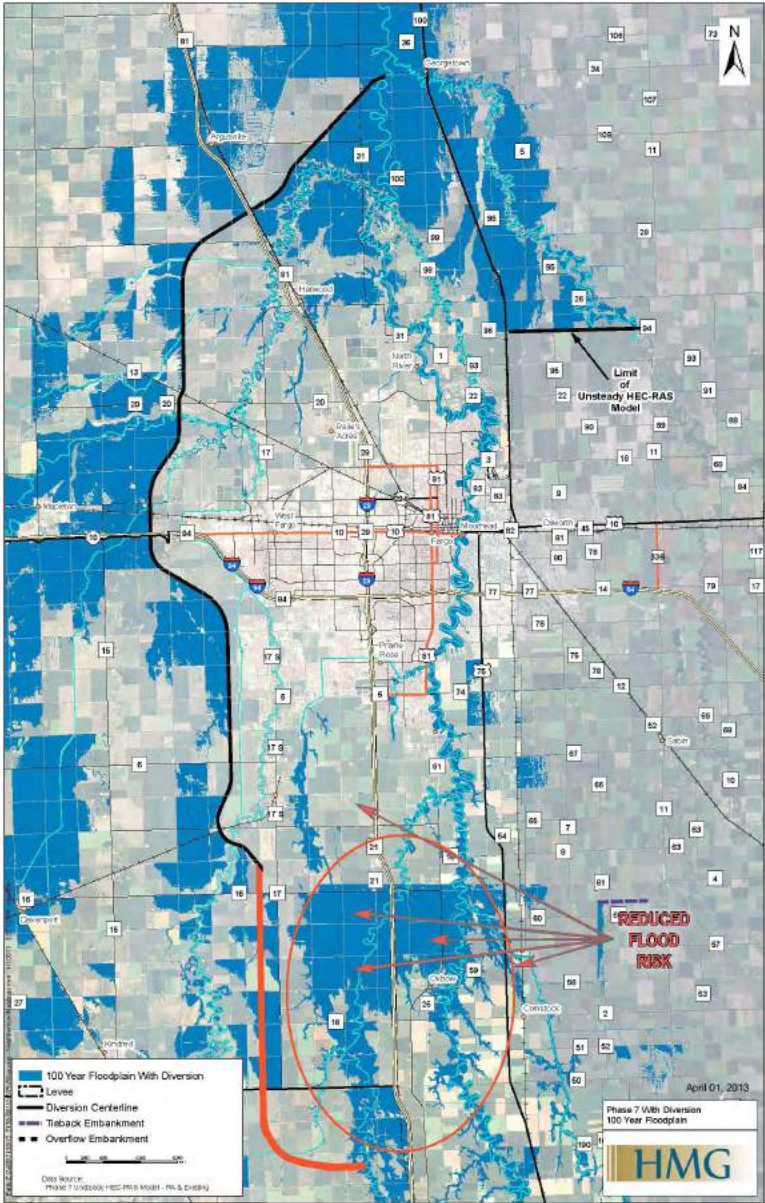
- Removal of Class 1 High Hazard Dams on the Wild Rice and Red River
- Less Impacts to MN waterways, infrastructure and property owners
- Less Impacts to wildlife and fish
- Hwy 75 will not need to be elevated
- Comstock, MN will not need a ring-dike
- RRV Western railroad will not need to be elevated
- Fewer Buyouts
- Ag-Land Stay in Production and most would qualify for multi-peril coverage
- Organic farming operations can remain operational
- Metro Area still has growth potential
- Fewer Bridge replacements or relocations
- 1-29 south of Cass 16 will not require elevation
- Less Impacts to Social Fabric
- Less Impacts to School Districts
- Reduction in FEMA Loss Claims

Potential Saving: \$1 - \$2 Billion (of final project costs)

Inlet Location:

Begin inlet south of Cass Hwy 46 and approx 2-3 mile into Richland County on the west side of the Wild Rice River. There is natural geological slope from approx 924' to 917' which would provide a more robust and dependable flow as it enters the diversion channel and crosses the Sheyenne River.

Using a weir structure to divert water into diversion, then channel either directly West or N-NW to intersect with Cass 17. Two options would be to run the diversion channel on the east or west side of Cass 17 until reaching the intersect with Cass 16. From the Cass 16 Cass 17 intersect; the remaining alignment would remain generally the same with the exception of a further west diversion channel alignment west of West Fargo.



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Flood Plain Development:

The natural flood plain south of Fargo, ND contains sufficient capacity to provide crest buffering to the metro area. This conclusion is further supported by the combined peak CFS flows at Abercrombie and Hickson gauges, in 2009, exceeding the peak CFS flow recorded by the USGS at the Fargo river gauge.

There is some concern about the peak CFS flow associated to the Hickson gage potentially being overstated, which suggests that less natural flood plain capacity is needed than has been stated by the USACE and local sponsor representatives. The FEMA 2012 study cites data collection 3.6 miles upstream of Cass 18 (*attached below, Table 3, pages 7-8*), which would be approximately 4 miles upstream of Oxbow, Hickson and Bakke, ND. C. Gregg Thielman of Houston Engineering, Inc. failed to respond to questions relating to discharge monitoring presented in the FM - Diversion "White Paper" (*attached below, pages 9-13*) authored by Thielman and Houston Engineering.

Loss of the natural flood plain storage would be detrimental to North Dakota and Minnesota environmental interests, as it relocates and increases negative impacts onto upstream and downstream areas outside the jurisdictional boundaries of Fargo, ND.

Suggested Requirements:

Development located within the 100 year flood plain shall be elevated in the following manner:

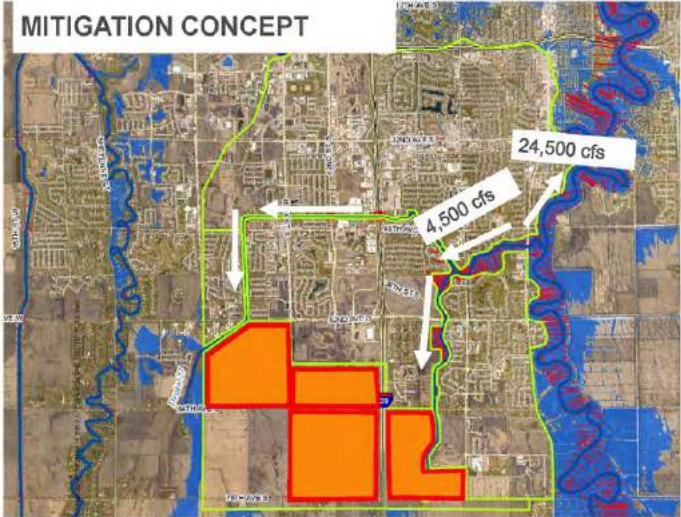
1. All development in the flood plain must increase water storage by a minimum of 20 percent or Zero Impact (whichever is greater).
2. Material shall be existing spoil to elevate the structure location to minimum 100 year BFE elevation.
3. Lot sizes must be sized accordingly to allow for existing spoil requirements to be followed.
4. No new clay, dirt, sand or gravel may be added to build sites within the 100 year flood plain. Material exchange yard for yard would be allowable if build site material is not structurally adequate.
5. Flood plain development shall have first floor elevations 5' above the FEMA 100 year BFE and the lowest point of risk, lowest opening BFE + 2.5' above the FEMA 100 year BFE.
6. All roadways and driveways shall have a minimum elevation of 1.0' above the FEMA 100 year BFE.
7. The placement of fill and associated engineering certifications and documentation shall follow FEMA regulations for Letter of Map Revisions by Fill (LOMR-F).
8. The LOMR-F preparation and submittal shall be the responsibility of the developer.
9. Water storage shall be installed such that proper drainage is interconnected and maintained to sustain 20 percent or Zero Impact (whichever is greater) capacity increases for development within the 100 year flood plain.

On or around September 21, 2015 **PROJECT NO. MS-14-20 (SOUTHWEST AREA STORM SEWER MASTER PLAN)** was presented to the Fargo City Commission. (*attached below, pages 14-57*)

This concept is similar in nature to the aforementioned, however, if spoil material removed is used to elevate entire tracts of adjacent land for development, the benefit of internal storage is diminished by the cumulative amount of displacement created by elevating sites other than those specific to physical structure elevation.

This page contains no comments

The **PROJECT NO. MS-14-20 (SOUTHWEST AREA STORM SEWER MASTER PLAN)** does take a positive step towards flood attenuation/mitigation by admitting preservation of flood plain or augmenting natural flood plain storage provides flood reduction benefit, which should be implemented across the entire remaining natural flood plain as Fargo expands southward.



Implementing a Zero Impact Alternative and combining it with expanded features presented in the **PROJECT NO. MS-14-20 (SOUTHWEST AREA STORM SEWER MASTER PLAN)** could achieve robust flood reduction benefit to the Fargo area while limiting or eliminating negative impacts to Minnesota.

Removal of Class 1 High Hazard Dams on the Wild Rice and Red River:

Removing the dam control structure features ensures:

- 1. Natural flow fluctuations are maintained, biodiversity and population densities of native aquatic organisms are preserved.
- 2. Bank saturation, slumping and erosion are not increased by more frequent operation of the dam control gates.
- 3. Riparian and river wetland habitats are preserved, wherein, increased frequency of controlled operation could impact existing riparian zone and prevent establishment of new riparian zones.

This page contains no comments

Need for River Setback Requirement in relation to elevation and distance from floodway:

Unrestricted encroachment into natural flood plains exerts a negative impact on floodways and adjacent flood plains. Cumulative changes in water displacement create new risk areas and as a result a perceived need for flood mitigation that creates further impacts due to water displacement.

Suggested setback would be a minimum of 100' from the further reach of the 100 year flood way and 2.5' above the 100 year BFE flood plain.

Need for Fargo to complete internal floodwalls, dikes and levees:

Fargo is caught in a cycle of flood plain encroachment, flood fighting and an insatiable desire for more growth.

There does not appear to be any indication of how close Fargo is to completing permanent internal flood protection within the MN Draft EIS. Failure to quantify and compare the remaining internal measures needed to protect the existing city with reasonable flood protection to the overall impacts and footprint of the Class 1 High Hazard Dam, Staging and Storage Area and related Diversion Channel, would facilitate unnecessary impacts to Minnesota interests.

Minnesota is compelled to match Fargo's water displacement with flood protection without any direct benefit to Minnesota other than the relocation of Fargo flood impacts onto Minnesota interests.

The most time sensitive flood risk reduction solution, one that Moorhead addressed in a timely manner, is internal flood protection to safeguard the current infrastructure that exists.

The FMUS study (*attached below, pages 58-74*), commissioned in 2004, indicates that 200,000 to 400,000 acre feet of distributed upstream retention could provide up to 1.6' of benefit to Fargo. Bringing internal flood protection to a minimum of 1.5 feet above the FEMA 100 year BFE in conjunction with distributed upstream storage would provide adequate flood risk reduction to the metro area, without the construction of multiple Class 1 High Hazard dam control structures.

A Zero Impact Alternative (Wild Rice Weir Inlet, Richland County) could meet the stated project purpose of providing adequate flood reduction benefit to Fargo and future responsible growth opportunity without a Class 1 High Hazard Dam, cumulative effect of riverbank degradation upstream, and related impacts and other socio-economic impacts upstream or downstream of the Fargo project area.

Sincerely,



Marcus Larson
513 7th St
Hickson, ND 58047

This page contains no comments

Table 3

Table 3: Summary of Detailed Discharges

Flooding Source and Location	Drainage Area (Square miles)	Peak Discharges (Cubic Feet per Second)			
		10-percent	2-percent	1-percent	0.2-percent
DRAIN 10 BREAKOUT	*		307	1,492	11,404
COUNTY DRAIN 21					
Upstream of confluence with Sheyenne River	*	800	1,290	1,480	1,870
COUNTY DRAIN 45					
Just downstream of 52nd Avenue	*	450	3,350	6,100	13,700
Just upstream of Breakout Floodway Corridor B	*	450	1,800	3,600	8,500
Just upstream of Breakout Floodway Corridor C	*	155	530	600	1,000
Just upstream of Breakout Floodway Corridor D	*	155	255	300	410
DRAIN 53	*	*	165	2,199	9,027
RED RIVER OF THE NORTH					
Approximately 3.6 miles upstream of Cass County Highway 18	2,715	7,648	12,307	14,173	21,818
Approximately 2.3 miles upstream of Cass County Highway 16	*	7,850	13,967	17,606	27,466
Approximately 2.9 miles downstream of Cass County Highway 16	*	10,125	21,468	25,137	33,764
Approximately 15 miles downstream of Cass County Highway 16	4,625	10,300	22,300	29,300	50,500
SHEYENNE RIVER					
Approximately 2,900 feet upstream of 54 th Street SE	*	3,441	5,408	6,366	7,215
Approximately 9,300 feet downstream of 50 1/2th R Street SE	*	3,234	4,859	5,713	6,636

This page contains no comments

**White Paper
FM Diversion
Flood Frequency and Retention
Final – February 18, 2013**

**White Paper – FM Diversion – Flood Frequency and Retention
Final – February 18, 2013**

Flood Frequency:

Following the historic flood of 1997, the Federal Emergency Management Agency (FEMA) Regions V and VIII, along with the U.S. Army Corps of Engineers (USACE) – St. Paul District initiated a study to update the hydrology and hydraulics for the Red River of the North (RRN) mainstem. The study is titled “Regional Red River Flood Assessment Report, Wahpeton, North Dakota/Breckenridge, Minnesota to Emerson, Manitoba” and is dated January, 2003. Subsequently, FEMA, Region VIII initiated a study to update the hydrology, hydraulics, and floodplain mapping for the RRN and Wild Rice River in southern Cass County, ND and Clay County, MN. These studies formed the basis for the effective Digital Flood Insurance Rate Map (DFIRM) for Clay County, MN dated April 17, 2012 and preliminary partial county-wide DFIRM for Cass County, ND dated July 31, 2012. Both the FEMA and USACE led studies included calibration of the hydraulic models to the 1997 historic flood event. The FEMA study maintains the hydrology from the prior FIS for the RRN at Fargo. This hydrology was developed in 1971 and does not take into account recent flood events. The FEMA study included the RRN through the communities of Oxbow/Hickson/Bakke Subdivision. The Oxbow/Hickson/Bakke Subdivision area was not included in the USACE study since the two study areas did not overlap.

Following the historic 2009 flood on the Red River, the U.S. Army Corps of Engineers – St. Paul District (USACE) fast-tracked an ongoing feasibility study to evaluate long-term flood protection options for the cities of Fargo, ND and Moorhead, MN. As part of the feasibility study, hydrology for the Red River was updated and a new hydraulic model (unsteady HEC-RAS) was developed. The hydrology utilized the recommendations of an Expert Opinion Elicitation (EOE) panel that concluded the region is in a wet cycle. The EOE panel included a field of experts in hydrology and hydraulics from several Federal and State agencies that are familiar with the RRN watershed and climate change. Based on this recommendation a wet cycle period of record from 1942 to 2009 was used for the hydrology development for this study, and the proposed FM Area Diversion Project. The USACE hydrology also included a full Period of Record (POR) analysis that included records from 1902 to 2009 along with the historic 1897 flood event.

The following table provides a summary of the hydrology developed for the FEMA/USACE study as well as the USACE feasibility study leading to the proposed FM Area Diversion Project. Discharges for the Red River are provided for both the USGS Fargo streamgauge as well as the USGS Hickson streamgauge. Discharges for the Wild Rice River are provided for the USGS Abercrombie streamgauge. Historic discharges for these locations are also provided for the 1997, 2006, 2009, 2010, and 2011 historic flood events.

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Event	RRN Discharge (cfs) at USGS Gage at Fargo, ND	RRN Discharge (cfs) at USGS Gage at Hickson, ND	WRR Discharge at USGS Gage at Abercrombie, ND	Hickson percentage of Fargo	Abercrombie percentage of Fargo
10-year FEMA	10,300	7,648	4,944	74.3	48.0
10-year USACE EOE	17,000	10,500	6,185	61.7	36.4
10-year USACE POR	13,865	8,400	5,900	60.6	42.6
50-year FEMA	22,300	12,307	10,430	55.2	46.7
50-year USACE EOE	29,300	19,000	11,655	64.8	39.8
50-year USACE POR	26,000	19,000	11,700	73.1	45.0
100-year FEMA	29,300	14,173	13,220	48.4	45.1
100-year USACE EOE	34,700	22,000	13,780	63.4	39.7
100-year USACE POR	33,000	23,100	13,500	70.0	40.9
500-year FEMA	50,500	21,818	20,460	43.2	40.5
500-year USACE EOE	61,700	37,000	18,342	60.0	29.7
500-year USACE POR	66,000	35,000	18,000	53.0	27.2
1997 Historic	28,000	13,300	9,470	47.5	33.8
2006 Historic	19,900	14,400	9,180	72.3	46.1
2009 Historic	29,500	23,700	14,100	80.3	47.8
2010 Historic	21,200	12,200	8,790	57.5	41.5
2011 Historic	27,200	13,900	11,800	51.1	43.4

Flooding on the RRN at Fargo is largely driven by combined flows from the RRN and Wild Rice River. These flows are attenuated somewhat by the natural floodplain storage at the Wild Rice River and RRN confluence before they reach Fargo. Flooding on the RRN at Hickson is driven by flows on the RRN which include a combination of flows from the Bois de Sioux and Ottertail Rivers. As shown in the table above, the relative flow on the RRN at Hickson compared to the RRN at Fargo varies by flood event.

As shown in the table above, the 2009 flood event at Hickson was a larger statistical flood event than at Fargo. The 2009 flood discharge at Hickson approached a 100-year flood based on the USACE hydrology, while it was approximately a 50-year flood at Fargo based on the USACE hydrology. It is typical that a flood event will have discharges of varying frequencies along a river's path due to the regional variation of precipitation and runoff. The 2009 flood was driven by a number of factors, including above average moisture in the fall of 2008; significant frost in the ground as a result of cold temperatures and limited initial snowpack in the fall of 2008; heavy snowpack in the watershed upstream from Fargo-Moorhead; and a rapid warm-up combined with heavy rains in portions of the watershed that led to a rapid snowmelt. This rain combined with the rapid snowmelt was a major factor in the size of the flood event at Hickson.

During historic flood events, including the 2009 flood, the communities of Fargo, ND and Moorhead, MN, along with rural areas in Cass County, ND and Clay County, MN implemented significant flood fighting efforts to protect properties within those communities. These measures primarily included the construction of emergency clay and

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sandbag levees. The communities have also constructed a number of permanent levees and floodwalls since the 2009 flood. The permanent projects were subject to permitting and review by the appropriate agencies and were constructed in compliance with local, state, and federal rules. While protecting properties, the permanent and emergency flood protection measures limit the conveyance of water through the Red River by constricting the flow of water. This increases water levels in the Red River through the communities which extends to upstream areas. The constriction also tends to reduce the amount of discharge through the communities due to the higher stages and subsequent storage of water upstream. Modeling performed during the feasibility study has shown that any upstream impacts attenuate to zero in the Oxbow/Hickson/Bakke Subdivision area.

Retention:

A number of studies have been conducted to investigate the benefits of retention along the RRN mainstem. These studies include:

- **Red River Basin Commission – Long Term Flood Solutions for the Red River Basin, September, 2011.** The Red River Basin Commission issued their final report on Long Term Flood Solutions (LTFS) for the Red River Basin in September, 2011. The LTFS study evaluated storage requirements in the Red River Basin to achieve a 20% flow reduction of 1997 peak flows along the Red River mainstem. The LTFS study showed this reduction is achievable, and estimated 125,000 acre-feet of storage would be required upstream from Wahpeton/Breckenridge to achieve this goal, which would result in a stage reduction of approximately 2.4 feet at Wahpeton/Breckenridge during a simulated 1997 flood event. Similarly, the LTFS showed an estimated storage of 240,000 acre-feet would be required upstream from Fargo/Moorhead to achieve the 20% reduction goal, which would result in a stage reduction of approximately 2.3 feet at Fargo/Moorhead during a simulated 1997 flood event. As noted in the 'flood frequency' table above, the 1997 flood event at Fargo is now considered less than a 50-year event by the USACE.
- **U.S. Army Corps of Engineers – Fargo-Moorhead and Upstream Feasibility Study.** Modeling performed by the U.S. Army Corps of Engineers estimated that a system of impoundments with 200,000 to 400,000 acre-feet of storage could reduce the flood stage at Fargo-Moorhead by 1.6 feet for a 32,000 cfs flood event, which is slightly less than a 100-year event defined by the USACE.
- **FM Diversion, Phase 3.** Initial design and planning for the proposed FM Area Diversion Project resulted in downstream impacts that were deemed unacceptable. These impacts varied from 6 inches to 2 feet on the RRN for the 100-year flood event, depending on the location and width of the floodplain. Houston Engineering, Inc. and Moore Engineering, Inc. performed an evaluation for the Southeast Cass Water Resource District to determine the amount of retention that would be needed to mitigate the downstream impacts. The study results were

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presented to the FM Metro Flood Study Work Group on March 4, 2010 and showed approximately 215,000 acre-feet of effective storage would be needed to mitigate the downstream impacts. The effective storage was computed where the major tributaries enter the RRN mainstem. The study estimated this would equate to 400,000 to 600,000 acre-feet of distributed storage throughout the RRN watershed upstream from Halstad, MN.

- **Wild Rice River Retention Studies.** Local Water Resource Districts in North Dakota have completed a sensitivity analysis for the 2009 flood event on the Wild Rice River that demonstrated how distributed storage is not a viable option to replace the storage component of the diversion channel. Modeling showed that if this option were pursued for the Wild Rice River, nearly all of the distributed storage would need to be placed in eastern Richland County. Additionally, even if this occurred, the distributed storage would not be enough to replace the storage required for the diversion channel. These results could also be applied to other tributaries and Wilkin County.

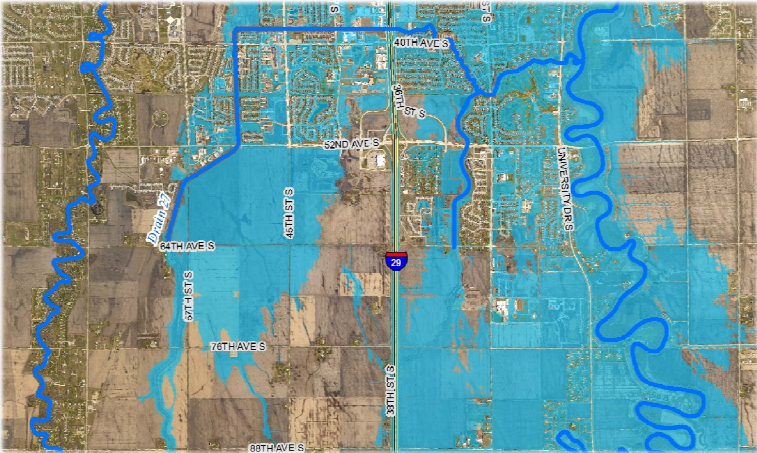
The results of these studies are fairly consistent and estimate potential benefits from upstream storage. These studies show that while some flood reduction benefits can be achieved on the RRN through retention, retention alone does not provide the desired level of flood protection for communities along the RRN mainstem. This includes Fargo-Moorhead as well as the communities of Oxbow/Hickson/Bakke Subdivision. This is why retention was eliminated as a stand-alone plan for a flood solution as part of the Final Fargo-Moorhead Metro Feasibility report and Environmental Impact Statement (July 2011). Similarly, the volume of retention needed farther upstream in the RRN watershed to mitigate downstream impacts from the FM Diversion would be significantly higher than the approximately 200,000 acre-feet included in the upstream staging area.

With that being said, retention can still provide local benefits and limited downstream benefits. In recognition of these benefits, the Flood Diversion Authority has committed \$25 Million toward retention projects upstream of the FM Area.

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**PROJECT NO. MS-14-20
SOUTHWEST AREA
STORM SEWER MASTER PLAN**

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PROJECT NO. MS-14-20

SOUTHWEST AREA STORM SEWER MASTER PLAN

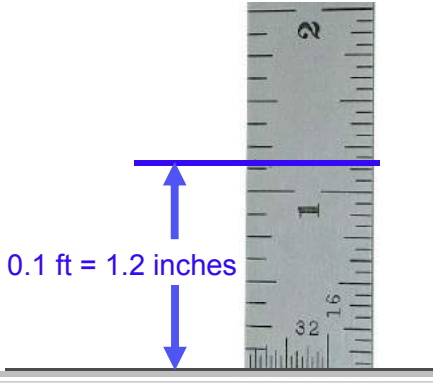


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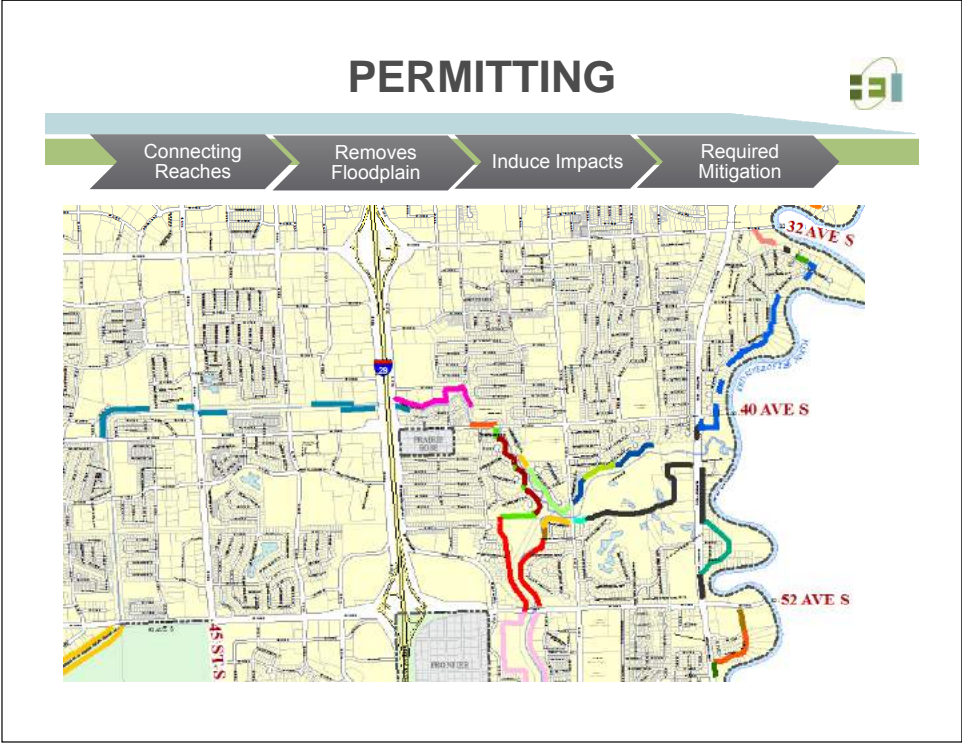
ND LEVEE CONSTRUCTION PERMIT

- A Flowage Easement is required if a Project impounds water on land not owned by applicant.
- Impacts greater than 0.1 foot requires a property right.

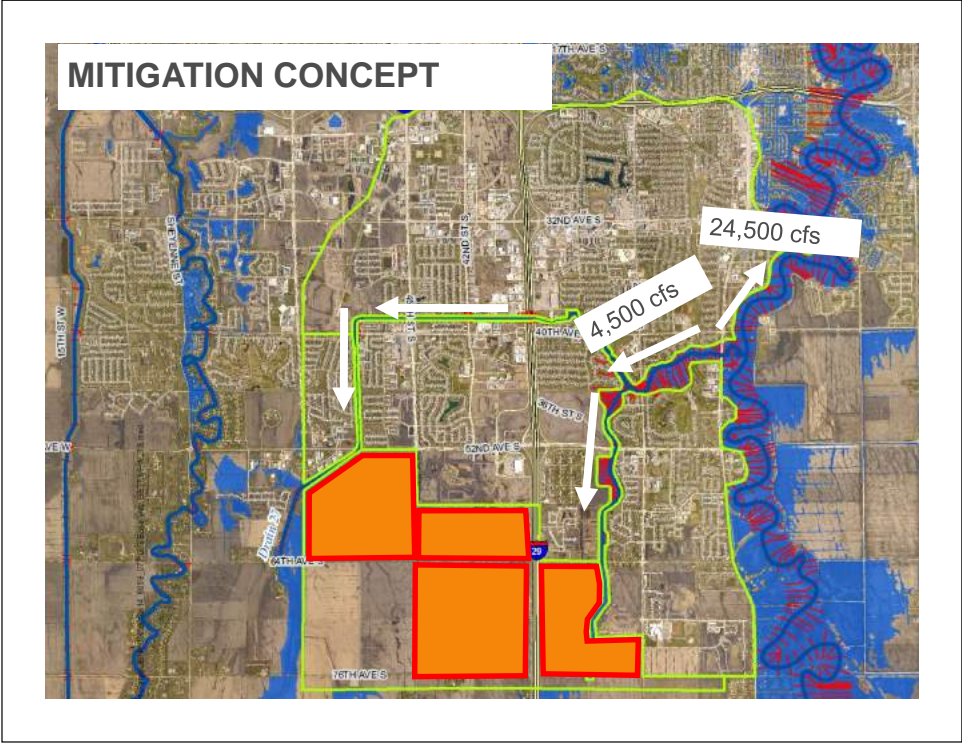
The image shows a portion of a permit application form. The title is "APPLICATION/NOTIFICATION TO CONSTRUCT OR MODIFY A DAM, BOND, BING DIKE OR OTHER WATER RESOURCE FACILITY". Below the title, there are several sections with checkboxes and text boxes. The form is partially obscured by a ruler in the adjacent image.



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OVERVIEW



- Study Area
- FEMA Floodplain
- Flood Protection to Date
- Hydraulic Modeling
- Impacts from Flood Protection
- Mitigation and Costs

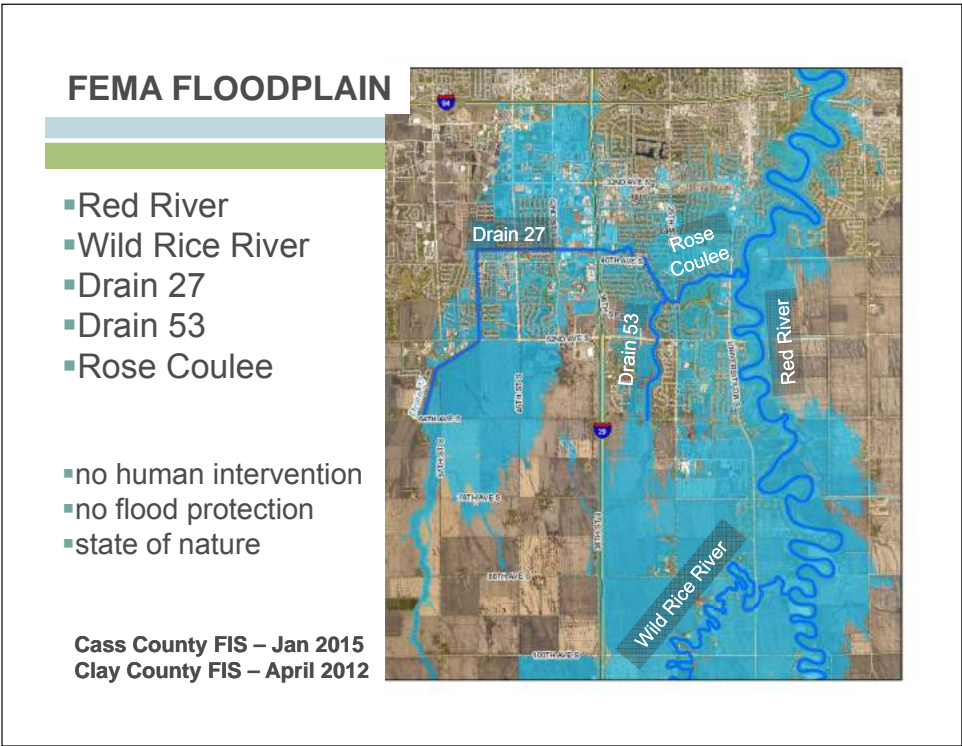
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STUDY AREA

- Red River
- Wild Rice River
- Drain 27
- Drain 53
- Rose Coulee



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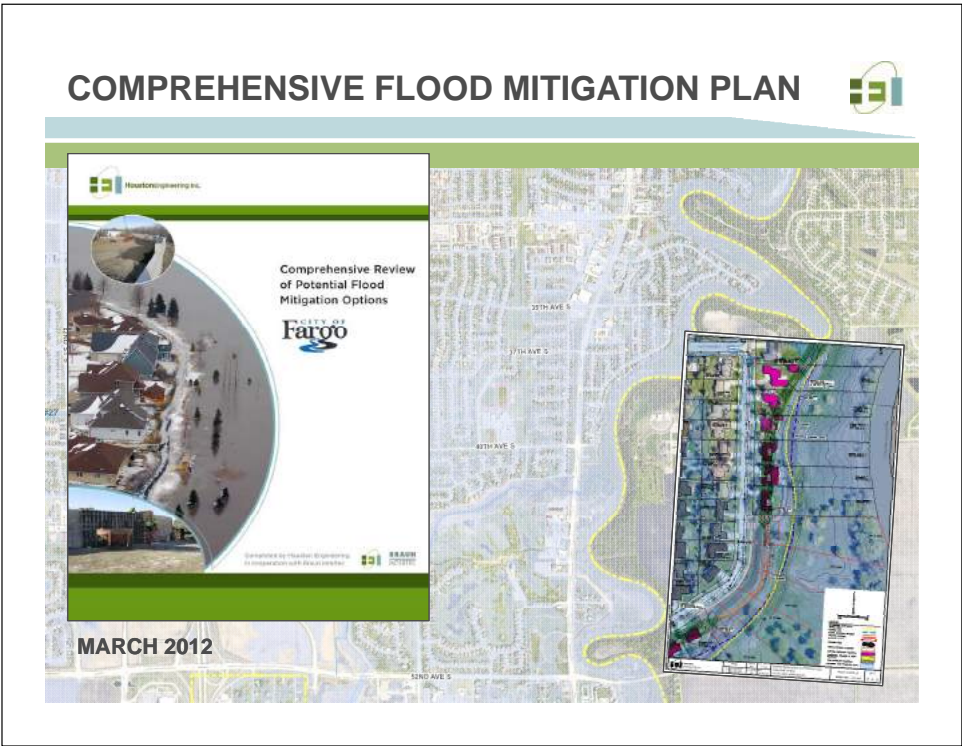
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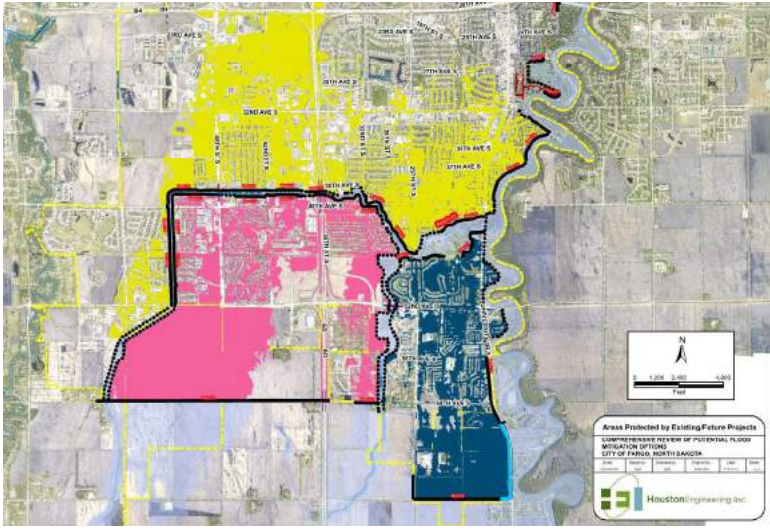


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COMPREHENSIVE FLOOD MITIGATION PLAN

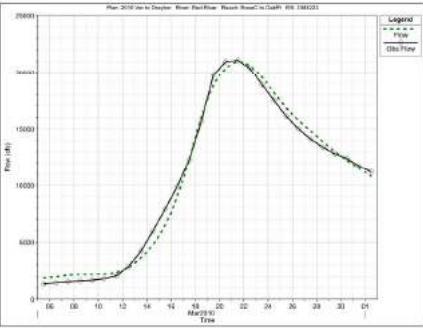
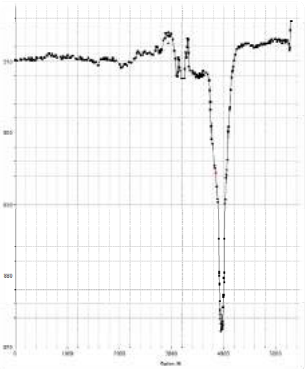


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ANALYZING HYDRAULICS IMPACTS



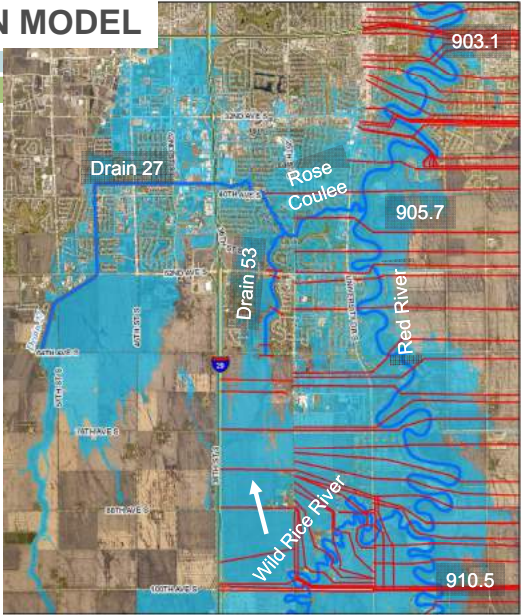
- HEC-RAS
 - Steady State (FEMA FIS)
 - Unsteady Flow (FM Diversion)



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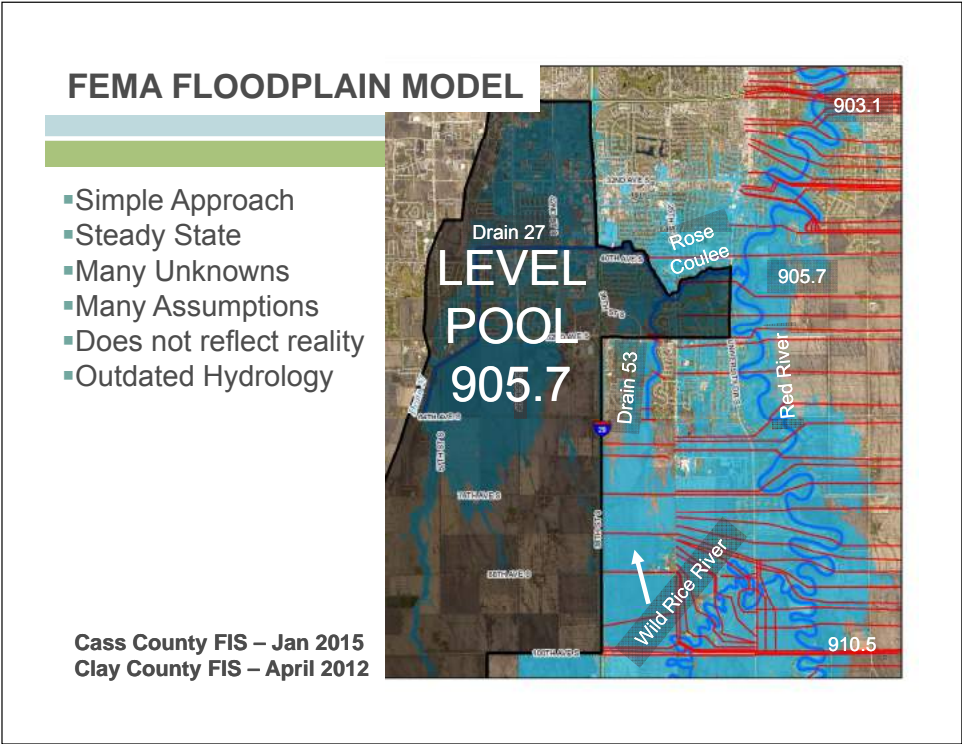
FEMA FLOODPLAIN MODEL

- Simple Approach
- Steady State
- Many Unknowns
- Many Assumptions
- Does not reflect reality
- Outdated Hydrology



Cass County FIS – Jan 2015
Clay County FIS – April 2012

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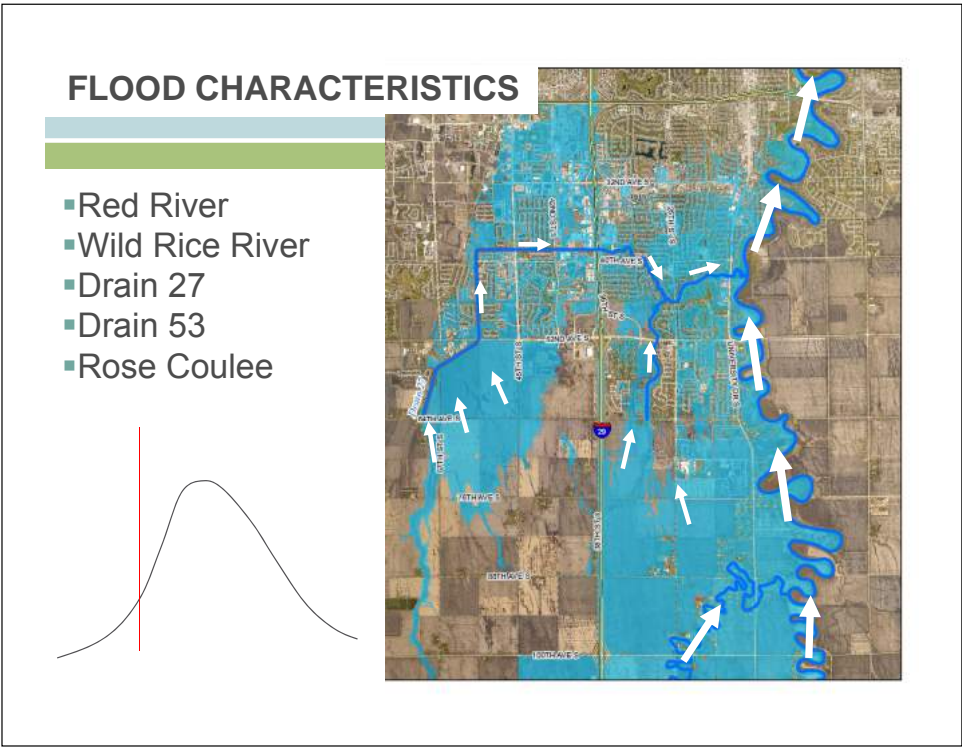
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FEMA FLOODPLAIN MODEL

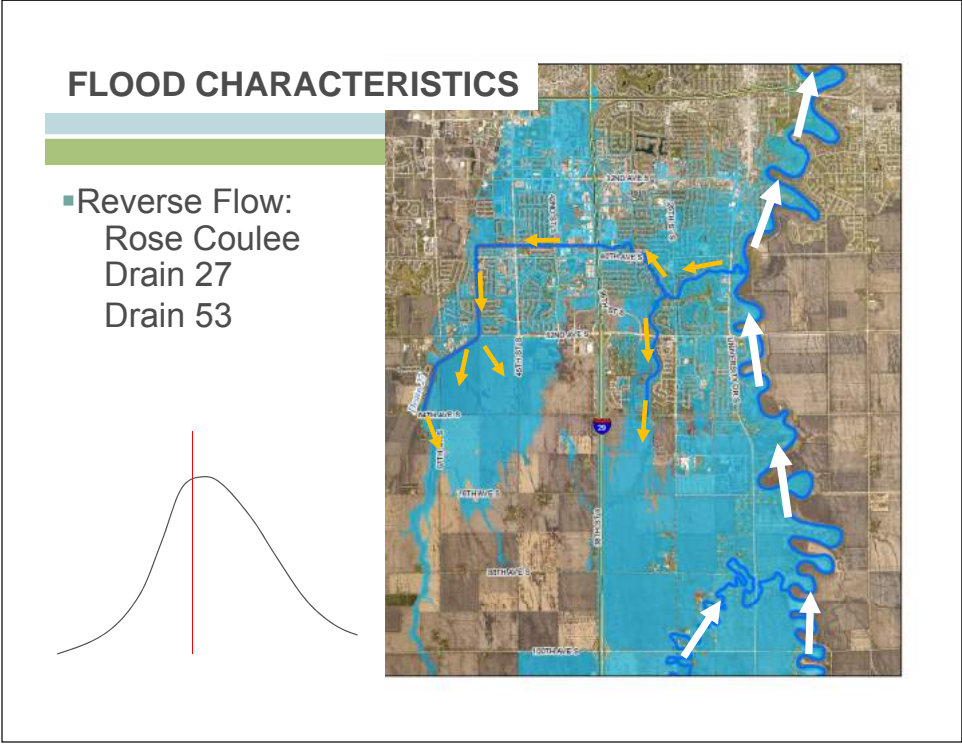
- Simple Approach
- Steady State
- Many Unknowns
- Many Assumptions
- Does not reflect reality
- Outdated Hydrology
 - H&H
 - 1979
 - FM Diversion
 - FEMA Future
 - Flood Risk

Cass County FIS – Jan 2015
Clay County FIS – April 2012

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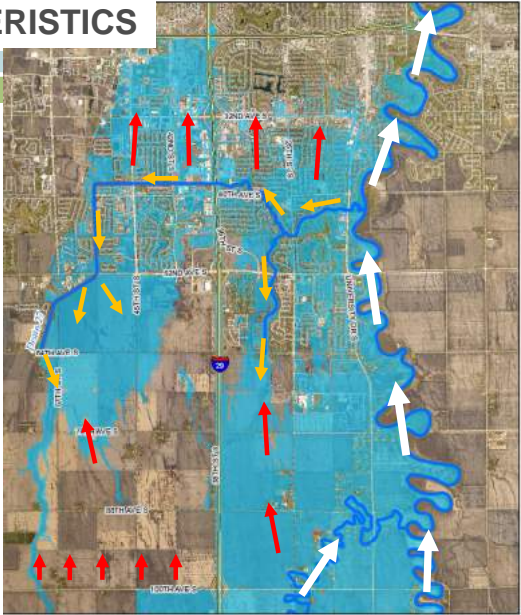
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FLOOD CHARACTERISTICS

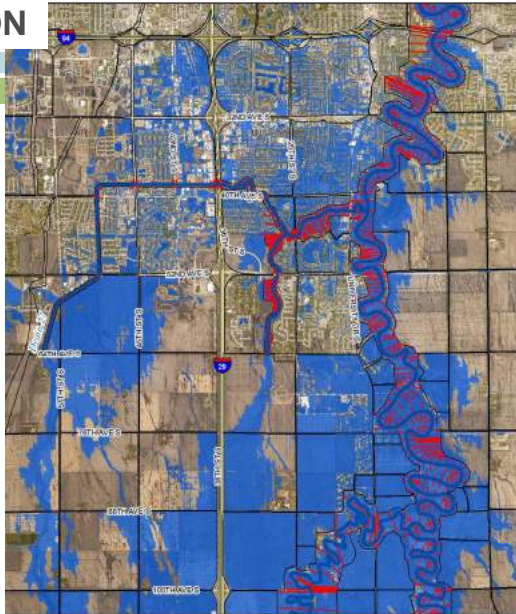
- Large Events
- Breakout Flows
 - Overland Flow
 - Wild Rice River
 - County Road 16



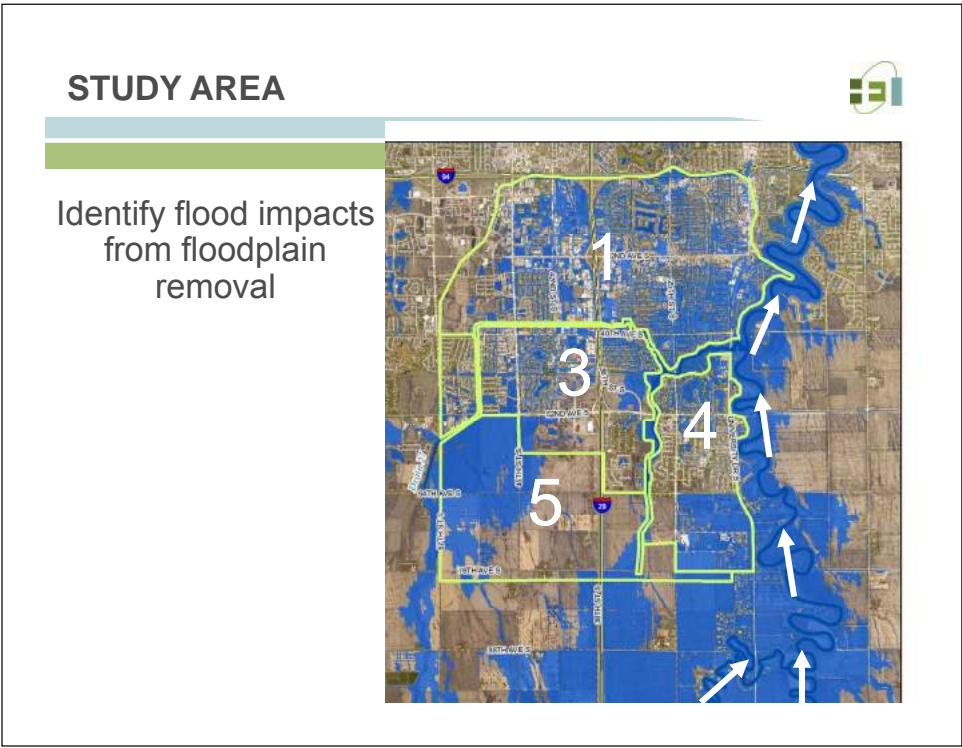
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MODEL SIMULATION

- New Model
- FM Diversion
 - Phase 8
 - Unsteady State
 - Full Hydrograph
 - Cross Sections
 - Storage Areas
- Complex
- More Realistic
- Flow Interaction
- Wild Rice River Breakout
- Reverse Flow



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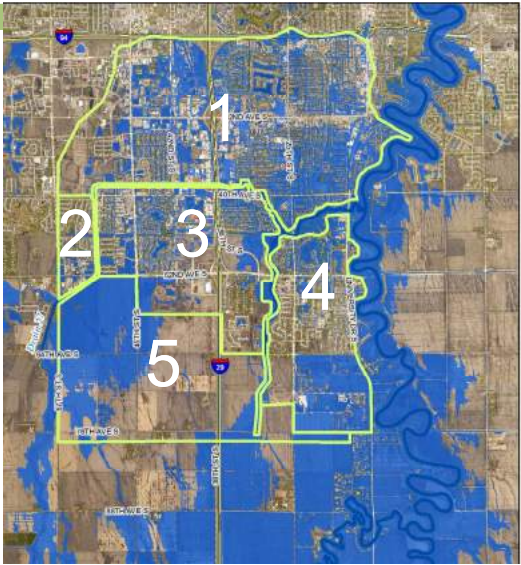
FLOOD IMPACTS



Flood Impacts

- 1. Volume Loss
- 2. Conveyance Loss

Area 1 = 3,100 ac-ft
Area 2 = 100 ac-ft
Area 3 = 1,000 ac-ft
Area 4 = 100 ac-ft
Area 5 = 1,400 ac-ft
Total = 6,400 ac-ft

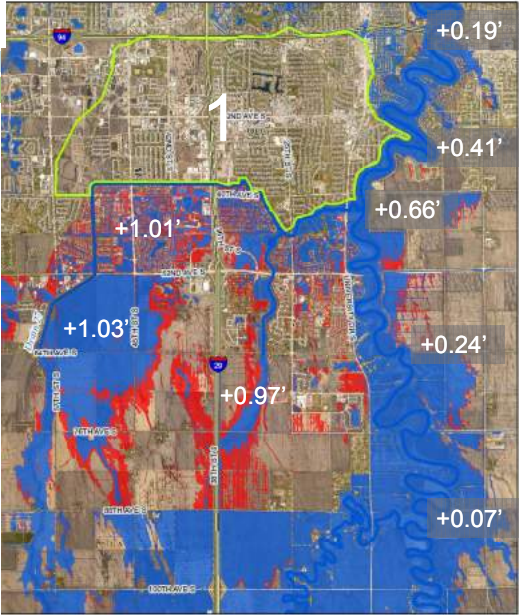


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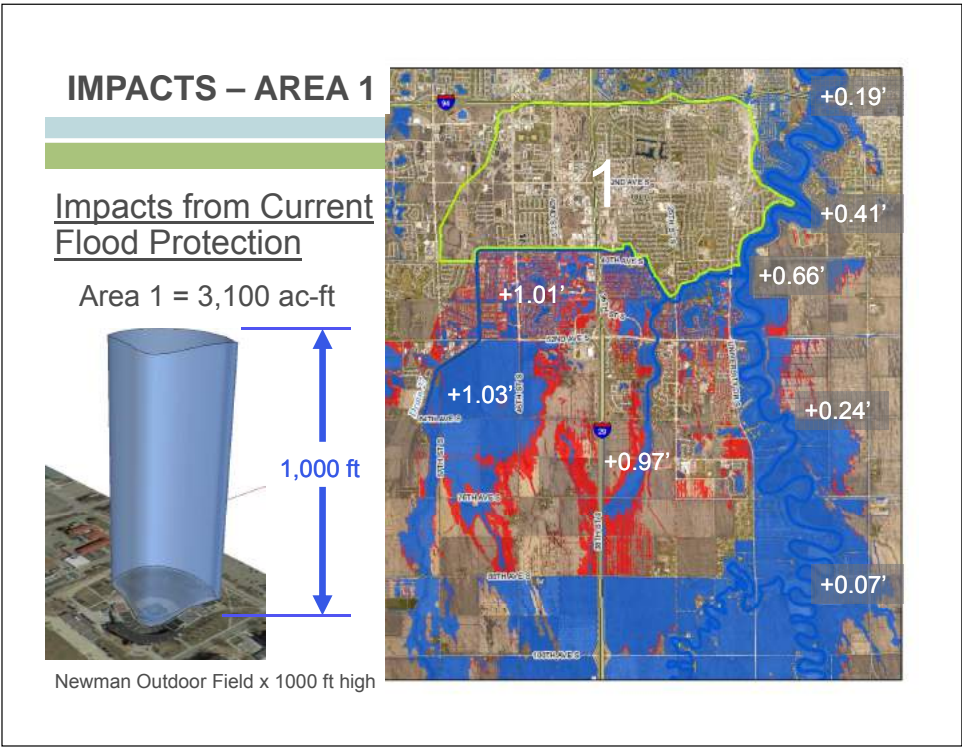
IMPACTS – AREA 1

Impacts from Current
Flood Protection

Area 1 = 3,100 ac-ft



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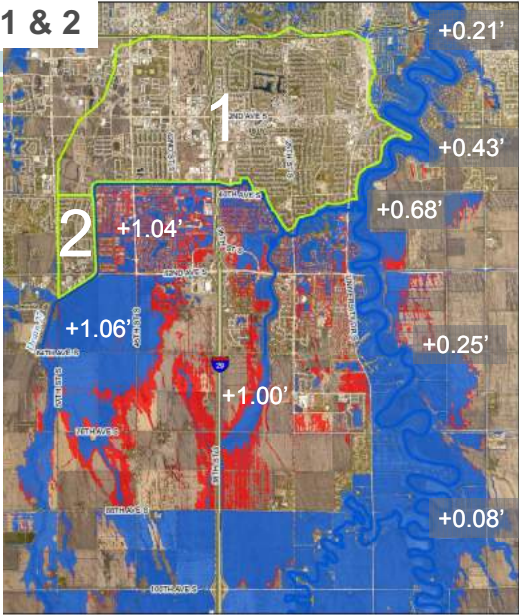


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IMPACTS – AREAS 1 & 2

Impacts from Current Flood Protection

Area 1 = 3,100 ac-ft
Area 2 = 100 ac-ft
Total = 3,200 ac-ft

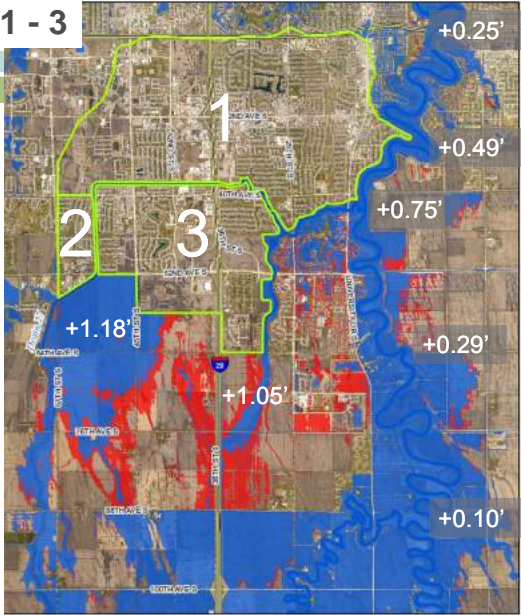


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IMPACTS – AREAS 1 - 3

Impacts from Current Flood Protection

- Area 1 = 3,100 ac-ft
- Area 2 = 100 ac-ft
- Area 3 = 1,000 ac-ft
- Total = 4,200 ac-ft



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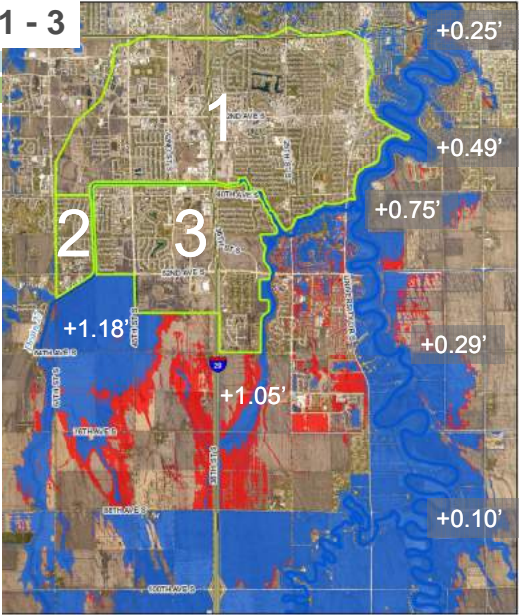
IMPACTS – AREAS 1 - 3

Impacts from Current Flood Protection

- Area 1 = 3,100 ac-ft
- Area 2 = 100 ac-ft
- Area 3 = 1,000 ac-ft
- Total = 4,200 ac-ft



Photo by championshipsdivision.com
25,500,000 cu.ft. = 585 ac-ft

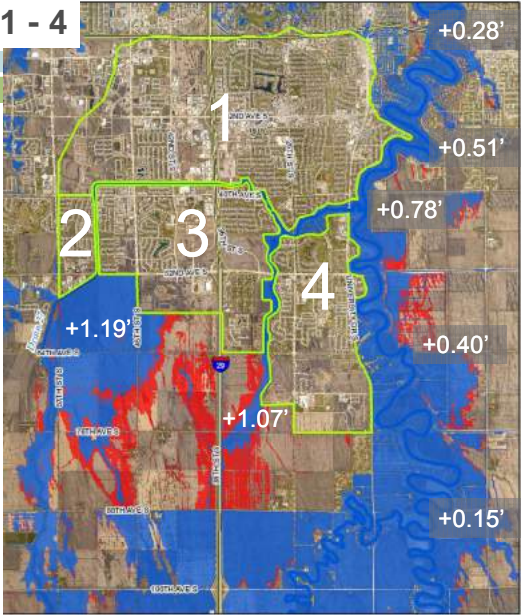


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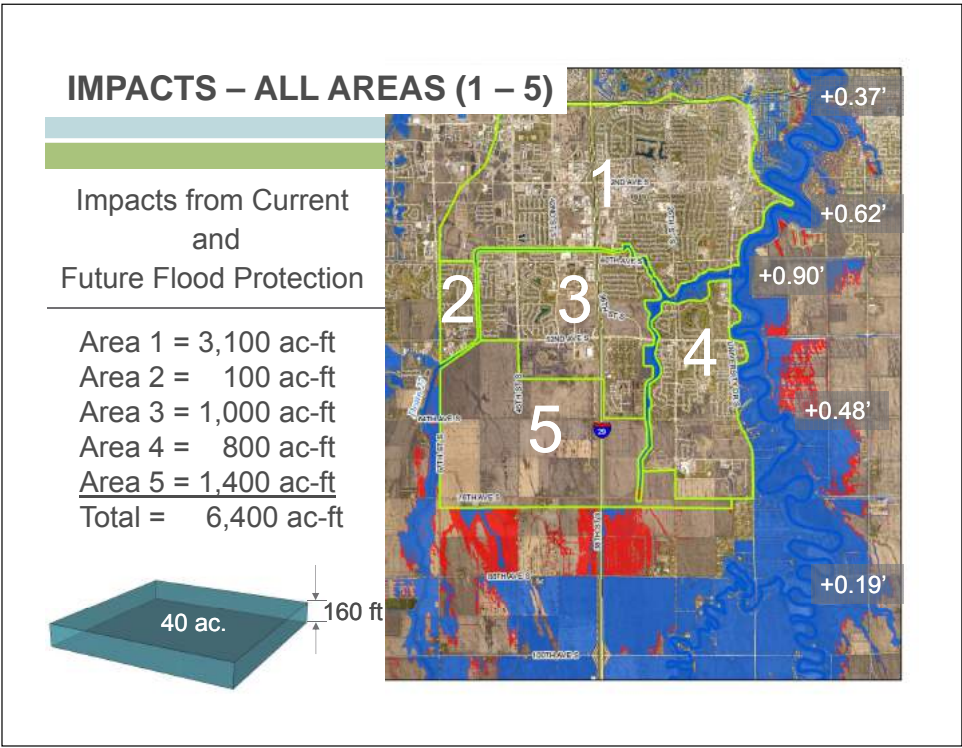
IMPACTS – AREAS 1 - 4

Impacts from Current Flood Protection

- Area 1 = 3,100 ac-ft
- Area 2 = 100 ac-ft
- Area 3 = 1,000 ac-ft
- Area 4 = 800 ac-ft
- Total = 5,000 ac-ft



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IMPACTS – ALL AREAS (1 – 5)

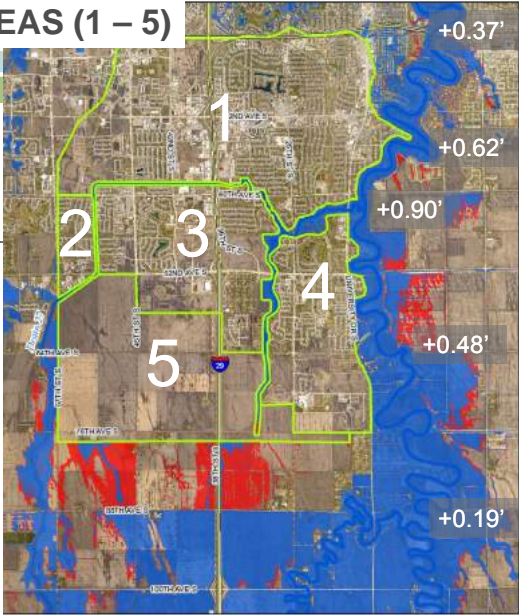
Impacts from Current
and
Future Flood Protection

- Area 1 = 3,100 ac-ft
- Area 2 = 100 ac-ft
- Area 3 = 1,000 ac-ft
- Area 4 = 800 ac-ft
- Area 5 = 1,400 ac-ft
- Total = 6,400 ac-ft

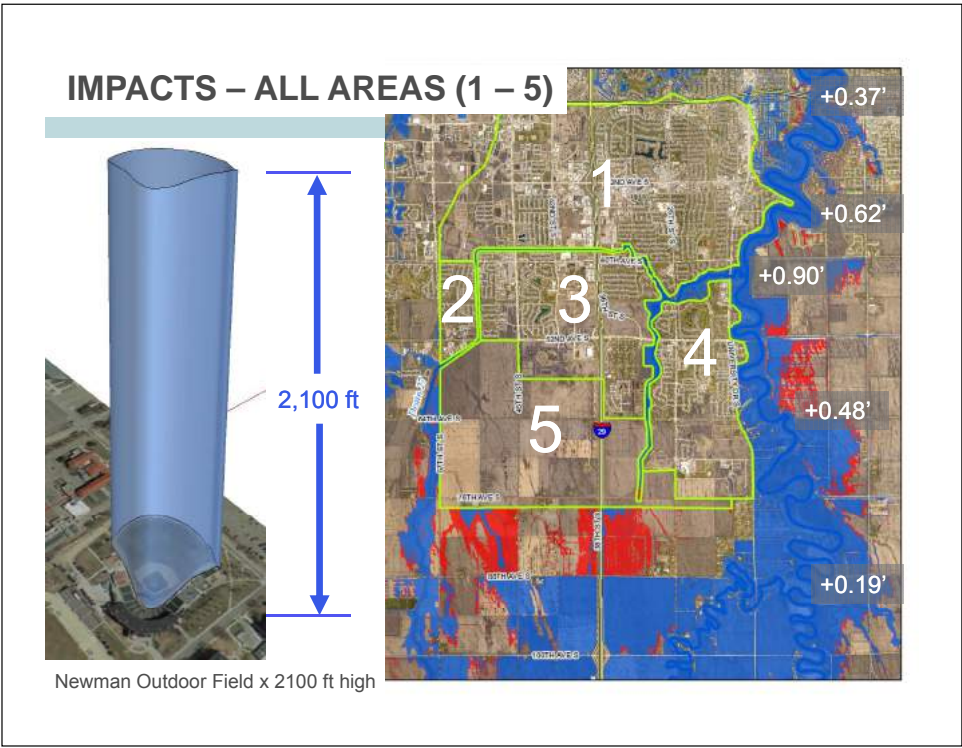


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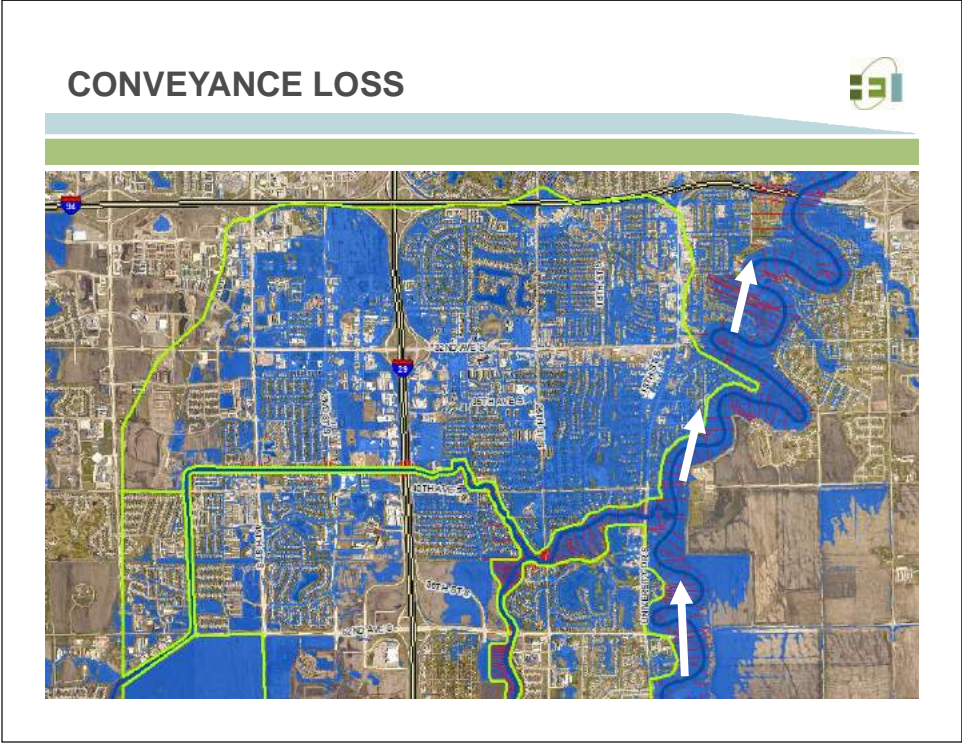
Photo by championshipsdivision.com
25,500,000 cu.ft. = 585 ac-ft



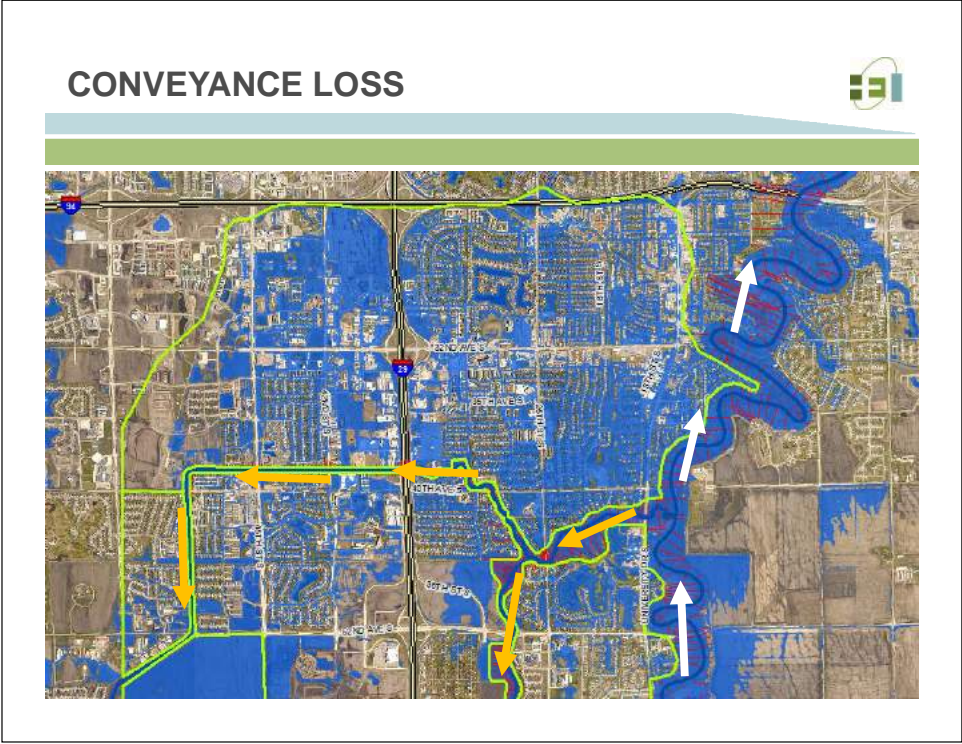
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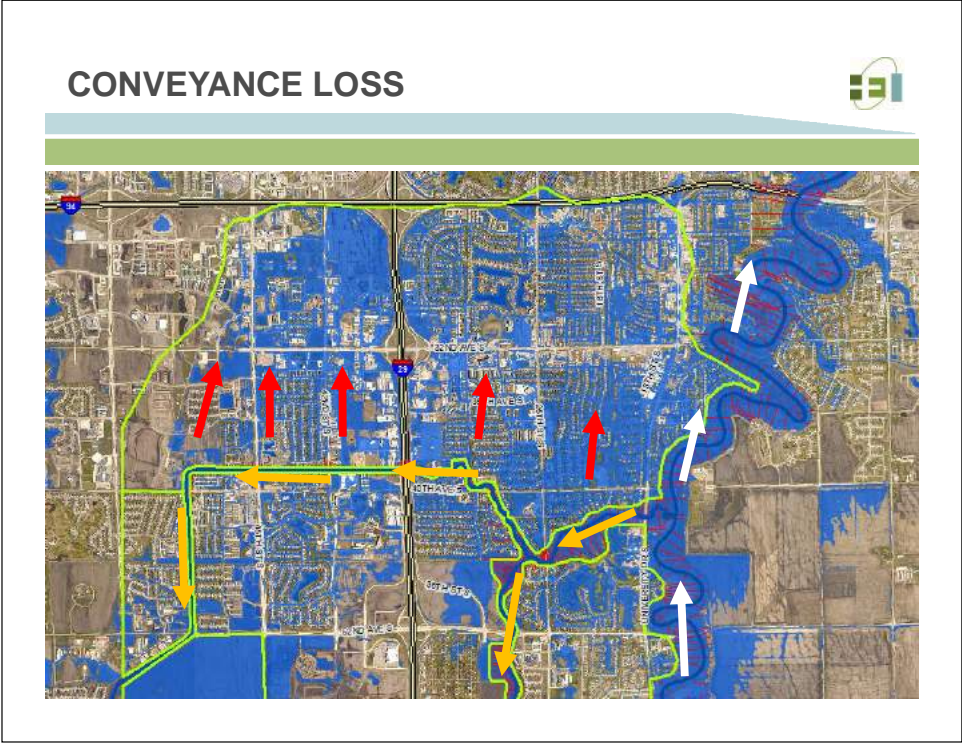
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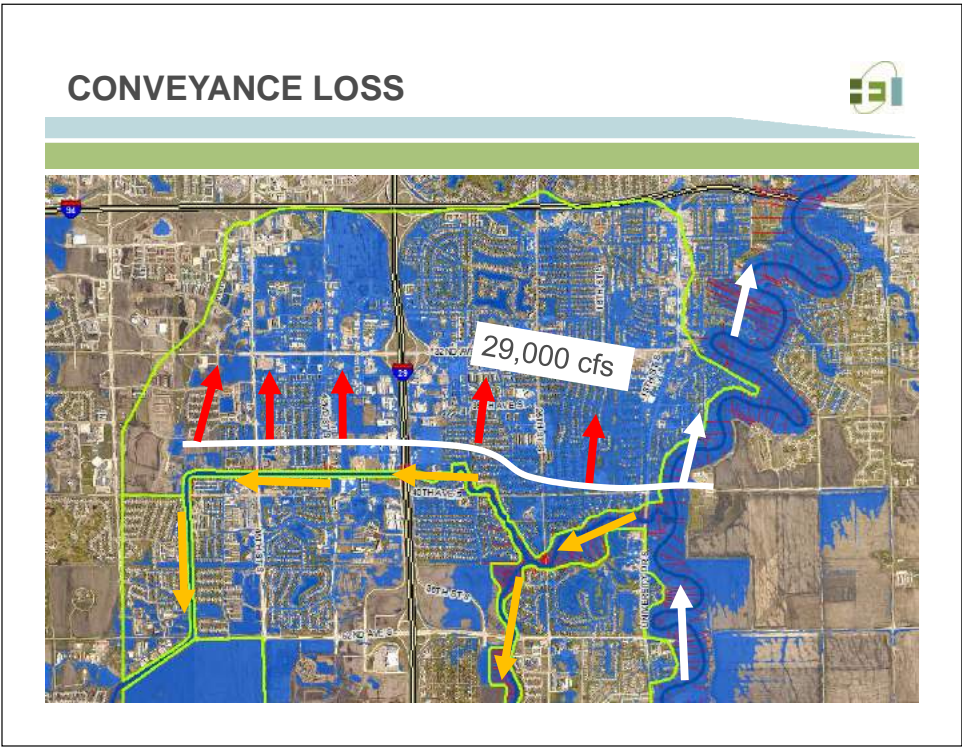
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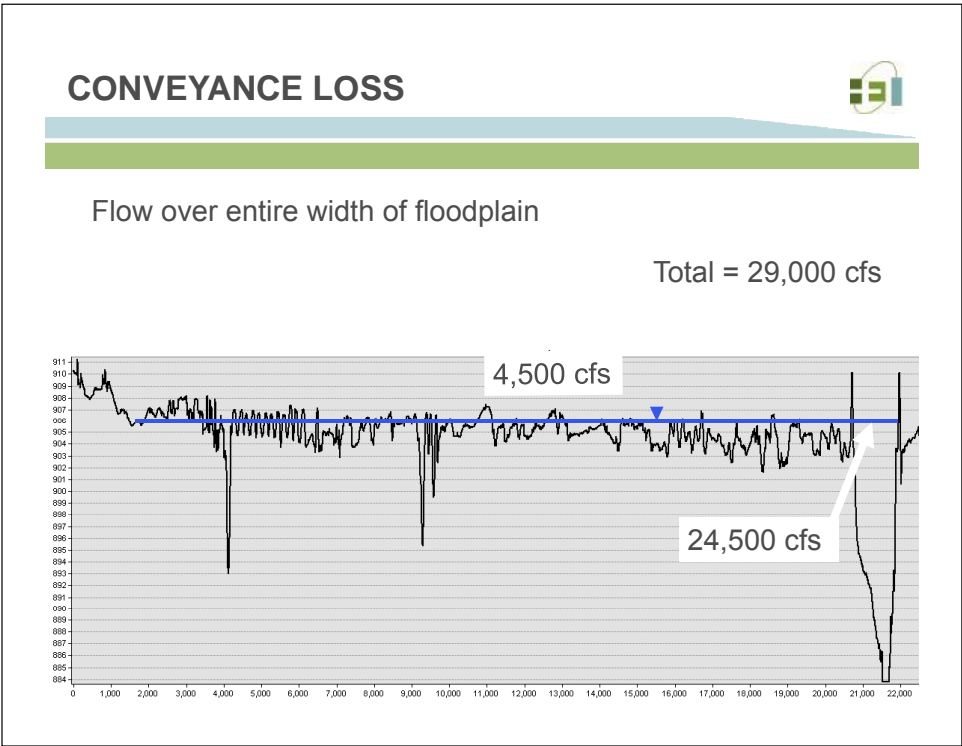
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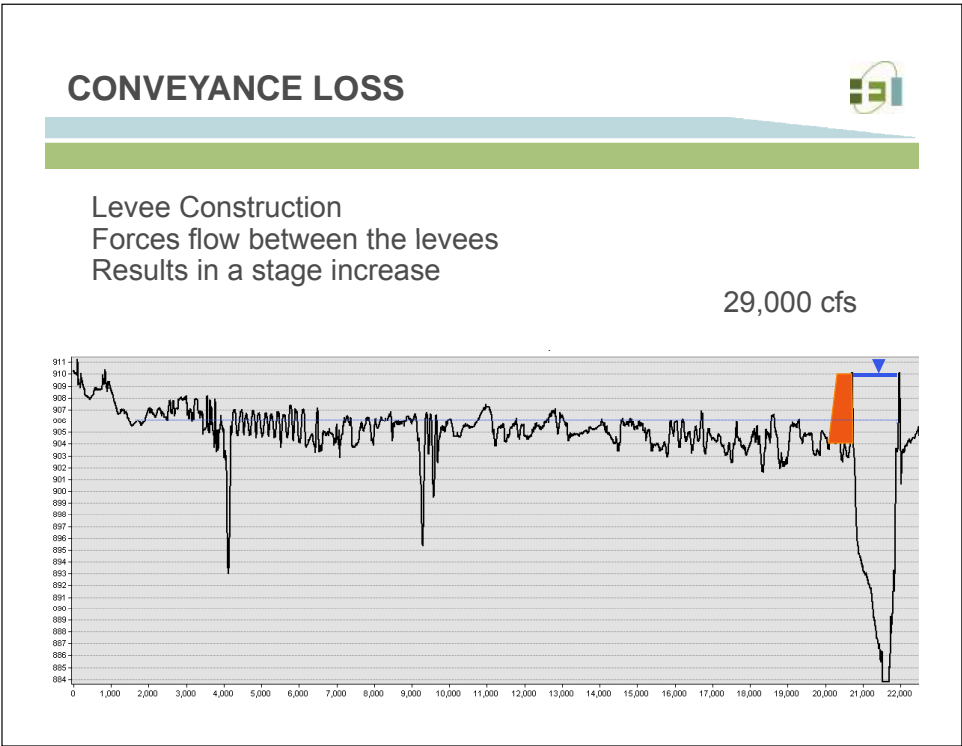
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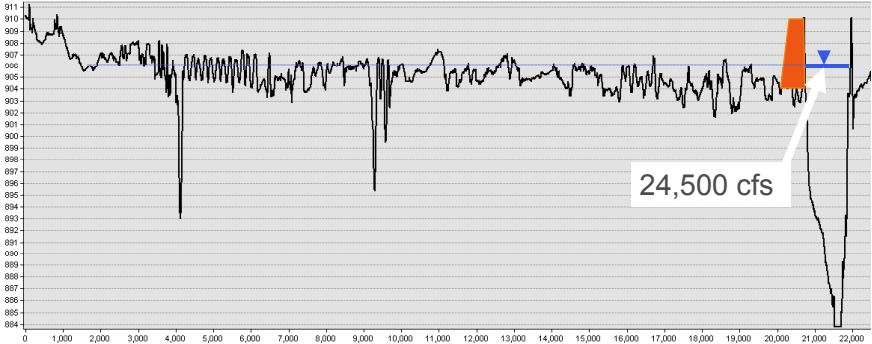


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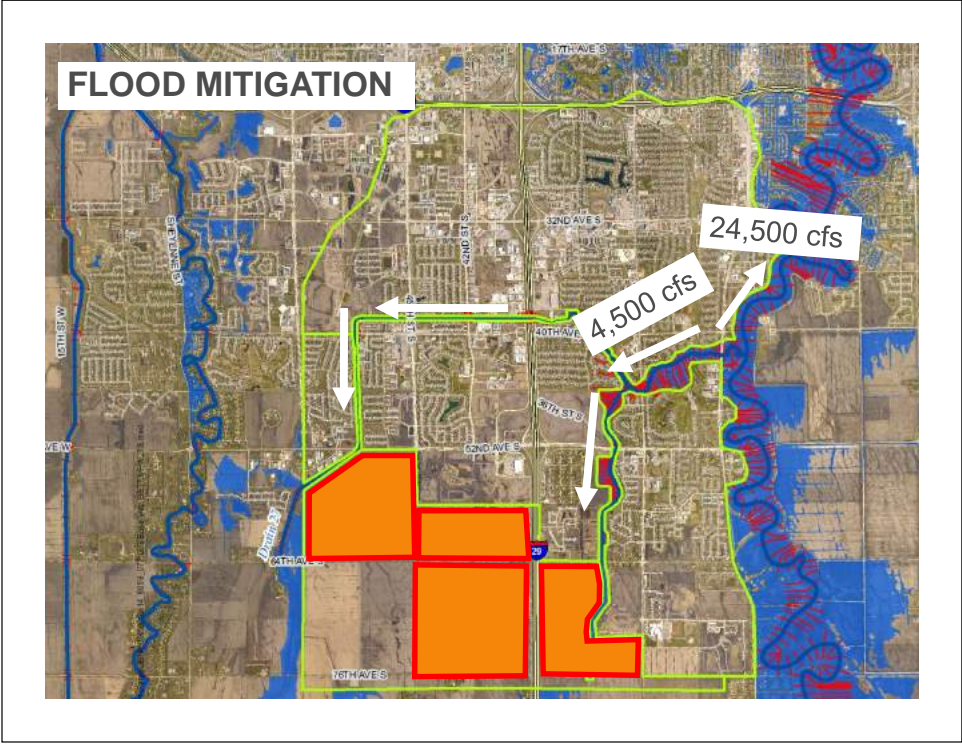
CONVEYANCE LOSS



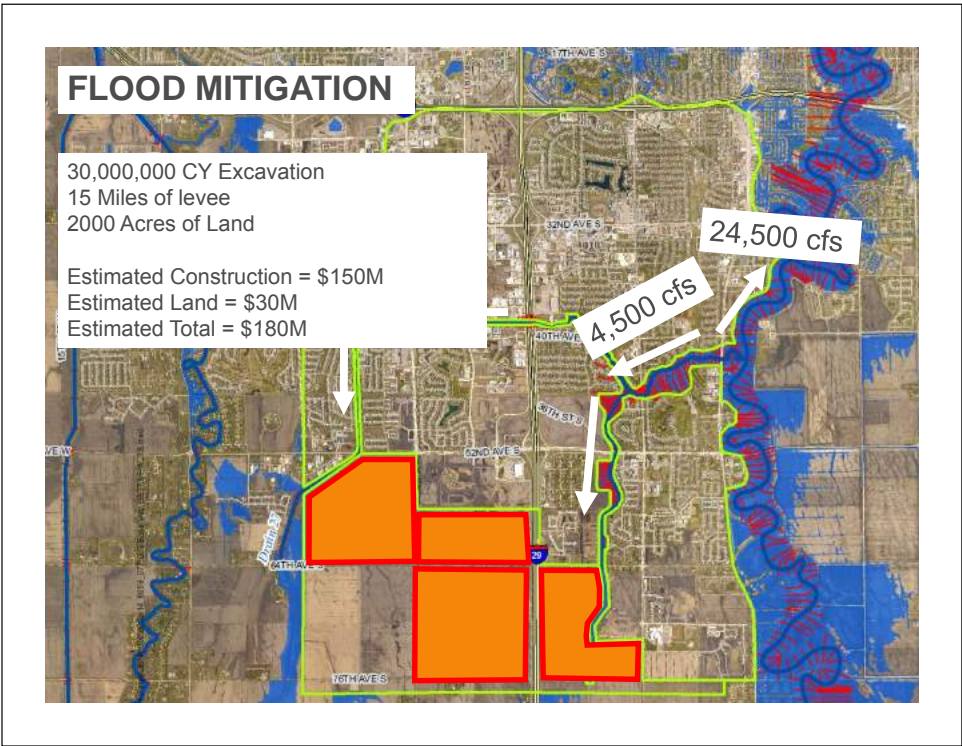
Levee Construction
Forces flow between the levees
Results in a stage increase



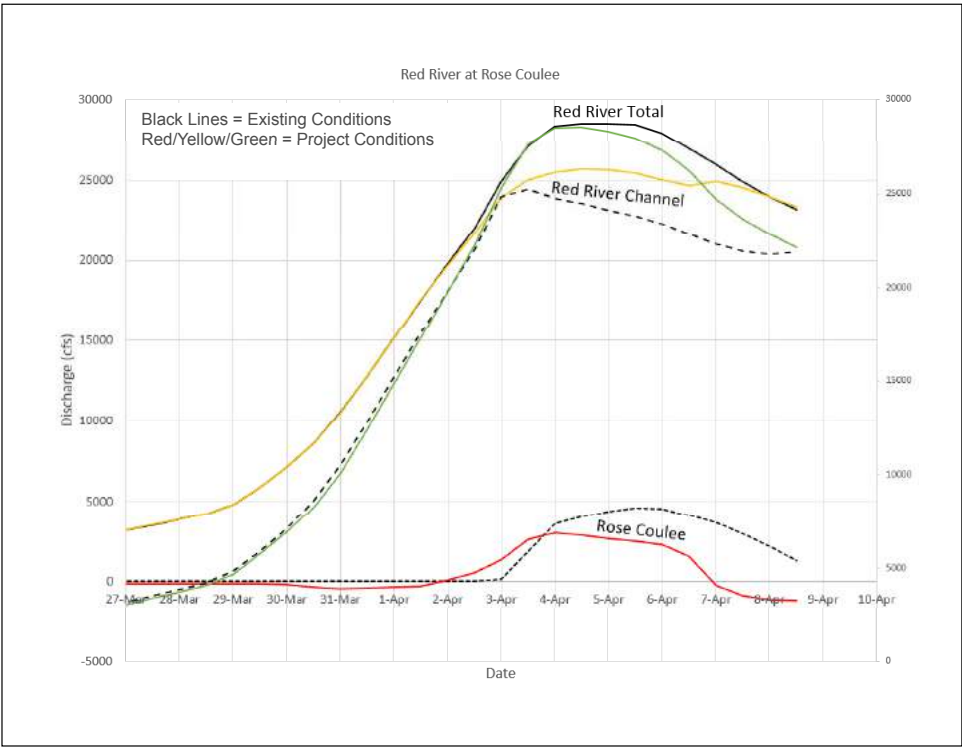
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ANALYSIS UPDATE

- Analysis to Date
- Uses latest FM Diversion model
 - Best Available
 - Model was developed for the larger scale project
 - Could be refined for this smaller scale project
- Plan to review model parameters
 - Detailed modeling to better reflect the isolated project area
 - Adjustments could result in 20-30% difference in results



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**Fargo-Moorhead
Upstream Feasibility Study
Phase 1 Summary
September 9, 2005**

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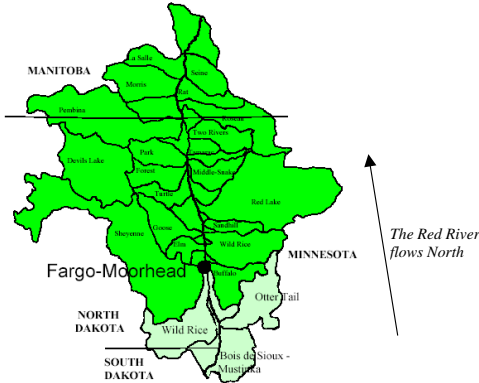
Fargo-Moorhead and Upstream Feasibility Study
Phase 1 Summary
September 9, 2005

I. INTRODUCTION

A. Purpose. This report provides a summary of Phase 1 of the Fargo-Moorhead and Upstream Feasibility study. The study was conducted from August 2004 through June 2005. Comments from meetings on 29-Jun-05 and 8-Sep-05 are incorporated.

B. General Background.

1. The Fargo-Moorhead and Upstream Feasibility Study (FMUS) was recommended in the September 2001 Red River Reconnaissance study and is authorized by a 30-Sep-74 Resolution of the Senate Committee on Public Works. A Feasibility Cost Sharing Agreement was signed on August 20, 2004. The study is looking for ways to reduce flood stages and restore aquatic ecosystems in the Red River Basin upstream (south) of Fargo-Moorhead (see map below). It will evaluate alternatives including a system of multi-purpose surface water storage sites that restore wetland habitat and provide flood damage reduction benefits.



2. The North Dakota State Water Commission and the City of Moorhead are jointly sponsoring the study. Additional cost-sharing partners include Southeast Cass Water Resource District; Richland County Water Resource District; Red River Joint Water Resource District; City of Fargo; Buffalo-Red River Watershed District; Bois de Sioux Watershed District; Minnesota Department of Natural Resources; Minnesota Board of Water and Soil Resources; Minnesota Pollution Control Agency; South Dakota Department of Game, Fish, and Parks; and Red River Basin Commission. The official Sponsors and their partners must provide 50% of all study costs through non-federal cash and in-kind contributions. The US Army Corps of Engineers provides the other 50% of the study funding.

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3. The planning objective is to formulate projects that advance both flood damage reduction and natural resource enhancement. The major underlying assumption is that a system of surface water storage sites upstream of Fargo-Moorhead will produce cumulative flood stage reductions and reduce flood damages downstream. We also assume that water storage can be accomplished in ways that restore aquatic ecosystems and increase habitat for wildlife.

4. Phase 1 is the first of three phases planned for the overall Fargo-Moorhead and Upstream Feasibility study. Each phase will be progressively more specific and detailed in order to determine the Federal interest in constructing a project. Phase 1 was intended to test the viability of a "distributed storage concept" and determine whether additional study is warranted. Phase 1 consisted of the following major tasks:

- a) Link existing hydraulic models together and use assumed hydrology (with input from others) to determine the potential effects of upstream storage on water levels in F-M.
- b) Preliminary urban economic analysis in Fargo and Moorhead to understand potential urban flood damage reduction benefits. Develop depth-damage curves based on a sampling of structures in the flood plain.
- c) Begin to identify potential storage sites and assess the total available storage in various basins (using existing planning as much as possible).
- d) Consider environmental concerns and opportunities related to the concept of distributed storage. Meet with all environmental stakeholders to identify existing information, plan for additional field studies in Phase 2, and identify concerns that affect the decision to proceed.
- e) Discuss plan formulation and justification with Corps of Engineers higher authorities to understand how a multi-site, multi-purpose formulation would be evaluated. (A teleconference was held on May 5, 2005.)
- f) Conduct a relatively small public involvement effort to share preliminary study findings. (Public meetings were held on March 28-29, 2005 in Breckenridge, MN and Fargo, ND.)
- g) Prepare scope of work for Phase 2 study.

5. Phase 1 was constrained by both time and funding. The study partners desired to focus on the potential for a system of impoundments to produce stage reductions and corresponding flood damage reduction benefits in the Fargo-Moorhead area. While the team recognized that there probably would be significant flood damage reduction benefits to areas between the impoundments and Fargo-Moorhead, no attempt was made in Phase 1 to quantify them. Similarly, preliminary environmental discussions were included in order to identify conceptual opportunities and constraints. Significant environmental assessment was planned to begin in Phase 2.

C. Flood Damage Reduction Issues. The Red River Basin lies in the bed of Glacial Lake Agassiz, and it has a long history of flooding. The cities of Fargo and Moorhead have extensive emergency plans to deal with flooding, and have done so very effectively in the past. Other rural and urban areas within the study area also have recurrent flood damages. Large floods on the Red River typically occur in April during snowmelt, but summer rainfall events can cause significant agricultural damage in the basin. The 1997 flood (which devastated the Grand Forks, ND area further downstream) was approximately a 70-year event in Fargo. (Note: the hydrologic assumptions used throughout this report are different than those used for the FEMA flood insurance mapping.) Floodplain delineations are still being revised to reflect recent significant floods, but it is expected that a large portion of the City of Fargo will be within the new FEMA 100-year flooded outline. The area is extremely flat, so very small reductions in flood elevation would produce large economic benefits. There have been significant investments in flood damage reduction measures for both agricultural and urban areas throughout the study area.

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D. Environmental Considerations.

1. The Red River basin lies within the Prairie Pothole Region (PPR), which has been dramatically affected by drainage and tillage predominantly related to this region's urban development and agriculture-based economy (Figure 1).

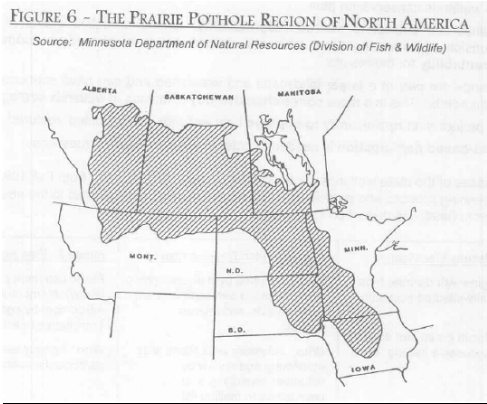


Figure 1-Prairie Pothole Region

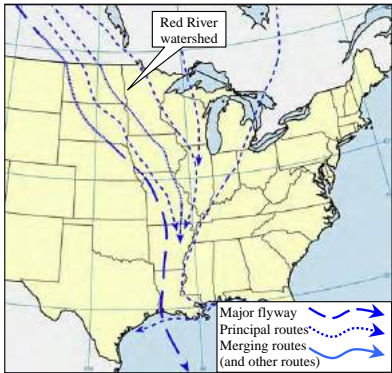


Figure 2 - Mississippi Flyway and study area

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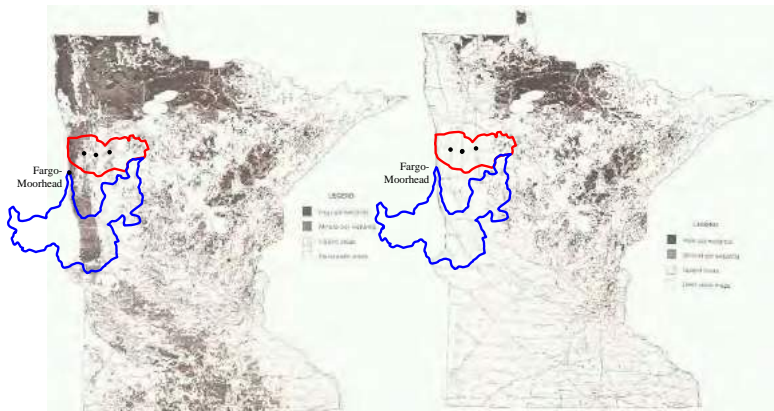


Figure 3 – Estimate of Minnesota Wetlands Circa 1860s and 1981 (FMUS Study area outlined in blue).

2. According to the 1997 Minnesota Wetlands Conservation Plan, over 95 percent of the wetlands in the Minnesota portion of the Fargo-Moorhead and upstream subbasin (blue outline in Figure 3) have been lost. Figure 3 also illustrates the general loss of wetlands in the whole Prairie Pothole Region (PPR). The resulting habitat loss has caused a dramatic decline in wetland-dependent wildlife populations. Because the Red River basin lies within a major waterfowl and shorebird migration route (Figure 2), the loss of permanent and seasonal wetlands has had a measurable adverse impact on migratory success.

3. The Prairie Pothole Region Joint Venture is one of six original joint venture regions under the North American Waterfowl Management Plan (NAWMP). The joint venture was established to conserve and enhance wetland habitat throughout the region. Wetlands in the PPR are among the continent's most biologically productive systems, providing habitat for waterfowl, shorebirds, wading birds, amphibians, and a variety of other wildlife. These wetlands are important for maintaining and recharging groundwater supplies and improving water quality, storing floodwaters, and trapping sediments. The PPR wetland complexes and their associated grasslands are an integral component of the prairie landscape, providing a wide array of ecological, social, and economic benefits.

4. The FMUS study is evaluating projects that would restore many different types of wetland habitat. Smaller scale impoundments and "pothole" restorations would contribute toward the NAWMP's acreage goals. Wetland restoration projects within the study area would provide waterfowl breeding habitat, and shorebird migration habitat in areas where it is currently limited or nonexistent, especially during late summer and fall. Restored wetlands could also provide other wetland functions, including low flow augmentation, improved fish habitat, improved water quality, and aquifer recharge. Given the extent of wetland drainage in the basin, there is a high potential for wetland restoration to provide significant habitat benefits.

II. HYDROLOGY AND HYDRAULICS

A. Description of distributed storage concept.

1. A range of storage potential was estimated by reviewing preliminary watershed district plans for basin storage. The storage potential for two preliminary plans was averaged over the drainage area of the corresponding basin. The estimate for the low end of the range of storage potential was 40 acre-feet per square mile for a total of 200,000 acre-feet of storage upstream of the Fargo gage. The estimate for the upper end of the range of storage potential was 80 acre-feet per square mile for a total of 400,000 acre-feet of storage upstream of the Fargo gage. Figures 4 and 5 show the low and high estimates of potential storage for various watersheds. A 31,000 acre-foot and a 60,000 acre-foot reservoir downstream of White Rock Dam were also modeled in combination with the 200,000 acre-feet of storage resulting in scenarios of 231,000 acre-feet and 260,000 acre-feet of storage for Scenarios L3 and L2, respectively.

2. The storage for the scenarios analyzed is distributed throughout the basin in small impoundments ranging in size from 2,000 acre-feet to 20,000 acre-feet. This type of storage would affect the tributary hydrograph throughout the flood event. Without knowing the specific size and location of the storage impoundments and without using a detailed hydrologic model, it is difficult to compute the change in the tributary hydrographs. For this analysis under scenarios L1, L2, L3 and H1 as discussed in the following paragraphs, it is assumed that the storage effect would be proportionate to the original flood hydrograph for a 30-day period from 15 March to 15 April. For scenario H5, the storage is taken off the tributary hydrographs by eliminating flow above a constant discharge that provides the estimated storage potential. Scenario H5 has less impact on the tributary hydrographs in comparison to Scenarios L1, L2, L3 and H1 since the storage was divided by a factor of 5 to reflect transferring the impacts to the upstream boundary for the HECRAS unsteady flow model.

B. Methodology for modeling.

1. A Hydraulics and Hydrology Technical Team was established in accordance with the Fargo Moorhead and Upstream Feasibility Study Project Management Plan dated November 18, 2004. The Hydraulics and Hydrology Technical Team is as follows:

Hydraulics and Hydrology Technical Team

Name	Organization	Phone	e-mail
Charlie Anderson	BDSWD	320-762-9740	jor@gctel.com
Bethany Bolles	EERC	701-777-5050	bbolles@undeerc.org
Don Buckhout	DNR	218-755-4482	don.buckhout@dnr.state.mn.us
Damon DeVillers	Richland Co. WRD	701-642-5521	damond@iengi.com
Stuart Dobberpuhl	Corps of Engineers	651-290-5638	stuart.v.dobberpuhl@usace.army.mil
Randy Gjestvang	ND SWC	701-282-2318	rgjest@water.swc.state.nd.us
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Scott Jutila	Corps of Engineers	651-290-5631	scott.a.jutila@usace.army.mil
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Jon Roeschlein	BDSWD	320-563-4185	bdswd@traversenet.com
Dan Thul	DNR	218-755-3639	dan.thul@dnr.state.mn.us
Jeff Volk	SE Cass WRD	701-282-4692	jvolk@mooreengineeringinc.com
Xixi Wang	EERC	701-777-5224	xwang@undeerc.org
Lance Yohe	RRBC	218-291-0422	lance@redriverbasincommission.org

Meetings with the Hydraulics and Hydrology Technical Team were held on November 19, 2004 and June 22, 2004 at the Red River Basin Commission Office in Fargo, North Dakota. Additional coordination with various members of the team was accomplished on as needed basis. Extensive coordination with the EERC, the NDSWC and others took place. The Hydrology used for 1997 Flood Event HECRAS unsteady flow simulation in this study is from the EERC and required close coordination so that the SWAT simulated hydrographs could be incorporated into the HECRAS unsteady flow model simulation for the 1997. This applies to the Red River of the North Main Stem

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unsteady flow modeling and the unsteady flow modeling of the lower Maple and Sheyenne Rivers. In addition, the unsteady flow modeling of the Maple and Sheyenne Rivers was coordinated closely with the participants of a subcommittee for the Red River Basin Commission.

2. The hydraulic evaluation uses both steady flow HECRAS models and unsteady flow HECRAS models. The steady flow HECRAS models developed for the January 2003 *Regional Red River Flood Assessment Report for Wahpeton, North Dakota/Breckenridge, Minnesota to Emerson, Manitoba* prepared by the U.S. Army Corps of Engineers, St. Paul District and the Federal Emergency Management Agency, Region V and Region VII were used for developing the existing conditions water surface profiles. The only change from the January 2003 profiles is that different hydrology is used, reflecting the required hydrology for evaluating Corps of Engineer projects. A HECRAS unsteady flow model was utilized for evaluating the project impacts on discharge hydrographs for the different scenarios. The impacts on the flow frequency curve at Fargo were then used to determine the impacts on the elevation frequency relationships.

3. The Scenarios evaluated are described below and summarized on Table 1:

a) Scenario H5- This scenario consists of taking storage off the upstream boundary condition hydrographs for the tributaries by eliminating flow above a certain discharge. The High Storage Potential value for the upstream boundary condition was divided by 5 to represent the storage at the upstream boundary of the HECRAS model.

b) Scenario L1 - This scenario is for a low estimate of storage as shown on Figure 4 with the storage distributed over a one month time period.

c) Scenario L2 - Same as L1 except that additional storage for State Line Dam was taken out of the White Rock Dam Outflow hydrograph after the distributed storage upstream of White Rock Dam was taken into account. This scenario does not impact the peak stage and discharge at Fargo but does lower the recession hydrograph. Essentially, what happens is that after a certain date for the 1997 simulation flood which is roughly April 15th, any further reduction in flow does not impact the peak stage at Fargo. The benefits of Scenario L2 are the same as L1.

d) Scenario L3 - Similar to L1 except that about 31,000 acre-feet storage was taken out of the flow from the tributary area of Big Slough located immediately downstream of White Rock Dam. This simulates the potential flood storage before April 15th that would be provided by the State Line Dam alternative.

e) Scenario H1- This scenario is for a high estimate of storage as shown on Figure 5 with the storage distributed over a one month time period.

4. For this study, uncertainty is addressed in the Economic Analysis. Uncertainty in the stage and discharge is taken into account as part of the Flood Damage Assessment risk analysis. Other considerations that contribute to uncertainty are:

a) In this evaluation, the specific size and location of the storage impoundments are not known making it difficult to determine the change in the tributary hydrographs for the upstream boundary conditions for the HECRAS unsteady flow model. Different assumptions were made resulting in the different scenarios analyzed. As can be seen from the results, the stage reductions vary. During the next phase of study, additional work is needed to refine this part of the analysis.

b) The analysis for this evaluation only looked at the 1997 historical flood event. For the frequency analysis, the impacts for events less than the 1997 flood are taken from the hydrographs simulated for this event. For events greater than the 1997 flood, it is assumed that the reduction in discharge would be the same as the 1997 event. Other flood events may not react similar to the 1997 event.

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C. Results. Table 1 summarizes the estimated flood elevations and stage reductions in Fargo-Moorhead for the 100-year flood event under each scenario. The expected flow and stage reductions in the Fargo-Moorhead reach of the Red River of the North are shown in Figures 6, 7 and 8. Figure 6 shows the observed 1997 discharge hydrograph, the simulated 1997 discharge hydrograph and discharge hydrographs for simulations of the scenarios analyzed. Figure 7 shows the discharge frequency relationship for existing conditions and the different scenarios analyzed. Figure 8 shows the elevation frequency relationship for existing conditions and the different scenarios analyzed.

Table 1: Hydrologic and Hydraulic Scenarios and estimated stage reductions in Fargo-Moorhead

Scenario	Stored Volume (acre-feet)	Description	1% Flood Elevation (feet)*	Stage Reduction (feet)
Existing Conditions			902.4	
H5	400,000	Total volume divided by 5, peak-shaving method	902.1	0.3
L1	200,000	Total volume distributed over 30 days.	901.3	1.1
L2	260,000	L1 + 60,000 AC-FT Stored after April 15	901.3	1.1
L3	231,000	L1 + 30,000 AC-FT Stored before April 15	901.0	1.4
H1	400,000	Total volume distributed over 30 days.	900.8	1.6

* Note: the hydrologic assumptions used throughout this report are different than those used for the FEMA flood insurance mapping.

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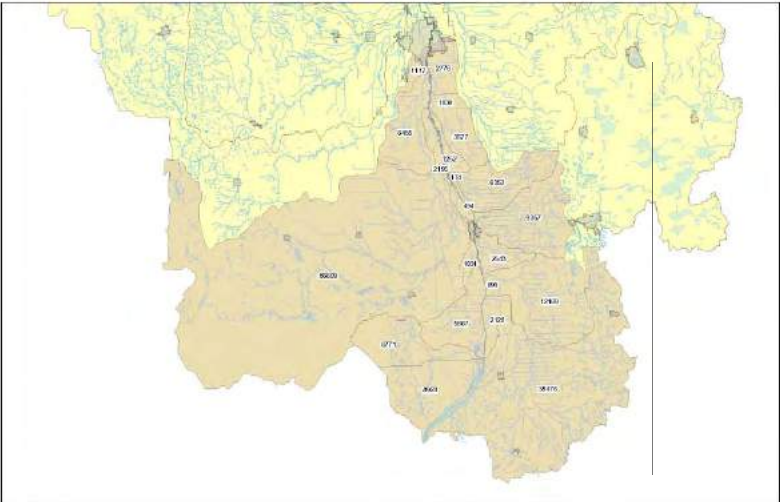


Figure 4. Low estimate of potential storage for the various watersheds upstream of the communities of Fargo, North Dakota and Moorhead, Minnesota.

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Figure 5. High estimate of potential storage for the various watersheds upstream of the communities of Fargo, North Dakota and Moorhead, Minnesota.

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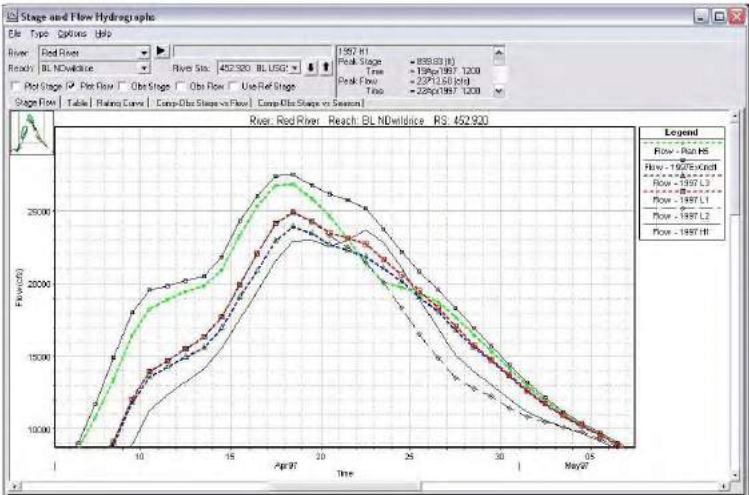


Figure 6. The HECRAS unsteady flow simulation results are shown for various scenarios in addition to the observed 1997 flood event discharge hydrograph for the location of the USGS Gage for the Red River of the North at Fargo, North Dakota.

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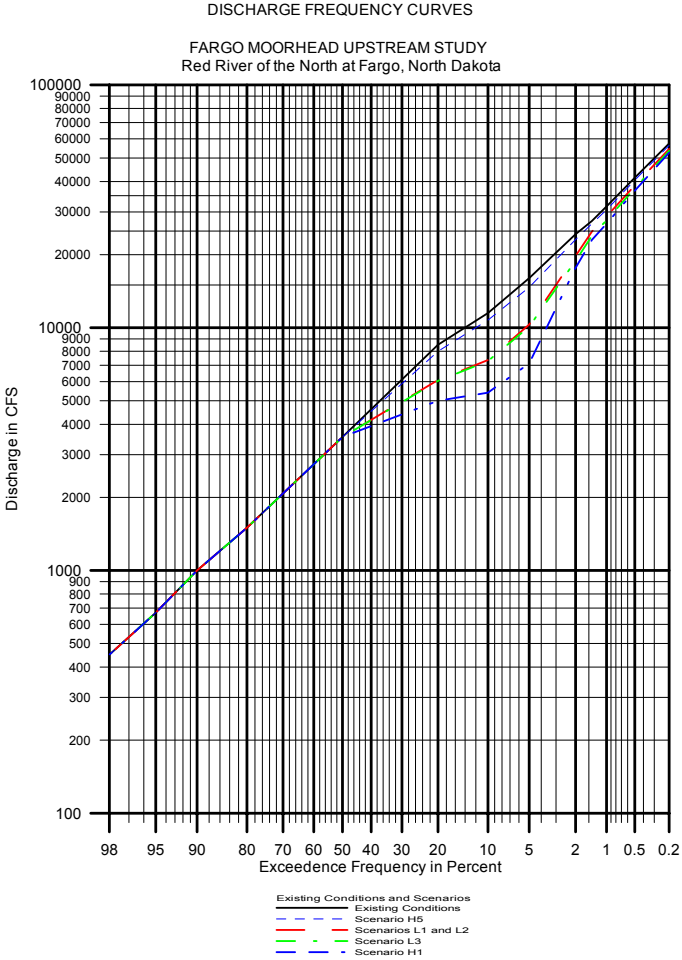


Figure 7. Discharge frequency curve for existing conditions and various scenarios for the Red River of the North at the location of the USGS gage for the Red River of the North at Fargo, North Dakota.

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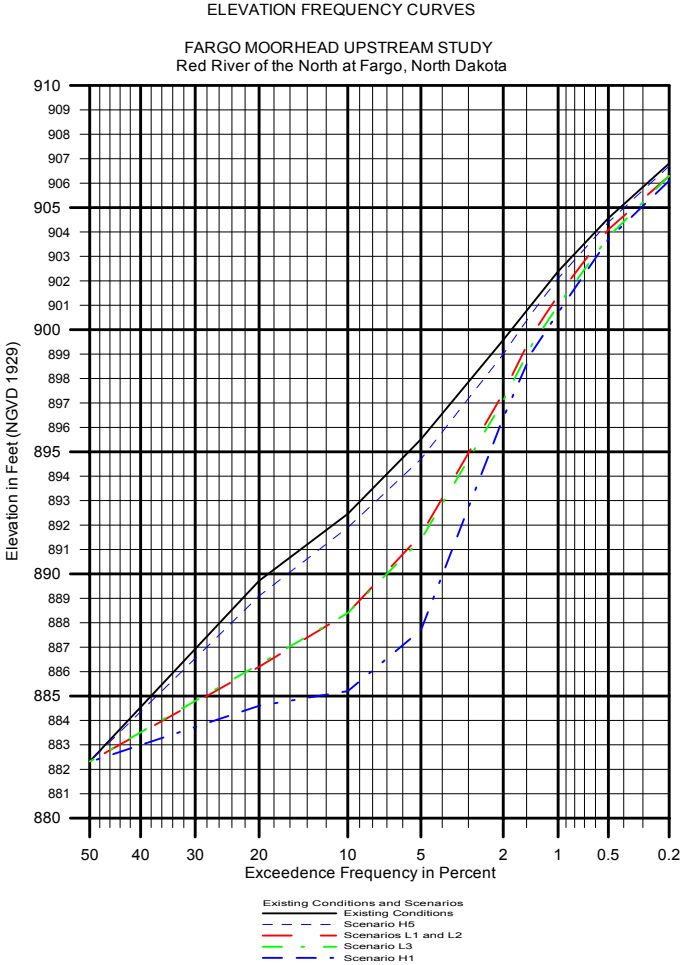


Figure 8. Elevation frequency curve for existing conditions and various scenarios for the Red River of the North at the location of the USGS gage for the Red River of the North at Fargo, North Dakota.

III. ECONOMIC ANALYSIS

A. Methodology.

1. The economic analysis for Phase 1 of the Fargo-Moorhead and Upstream Feasibility Study (FMUS) focused on potential benefits at Fargo-Moorhead. This is where most of the Federal (National Economic Development) flood damage reduction benefits for an upstream storage plan will likely occur and hence, this is where initial efforts were focused to help decide whether or not to proceed with Phase 2 of the study. The project features would create economic benefits to agricultural and urban areas upstream of Fargo-Moorhead, but no attempt was made in Phase 1 to quantify those benefits.
2. The Corps' Flood Damage Assessment computer model (FDA) was used to evaluate flood damages for existing conditions and for conditions with various storage plans in place. The reduction in flood damage resulting from a storage plan is the project benefit (referred to, in Corps vernacular, as National Economic Development, or NED, benefits). Among the input required by the model is data on structures in the flood plain including structure type, value, and ground and first floor elevations. This data was obtained from the respective cities and formatted for use in the model. Additional input required for the model is a set of eight water surface profiles ranging from the 2-year event up to the 500-year event. For this evaluation, existing conditions water surface profiles were developed for the eight events as indicated in Table 2. Separate profiles were not developed for the different scenarios. Instead, the new flood event probabilities for each were developed by using the revised discharge hydrographs for each scenario and the elevation discharge rating curve at the location of the USGS Gage for the Red River of the North at Fargo, North Dakota. Table 1 below presents the flood probabilities for the eight profiles under the existing condition and for four different with-storage scenarios. A description of the scenarios can be found in the H&H section of this report.

Flood Profile #	Existing Condition	With-Storage Scenarios			
		H5	L1 & L2	L3	H1
1	0.20	0.19	0.17	0.16	0.15
2	0.50	0.47	0.40	0.39	0.37
3	1.00	0.92	0.78	0.72	0.66
4	2.00	1.77	1.42	1.38	1.30
5	5.00	4.30	2.80	2.60	2.20
6	10.00	8.90	4.50	4.20	3.10
7	20.00	17.50	7.70	7.00	4.10
8	50.00	50.00	50.00	50.00	50.00

* Note: the hydrologic assumptions used throughout this report are different than those used for the FEMA flood insurance mapping.

3. Due to the preliminary nature of the Phase 1 economic analysis, some critical assumptions were made. One assumption deals with the level of flood protection provided by the existing system of levees and floodwalls. The system is not continuous throughout the Fargo-Moorhead flood plain. Gaps in the line of protection are filled by temporary levees during flood emergency situations. The existing levees provide as much as 100-year protection or more. But the level of protection assumed in the areas where the gaps exist is uncertain. For the purpose of this analysis, it was assumed that the existing flood protection is at the 100-year level.
4. Other significant assumptions dealt with the magnitude of potential storage volume that could be expected with a project in place and the effectiveness of this storage in reducing the flood threat downstream. At this time there is a high degree of uncertainty regarding this issue. The wide range in flood frequency reductions (Table 2) and the resultant benefits (Table 3 below) reflects this uncertainty.

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B. Results.

1. As Table 2 indicates, upstream storage reduces the frequency of a flood event, the magnitude of which depends on volume and location of the storage impoundments. Reducing the probability of a flood event directly reduces the average annual damage, essentially a measure of the flood threat over a range of flood events. The amount of damages reduced equates to the benefit for the scenario under consideration. Table 3 displays the average annual damages and benefits associated with the storage scenarios evaluated. Table 3 also shows the present value equivalent of the average annual benefits. This figure is typically viewed as the amount of project costs that can be supported by the benefits and still maintain a benefit-cost ratio of 1.0.

Scenario	Avg Annual Damages	/ Interest & Amort Factor *	PV of Avg Ann Benefits
Existing Conditions	\$ 22,357		
Scenario H5	20,691		
Avg Ann Benefits	1,666	0.058	\$ 28,724
Scenario L1 & L2	19,789		
Avg Ann Benefits	2,568	0.058	44,276
Scenario L3	19,119		
Avg Ann Benefits	3,238	0.058	55,828
Scenario H1	17,563		
Avg Ann Benefits	4,794	0.058	82,655

* At 5-3/8% interest over 50-year life

2. As mentioned above, one of the assumptions made for this analysis pertains to the level of protection provided by existing levees, floodwalls, and flood emergency efforts. A sensitivity analysis was performed to determine the effect of the assumed existing level of protection on flood damages and project benefits. This analysis showed that, while damages are sensitive to the assumed level of existing protection, more importantly, the incremental damages between the existing and with-project scenario (i.e., flood damage reduction benefits) are not particularly sensitive. The level of benefits remains fairly consistent regardless of the level of existing protection assumed in place.

IV. ENVIRONMENTAL AND WATER QUALITY CONSIDERATIONS

1. The EWQ Technical Team met in Moorhead on 19 January and 8 February 2005 with representatives of Minnesota Pollution Control Agency, North Dakota Department of Health, Minnesota Department of Natural Resources, Minnesota Board of Water and Soil Resources, Red River Basin Commission, South Dakota Game Fish and Parks and Corps of Engineers attending one, or both, meetings.

2. It was suggested that this team should assume an unbounded perspective in identifying environmental restoration needs and remediation options and not focus only on features that also provide storage for flood damage reduction. Others agreed but recognizing that we should limit the assessment to the aquatic environment.

3. One suggestion was that base flow could be improved in some stream reaches where local storage structures could improve groundwater recharge. The subject of "ecological connectivity" came up with recognition

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that ecological degradation is often the result of interrupted ecological pathways. One of the tasks of this group, then, would be to identify significant restorable linkages especially those affected by past hydrologic modification.

4. The group agreed that we should gather and review planning documents from the various jurisdictions and develop a matrix containing previously identified resource management proposals, and relevant functional attributes to aid in identifying structures or management activities that could be implemented with federal cost-sharing by virtue of meeting both flood damage reduction and environmental restoration objectives. The ensuing discussion on how to proceed with scoring the matrix led to the observation that objective scoring of generic structure types (such as on or off channel gated or ungated wet or dry impoundments) is difficult when considered outside their physical and operational contexts. Team members agreed that some of these structure types could score favorably for natural resource (NR) values but only if *done right*; that is to assume that the structures would be placed and operated in ways that restore or protect channels, wetlands, and marginal grasslands, etc. and allow or promote hydrologic regimes consistent with self-sustaining and diverse ecosystem structure and function. The group agreed that the ideal approach to provide maximum environmental benefits would be to restore drained wetlands, particularly in southwest Minnesota, where most of the land is in row crop agriculture with drain tile and a system of drainage ditches. This type of wetland restoration would greatly contribute toward the goals of the Prairie Pothole Joint Venture under the North American Waterfowl Management Plan by providing spring pair water and some summer brood water for nesting waterfowl. Ideally, small wetland restoration would be coupled with some grassland nesting cover creation, either through CRP or grassland easements. Additionally, the group agreed that restoring sinuosity to channeled creeks and rivers, such as the Bois de Sioux River, would contribute to flood reduction and provide maximum ecological benefits.

5. Applying the NR *done right* assumption to the scoring matrix of generic structure types automatically scores it with all +'s. The scoring matrix may be more appropriately used to evaluate existing and proposed structures with known design and operational parameters. The EWQ Technical Team needs to develop a more complete narrative statement defining the NR *done right* assumption and to compare it with a corresponding flood damage reduction *done right* assumption, which may or may not indicate compatibility.

6. The next step for the EWQ Team would be to populate the scoring matrix with actual structures with known physical and design parameters, scope and perform environmental monitoring and analysis, and then score it. In the Phase 2 report we would expect to be able to show many more +'s than -'s on the score sheet for both NR and FDR values.

V. COST CONSIDERATIONS

NOTE: The following discussion of costs is considered very preliminary and should not be used outside of this study. It is presented for general context only. Significantly more detailed work is needed to quantify the costs of projects once specific sites have been identified and conceptual design has been completed.

1. Red River Watershed Districts in Minnesota have been developing plans for small scale flood damage reduction projects that are consistent with the goals of this study. Cost estimates for two projects in the Red Lake Watershed District were developed by HDR. The Euclid East Impoundment provides gated storage of 1,878 acre-feet and an additional ungated storage of 565 acre-feet for a total of 2,443 acre-feet of flood storage. The estimated cost for the East Euclid site is \$2.51 million. The average cost per acre-foot of storage is \$1000. The Brandt Impoundment provides gated storage of 3,126 acre-feet and an additional ungated storage of 786 acre-feet for a total of 3912 acre-feet of flood storage. The estimated cost for the Brandt site is \$2.63 million. The average cost per acre-foot of storage is \$840.

2. The Red River Watershed Management Board provided information about 23 projects that have been proposed and/or constructed in the Red River Basin in Minnesota. These projects ranged in total storage from 280 acre-feet to 33,650 acre-feet. Costs per acre-foot ranged from \$105 to \$1,453, but the average for the 23 projects was \$607. It is clear that costs for storage in small impoundments will vary depending on local land acquisitions costs, depth of the impoundment, and other site-specific considerations.

3. Assuming a cost of \$800 per acre-foot of storage and an estimate of 200,000 acre-feet constructed, the cost of providing storage would be \$160 million. Assuming a cost of \$1000 per acre-foot and 400,000 acre-feet of

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storage, the cost would be \$400 million. Corps of Engineers flood damage reduction and ecosystem restoration projects are typically cost-shared between the Federal government and non-Federal sponsors. Feasibility study costs are shared 50/50. Implementation costs (plans and specifications and construction) are usually shared 65% Federal and 35% non-Federal. Non-Federal sponsors must provide all lands, easements, rights-of-way and relocations as part of the non-Federal share.

4. The Corps of Engineers has authority to build ecosystem restoration projects based on ecosystem benefits. Ecosystem benefits are not quantified in dollars but are evaluated qualitatively. The determination of justification is based on significance of the habitat benefits provided and the reasonableness of the cost to achieve the benefits. Costs for recent Corps projects around the Nation have averaged about \$20,000 per acre of restored habitat.

5. It is difficult to estimate the footprint of the proposed system of impoundments without having specific sites identified. Assuming an average flood storage depth of 6 feet and a total of 200,000 acre-feet of storage, the footprint would be 33,000 acres.

6. Assuming a cost of \$1000 per acre-ft and an average 6 foot depth of storage, a 200,000 acre-foot project would create 33,000 acres of habitat at a cost of \$6,060 per acre. This is well within the range of what has been considered reasonable on past Corps projects.

VI. CONCLUSIONS

1. The following conclusions are intended to summarize the key findings of Phase 1 of the study:

- A system of multi-purpose impoundments has the potential to reduce the 100-year flood elevations in Fargo-Moorhead by as much as 1.6 feet.
- A system of multi-purpose impoundments would provide the greatest stage reductions for floods of the 10-year to 20-year magnitude.
- From a Federal justification perspective, flood damage reduction benefits in the Fargo-Moorhead area alone would probably justify 20-25% of the costs of constructing a system of impoundments.
- Agricultural flood damage reduction benefits and urban benefits outside of Fargo-Moorhead have not been quantified but would probably be significant.
- With careful design, it is likely that a system of multi-purpose impoundments could be justified largely by ecosystem restoration benefits.

2. Discussion with the Corps Mississippi Valley Division and HQ staff indicated that the conceptual plan described in this report is sound. Significantly more work will be needed to quantify both economic (flood damage reduction) and ecosystem benefits in order to justify Federal involvement. Phase 2 must address significant ecosystem issues early in order to identify and describe ecosystem needs and to be sure that the flood damage reduction and ecosystem restoration features are compatible.

3. The project management plan for the study calls for a decision between the completion of Phase 1 analysis and the beginning of Phase 2 work. This report is intended to provide the information necessary to make an informed decision.

From: marcus.larson@exhostmail.com
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo Moorhead Flood Risk Management Project DEIS - Loss of Life
Date: Tuesday, October 27, 2015 11:31:07 PM
Attachments: [DNR Comments - Marcus Larson \(Loss of Life\) 2015-10-27.pdf](#)

Commenter 111 cont.



Summary of Comments on MarcusLarson_Commenter111i_Email3.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/19/2015 8:57:32 AM -06'00'
Commenter 111 cont.

Author: Medopera Subject: Sticky Note Date: 4/5/2016 12:05:14 PM
Comment ID: 111i (entire submittal)
Topic: Dam Safety, Risk and Loss of Life Concerns

Author: Date: Indeterminate

Dear Project Manager,

Attached are comments pertaining to Loss of Life associated with the Fargo Moorhead Flood Risk Management Project.

Thank you for considering my comments.

Respectfully submitted,

Marcus Larson
513 7th St
Hickson, ND 58047
701-588-4412 home
701-893-6975 cell

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October 27, 2015

Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road
St. Paul, Minnesota, 55155-4025

RE: Fargo Moorhead Flood Risk Management Project DEIS

Subject: Loss of Life

The MN DNR Draft EIS defines:

Class I Dam: A dam (defined in Minnesota Rules, part 6115) whose failure, misoperation, or other occurrences or conditions would probably result in any "loss of life" or serious hazard, or damage to health, main highways, high-value industrial or commercial properties, major public utilities, or serious direct or indirect, economic loss to the public. (<https://www.revisor.mn.gov/rules/?id=6115.0340>)

The "loss of life" probability assessment contained in the MN DNR Draft EIS, USACE - FEIS main report, July 2011 Appendix D attachment are deficient.

(page 11) Appendix U | A-19 response (see attachment, page 4)

Loss of life is not monetized or included in the economic benefits presented in the FEIS.

(page 13) Appendix O - 4.3 Phase 1 Key Assumption (see attachment, page 5)

Loss of life was not considered as part of the initial economic analysis. The vertical team requested that a "loss of life" analysis be completed to supplement the Other Social Effects (OSE) account, but no dollar value was to be placed on the loss of life.

Failure to monetize "loss of life" in the economic analysis allowed the USACE and non-federal local sponsor to advance their propose purpose without a factual or accurate cost - benefit ratio.

It is contradictory on one hand to argue the proposed project benefits approximately 200,000 people and on the other hand argue that any single life of that 200,000 does not warrant a dollar value when vetting the cost-benefit against the proposed project risk (see attachment, page 10) and any viable project alternative.

This was an intentional misrepresentation to fast-track and navigate the USACE Project Process to ensure the project could be slipped into a congressional bill favorable to the proposed project, which directly and indirectly attempts to circumvent the State of Minnesota DNR EIS and permitting regulatory requirements.

The Reconnaissance Study, Feasibility Study, EIS, DEIS, SDEIS and FEIS all failed to include a "loss of life" estimate due to an unexpected failure of the Class 1 High Hazard Dam. The Chief's Report should not have recommended the project for authorization, nor should the Office of Management and Budget cleared the project for Record of Decision approval - as it lacked a concise and reasonable "loss of life" estimate basis for decision making.

Is the project economically justified and does the project serve the public interest if the potential "loss of life" is "greater" as a result of the Class 1 High Hazard Dam as opposed to "Existing Conditions" **without** qualifying end results based upon modeling containing EOE theoretical assumptions?

Of particular concern is what the "loss of life" estimate would be under existing conditions **without** applying invalid theoretical assumptions of the EOE.

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The USACE obfuscates the "Population at Risk" and "Existing Conditions" - "loss of life" estimates (shown below - excerpt from MN DNR Draft EIS) by applying the theoretical framework of the EOE (Expert Opinion Elicitation) which references a higher than factual flood benchmark to disingenuously assert a greater population potentially at risk in an attempt to justify the project purpose, which conceals potential "loss of life" risks associated with the Class 1 High Hazard Dam structures. (see attachment, page 9)

Table 3.60 Estimated Maximum Loss of Life in the Benefited Area - Existing Conditions Due to Levee Overtopping or a Levee Failure¹

Flood Event	Population At Risk ¹	Existing Conditions (Base No Action Alt.) ² Anticipated 98% Evacuated	Existing Conditions (Base No Action Alt.) ² Unanticipated 0% Evacuated
10-year	858	1	32
20-year	1,501	1	54
50-year	2,177	2	90
100-year	18,050	4	200
200-year	64,670	8	394
500-year	133,403	12	594

Source: FFREIS – Appendix D, Attachment 1, USACE 2011

¹Population was estimated by determining which structures would be impacted during an individual flood event (flood depth grids). Population associated with each structure was calculated as the total metro population (202,684 people) divided by the number of structures.

²"Existing conditions" for the purposes of the EIS is considered similar to the Base No Action Alternative.

Preservation of "life" should be the paramount focus in any and all flood mitigation efforts. However, the SDEIS and FEIS contain excessive "postulations" as to preserving Fargo, ND as an economic engine for the region. Fargo, ND - as indicated on page 298 of Appendix O (see attachment, pages 6 - 7), has driven the alignment location and excessive flood mitigation for primary economic development of Fargo, ND.

Specific "loss of life" Deficiencies

Neither the FEIS and/or Appendix D Attachments adequately reflect or offer corollary for "loss of life" as it pertains to the current LPP or FCP.

- does not contain accurate or adequate benchmarks
- does not reflect "loss of life" without "assumed" evacuation
- does not contain projections adjusted to population growth
- does not adequately illustrate differences between temporary or permanent flood protection
- does not contain metrics relating to population density for inundations of areas removed from flood plain
- does not address evacuation complicated by permanent flood protection
- does not reflect geographical complications presented for emergency evacuation
- does not reflect augmented "loss of life" induced by permanent flood protection

Flood control consists of physically altering the floodplain to reduce the danger of a flood. However, the current LPP fails on three counts.

1. the flood plain has been altered in such a way as to increase discharge flows at the Fargo USGS gage.
2. the flood plain is being altered in such a way as to increase the danger of flooding in areas inside and outside the project area,
3. the staging area being a Class 1 High Hazard Dam represents a significantly greater threat to the city of Fargo, ND due to excessive water levels held above the elevation of the entire city on historically unstable ground.

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Page 60 of Appendix D (see attachment, page 8): The USACE assumes that *“98% of the population would evacuate upon receiving the warning of imminent levee failure.”* However, the USACE does not make a distinction between temporary or permanent levee failures, it only suggests that emergency levees would increase the "loss of life" potential but fails to quantify the increased "loss of life" associated to a Class 1 High Hazard Dam.

Failure of the USACE to provide "loss of life" estimated associated to failure of a Class 1 High Hazard Dam is an example of the systemic deficiencies and critical flaws in the USACE cursory approach to the proposed project. Wherein, conditions surrounding the Fargo - Moorhead project area would make land evacuation extremely complicated and many of the natural flood plain areas being encroached upon, lack arterials capable of handle mass evacuation under adverse conditions with advance warning, let alone, unexpected failure of a Class 1 High Hazard Dam in the middle of the night or any other hour of the day.

It is generally accepted that populations that have permanent protection in place are less likely to evacuate because the flood protection offers an unwarranted sense of security that does not reflect a true flood risk specific to the given area. At greater risk are those population(s) that live in areas that were previously flood plains that have been developed due to permanent mitigation structures.

The current USACE FEIS, Supplemental EA and Minnesota DNR Draft EIS are deficient in providing "loss of life" statistics that include a reasonable basis for decision making.

Further study and accurate risk assessment relating to "loss of life" is needed comparing existing conditions with and without the assumptions advance within the EOE theoretical framework.

Sincerely,



Marcus E. Larson
513 7th St
Hickson, ND 58047
701-588-4412

This page contains no comments

infrastructure. In addition, significant coordination would be required for operation of the storage sites. Sections 8.4.2 and 8.4.3 of Appendix O of the FEIS contain more information on wetlands and grassland restoration measures.

A-18 Storage and Wetlands/Grasslands Restoration Alternatives Improve Environmental Quality and Benefit Wildlife

Many comments asked the Corps to consider the environmental quality improvements that could be provided by storage and wetlands/grasslands restoration alternatives. Wetlands and grasslands provide habitat for migratory birds, fish, and other wildlife; they improve water quality and decrease storm water runoff; and they contain a variety of native plant vegetation. In addition, wetlands play a role in water supply as they recharge ground and surface waters. Storage and wetlands/grasslands restoration alternatives could provide opportunities to improve environmental quality. Viable wetlands could also bring in tourism dollars to help boost the regional economy.

Response:

Section 8.4.3 of Appendix O of the FEIS considers flood storage alternatives. Flood storage opportunities and wetland and grassland restoration opportunities do exist, and with the right operational scheme, storage impoundments could improve environmental quality. Flood storage alternatives could be effective basin-wide and produce cumulative benefits basin-wide. However, these measures are not the most effective or efficient measures to reduce flood risk to Fargo-Moorhead. Any combination of flood storage systems would be costly and relatively ineffective at addressing the flooding problems in Fargo-Moorhead.

A-19 Flaws in Benefit/Cost Analysis

The process used to analyze costs and benefits is flawed. The negative effects are minimized, the recreation benefits are exaggerated, and the death projections are unrealistic.

Response:

The economic analysis presented in the FEIS uses the standard methodology prescribed by the Water Resources Council's "Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies" and the Corps of Engineers' Engineer Regulation 1105-2-100. Recreation benefits are not used to justify the flood risk management features of the project, but the economic analysis of recreation benefits is included to show that recreation features are economically justified as additional features. Loss of life is not monetized or included in the economic benefits presented in the FEIS.

A-20 Solution to Red River Basin Flooding Problems

The project does not even guarantee to solve the Red River Basins catastrophic flooding problems.

Response:

There is no measure that can guarantee to solve flooding problems; however, existing data and hydraulic modeling indicate that the LPP would substantially reduce flood risk in the Fargo-

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open, and the plan was to backcheck them upon review of the next draft report to be prepared for Alternative Formulation Briefing documentation.

4.2.2 Feasibility Scoping Meeting (FSM)

The Feasibility Scoping Meeting was held on May 19, 2009. The PDT and the Vertical Team discussed the preliminary planning efforts, the range of alternatives, and the proposed planning activities needed to complete the study. The results of the meeting were documented in a memorandum (See Attachment 1 - FSM Memo).

4.3 PHASE 1 KEY ASSUMPTIONS

4.3.1 Future without project assumptions

The future without project assumptions were key to the analysis and were discussed in the FSM documentation submitted to the ATR team and the vertical team. Comments from both the ATR and vertical teams addressed these assumptions. The key assumptions for this phase were:

- The city of Fargo's potential "Southside Flood Control Project" was assumed to not be in place as part of the future without project condition. This is consistent with guidance in IWR 88-R-2, National Economic Development Procedures Manual - Urban Flood Damage, Volume 1, Page VI-3, paragraph 6 which states: "If local action is planned to occur only as the result of no Federal action, the project should not be assumed as part of the "without" condition. Local interests should not be penalized for their own incentive."
- No credit was given to flood fights and emergency measures. The vertical team requested that a sensitivity analysis be completed in the future to provide the decision makers with this information.
- Climate change was not included in the Phase 1 analyses, although there appeared to be an increasing trend in both peak flows and flood frequency in recent decades. The vertical team agreed that it would be appropriate to use an expert opinion elicitation process to obtain recommendations on this topic and to use those recommendations.
- Loss of life was not considered as part of the initial economic analysis. The vertical team requested that a loss of life analysis be completed to supplement the Other Social Effects (OSE) account, but no dollar value was to be placed on the loss of life.

4.3.2 Hydrology

The hydrologic information used in Phase 1 was the best available data when the work began in 2008. It was based on earlier work done by the Corps after the 1997 flood. The Corps hydrology was different from the data used by the Federal Emergency Management Agency (FEMA) in updating flood insurance maps, because FEMA's flows were based upon an earlier administrative determination. Phase 1 hydrology did not include the 2009 flood, the flood of record at the Fargo gage, because it did not occur until after the initial analyses were under way

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FMM Feasibility VE Study - Comments										
Proposal	Civil	PM	Structures	Geotech	H&H	Environmental				
E1 Realign ND diversion east of the Shawanese River & protect the road, ND with ring levees.	The ND alignment is a locally preferred alignment and therefore they chose the locations to be taken out of the flood plain to include the road. By placing a ring levee around the road it would deflect the local currents goal of attenuating the small waves from becoming isolated each flood season. In addition, the Federal Government would not be able to place a rock ring levee proposal for the town of Kragena because the benefit to cost ratio is not above 2.0 and therefore the local sponsors would have to come up with other means on their own to accomplish the proposal in ND.									
E2 Realign MN diversion by clearing channel & installing outlet works.	This proposal is to realign and shorten the MN diversion by shifting the alignment to the West of Kragena. The alignment is to include the town of Kragena to eliminate their flooding from the Buffalo River which is to the East of the town. If the channel were aligned to include the town of Kragena it would also make the city of Moorhead feel as though they are being prepared for future development which was not acceptable for their city's acceptance of the MN.				Figures 2 & 3 regarding the outlet design and location of the MN alignment were agreed and completed during phase 3 of the feasibility study.					
E3 Begin ND diversion channel further North.	Again, the ND alignment is a locally preferred alignment and therefore they chose the general location for the inlet. Their reasoning for the location of the inlet being further South than the MN alignment was to accommodate the city of Kragena's current future plans of development and to protect the city from the Wild Rice River flooding to the South.	to elaborate and relocate the 30 houses of Horse will not be acceptable to the Locally Preferred Plan sponsors.			With the new location proposed of the inlet structure it is very probable that a control structure of some sort will need to be placed at the intersection of the Wild Rice River and the Red River of the North due to the amount of water build-up that will occur. This is a similar concept to the admission channel on the MN alignment that was needed for conveyance, no structure at the proposed ND inlet on the Wild Rice will generally disrupt the design of the channel.					
E4 Realign Wild Rice Diversion for MN alignment.	Agreed. This is a possibility to consider during plans and specifications if the MN alignment is chosen.									
E5 Replace bridged crossings with at grade crossings.							The level of design that has been done is only feasibility level and for the purpose of feasibility the cost needs to be as close as possible to construction cost and therefore actual bridges were only considered at this stage. This is an option to look into during plans and specifications as each crossing will need to be considered individually. The major issue with this idea is the impedance it will cause with the low flow channel. The purpose of the low flow channel was to continually pass through flow through the channel so that it did not change the environmental habitat that will be remaining through for various the northern end of the ND alignment. This idea will require the concurrence of the related resource agencies, the safety council for the required work to permit the roads during every rain storm as well as the hydraulics Department to ensure the overall channel purpose will not be affected. This is a possibility for cost savings and will be considered during plans and specifications.			

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<p>#6</p> <p>Realign North end of ND diversion/Outlet further South.</p>	<p>As the ND alignment is a locally preferred alignment the inlet and outlet locations were generally chosen by the local sponsors. Bearing plans and specifications for the inlet locations will be further surveyed and analyzed for project acceptance and local sponsor acceptance.</p>					
<p>#7</p> <p>Construct U-Channel through areas of multiple bridges.</p>					<p>This is a possible alternative that could be considered during plans and specifications, but additional geotech modeling would be required because of the poor stability with the intersection of the Ferriss and Aquifer structures around 30.55 feet below ground surface.</p>	
<p>#8</p> <p>Redesign inlet/outlet works.</p>			<p>Concepts #4 & #5 should be further examined during the plans and specifications stage of the project.</p>		<p>After completing phase 2 design of the channel and significant changes have been made. The channel was being stability issues with the depth of the channel on the ND alignment and the MR alignment was being uplift issues with the Buffalo aquifer. To eliminate these issues both alignment designs now include a minimum of 4.50 feet switch to increase the neutral block on global stability analysis. The second iteration to the design was side slopes being maintained at 4:1. Drawing #2 of the proposal shows the revised TCF pipe being moved. This would leave too much erosion for stability purposes of the channel. Drawing #1 shows a side slope of 3:1, this is also not possible with the requirements of stability factors.</p>	
<p>#9</p> <p>Raise inlet city protection to 100 year level.</p>		<p>Due to the phase 3 hydrology of the specific events and collaboration with the 2005 flood event it has been found that the cities of Fargo and Moorhead now have never faced a 100 year event. The design goal of raising a 100 year event with a stage no greater than 25.0 feet at the Fargo gate and a 100 year event with a stage no greater than 30.5 feet at the Fargo gate is no longer feasible with the CFC plan. It has been determined that the National Economic Development plan through further analysis in the MR MR plan. The cities have come to agreement that the ND 35K CFC plan provides enough protection and is what they can afford, therefore the ND 35K plan is now compared with what is known as the locally Compatible Plan, FCP, the MR 35K plan. The FCP is the plan that provides great benefits to the locally Preferred Plan. In conclusion, it is no longer possible due to the development of the hydrology and hydraulics for the cities to raise their inlet level of protection to the 100 year, without sacrificing a dramatically large levee footprint along the Red River at the North.</p>				
<p>#10</p> <p>Railroad yard relocation.</p>	<p>Due to the constraints of the Buffalo Aquifer it is an impossible to construct the diversion channel East of BNSF's rail yard as it is for them to shift or expand their rail yard any further East. This was learned in a conference with BNSF where they explained to the third party that their rail yarding options used east of their rail yard and they had looked into expanding, but, but were not able to because of the Buffalo Aquifer proximity the rail yard.</p>		<p>The other part of this proposal involved constructing the diversion channel through the rail yard. After the conference with BNSF they explained that this was not an acceptable design option for them due to safety and operations. The safety factor involved for them to have dangerous is to have a car derail over the diversion channel in the yard, when they would have to derail it off the bridged rail yard. The operation for the rail yard required that they not be interrupted with this construction and if they are to make use of their existing rail yard while under construction they expressed the need for an alternate functioning location because they would not be able to shut down the main line or any switching on bridges even if they</p>			<p>Page 7 of 10</p>

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For the analysis it was assumed that 98% percent of the population would decide to evacuate upon receiving the warning of imminent levee failure. Those who remain are subject to a fatality rate which depends on the depth of flooding at their structure. The fatality rates used are shown in Table 2 below. Based on this information, an estimated LOL was calculated for various flood events.

Fatality Rates for those remaining in their homes	
0' - 2'	0
2' - 13'	0.0002
13' - 15'	0.12
>15'	0.91

Table 2. Fatality Rates used in analysis

Event	Remaining		
	Estimated PAR	After Evacuation	Estimated LOL
10yr	858	17	1
20yr	1501	30	1
50yr	2177	44	2
100yr	18050	361	4
200yr	64670	1293	8
500yr	133403	2668	12

Table 3. Estimated Loss of Life in Fargo-Moorhead (anticipated failure w/ evacuation order)

Note that PAR & LOL was determined for various flood events, including smaller, more frequent events. Considering the fact that the area has successfully contained floods in excess of the 100-year magnitude, an evacuation would not likely be ordered for these events. The PAR is calculated for the all events to highlight the increased level of risk for larger floods as compared to smaller floods.

Unexpected Failure

In the case of an unexpected failure, the potential for loss of life is significantly greater than for the case of an anticipated failure. As warning time is greatly diminished, the potential for loss of life applies of the entire population that lives within the ultimate inundated area. An unexpected failure could occur during a relatively frequent event and cause significant LOL due to the lack of adequate warning.

To determine a worst case LOL for unexpected failure, 0% evacuation is assumed and the same fatality rates based on depth at individual structures that were used for the anticipated failure scenario are applied. To assume 0% evacuation is to assume that the entire city floods immediately with no warning and no time to attempt to evacuate. In the event of an actual unexpected failure, the arrival of flood waters at an individual structure will depend on proximity to the breach, the size of the levee breach, available storage capacity of the area behind the levees, and topography of the protected area. In the case of Fargo, a large north-to-south ridge would tend to delay or meter floodwaters that cross it. Embankments at Main Avenue, Interstate 94, Interstate 29, and the railroad lines

FMMFS Loss of Life Analysis
January 5, 2009

- Will the trends in precipitation and streamflow continue into the future, or are the trends seen now manifestations of past changes, with not much more change in the future?
- Freezing/frost plays an important role in flood events: freeze attenuates the flow, for example. In the most recent flood event, the frost let out prior to the first crest, which allowed water to soak into the ground.
- "Something is happening" at Oakport to cause a shift in stages.
- At around the 20-year event (about 20,000 cfs), flood fighting begins.
- Do flood damages in Fargo-Moorhead top out at some point, for example, at the 500-year event?
- Do changes in uncertainty about the discharge frequency curve affect the findings of feasibility of flood risk reduction measures?
- Has uncertainty about the unregulated flow to regulated flow transform function been described?
- The Corps is making the assumption that there is a single curve that is uncertain, but there may be more than one curve, or a single curve that's always changing.
- The Corps' risk analysis is beginning to include other indices besides expected annual damage, such as loss of life.
- How does the length of the period of analysis (20 years? 30 years?) compare to the time scale of climate change?
- The Corps needs to project some climate. Is it the current state, or another state?
- Starting in 1980 or so, it is clear that precipitation increases in this region.
- The record seems to show periods of stability, then periods of variability, repeated over and over.
- Pre-1940, precipitation and evapotranspiration data are quite different than post-1940.
- High floods appear rather stable in the last 50 years, but small floods seem to have disappeared from the record.
- Precipitation right before snow is important. Floods usually occur in the spring. Precipitation is trending faster than evapotranspiration. A significant increase in cool season precipitation is apparent.
- Small changes in precipitation can result in large changes in soil moisture/accumulated storage.
- What effect does even a small increase in temperature have? Will evapotranspiration increase and balance out the effect of increased precipitation? It would take many years for soil moisture to evaporate.
- Abrupt climate changes have happened at all scales over time. Tree rings and other climate proxies show historical climate change. So, global warming may be contributing to the trends in this region, but it need not be invoked to explain abrupt changes in precipitation and streamflow.

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to make the NED plan not feasible. A success rate of 30% would be required to make the ND35K plan not feasible. The results of this are based on the hydraulic model calibrated to the 2006 event and Phase 2 hydrology, as described in Appendix A, hydrology. Although the sensitivity analysis was not refined using Phase 3 or Phase 4 hydrology, the newer information would likely make flood fight success less significant for feasibility.

3.10.4 Risk of Project Failure

The project will be designed using appropriate measures and factors of safety to ensure that the constructed system is robust and resilient. However, there will be a residual risk of a component failure or exceedance of the system's design capacity. The LPP includes an emergency spillway section as part of the County Road 17 tie-back levee that would allow floods in excess of the 0.2-percent chance event to flow to the west and north around the protected area. Neither the ND35K plan nor the FCP include a similar ability to redirect extreme events. In the case of a flood event that exceeded the design capacity of the system, the tie-back levees of the ND35K plan and FCP could be overtopped, allowing a sudden influx of flood waters within the protected area. An overtopping or breach of a tie-back levee, storage area levee, or failure of a control structure in any of the alternatives could allow flood water into the protected area during any flood event in which the failure occurred. The effects of such a failure could be catastrophic, depending on the magnitude and timing of the stage increases within the protected area. A loss of life analysis was completed for the LPP to determine the impacts if a catastrophic failure were to occur. This analysis is included in Appendix D, Other Social Effects. The results of this analysis indicated that if there was a catastrophic failure with a 1-percent chance event, 31 people could lose their lives and for an event twice as large as a 0.2-percent chance event (500-year times two) the loss of life could be up to 350 individuals.

The LPP and ND35K plans both include control structures on the Red and Wild Rice rivers and aqueduct structures on the Sheyenne and Maple rivers that could be affected by ice or debris during a flood event. These structures include features to deal with ice and debris within the diversion channel and the natural river channels, but there will remain a risk that these structures could be partially blocked by ice or debris which could raise water surfaces upstream of the structures. Research on ice effects associated with the project is being conducted by U.S. Army Cold Regions Research and Engineering Laboratory (CRREL). Although the research is not completed yet, preliminary results show that for period of record, using the unified degree-day method (UDDM), 38 ice-outs occurred before the peak water stage, while 28 occurred after. For the known flood years of 2001, 2009 and 2010, UDDM predicted ice-out at Fargo before the time of peak water stage is in agreement with observations. The UDDM results do agree with the observations that, for many years, particularly ones with floods, ice-out occurs before or during the peak stage event. Addition research and modeling will be addressed through study efforts during the design and implementation phase. The effort includes study of ice at the gated structures, ice in the diversion channel, and the effect of lower flows on ice in the benefited area. The effort also includes the study of similar flood risk management projects under ice conditions (e.g. Winnipeg diversion).

It is assumed that during floods larger than the 1-percent chance event, the non-federal sponsors would augment the LPP, FCP and ND35K plans using existing flood damage reduction projects

From: marcus.larson@exhostmail.com
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo Moorhead Flood Risk Management Project DEIS - Aquatic Species
Date: Wednesday, October 28, 2015 12:45:53 AM
Attachments: [DNR Comments - Marcus Larson \(Aquatic Species\) 2015-10-28.pdf](#)

Commenter 111 cont.

Summary of Comments on MarcusLarson_Commenter111i-m_Email4.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/19/2015 9:03:31 AM -06'00'
Commenter 111 cont.

Author: Date: Indeterminate

Dear Project Manager,

Attached are comments pertaining to "Aquatic Species" associated with the Fargo Moorhead Flood Risk Management Project.

Thank you for considering my comments.

Respectfully submitted,

Marcus Larson
513 7th St
Hickson, ND 58047
701-588-4412 home
701-893-6975 cell

October 28, 2015

Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road
St. Paul, Minnesota, 55155-4025

RE: Fargo Moorhead Flood Risk Management Project DEIS

Subject: Aquatic Species

The MN DNR Draft EIS discusses migration, fish passage and biologic connectivity, however, it does not appear to explore potential interruptions and threats to aquatic species spawning during project operation and non-point pollutants.

The MN DNR - Red River of the North Fisheries Management Plan (*see attachment*) indicates that the objectives of Reach 1 and Reach 2 of the Red River of the North are to effectively manage Channel Catfish and establish a self sustaining, reproducing population for Lake Sturgeon, Walleye, Sauger and Northern Pike.

Operation of a Class 1 High Hazard Dam associated with the Fargo Moorhead Flood Risk Management Project could disrupt spawning in the staging and storage area and along the diversion channel, relocating spawn activities for all aquatic species into areas outside the regular river channel and leave those aquatic species stranded without biologic connectivity during drawn down. This could lead to population fluctuation, collapse and/or diversity imbalances in reaches of the river system that are affected by project operation.

It does not appear that bacterial transfer of sediments, pollutants and other toxin transfer have been addressed in the MN DNR Draft EIS, which could also exert unfavorable influence on aquatic species.

The staging and storage area upstream of the Class 1 High Hazard Dam could lead to elevated levels of non-point pollutants and depending on project operation and undetermined draw-down periods, lead to cross contamination of invasive species between river systems within the proposed project area.

Sincerely,



Marcus E. Larson
513 7th St
Hickson, ND 58047
701-588-4412

Page: 2

Author: Medopera Subject: Highlight Date: 4/5/2016 12:15:19 PM
Comment ID: 111j
Topic: Fish Passage and Biological Connectivity, Fish Impacts

Author: Medopera Subject: Highlight Date: 4/5/2016 12:15:54 PM
Comment ID: 111k
Topic: Fish Passage and Biological Connectivity, Water Quality Impacts on Aquatic Species

Author: Medopera Subject: Highlight Date: 4/5/2016 12:16:56 PM
Comment ID: 111m
Topic: Invasive Species, Cross Contamination of Invasive Species

Author: Medopera Subject: Highlight Date: 4/5/2016 12:16:07 PM
Comment ID: 111l
Topic: Potential Environmental Hazards, Non-point Pollutants

Red River of the North Fisheries Management Plan



Page: 3

Author: Medopera Subject: Sticky Note Date: 11/19/2015 9:18:03 AM -06'00'
Comment ID: 111k cont. - supporting document



Minnesota Department of Natural Resources
North Dakota Game and Fish Department
Manitoba Water Stewardship
South Dakota Department of Game, Fish and Parks

April 2008 - 2012

I. Red River of the North Description

The hydrologic headwaters of Red River of the North (Red River) originate in the upper portions of the Otter Tail River watershed. Red River of the North, by name, begins at the confluence of the Bois de Sioux and Otter Tail rivers and flows northward approximately 545 miles through the bed of glacial Lake Agassiz where it empties into Lake Winnipeg (Figure 1). The upstream 400 miles of Red River forms the Minnesota-North Dakota border and the downstream 145 miles flow through southern Manitoba, Canada.

Red River has a watershed area of approximately 45,000 square miles excluding the Assiniboine River basin, which joins Red River at Winnipeg. Twenty-one primary subwatersheds located in North Dakota, Minnesota, and Manitoba empty into Red River (Figure 1). Approximately 46.6% of the Red River watershed (21,000 mi²) lies in North Dakota, 38.9% (17,500 mi²) in Minnesota, 12.7% (5,700 mi²) in Manitoba and 1.8% (810 mi²) in South Dakota (Eddy et al. 1972). Land use throughout the basin is dominated by agricultural practices.

Red River is a highly sinuous, low gradient warmwater river with an extensive floodplain. Stream sinuosity through the U.S. portion of Red River averages 2.0, ranging from 1.6 to 2.6 through the different segments. Stream gradient varies from 0.2 to 1.3 ft/mile (Renard et al. 1986). The highest gradient segment (1.3 ft/mi) is found between river mile (RM) 398 and RM380 just downstream from the former dam site at Wahpeton, ND/Breckenridge, MN (Figure 2). The next highest gradient segment (gradient = 0.9 ft/mi) is located from RM226 to RM181 between the confluences with Wild Rice River, Minnesota, and Sand Hill River, MN. Eight dams have been built on the mainstem of Red River in the U.S. and these reduce the gradient through many segments. For instance, the construction of the Midtown and North dams in Fargo, ND, reduced the stream gradient through that stretch of river from its original 1.8 ft/mile to the present 0.2 ft/mile. As would be expected, the higher gradient segments contain the most riffles. Renard et al. (1986) reported the segment from RM226 to RM181 contained 15 individual riffles and the segment from RM398 to RM380 contained 4 riffles. Red River averages approximately 150 feet wide in the upstream segments and approximately 250 feet wide in the lower segments. Water depths reach a maximum of approximately 30 feet.

Mean annual flow for Red River at Wahpeton, ND, is 657 cubic feet per second (cfs) and increases to 4,514 cfs at Drayton, ND (USGS), and to approximately 8,400 cfs at Lake Winnipeg (Aadland et al. 2005). The majority of Red River's annual flow comes from the eastern tributaries as a result of regional patterns of precipitation, evapotranspiration, soils, and topography (Stoner et al. 1993). Most runoff occurs in spring and early summer as a result of rains falling on melting snow or heavy rains falling on saturated soils.

Five of the eight dams on the U.S. segment of mainstem Red River have been converted into rock-arch rapids in order to allow for fish passage, remove erosive hydraulic currents and reduce public safety hazards (Figure 2). The three remaining, unmodified dams are located near the towns of Christine, Hickson and Drayton, ND. One additional dam lies on the Canadian segment of mainstem Red River at Lockport, Manitoba.

Red River of the North
Fisheries Management Plan

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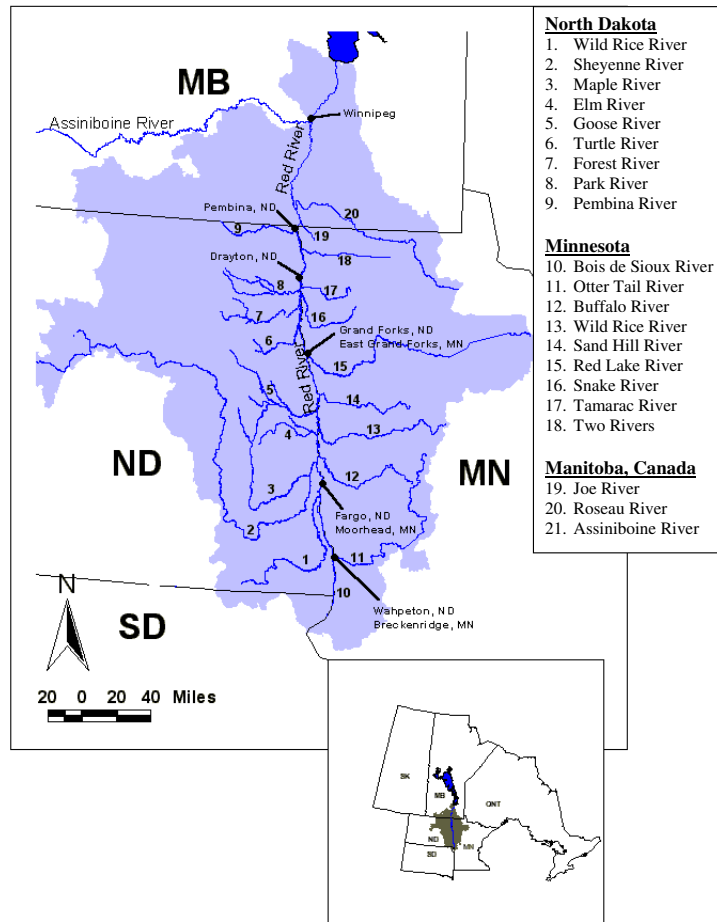


Figure 1. Primary rivers and streams of the Red River basin.

Red River is a warm water stream with temperatures that regularly reach into the low 80s°F in July and August, and ices over in the winter (USGS real-time gage station data). Red River is known for its high concentration of suspended solids, which results primarily from fine clay and silt sediments from the glacial lake plain. Median concentrations of total suspended solids during open water periods are noticeably higher downstream from the tributary confluences of Sheyenne River (ND), Buffalo River (MN) and Wild Rice River (MN) compared to upstream (Paakh et al. 2006). Suspended sediment contributions from tributary streams are likely a factor. The two Minnesota tributary streams that drain into Red River upstream from these confluences, Bois de Sioux River and Otter Tail River, have lower median suspended sediment concentrations than any of the other Minnesota tributary streams (Paakh et al. 2006). The states of North Dakota and Minnesota list Red River, along with many of the tributary streams, as impaired waters due to sediment; i.e., water quality is not sufficient to meet State designated uses

(<http://www.pca.state.mn.us/water/tmdl/tmdl-303dlist.html>)

(http://www.health.state.nd.us/WQ/SW/Z2_TMDL/TMDL_Lists/B_TMDL_List.htm).

Primary sediment sources include stream channel erosion and agricultural runoff resulting from changes in vegetative land cover types and alterations to the hydrology of the watershed.

Dissolved oxygen (DO) levels in Red River mainstem generally stay above 5 mg/l. However, periodic dips in DO are known to have occurred. The Minnesota Pollution Control Agency (MPCA) reported DO levels on Red River in Fargo reached a low of 0.40 mg/l in August 2003 and the USGS gage station in Fargo documented DO levels below 4.0 mg/l on July 25 and 26, 2006 (MPCA 2007 *draft*). Each of these events coincided with a documented fish kill in the area. Many tributary stream segments are listed as impaired due to low dissolved oxygen levels (MPCA 2008).

II. Fisheries Management

Early state and provincial fishery management activities on Red River were given little emphasis because the dominant fishery was for channel catfish, rather than the more popular walleye or northern pike. Prior to 1954, both Minnesota's and North Dakota's inland fishing regulations also applied to Red River at their common boundary. In 1954, both North Dakota and Minnesota had regulations that closed Red River to spring angling for game fish, but other fishing regulations differed between the two states.

In the early 1980's, biological surveys were conducted to document the river's fish populations and aquatic fauna. Some of this work was done in response to the proposed Garrison Diversion project, which would have delivered Missouri River water from Lake Sakakawea to Red River. Biological surveys were conducted by Manitoba, the Minnesota Department of Natural Resources, the University of North Dakota at Grand Forks, the North Dakota Game and Fish Department, and other governmental entities.

Lysack (1986) conducted a recreational user survey on a ten-mile segment of Red River above Lake Winnipeg and found that an estimated 7,920 lbs of channel catfish were harvested from the study area with 90% of the harvested channel catfish being larger than 30 inches. It was felt that there was the possibility for over harvest of large channel catfish from that region.

In 1988, Minnesota, North Dakota, South Dakota and the Province of Manitoba convened a catfish coordination meeting. The resulting working group named itself the International Red River Fisheries Management Steering Committee in 1990. The group's primary focus was to provide protection for Red River's channel catfish population from over harvest and to coordinate assessment work in the basin. To that end, North Dakota and Minnesota enacted regulations in 1990 that restricted angler harvest of channel catfish to five fish in possession, only one of which could be over 24 inches. In 1992, Manitoba adopted a no harvest regulation for channel catfish 24 inches or larger for Red River.

In 1998-2000, North Dakota regulations included a continuously open game fish season on Red River, while Minnesota retained its closure to the taking of game fish from March 1 through the first Friday in May. The North Dakota daily limits were: three northern pike; a combined total of five walleye, sauger or saugeye; a combined total of three bass, no limit on yellow perch, one muskellunge, and no protection for lake sturgeon. The Minnesota daily and possession limits were: three northern pike, a combined total of six walleye or sauger, six bass, 100 yellow perch, one muskellunge and no open season for lake sturgeon.

In 2000, Minnesota and North Dakota both established a conservation season (CS) for walleye, sauger, and northern pike from March 1 to the first Friday in May. During the CS, more restrictive regulations were in place to protect these species during a time of high vulnerability and potentially high fishing pressure. During most of the year the walleye and sauger limit was 5 (combined), but during the CS the limit was 3 including only 2 walleye less than 18"; all walleye or sauger from 18-28" were to be immediately released; and only 1 walleye could be over 28". The year round northern pike limit was 3 (no size restriction) except during the CS when no pike over 27" were allowed to be harvested. The channel catfish limit was 5 (only 1 over 24"); largemouth/smallmouth bass limit was 3, yellow perch limit was 50, the muskellunge limit was 1 with a minimum length limit of 40", and there was no open season for lake sturgeon.

The conservation season was eliminated in 2004. Currently, there is a continuous fishing season on the Minnesota/ North Dakota segment of Red River. South Dakota has seasonal closures for walleye, sauger, northern pike, smallmouth bass and largemouth bass and Manitoba has a general spring season closure. Angling for lake sturgeon is continuously closed on all segments of Red River in both the U.S. and Canada. Daily bag and possession limits for fish species other than lake sturgeon vary between Minnesota, North Dakota, South Dakota and Manitoba depending on which waters are being fished.

In 2002, the MN DNR began implementing a 20-year plan to restore the once abundant lake sturgeon population(s) in the Red River basin and this program continues (MN DNR 2002). Lake sturgeon fry and fingerlings are stocked into rivers and lakes as part of a comprehensive program to re-establish lake sturgeon populations in their native ranges. The goal of the program is to re-establish a sexually mature, naturally reproducing population over the next 20 to 30 years.

Various investigators have studied various aspects of Red River fisheries since 1895 (Eddy et al. 1972) including the MN DNR, ND G&F, Manitoba Fisheries and different Universities. These studies have included channel catfish habitat use and availability, spawning patterns of several

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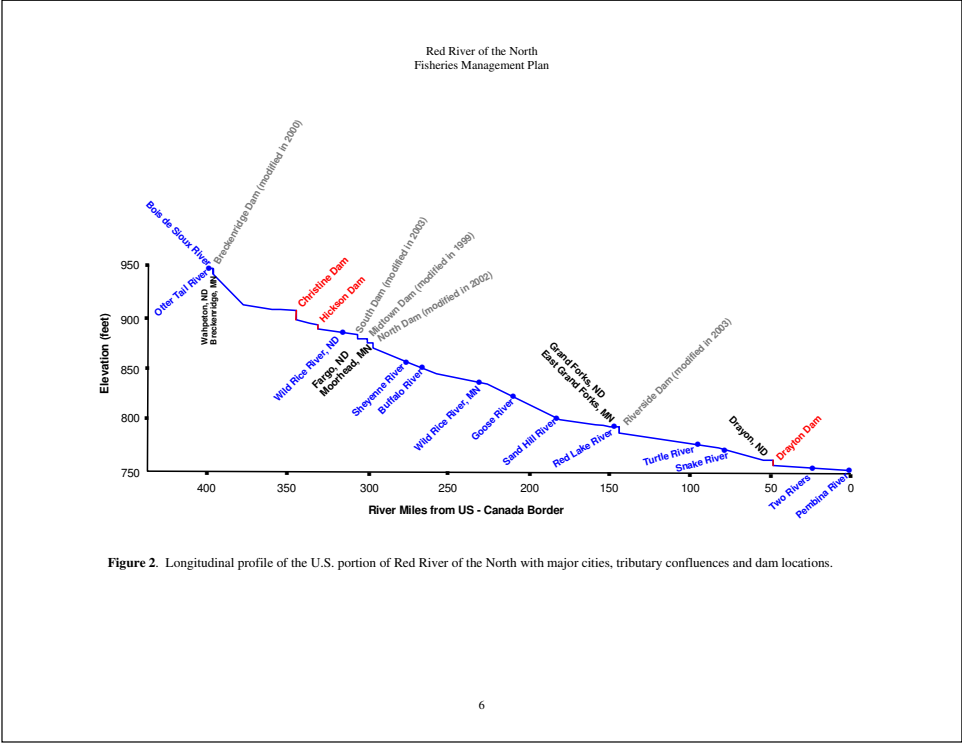
fish species, angler use surveys, fish population assessments, channel catfish population estimates, water chemistry monitoring, disease and parasite monitoring, and fish flesh contaminant analyses.

Several angler use surveys have been conducted on Red River (Lysack 1986; Topp 1996a; Schlueter 1998; Brooks and Schlueter 1999; Brooks and Schlueter 2002; Topp 2003, Brooks and Schlueter 2005). Two of these surveys (Topp 1996a and 2003) used identical methods covering the same time period, May 1 through September 30 and found that total estimated angler effort (hours) dropped 32% between 1994 (159,723 hrs) and 2001 (108,182 hours). Similarly, the estimated number of catfish harvested dropped 26% from 15,787 fish in 1994 to 11,747 fish in 2001. Alternately, the weight of channel catfish harvested increased 51% from 28,384 lbs in 1994 to 42,981 lbs in 2001.

The Red River Steering Committee intends to continue conducting fish population assessments once every five years. Angler use surveys will also be conducted once every five years in conjunction with the fish population assessment. Information from all past and future studies will be used to best manage the Red River of the North's recreational fishery.

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III. Goals and Objectives For Red River of the North

Goals

- Provide a high quality, sustainable channel catfish fishery and secondary angling opportunities for walleye, sauger, and northern pike
- Re-establish a self-sustaining population of lake sturgeon in the Red River basin.
- Reconnect Red River and its tributaries by removing or modifying dams in order to restore uninterrupted fish migration pathways.
- Protect and/or rehabilitate within-channel, riparian, and upland habitat on Red River and in its watershed in order to sustain or enhance components necessary for a healthy and stable riverine ecosystem.
- Provide viable, native fish populations through habitat protection and enhancement, fisheries management, and resource monitoring.
- Provide public access to Red River and its tributaries for fishing, boating, canoeing, kayaking, and other river related activities.
- Expand educational opportunities and promote appreciation for the Red River basin ecosystem.
- Prevent invasive species from being introduced, established or spread within waters of the Red River basin.

Fish Population Objectives

Only, three coordinated fish population surveys have been conducted on Red River (Henry 1996, Huberty 1996, Topp 1996b, Martini and Stewig 2002, Henry 2007). There is limited fish population data to identify trends in stock size, which makes it difficult to set specific fish population objectives. Dam modifications intended to benefit fish populations, highly variable net and line catch rates, highly variable stream flows between sample years, and variations in sample periods (months) complicates data analyses and interpretation used to establish objectives based on population trend data. Regardless, it is important to establish population and habitat objectives to guide management efforts and set a benchmark by which management success can be evaluated. The following objectives were based on information obtained through the three aforementioned fish surveys. These objectives will be refined in the future as knowledge of fish populations in Red River of the North increases.

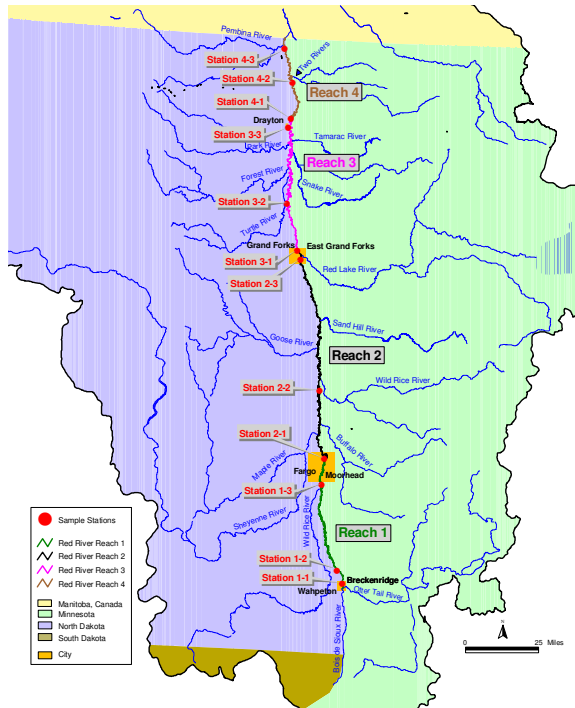
The primary fishery management species on Red River are channel catfish (*Ictalurus punctatus*) and lake sturgeon (*Acipenser fulvescens*). Secondary management species include: walleye (*Sander vitreum*), northern pike (*Esox lucius*), and sauger (*Sander canadensis*). For fishery management purposes the U.S. portion of Red River was divided into four segments, referred to as Reaches (Figure 3).

Major assumptions when setting the following fish population objectives were that fish abundance and size structure within each individual fish population for which objectives are listed had characteristics reflective of a healthy, reproducing population during the times of sampling. Trap net and trotline catch rate objectives values were determined by simple averaging of the CPUE across the three existing sample years (1995, 2000, and 2005; Table 1). Proportional stock density (PSD) and relative stock density of fishes ≥ 24 inches (RSD₂₄) were calculated from trap net catch data using a stock size of 11 inches and a quality size of 16 inches,

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and objective values were determined by simple averaging across sample years (Table 2). Percentage of fish ≥ 24 inches and ≥ 30 inches was calculated from trotline data and objective values were determined by simple averaging across sample years (Tables 3 and 4). Survey design and data collection methods were developed to target channel catfish. Efforts are currently underway to incorporate strategies to effectively evaluate walleye, sauger, northern pike and lake sturgeon populations; numerical objectives will be developed for those species in the future.



- Reach 1. Wahpeton/Breckenridge to Fargo/Moorhead, U.S. River Mile 400 to 300.
- Reach 2. Fargo/Moorhead to Grand Forks/East Grand Forks, U.S. River Mile 300-145.
- Reach 3. Grand Forks/East Grand Forks to Drayton, U.S. River Mile 145-50.
- Reach 4. Drayton to Minnesota/Manitoba border, U.S. River Mile 50-0.

Figure 3. Reach delineations for Red River of the North including 2005 sample site locations.

Reach 1 Objectives

- Channel catfish
 - Trap net catch rate (CPUE) of 63.0 fish/lift
 - Trap net PSD of 50% and an RSD₂₄ of 5%
 - Trotline catch rate of 4.5 fish/line set
 - 15% of catfish caught on trotlines are ≥ 24 inches and 10% are ≥ 30 inches.
- Lake sturgeon
 - Establish a self-sustaining, reproducing population
- Walleye
 - Maintain a self-sustaining, reproducing population
- Sauger
 - Maintain a self-sustaining, reproducing population
- Northern Pike
 - Maintain a self-sustaining, reproducing population.

Reach 2 Objectives

- Channel catfish
 - Trap net catch rate (CPUE) of 35 fish/lift
 - Trap net PSD of 55% and an RSD₂₄ of 15%
 - Trotline catch rate of 3.0 fish/line set
 - 20% of catfish caught on trotlines are ≥ 24 inches and 15% are ≥ 30 inches.
- Lake sturgeon
 - Establish a self-sustaining, reproducing population
- Walleye
 - Maintain a self-sustaining, reproducing population
- Sauger
 - Maintain a self-sustaining, reproducing population
- Northern Pike
 - Maintain a self-sustaining, reproducing population

Reach 3 Objectives

- Channel catfish
 - Trap net catch rate of 3.0 fish/lift
 - Trap net PSD of 40% and an RSD₂₄ of 25%
 - Trotline catch rate of 4.5 fish/line set
 - 40% of catfish caught on trotlines are ≥ 24 inches and 4% are ≥ 30 inches.
- Lake sturgeon
 - Establish a self-sustaining, reproducing population
- Walleye
 - Maintain a self-sustaining, reproducing population
- Sauger
 - Maintain a self-sustaining, reproducing population
- Northern Pike
 - Maintain a self-sustaining, reproducing population

Reach 4 Objectives

- Channel catfish
 - Trap net catch rate of 2.0 fish/lift
 - Trap net PSD of 30% and an RSD₂₄ of 10%
 - Trotline catch rate of 4.0 fish/line set
 - 45% of catfish caught on trotlines are ≥ 24 inches and 1% ≥ 30 inches
- Lake sturgeon
 - Establish a self-sustaining reproducing population
- Walleye
 - Maintain a self-sustaining, reproducing population
- Sauger
 - Maintain a self-sustaining, reproducing population
- Northern Pike
 - Maintain a self-sustaining, reproducing population

Manitoba segment(s): U.S./Manitoba border to Lake Winnipeg.
Manitoba will submit management objectives at a future date.

Table 1. Trap net catch rates (CPUE; fish/net set) for channel catfish during coordinated sampling events on Red River of the North.

Reach		1995	2000	2005	Average
1	CPUE	80.2	22.8	86.9	63.3
	(No. of net sets)	(31)	(29)	(30)	
2	CPUE	52.2	7.5	50.2	36.6
	(No. of net sets)	(56)	(30)	(30)	
3	CPUE	0.3	2.8	5.7	2.9
	(No. of net sets)	(27)	(27)	(29)	
4	CPUE	0.2	3.0	2.6	1.9
	(No. of net sets)	(30)	(38)	(30)	

Table 2. PSD and RSD₂₄ values for channel catfish sampled using trap nets during coordinated sampling events on Red River of the North. Values were rounded to the nearest percentage.

Reach		1995	2000	2005	Average
1	PSD	51	65	39	52
	RSD ₂₄	2	5	10	6
2	PSD	51	62	56	56
	RSD ₂₄	6	15	30	17
3	PSD	*	71	55	42
	RSD ₂₄	*	20	28	24
4	PSD	*	23	37	30
	RSD ₂₄	*	9	17	13

* Sample size was insufficient for calculating PSDs or RSDs.

Table 3. Trotline catch rates (CPUE; fish/line set) for channel catfish during coordinated sampling events on Red River of the North.

Reach		1995	2000	2005	Average
1	CPUE	4.0	6.0	3.4	4.5
	(No. of line sets)	(24)	(18)	(18)	
2	CPUE	5.1	2.6	1.5	3.1
	(No. of line sets)	(9)	(18)	(17)	
3	CPUE	3.8	7.5	2.9	4.7
	(No. of line sets)	(44)	(35)	(27)	
4	CPUE	2.8	4.3	4.1	3.7
	(No. of line sets)	(48)	(33)	(26)	

Table 4. Percentage of all channel catfish greater or equal to 24 and 30 inches that were captured using trotlines during coordinated sampling events on Red River of the North.

Reach		1995	2000	2005	Average
1	≥24 in	2.1	16.5	27.9	15.5
	≥30 in	3.7	6.3	20.8	10.3
2	≥24 in	8.7	10.6	48.0	22.4
	≥30 in	5.2	2.3	41.0	16.2
3	≥24 in	16.1	28.8	78.2	41.0
	≥30 in	2.2	0.0	8.0	3.4
4	≥24 in	16.3	42.3	77.2	45.3
	≥30 in	0	0	3.3	1.1

Habitat Objectives

Information on Red River instream habitat is generally sparse. Selected information regarding macrohabitat in Red River (e.g., gradient, channel sinuosity, hydrologic regime, water quality) is available. Tributary streams have a major impact on fish populations and habitat conditions within Red River, so activities designed to help achieve Red River objectives must include tributary streams. The following habitat objectives apply to all Reaches and segments of Red River and its tributaries.

Objective 1: Establish and maintain stable stream channels.

A stable stream channel is one that has the ability to transport the sediment and flows produced by its watershed in such a manner that the stream maintains a consistent dimension, pattern and profile over time without either aggrading nor degrading (Rosgen 1996). Stable stream channels provide the best potential for providing high quality instream habitat conditions and, because they are in balance with their sediment supply, minimize the potential for problems associated with excessive sediment loading.

Objective 2: Define, identify, improve and protect high quality channel catfish, lake sturgeon, walleye, and northern pike spawning and rearing habitats within appropriate Red River stream segments and tributary streams.

Objective 3: Provide uninterrupted fish passage/river connectivity throughout Red River and its tributary streams.

Objective 4: Provide heterogeneous and complex physical habitat components consistent with the physiographic setting and important to aquatic species in the Red River basin.

Habitat components include: suitable spawning and rearing substrates, cover structure such as boulders or large woody materials, a mixture of mesohabitats (riffle, pools and runs), and riparian vegetation. Habitat components for each species of interest should be guided by habitat suitability criteria developed by Aadland and Kuitunen (2006).

Objective 5: Provide water of sufficient quality to sustain healthy aquatic communities.

Although it is important that all constituents meet water quality standards as defined by the individual State or Province, this objective focuses on the two that most commonly exceed water quality standards in the Red River basin.

- Dissolved oxygen levels should be maintained at or above 5 mg/l
- Turbidity levels should be maintained below 25 NTU (nephelometric turbidity units, a measure of suspended particles in water)

Objective 6: Define and re-establish a more natural flow regime.

Five characteristics of flow regime influence river ecosystems: magnitude, frequency, duration, timing, and rate of change. Alterations in any one of these characteristics can directly impact habitat and aquatic biota. River discharge varies on time scales ranging from hours to years to even longer and it is this variability, absent human disturbance, that defines a stream's natural flow regime. The naturally variable flow regime creates and maintains instream physical habitat. Aquatic species within a river or stream have evolved with the natural flow regime and depend on the predictable seasonal variation in discharge (Bunn and Arthington 2002). The natural flow regime is a major determinant of instream physical habitat, which, in turn, is a determinant of the biotic composition within a stream.

It is widely known that natural flow regimes of Red River of the North and its tributaries have been substantially altered by a number of factors including, but not limited to: ditching, channelization, land use cover changes, and vegetative cover changes. Alterations to the flow regimes have destabilized stream channels and negatively impacted fish populations and aquatic communities. Working to re-establish more natural flow regimes will help to stabilize stream channels, increase the quality of instream habitat, and improve water quality leading to healthier aquatic communities and individual fish stocks.

Objective 7: Establish biologically based protected minimum flows that support a healthy, functioning biological community.

IV. Operational Plan

Fish Population and Angler Surveys and Assessments

- Fish population Assessments
Sample fish populations every 5 years using standardized gear and sampling period(s). The next assessment is planned to occur in 2010. Sampling gear and timing for assessments will include trap nets (3 ft by 6 ft, 0.75 in. mesh) and trotlines (45 m long with 25 drop lines using #4 hooks) in June, and boat electrofishing in the spring and/or fall.
- Recreational use surveys
North Dakota and Minnesota will conduct angler use surveys once every five years, in conjunction with the fish population assessment, to estimate angler pressure and harvest by species for the mainstem Red River. The next angler use survey is scheduled for 2010 using the standard survey design as outline by Topp (2001).
- Fishery assessments, angler use surveys, and other relevant information will be evaluated so that necessary management adjustments can be made to ensure the sustainability of the fisheries resources.
- Methods to adequately sample and evaluate walleye, sauger, northern pike and lake sturgeon populations will be developed and implemented.
- Current survey design and analysis techniques used to evaluate the status of fish populations in Red River will be reviewed and updated based on the latest and best available fisheries knowledge and techniques.

Habitat

The overall approach to habitat management in Red River is to maintain, restore, enhance and protect riverine and upland habitats and their functions. The majority of factors affecting the aquatic resources in the mainstem of Red River operate at the watershed scale and managing the river must include a watershed scale approach. The two most significant and widespread causes of habitat degradation within the Red River basin are alterations to the hydrologic regime and increased sediment loading. Primary factors responsible for these include ditching, channelization, agricultural and urban land use practices, and changes in vegetative land cover types. Further, several fish populations, including important species such as channel catfish, lake sturgeon, walleye and northern pike, depend on tributary streams to provide habitat that is not available in the mainstem Red River during critical life history stages. It is generally known that the highest quality spawning habitat available for species that require swifter currents and larger substrate particles, such as walleye and lake sturgeon, is found primarily in the beach ridge areas and fish migrate up tributary streams from mainstem Red River to use them. Therefore, strategies to protect and improve fish habitat must include tributary streams.

Along with watershed management, activities intended to benefit fish populations in Red River should include instream habitat management. Rabeni (1993) suggests that the most efficient approach to improving habitat conditions for warmwater fish communities is to increase instream habitat diversity. Fish species diversity is often correlated with habitat diversity (Orth and White 1993). Rabeni (1993) also suggests that, given the limited time and money often available to fisheries managers, most instream habitat diversity objectives within warmwater streams can be

adequately met by increasing the amount and variety of available depths and physical structure types. Activities to improve Red River instream habitat conditions include:

- Promote watershed and floodplain uses that are compatible with a healthy river systems
- Restore, enhance or protect wetlands along Red River and its tributaries
- Restore, enhance or protect functional riparian habitat and streamside buffers along Red River and its tributaries
- Establish, restore and maintain critical flow regimes
- Restore the natural functions of altered stream channels using natural channel design principles
- Work with entities involved with flood damage reduction strategies to incorporate stream protection and enhancement measures in project design and operation,
- Provide sufficient quantities of instream structure
 - Protect and/or enhance instream structure, such as complex woody material (e.g., snags, fallen trees, root systems) and boulders
 - Maintain, restore, enhance and protect functional riparian areas
 - Instream snag removal and floodplain tree removal projects should be scrutinized and discouraged when proposed solely for aesthetics. Snagging projects shall be required to follow the stream obstruction removal guidelines set forth by the American Fisheries Society (AFS 1983).
 - Add cover materials to pool and backwater areas
- Reconnect river habitats and energy pathways by removing or modifying all dams on the main stem and high priority dams on tributary- streams to address public safety concerns, erosion and to promote fish passage. Continue to develop partnerships with private, local, state, and federal entities to promote the removal or modification of dams.
- Identify, protect and enhance critical fish habitat or areas of concern by acquiring land as Aquatic Management Areas, and by funding and supporting fish habitat improvement projects.
- Participate on the International Red River Fisheries Steering Committee, other interstate, and interagency groups or committees focused on natural resource conservation, with the intent of coordinating management strategies.
- Foster relationships with local watershed districts, communities, interest groups, landowners, and concerned citizens to discuss natural resource issues, promote sound land management practices, and implement projects that meet mutual goals.
- Support and participate in educational programs to promote a better understanding of natural stream functions and processes, habitat conservation, and resource management.

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Stocking

- Stock lake sturgeon fry and fingerlings in the Red River basin to re-establish the population as per the lake sturgeon restoration plan (MN DNR 2002). Lake sturgeon will be stocked through the year 2022 as outlined in the following table (MN DNR 2005):

<u>Stocking location</u>	<u>Life State</u>	<u>Number</u>	<u>Frequency</u>	<u>Jurisdiction</u>
Otter Tail Lake	Fingerling	4,000	Annual	MN DNR
White Earth Lake	Fingerling	8,000	Annual	White Earth Band
Round Lake	Fingerling	5,000	Annual	White Earth Band
Big Detroit Lake	Fingerling	2,000	Annual	MN DNR
Otter Tail River	Fingerling	1,000	Annual	MN DNR
Buffalo River	Fingerling	1,000	Annual	MN DNR
Red Lake River	Fry	100,000	Annual	MN DNR
Roseau River	Fry	100,000	Annual	MN DNR

- With the exception of lake sturgeon, no stocking of additional fish species is recommended. Future stocking considerations will be carried out only after a review has been conducted by the state proposing the introduction. The review would include the proposing state's protocol for species introductions, use of the American Fisheries Society's policy #15 for species introductions, and consultation with other state and provincial agencies.

Regulations

- Angling regulations will be standardized where possible to protect the fisheries resources, make regulations easier for anglers to understand, and help enforcement efforts. Angler compliance with regulations will be fostered through a pro-active information campaign (e.g., news releases, pamphlets, signs) and effective enforcement.

Angler Access

- Adopt and implement the Red River of the North canoe and boating route master plan (River Keepers 2002).
- Update and reprint the "Fishing on the Red River of the North" brochure as needed.

Lake Sturgeon

- Implement the lake sturgeon restoration plan (MN DNR 2002).

Invasive Species

- Implement a pro-active prevention program to build awareness of invasive species and the pathways they use for introduction and spread.
- Implement agency plans to address invasive species introductions and spread, and control environmental impacts.

V. Supplemental Information

Lake Sturgeon Restoration

Historical accounts suggest that lake sturgeon were abundant in the Red River basin until the late 1800's (Gough 1988-1992). Lake sturgeon populations in the Red River basin were decimated by over exploitation, construction of dams, and declines in water quality. By the mid-1900's lake sturgeon had effectively been extirpated from the Red River basin. Although there are occasional, unconfirmed reports of lake sturgeon being caught in Red River, there is little chance that this population can recover on its own.

The long-range goal for lake sturgeon restoration in the Red River basin is to establish a self-sustaining population over the next 20 to 30 years (MN DNR 2002). Restoration activities will include removal or modification of dams so that the maturing lake sturgeon population will be able to access historic spawning areas and reproduce naturally, sturgeon stocking, protective regulations and water quality improvement.

A major component of the lake sturgeon restoration plan is the reintroduction of lake sturgeon at selected sites in the Red River basin using fry and fingerling stocking. Successful reintroduction efforts may hinge upon stocking a young enough life stage so that imprinting to the receiving water is maximized. Lake sturgeon grow slowly and mature at a late age, so stocking a minimum of 20 lake sturgeon year classes is recommended.

Other sturgeon restoration activities include a public information/outreach program to inform the public of our restoration plan, a no harvest regulation to remain in effect indefinitely on Red River and its tributaries, and general water quality improvement and/or protection throughout the Red River basin.

A complete description of Minnesota's plan for lake sturgeon restoration in the Red River basin can be found in MN DNR (2002) and the current stocking regime can be found in MN DNR (2005).

Dam Removal and Stream Restoration

The flow in Red River is directly affected by the presence of eight low head dams in the U.S. The purpose of these dams is to store municipal water supplies, control river levels, or both. Approximately 160 dams on tributary waters in Minnesota alone indirectly affect flow, with numerous flood control projects presently proposed. Primary purposes of tributary dams include floodwater retention, lake level maintenance, water supply, waterfowl production, or hydropower.

Dams are often in disrepair and serve no existing discernable function. Many of the dams in the Red River basin are barriers to fish migration and pose a drowning threat to the public. The MN DNR, ND G&F and other project partners have worked to remove or modify dams to allow for fish migration and address public safety concerns. Currently, five of the eight main stem dams on U.S. segment of Red River have been modified: Fargo Midtown Dam (Fargo, ND) was modified in 1999; Kidder Dam (Wahpeton, ND) was modified in 2000; Riverside Dam (Grand Forks, ND) was modified in 2002; Fargo North Dam (Fargo, ND) was modified in 2002, and

Fargo South Dam (Fargo, ND) was modified in 2003. Plans to modify the three remaining dams on the U.S. portion of mainstem Red River (Christine Dam near Christine, ND, Hickson Dam near Hickson, ND, and Drayton Dam near Drayton, ND) are progressing.

Numerous dam removal/modification projects have been completed on Red River tributary streams including, but not limited to: the Roseau City dam modification (Roseau River) and Old Mill State Park dam removal (Middle River in 2001, the Buffalo River State Park dam (Buffalo River) removal in 2002, the diversion dam fish by-pass project (Fergus Falls, MN Otter Tail River) in 2002, the Lions Park Club Dam modification (Frazee MN; Otter Tail River) in 2003, the East Grand Forks dam modification (Red Lake River) in 2003, the Crookston Dam modification (Red Lake River, Crookston, MN) in 2005, the Heiberg dam modification (Wild Rice River, Twin Valley, MN) in 2006, and the Argyle Dam removal (Middle River, Argyle, MN) in 2007, and the Lake Breckenridge dam (Otter Tail River, Breckenridge, MN) in 2007. These projects have resulted in the reconnection of hundreds of miles of stream habitat across the Red River basin and the potential exists to reconnect hundreds more through continued efforts.

Water Quality

Major issues concerning Red River include flood control, drought, irrigation, sedimentation, pollution (industrial, agricultural and municipal), recreation enhancement, municipal and private water appropriations, and inter-basin water transfer. Several communities are established on the banks of Red River; the three largest include the metropolitan areas of Fargo-Moorhead and Grand Forks-East Grand Forks in the U.S. and Winnipeg in Manitoba.

The Red River watershed lies in an area of intense agricultural land use with extensive ditch and transportation systems. Ditches are steeply sloped and many have unstable banks and lack adequate, effective vegetative streamside buffers. The majority of the wetlands in the Red River basin have been drained and stream channelization is common. Native vegetation has been replaced with intensive row crop agriculture. This situation results in increased water temperatures, decreased dissolved oxygen concentrations, and heavy sediment loads being carried to Red River causing increased sedimentation and turbidity. Increased sedimentation increases stress and mortality to aquatic organisms and directly effects spawning, nursery and other important fish habitat by covering substrates, filling interstitial spaces, and reducing pool depths.

Extreme river turbidity levels resulting from elevated sediment inputs indicates the need for increased erosion control on all lands within the Red River watershed, especially those under frequent tillage. Methods to improve water quality (e.g., reduce turbidity, PCBs and fecal coliform levels) in Red River are: (1) restore functional, vegetative streamside buffers, (2) improve soil conservation practices on watershed lands, (3) protect and restore wetlands throughout the watershed, (4) stabilize stream banks and restore the natural functions of altered stream channels, and (5) improve municipal and industrial point source discharges.

Fish Stocking

Fish stocking can be done for a variety of reasons including: to increase population size, to maintain a population at the current level, to introduce a new species, to re-establish a species that has been lost from an area, or as a reaction to social concerns.

There should be a clearly defined biological need for any stocking effort occurring in the Red River basin and this should be described in a management plan for the particular species. In all cases, fish stocking should not compromise existing fish populations or create problems for the ecosystem. To minimize risk, stocking efforts should follow protocols established by the state or province conducting the stocking. Any fish stocking into Red River should be done in consultation with the other potentially affected states and province.

Invasive Species

Species that have been introduced, or moved, by humans into an area where they do not naturally occur are called “exotic” or “non-native” species. Non-native species that cause ecological or economic problems are termed “invasive species”. Invasive species can be introduced into waters within the Red River basin through a variety of sources and pose a threat to the Red River ecosystem and its recreational fisheries.

Preventing invasive species from being introduced and established in a system is the most effective strategy against infestation. A pro-active prevention program should be implemented across the Red River watershed to build awareness of invasive species and the pathways they use for introduction and spread. State agencies have plans to address invasive species introductions and spread (Schlueter 2007; MN DNR 2007) and general information and guidelines for preventing invasive species can be found online at:

<http://www.dnr.state.mn.us/invasives/index.html> and at <http://gf.nd.gov/fishing/ans.html>.

Fisheries operations in the Red River basin should follow the guidelines outlined in MN DNR (2007 *draft*).

The next step beyond prevention is early detection and rapid response. Early detection of an invasive species and a quick, coordinated response offers the best chance to control the spread of the invasive species and offers the best chance to minimize ecological and economic impacts. For many aquatic species there is no known selective control, so the problems they cause continue indefinitely. Management directed toward established invasive species focuses primarily on controlling spread and negative impacts.

Recreational Access

Public access to Red River has been identified as an area in need of improvement to facilitate outdoor recreational activities including, but not limited to: angling, canoeing, and boating. In 2001 and 2002, River Keepers, a Fargo-Moorhead based non-profit organization, inventoried recreational use infrastructure (e.g., access sites, dams, road crossings) and developed a detailed master plan (River Keepers 2002) to “...guide [infrastructure] development to maximize sustainable use, encourage safety, and contribute to economic development.” Included in the plan are detailed descriptions of existing and potential boat and canoe access sites, and a strategy for implementing the overall plan. This plan should be used as the primary guide for access development on Red River.

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Red River of the North
Fisheries Management Plan

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Red River of the North Management Plan
Signature Page

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Henry Drewes
Minnesota Department of Natural Resources

4/8/08

Date



Scott Gangl
North Dakota Game and Fish Department

4/9/08


Date



Derek Kroeker
Manitoba Water Stewardship

4/9/08

Date



Mark Ermer
South Dakota Department of Game, Fish and Parks

4/9/08

Date

From: marcus.larson@exhostmail.com
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo Moorhead Flood Risk Management Project DEIS - Bird Strike
Date: Wednesday, October 28, 2015 1:19:57 PM
Attachments: [DNR Comments - Marcus Larson \(Bird Strike\) 2015-10-28.pdf](#)
[Fargo Hector International - FAA Wildlife Strike 1990-2015.xls](#)

Commenter 111 cont.

Summary of Comments on MarcusLarson_Commenter111n_Email5.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/19/2015 9:19:44 AM -06'00'
Commenter 111 cont.

Author: Date: Indeterminate

Author: Date: Indeterminate

Dear Project Manager,

Attached are comments pertaining to "Bird Strike" assessment associated with the Fargo Moorhead Flood Risk Management Project.

Thank you for considering my comments.

Respectfully submitted,

Marcus Larson
513 7th St
Hickson, ND 58047
701-588-4412 home
701-893-6975 cell

October 28, 2015

Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road
St. Paul, Minnesota, 55155-4025

RE: Fargo Moorhead Flood Risk Management Project DEIS

Subject: Bird Strike Assessment

Page: 2

Author: Medopera Subject: Highlight Date: 4/5/2016 12:20:37 PM
Comment ID: 111n
Topic: Wildlife and Wildlife Habitat, Bird Collision

The MN DNR Draft EIS does not contain a "bird strike" assessment for Hector International Airport.

The probability for "bird strikes" along Hector International Airport's southern approach flight path and northern approach flight path could be increased due to an increase of migratory birds being drawn to the proposed manmade lake south of Fargo, North Dakota and a pooled water in and around the Georgetown, MN area north of Fargo Hector International airport.

This places a high concentration of Fargo's southern residential population, 8 schools, hospitals and clinics and several businesses in a "risk zone" of "bird strikes" and aircraft impact crash site debris. There is also risk to residential population, several schools, hospital and clinic along near the northern approach flight path.

The FAA (Federal Aviation Administration) has recorded 203 wildlife strikes from October 1, 1990 to July 27, 2015 associated with Fargo Hector International Airport. (see attached excel .xls file)

A January 18, 2010 Fargo Forum article (see attachment below) indicated a sharp rise in bird strikes on airplanes since 2006. The outdated bird strike count since 2006 of 66 has risen to 194.

According to the FAA:

Q: Do most bird strikes occur while in flight, at takeoff, or landing?

A: About 60% of bird strikes with civil aircraft occur during landing phases of flight (descent, approach and landing roll); 37% occur during take-off run and climb; and the remainder occur during the en-route phase.

Q: At what altitude do most bird strikes occur?

A: About 92% of the bird strikes with commercial civil aircraft in USA occur at or below 3,500 feet AGL (above ground level). From 1990-2013, there were 21 strikes with commercial aircraft at heights from 20,000-31,300 feet AGL.

What will be the effect or statistical probability of migratory species and greater bird strikes as a result of project operation on Fargo's north and south flight path approach.

Sincerely,



Marcus E. Larson
513 7th St
Hickson, ND 58047
701-588-4412



Fargo airport sees rise in bird-plane collisions

By news@inforum.com on Jan 18, 2010 at 12:00 a.m.

Reported bird strikes on airplanes have risen sharply at Fargo's Hector International Airport since 2006.

That reflects greater diligence by pilots in reporting strikes, said Shawn Dobberstein, the airport's executive director.

"I think there's just more being reported. I don't know that there's any more (strikes), at least in our situation, than there had been," he said.

Hector had a total of 107 reported bird strikes at Hector from 1990 through July 2009, according to information from The Associated Press.

Only 12 of the 107 came in 1990 through 1999.

Of the 107, 66 have occurred since 2006.

Hector does what it can to minimize wildlife habitat on airport property in an attempt to limit the number of birds and reduce the possibility that one will hit a plane, he said.

Dobberstein said he's aware of several flights through the years that took off from Hector, struck a bird and then returned to the airport to have the aircraft checked as a precaution.

Reported bird strikes at Hector

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2000 -- 5

2001 -- 0

2002 -- 7

2003 -- 5

2004 -- 5

2006 -- 17

2007 -- 26

2008 -- 18

2009* -- 5

*Through July 2009

The AP also listed reported bird strike totals from 1990 through July 2009 for these area airports:

- Grand Forks International Airport, 105.
- Joe Foss Field (Sioux Falls, S.D.), 69.
- Bismarck Municipal Airport, 63.
- Jamestown (N.D.) Regional Airport, 3.
- Thief River Falls (Minn.) Regional Airport, Minn., 3.
- Crookston (Minn.) Municipal Airport, 2.
- Fergus Falls (Minn.) Municipal Airport, 2.
- Norman County/Ada/Twin Valley (Minn.) Airport, 1.
- Devils Lake (N.D.) Regional Airport, 1.
- Cooperstown (N.D.) Municipal Airport, 1.

Readers can reach Forum reporter Jonathan Knutson at (701) 241-5530



Flight makes emergency landing in Fargo - twice - after bird strike

Fargo, N.D. (AP) · Aug 17, 2009

Transportatio

A Frontier Airlines flight made two safe emergency landings in Fargo within 24 hours, because of separate problems.

Airline spokesman Steve Snyder says the Bombardier Q400 turboprop hit birds on takeoff Sunday afternoon and was forced to turn back.

The plane was repaired overnight and took off again Monday morning. Snyder says it was forced to turn back again when one of the landing gear doors did not close after takeoff.

Both flights were bound for Denver. Snyder says no passengers were injured. The plane can carry 74 people, and was filled to capacity Monday. Snyder was not sure how many people were aboard Sunday.

Information from: WDAY-TV, <http://wday.com>

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INCIDENT DATE	STATE	AIRPORT ID	AIRPORT	OPID	OPERATOR	ATYPE	TYPE_ENG	SPECIES ID	SPECIES
7/27/2015 0:00	ND	KFAR	HECTOR INTERNATIONAL	MIL	MILITARY	C-130	C	UNK	
6/17/2015 0:00	ND	KFAR	HECTOR INTERNATIONAL	SKW	SKYWEST AIRLINES	CRJ100/200	D	J2109	Mallard
5/30/2015 0:00	ND	KFAR	HECTOR INTERNATIONAL	SKW	SKYWEST AIRLINES	CRJ100/200	D	Y1005	Barn swallow
5/8/2015 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		ZT002	Western meadowlark
3/31/2015 0:00	ND	KFAR	HECTOR INTERNATIONAL	BUS	BUSINESS	C-172	A	ZX004	Dark-eyed junco
10/30/2014 0:00	ND	KFAR	HECTOR INTERNATIONAL	CPZ	COMPASS AIRLINES	EMB-170	D	UNKB	Unknown bird
8/31/2014 0:00	ND	KFAR	HECTOR INTERNATIONAL	DAL	DELTA AIR LINES	A-319	D	UNKB	Unknown bird
8/29/2014 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		NE112	Franklin's gull
8/24/2014 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		NE112	Franklin's gull
8/18/2014 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNKC	UNKNOWN COMMERCIAL	UNKNOWN		NE112	Franklin's gull
8/11/2014 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		N5111	Killdeer
8/10/2014 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		N5111	Killdeer
8/8/2014 0:00	ND	KFAR	HECTOR INTERNATIONAL	ENY	ENVOY AIR	EMB-145	D	Y1005	Barn swallow
8/7/2014 0:00	ND	KFAR	HECTOR INTERNATIONAL	BUS	BUSINESS	LEARJET-45	D	UNKBS	Unknown bird - small
8/5/2014 0:00	ND	KFAR	HECTOR INTERNATIONAL	FLG	ENDEAVOR AIR	CRJ900	D	K5114	American kestrel
6/14/2014 0:00	ND	KFAR	HECTOR INTERNATIONAL	SKW	SKYWEST AIRLINES	CRJ100/200	D	ZT002	Western meadowlark
5/30/2014 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		1D12	White-tailed jackrabbit

This page contains no comments

5/22/2014 0:00	ND	KFAR	HECTOR INTERNATIONAL	ENY	ENVOY AIR	EMB-145	D	UNKB	Unknown bird
5/19/2014 0:00	ND	KFAR	HECTOR INTERNATIONAL	SCX	SUN COUNTRY AIRLINES	B-737-800	D	UNKB	Unknown bird
12/13/2013 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		L4302	Gray partridge
10/20/2013 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		NE101	Herring gull
10/12/2013 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		NE112	Franklin's gull
10/6/2013 0:00	ND	KFAR	HECTOR INTERNATIONAL	EGF	AMERICAN EAGLE AIRLINES	EMB-145	D	NE104	Ring-billed gull
10/6/2013 0:00	ND	KFAR	HECTOR INTERNATIONAL	EGF	AMERICAN EAGLE AIRLINES	EMB-145	D	NE112	Franklin's gull
10/5/2013 0:00	ND	KFAR	HECTOR INTERNATIONAL	MRA	MARTINAIRE	BE-1900	C	NE112	Franklin's gull
9/23/2013 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		NE112	Franklin's gull
8/23/2013 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		K3310	Sharp-shinned hawk
7/31/2013 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		N6017	Pectoral sandpiper
7/30/2013 0:00	ND	KFAR	HECTOR INTERNATIONAL	SKW	SKYWEST AIRLINES	CRJ100/200	D	Y1005	Barn swallow
7/30/2013 0:00	ND	KFAR	HECTOR INTERNATIONAL	SKW	SKYWEST AIRLINES	CRJ900	D	UNKB	Unknown bird
7/24/2013 0:00	ND	KFAR	HECTOR INTERNATIONAL	SKW	SKYWEST AIRLINES	CRJ900	D	ZT002	Western meadowlark
7/24/2013 0:00	ND	KFAR	HECTOR INTERNATIONAL	BUS	BUSINESS	PA-44 SEMINOLE	A	UNKBS	Unknown bird - small
6/10/2013 0:00	ND	KFAR	HECTOR INTERNATIONAL	CPZ	COMPASS AIRLINES	EMB-170	D	J2109	Mallard

This page contains no comments

6/3/2013 0:00	ND	KFAR	HECTOR INTERNATIONAL	SKW	SKYWEST AIRLINES	CRJ100/200	D	ZT105	Bobolink
5/17/2013 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		ZX303	Savannah sparrow
4/28/2013 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		1D12	White-tailed jackrabbit
4/25/2013 0:00	ND	KFAR	HECTOR INTERNATIONAL	BUS	BUSINESS	C-172	A	J2109	Mallard
10/18/2012 0:00	ND	KFAR	HECTOR INTERNATIONAL	EGF	AMERICAN EAGLE AIRLINES	EMB-145	D	NE104	Ring-billed gull
8/28/2012 0:00	ND	KFAR	HECTOR INTERNATIONAL	MIL	MILITARY	C-21	D	YI	Swallows
8/6/2012 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		K5114	American kestrel
7/21/2012 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		K5114	American kestrel
7/17/2012 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		K5114	American kestrel
7/12/2012 0:00	ND	KFAR	HECTOR INTERNATIONAL	AAY	ALLEGIAN AIR	MD-83	D	K5114	American kestrel
7/7/2012 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		K5114	American kestrel
6/3/2012 0:00	ND	KFAR	HECTOR INTERNATIONAL	AAL	AMERICAN AIRLINES	EMB-145	D	UNKBL	Unknown bird - large
5/10/2012 0:00	ND	KFAR	HECTOR INTERNATIONAL	BUS	BUSINESS	PA-44 SEMINOLE	A	UNKBS	Unknown bird - small
4/24/2012 0:00	ND	KFAR	HECTOR INTERNATIONAL	EGF	AMERICAN EAGLE AIRLINES	EMB-145	D	UNKBS	Unknown bird - small
4/19/2012 0:00	ND	KFAR	HECTOR INTERNATIONAL	MIL	MILITARY	C-21	D	UNKB	Unknown bird
4/5/2012 0:00	ND	KFAR	HECTOR INTERNATIONAL	EGF	AMERICAN EAGLE AIRLINES	EMB-145	D	K3302	Red-tailed hawk

This page contains no comments

12/22/2011 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		O2111	Rock pigeon
7/17/2011 0:00	ND	KFAR	HECTOR INTERNATIONAL	MES	MESABA AIRLINES	CRJ100/200	D	YI009	Cliff swallow
10/23/2010 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		NE112	Franklin's gull
9/19/2010 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		NE112	Franklin's gull
9/8/2010 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		1D12	White-tailed jackrabbit
9/2/2010 0:00	ND	KFAR	HECTOR INTERNATIONAL	TCF	SHUTTLE AMERICA	EMB-170	D	NE112	Franklin's gull
8/26/2010 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		ZT002	Western meadowlark
8/21/2010 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		NE112	Franklin's gull
8/17/2010 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		NE112	Franklin's gull
8/16/2010 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		NE112	Franklin's gull
7/13/2010 0:00	ND	KFAR	HECTOR INTERNATIONAL	SKW	SKYWEST AIRLINES	CRJ100/200	D	YI009	Cliff swallow
7/8/2010 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		K5114	American kestrel
6/6/2010 0:00	ND	KFAR	HECTOR INTERNATIONAL	SKW	SKYWEST AIRLINES	CRJ700	D	1D12	White-tailed jackrabbit
5/3/2010 0:00	ND	KFAR	HECTOR INTERNATIONAL	BUS	BUSINESS	BE-90 KING	C	UNKBL	Unknown bird - large

This page contains no comments

4/20/2010 0:00	ND	KFAR	HECTOR INTERNATIONAL	SKW	SKYWEST AIRLINES	CRJ100/200	D	UNKBS	Unknown bird - small
4/19/2010 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	CITATION	D	NE104	Ring-billed gull
10/25/2009 0:00	ND	KFAR	HECTOR INTERNATIONAL	DAL	DELTA AIR LINES	EMB-170	D	NE115	Bonaparte's gull
10/1/2009 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		NE101	Herring gull
9/16/2009 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		K5114	American kestrel
8/25/2009 0:00	ND	KFAR	HECTOR INTERNATIONAL	NWA	NORTHWEST AIRLINES	A-320	D	NE115	Bonaparte's gull
8/16/2009 0:00	ND	KFAR	HECTOR INTERNATIONAL	NWA	NORTHWEST AIRLINES	DC-9-30	D	ZZ201	House sparrow
8/16/2009 0:00	ND	KFAR	HECTOR INTERNATIONAL	SSX	LYNX AVIATION	DHC8 DASH 8	C	NE115	Bonaparte's gull
8/16/2009 0:00	ND	KFAR	HECTOR INTERNATIONAL	MES	MESABA AIRLINES	CRJ900	D	NE115	Bonaparte's gull
8/9/2009 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		N5111	Killdeer
8/9/2009 0:00	ND	KFAR	HECTOR INTERNATIONAL	MES	MESABA AIRLINES	CRJ900	S	NE115	Bonaparte's gull
8/2/2009 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		K5114	American kestrel

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8/2/2009 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		YM1102	American crow
7/31/2009 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		YI005	Barn swallow
7/27/2009 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		K5114	American kestrel
7/19/2009 0:00	ND	KFAR	HECTOR INTERNATIONAL	FLG*	PINNACLE	CRJ100/200	D	Y	Perching birds (y)
7/15/2009 0:00	ND	KFAR	HECTOR INTERNATIONAL	MIL	MILITARY	UNKNOWN		YI009	Cliff swallow
4/10/2009 0:00	ND	KFAR	HECTOR INTERNATIONAL	BUS	BUSINESS	PA-44 SEMINOLE	A	UNKBM	Unknown bird - medium
4/8/2009 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		1D12	White-tailed jackrabbit
10/10/2008 0:00	ND	KFAR	HECTOR INTERNATIONAL	AAY	ALLEGIAN AIR	MD-83	D	NE112	Franklin's gull
10/1/2008 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		Z4003	House wren
10/1/2008 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		NE112	Franklin's gull
9/20/2008 0:00	ND	KFAR	HECTOR INTERNATIONAL	NWA	NORTHWEST AIRLINES	A-319	D	UNKBM	Unknown bird - medium
9/12/2008 0:00	ND	KFAR	HECTOR INTERNATIONAL	ABX	ABX AIR	DC-9-30	D	UNKBM	Unknown bird - medium
9/3/2008 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		NE112	Franklin's gull
9/1/2008 0:00	ND	KFAR	HECTOR INTERNATIONAL	SKW	SKYWEST AIRLINES	CRJ100/200	D	NE1	Gulls
9/1/2008 0:00	ND	KFAR	HECTOR INTERNATIONAL	SKW	SKYWEST AIRLINES	CRJ100/200	D	NE1	Gulls
8/20/2008 0:00	ND	KFAR	HECTOR INTERNATIONAL	FLG*	PINNACLE	CRJ100/200	D	NE1	Gulls
8/18/2008 0:00	ND	KFAR	HECTOR INTERNATIONAL	SSX	LYNX AVIATION	DHC8 DASH 8	C	UNKBM	Unknown bird - medium
8/9/2008 0:00	ND	KFAR	HECTOR INTERNATIONAL	MIL	MILITARY	UNKNOWN		ZD102	Cedar waxwing

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8/7/2008 0:00	ND	KFAR	HECTOR INTERNATIONAL	BUS	BUSINESS	C-310	A	K33	Hawks
7/29/2008 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		N5111	Killdeer
7/22/2008 0:00	ND	KFAR	HECTOR INTERNATIONAL	SKW	SKYWEST AIRLINES	CRJ100/200	D	Y1009	Cliff swallow
7/7/2008 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		ZX303	Savannah sparrow
5/4/2008 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		NE104	Ring-billed gull
4/22/2008 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		K5114	American kestrel
3/21/2008 0:00	ND	KFAR	HECTOR INTERNATIONAL	NWA	NORTHWEST AIRLINES	DC-9	D	UNKBM	Unknown bird - medium
3/21/2008 0:00	ND	KFAR	HECTOR INTERNATIONAL	NWA	NORTHWEST AIRLINES	UNKNOWN		YH004	Horned lark
12/12/2007 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		O2111	Rock pigeon
10/21/2007 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		NE104	Ring-billed gull
10/21/2007 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		NE104	Ring-billed gull
10/17/2007 0:00	ND	KFAR	HECTOR INTERNATIONAL	SKW	SKYWEST AIRLINES	CRJ100/200	D	NE104	Ring-billed gull
10/7/2007 0:00	ND	KFAR	HECTOR INTERNATIONAL	MIL	MILITARY	UNKNOWN		UNKBM	Unknown bird - medium
10/4/2007 0:00	ND	KFAR	HECTOR INTERNATIONAL	NWA	NORTHWEST AIRLINES	A-320	D	NE104	Ring-billed gull

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9/17/2007 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		NE115	Bonaparte's gull
8/23/2007 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		Y1005	Barn swallow
8/23/2007 0:00	ND	KFAR	HECTOR INTERNATIONAL	ABX	ABX AIR	DC-9-40	D	UNKBM	Unknown bird - medium
8/22/2007 0:00	ND	KFAR	HECTOR INTERNATIONAL	ABX	ABX AIR	DC-9	D	UNKBM	Unknown bird - medium
8/20/2007 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		N5111	Killdeer
8/13/2007 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		ZT002	Western meadowlark
8/12/2007 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		ZX310	Grasshopper sparrow
8/11/2007 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		N5111	Killdeer
8/8/2007 0:00	ND	KFAR	HECTOR INTERNATIONAL	FLG*	PINNACLE	CRJ100/200	D	NE104	Ring-billed gull
8/6/2007 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		NE112	Franklin's gull
8/5/2007 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		N5111	Killdeer
8/5/2007 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		O2205	Mourning dove
7/22/2007 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		Y1009	Cliff swallow
7/15/2007 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		N5111	Killdeer
7/15/2007 0:00	ND	KFAR	HECTOR INTERNATIONAL	MIL	MILITARY	C-21A		UNKBM	Unknown bird - medium
7/14/2007 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		N5111	Killdeer
7/11/2007 0:00	ND	KFAR	HECTOR INTERNATIONAL	SKW	SKYWEST AIRLINES	CRJ100/200	D	N5111	Killdeer
7/10/2007 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		N5111	Killdeer
6/8/2007 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		1D12	White-tailed jackrabbit
6/8/2007 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		O2205	Mourning dove
6/3/2007 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		ZT002	Western meadowlark
3/24/2007 0:00	ND	KFAR	HECTOR INTERNATIONAL	ABX	ABX AIR	DC-9-40	D	UNKBM	Unknown bird - medium

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9/22/2006 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		NE101	Herring gull
9/22/2006 0:00	ND	KFAR	HECTOR INTERNATIONAL	SKW	SKYWEST AIRLINES	CRJ100/200	D	Y1005	Barn swallow
9/18/2006 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		K5114	American kestrel
9/17/2006 0:00	ND	KFAR	HECTOR INTERNATIONAL	SKW	SKYWEST AIRLINES	CRJ100/200	D	ZX310	Grasshopper sparrow
9/15/2006 0:00	ND	KFAR	HECTOR INTERNATIONAL	SKW	SKYWEST AIRLINES	CRJ100/200	D	UNKBS	Unknown bird - small
9/5/2006 0:00	ND	KFAR	HECTOR INTERNATIONAL	MIL	MILITARY	F-16A		M7001	Sora
9/1/2006 0:00	ND	KFAR	HECTOR INTERNATIONAL	NWA	NORTHWEST AIRLINES	A-319	D	UNKBM	Unknown bird - medium
8/24/2006 0:00	ND	KFAR	HECTOR INTERNATIONAL	BUS	BUSINESS	CL-600	D	Y1005	Barn swallow
8/23/2006 0:00	ND	KFAR	HECTOR INTERNATIONAL	NWA	NORTHWEST AIRLINES	DC-9-50	D	Y1005	Barn swallow
8/14/2006 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		1F41	Striped skunk
8/6/2006 0:00	ND	KFAR	HECTOR INTERNATIONAL	NWA	NORTHWEST AIRLINES	BA-RJ85	D	NE112	Franklin's gull
8/2/2006 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		N5111	Killdeer
8/1/2006 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		ZX310	Grasshopper sparrow
7/29/2006 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		NE115	Bonaparte's gull
7/24/2006 0:00	ND	KFAR	HECTOR INTERNATIONAL	MIL	MILITARY	F-16A		N5111	Killdeer
7/18/2006 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		N5111	Killdeer
7/7/2006 0:00	ND	KFAR	HECTOR INTERNATIONAL	MES	MESABA AIRLINES	BA-RJ85	D	N5111	Killdeer
6/19/2006 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		ZX310	Grasshopper sparrow
5/26/2006 0:00	ND	KFAR	HECTOR INTERNATIONAL	SKW	SKYWEST AIRLINES	CRJ100/200	D	UNKBM	Unknown bird - medium
9/21/2005 0:00	ND	KFAR	HECTOR INTERNATIONAL	MIL	MILITARY	KC-135R		UNKBM	Unknown bird - medium

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9/15/2005 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		1D12	White-tailed jackrabbit
9/2/2005 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNKC	UNKNOWN COMMERCIAL	A-320	D	NE1	Gulls
8/19/2005 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		NE104	Ring-billed gull
8/17/2005 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		N5111	Killdeer
8/13/2005 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		1D12	White-tailed jackrabbit
7/28/2005 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		Y1005	Barn swallow
6/13/2005 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		1D12	White-tailed jackrabbit
10/29/2004 0:00	ND	KFAR	HECTOR INTERNATIONAL	NWA	NORTHWEST AIRLINES	DC-9-30	D	NE1	Gulls
10/23/2004 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		NE104	Ring-billed gull
9/13/2004 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		ZT002	Western meadowlark
8/4/2004 0:00	ND	KFAR	HECTOR INTERNATIONAL	MIL	MILITARY	C-130H		Y	Perching birds (y)
8/3/2004 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		N5111	Killdeer
8/2/2004 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		1D12	White-tailed jackrabbit
9/18/2003 0:00	ND	KFAR	HECTOR INTERNATIONAL	NWA	NORTHWEST AIRLINES	A-320	D	Y1005	Barn swallow
9/10/2003 0:00	ND	KFAR	HECTOR INTERNATIONAL	NWA	NORTHWEST AIRLINES	A-320	D	NE104	Ring-billed gull
9/7/2003 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		NE112	Franklin's gull
5/5/2003 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		J2134	Gadwall
4/19/2003 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		NE104	Ring-billed gull
4/12/2003 0:00	ND	KFAR	HECTOR INTERNATIONAL	ABX	ABX AIR	DC-9	D	NE104	Ring-billed gull
4/4/2003 0:00	ND	KFAR	HECTOR INTERNATIONAL	MIL	MILITARY	F-16A		UNKBM	Unknown bird - medium

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11/20/2002 0:00	ND	KFAR	HECTOR INTERNATIONAL	NHK	FAA	BA-125-800	D	1F131	Red fox
10/10/2002 0:00	ND	KFAR	HECTOR INTERNATIONAL	AWI	AIR WISCONSIN AIRLINES	CRJ100/200	D	NE112	Franklin's gull
10/10/2002 0:00	ND	KFAR	HECTOR INTERNATIONAL	AWI	AIR WISCONSIN AIRLINES	CRJ100/200	D	NE112	Franklin's gull
9/30/2002 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		NE112	Franklin's gull
9/3/2002 0:00	ND	KFAR	HECTOR INTERNATIONAL	BUS	BUSINESS	C-404	A	NE1	Gulls
8/15/2002 0:00	ND	KFAR	HECTOR INTERNATIONAL	MIL	MILITARY	F-16A		O2205	Mourning dove
4/29/2002 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	LEARJET UNKN		NE112	Franklin's gull
4/18/2002 0:00	ND	KFAR	HECTOR INTERNATIONAL	UNK	UNKNOWN	UNKNOWN		K5T05	Merlin
9/30/2001 0:00	ND	KFAR	HECTOR INTERNATIONAL	MIL	MILITARY	F-16A		ZT001	Eastern meadowlark
7/6/2001 0:00	ND	KFAR	HECTOR INTERNATIONAL	MIL	MILITARY	C-130H		UNKBM	Unknown bird - medium
9/27/2000 0:00	ND	KFAR	HECTOR INTERNATIONAL	MIL	MILITARY	KC-135T		UNKBS	Unknown bird - small
8/24/2000 0:00	ND	KFAR	HECTOR INTERNATIONAL	NWA	NORTHWEST AIRLINES	DC-9	D	NE1	Gulls
8/19/2000 0:00	ND	KFAR	HECTOR INTERNATIONAL	AWI	AIR WISCONSIN AIRLINES	CRJ100/200	D	UNKBS	Unknown bird - small
7/22/2000 0:00	ND	KFAR	HECTOR INTERNATIONAL	NWA	NORTHWEST AIRLINES	DC-9	D	ZT1	Blackbirds
4/6/2000 0:00	ND	KFAR	HECTOR INTERNATIONAL	HKA	SUPERIOR AVIATION	MERLIN IV	C	NE1	Gulls
3/8/2000 0:00	ND	KFAR	HECTOR INTERNATIONAL	UAL	UNITED AIRLINES	CRJ100/200	D	J21	Ducks
9/12/1999 0:00	ND	KFAR	HECTOR INTERNATIONAL	PVT	PRIVATELY OWNED	HOMEBUILT		UNKBS	Unknown bird - small
9/5/1999 0:00	ND	KFAR	HECTOR INTERNATIONAL	NWA	NORTHWEST AIRLINES	DC-9-30	D	UNKBM	Unknown bird - medium
8/21/1999 0:00	ND	KFAR	HECTOR INTERNATIONAL	MIL	MILITARY	F-16A		YI005	Barn swallow
10/6/1998 0:00	ND	KFAR	HECTOR INTERNATIONAL	RYN	RYAN INTL AIRLINES	B-727-100	D	UNKBM	Unknown bird - medium

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10/9/1997 0.00	ND	KFAR	HECTOR INTERNATIONAL	MIL	MILITARY	F-16A		Z6004	Swainson's thrush
10/9/1997 0.00	ND	KFAR	HECTOR INTERNATIONAL	MIL	MILITARY	F-16A		Z6004	Swainson's thrush
9/4/1997 0.00	ND	KFAR	HECTOR INTERNATIONAL	NWA	NORTHWEST AIRLINES	DC-9	D	UNKBS	Unknown bird - small
7/20/1997 0.00	ND	KFAR	HECTOR INTERNATIONAL	BUS	BUSINESS	C-172	A	ZT1	Blackbirds
6/10/1997 0.00	ND	KFAR	HECTOR INTERNATIONAL	NWA	NORTHWEST AIRLINES	DC-9	D	ZX3	Sparrows
9/16/1996 0.00	ND	KFAR	HECTOR INTERNATIONAL	BUS	BUSINESS	BE-400 BJET	D	UNKBS	Unknown bird - small
9/14/1994 0.00	ND	KFAR	HECTOR INTERNATIONAL	AVV	AIRVANTAGE	SA226 TC	C	NE1	Gulls
9/13/1994 0.00	ND	KFAR	HECTOR INTERNATIONAL	FFT	FRONTIER AIRLINES	B-737-200	D	NE2	Terns
8/27/1994 0.00	ND	KFAR	HECTOR INTERNATIONAL	MIL	MILITARY	KC-135R		Y1005	Barn swallow
8/30/1993 0.00	ND	KFAR	HECTOR INTERNATIONAL	BUS	BUSINESS	PA-28	A	UNKBM	Unknown bird - medium
10/22/1991 0.00	ND	KFAR	HECTOR INTERNATIONAL	MIL	MILITARY	F-16		YH004	Horned lark
10/18/1991 0.00	ND	KFAR	HECTOR INTERNATIONAL	BUS	BUSINESS	LOCKHEED 1329	B	UNKBS	Unknown bird - small

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4/2/1991 0.00	ND	KFAR	HECTOR INTERNATIONAL	MIL	MILITARY	C-130B		J2106	Green-winged teal
10/1/1990 0.00	ND	KFAR	HECTOR INTERNATIONAL	NWA	NORTHWEST AIRLINES	B-757-200	D	NE112	Franklin's gull

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DAMAGE	COST REPAIRS	AMA	AMO	EMA	EMO	AC CLASS	AC MASS	NUM ENGS	ENG 1 POS	ENG 2 POS	ENG 3 POS	ENG 4 POS	REG	FLT
N		561	12			A	4	4	4	4	4	4		
N		188	10	22	4	A	3	2	5	5			N943SW	5990
		188	10	22	4	A	3	2	5	5				5561
N		228	7	7	19	A	1	1	7				N512ND	12
M		332		22	4	A	4	2	1	1				5820
N		04A	6	10	1	A	4	2	1	1				1456
N		332	14	1	10	A	3	2	5	5				3256
N		395	11	19	1	A	3	2	5	5			C-FSDL	
N		188	17	22	4	A	4	2	5	5				3849
N		188	10	22	4	A	3	2	5	5			N993ML	6277

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N		332	14	1	10	A		3	2	5	5		N035AE	2982
N		148	43	10	1	A		4	2	1	1			117
		332	14	1	10	A		3	2	5	5			3055
N		332	14	1	10	A		3	2	5	5		N638AE	3158
N		123	27	31	4	A		3	2	4	4		N575F	725
N		188	10	22	4	A		3	2	5	5			6488
N		188	17	22	4	A		4	2	5	5			4658
N		188	17	22	4	A		4	2	5	5		N161PQ	4536
N		729	33	7	19	A		2	2	4	4		N595ND	95
		332		22	4	A		4	2	1	1			5722

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N		188	10	22	4	A		3	2	5	5			N432SW	4698
S	3000	228	7	7	19	A		1	1	7				N537ND	37
N		332	14	1	10	A		3	2	5	5			N696AE	4076
N		385		19	1	A		3	2						
		583	37	34	10	A		4	2	5	5				351
S		332	14	1	10	A		3	2	5	5			N678AE	4088
N		729	33	7	19	A		2	2	4	4			N595ND	
N		332	14	1	10	A		3	2	5	5			N615AE	
N		385		19	1	A		3	2						
N		332	14	1	10	A		3	2	5	5			N676AE	4080

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	188	10	22	4	A		3	2	5	5				2535
	332		22	4	A		4	2	1	1				5968
	188	10	22	4	A		3	2	5	5				6026
	188	16	22	4	A		4	2	5	5				4505
M	123	18	31	4	A		2	2	4	4				N6111V

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N		220	21	13	13	A		2	2	4	4					357
N		188	10	22	4	A		3	2	5	5					5926
N		583	90	34	10	A		4	2	5	5			N8023E		455
N		188	10	22	4	A		3	2	5	5					6666
N																
N		04A	3	10	1	A		4	2	1	1			N376NW		748

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	188	10	22	4	A		3	2	5	5			6668
	188	10	22	4	A		3	2	5	5			6809
N	188	10	22	4	A		3	2	5	5		N452SW	3997
N	561				A								
N	04A	6	10	1	A		4	2	1	1		N321NB	1065
N	188	6	22	4	A		3	2	5	5		N604TC	
N	583	23	34	10	A		4	2	5	5		N762NC	856
N	188	17	2	1	A		4	4	1	1	1	1	3648
N	561				A								
	188	17	2	1	A		4	4	1	1	1	1	N516XJ 3551
M	188	10	22	4	A		3	2	5	5		N969SW	6909
N					A								

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N		561			A												
S		148	26	34	40	A		4	2	1	1					N526US	

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REMAINS COLLECTED	REMAINS SENT	INCIDENT MONTH	INCIDENT YEAR	TIME OF DAY	TIME	FAREGION	ENROUTE	RUNWAY	LOCATION	HEIGHT	SPEED
FALSE	FALSE	7	2015		1315	AGL				50	
TRUE	FALSE	6	2015	Day	700	AGL		36		0	132
TRUE	FALSE	5	2015	Day	1315	AGL		36			
TRUE	FALSE	5	2015			AGL		36			
TRUE	TRUE	3	2015	Night	2300	AGL		18		2000	110
FALSE	FALSE	10	2014	Night	2025	AGL					
FALSE	FALSE	8	2014	Night	2050	AGL		18			
TRUE	FALSE	8	2014			AGL		36			
TRUE	FALSE	8	2014			AGL		18			
TRUE	FALSE	8	2014	Day	645	AGL				0	
TRUE	FALSE	8	2014			AGL		36			
TRUE	FALSE	8	2014			AGL		18			
TRUE	FALSE	8	2014	Day	1122	AGL		18		0	
TRUE	FALSE	8	2014	Day	1819	AGL		18		0	110
TRUE	FALSE	8	2014	Day	1600	AGL		18		0	110
TRUE	FALSE	6	2014	Night	2200	AGL		18			
TRUE	FALSE	5	2014			AGL		18			

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FALSE	FALSE	5	2014	Night	1115	AGL		18		500	140
FALSE	FALSE	5	2014	Day	758	AGL		18			
TRUE	FALSE	12	2013			AGL		36			
TRUE	FALSE	10	2013			AGL		27			
TRUE	FALSE	10	2013			AGL		27-Sep			
TRUE	FALSE	10	2013	Day	1715	AGL		30		0	
TRUE	FALSE	10	2013	Day	800	AGL		36		0	140
TRUE	FALSE	10	2013	Day	825	AGL		36		0	110
TRUE	FALSE	9	2013			AGL		18			
TRUE	FALSE	8	2013			AGL		18			
TRUE	TRUE	7	2013			AGL		36			
TRUE	FALSE	7	2013	Day	1255	AGL		18		0	
FALSE	FALSE	7	2013	Day	1300	AGL		36			
TRUE	FALSE	7	2013	Day	1224	AGL		18		0	100
FALSE	FALSE	7	2013	Night	2315	AGL		36		900	110
TRUE	FALSE	6	2013	Day	1700	AGL		18			

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TRUE	FALSE	6	2013	Day	1615	AGL	18	100	110
TRUE	FALSE	5	2013			AGL	18		
TRUE	FALSE	4	2013			AGL	18		
TRUE	TRUE	4	2013	Night	2145	AGL	18	1500	120
TRUE	FALSE	10	2012	Dawn	720	AGL	36	0	140
FALSE	FALSE	8	2012		1525	AGL		700	
TRUE	FALSE	8	2012			AGL	27		
TRUE	FALSE	7	2012			AGL	36		
TRUE	FALSE	7	2012			AGL	36		
TRUE	FALSE	7	2012	Day	1253	AGL	18	0	
TRUE	FALSE	7	2012			AGL	36		
FALSE	FALSE	6	2012	Night	2213	AGL	36	1000	135
FALSE	FALSE	5	2012	Night	2230	AGL	18	500	90
FALSE	FALSE	4	2012	Night		AGL	18	1000	140
FALSE	FALSE	4	2012		1430	AGL			
TRUE	FALSE	4	2012	Day	1150	AGL	18	100	140

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TRUE	FALSE	12	2011		AGL					
TRUE	FALSE	7	2011	Day	1050	AGL		18		0
TRUE	FALSE	10	2010			AGL		36		
TRUE	FALSE	9	2010			AGL		36		
TRUE	FALSE	9	2010			AGL		36		
TRUE	FALSE	9	2010	Day	1446	AGL		36		20
TRUE	FALSE	8	2010			AGL		27		
TRUE	FALSE	8	2010			AGL		36		
TRUE	FALSE	8	2010			AGL		18		
TRUE	FALSE	8	2010			AGL		27		
TRUE	FALSE	7	2010	Day	1319	AGL		18		0
TRUE	FALSE	7	2010			AGL		36		
TRUE	FALSE	6	2010	Day	2015	AGL		36		0
FALSE	FALSE	5	2010	Night	2250	AGL		36	600	106

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FALSE	FALSE	4	2010	Night	4	AGL	36	1000	135
TRUE	FALSE	4	2010			AGL	27		
TRUE	FALSE	10	2009	Day	1445	AGL	36		
TRUE	FALSE	10	2009			AGL	18		
TRUE	FALSE	9	2009			AGL	18		
TRUE	FALSE	8	2009	Day	700	AGL	36		
TRUE	FALSE	8	2009	Day	1223	AGL	36		0
FALSE	FALSE	8	2009	Day	1525	AGL			0
TRUE	FALSE	8	2009	Day	1050	AGL	36		0
TRUE	FALSE	8	2009			AGL	36		
TRUE	FALSE	8	2009	Day	700	AGL	18		
TRUE	FALSE	8	2009			AGL	18		

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TRUE	FALSE	8	2009		AGL		18			
TRUE	FALSE	7	2009	Day	1320	AGL		18		0
TRUE	FALSE	7	2009			AGL		36		
TRUE	TRUE	7	2009	Day	1515	AGL		18		0
FALSE	FALSE	7	2009	Day	1600	AGL				149
FALSE	FALSE	4	2009	Night	2145	AGL		9		2600 130
TRUE	FALSE	4	2009			AGL		36		
FALSE	FALSE	10	2008	Day	1755	AGL		36		0
TRUE	FALSE	10	2008			AGL		36		
TRUE	FALSE	10	2008			AGL		36		
FALSE	FALSE	9	2008			AGL				3000
FALSE	FALSE	9	2008	Night	545	AGL				2500 250
TRUE	FALSE	9	2008			AGL		36		
FALSE	FALSE	9	2008	Day	1240	AGL		18		0
FALSE	FALSE	9	2008	Day	1155	AGL		18		0
FALSE	FALSE	8	2008	Day	710	AGL		18		0
FALSE	FALSE	8	2008	Night	2230	AGL		9		
FALSE	FALSE	8	2008	Day	1536	AGL				135

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FALSE	FALSE	8	2008	Night	2155	AGL	39	100	
TRUE	FALSE	7	2008			AGL	36		
TRUE	FALSE	7	2008	Day	1110	AGL	18	0	
TRUE	FALSE	7	2008			AGL	18		
TRUE	FALSE	5	2008			AGL	36		
TRUE	FALSE	4	2008			AGL	18		
FALSE	FALSE	3	2008	Day	1807	AGL		0	
TRUE	FALSE	3	2008	Day	1300	AGL	36		
TRUE	FALSE	12	2007			AGL	18		
TRUE	FALSE	10	2007			AGL	36		
TRUE	FALSE	10	2007			AGL	36		
TRUE	FALSE	10	2007	Day	1215	AGL	18	0	
FALSE	FALSE	10	2007	Day	1237	AGL			130
TRUE	FALSE	10	2007	Day	830	AGL	36	0	

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TRUE	FALSE	9	2007		AGL		18			
TRUE	FALSE	8	2007		AGL		36			
FALSE	FALSE	8	2007		AGL					
FALSE	FALSE	8	2007	Night	AGL		18	4500	180	
TRUE	FALSE	8	2007		AGL		36			
TRUE	FALSE	8	2007		AGL		36			
TRUE	FALSE	8	2007		AGL		36			
FALSE	FALSE	8	2007	Dusk	1830	AGL	18		0	
TRUE	FALSE	8	2007		AGL		36			
TRUE	FALSE	8	2007		AGL		18			
TRUE	FALSE	8	2007		AGL		18			
TRUE	FALSE	7	2007		AGL		36			
TRUE	FALSE	7	2007		AGL		36			
FALSE	FALSE	7	2007	Day	1350	AGL				120
TRUE	FALSE	7	2007		AGL		36			
TRUE	FALSE	7	2007	Dusk		AGL	36		0	
TRUE	FALSE	7	2007		AGL		36			
TRUE	FALSE	6	2007		AGL		27			
TRUE	FALSE	6	2007		AGL		18			
TRUE	FALSE	6	2007		AGL		36			
FALSE	FALSE	3	2007		AGL				1700	

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TRUE	FALSE	9	2006		AGL		9		
TRUE	FALSE	9	2006	Day	1250	AGL	36		0
TRUE	FALSE	9	2006			AGL	36		
TRUE	FALSE	9	2006	Day	1148	AGL	18		
FALSE	FALSE	9	2006	Day	1505	AGL	18	20	135
FALSE	FALSE	9	2006	Night	2045	AGL		1500	300
FALSE	FALSE	9	2006			AGL			
TRUE	FALSE	8	2006	Day	855	AGL	18		0
TRUE	FALSE	8	2006	Day	1107	AGL	18		0
TRUE	FALSE	8	2006			AGL	36		
FALSE	FALSE	8	2006	Day	1455	AGL	36		
TRUE	FALSE	8	2006			AGL	18/36		
TRUE	FALSE	8	2006			AGL	27-Sep		
TRUE	FALSE	7	2006			AGL	18/36		
FALSE	FALSE	7	2006	Day	1150	AGL		0	140
TRUE	FALSE	7	2006			AGL	18		
TRUE	FALSE	7	2006	Day	1025	AGL	18		0
TRUE	FALSE	6	2006			AGL	27		
FALSE	FALSE	5	2006	Dusk	2115	AGL	18	8000	230
FALSE	FALSE	9	2005	Night	2255	AGL		1900	162

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TRUE	FALSE	9	2005		AGL		27-Sep			
FALSE	FALSE	9	2005	Day	820	AGL	18/36			
TRUE	FALSE	8	2005			AGL	36			
TRUE	FALSE	8	2005			AGL	18			
TRUE	FALSE	8	2005			AGL	36			
TRUE	FALSE	7	2005			AGL	27-Sep			
TRUE	FALSE	6	2005			AGL	36			
FALSE	FALSE	10	2004			AGL	36		0	
TRUE	FALSE	10	2004			AGL	27			
TRUE	FALSE	9	2004			AGL	18			
TRUE	TRUE	8	2004	Day	1445	AGL			500	
TRUE	FALSE	8	2004			AGL	27-Sep			
TRUE	FALSE	8	2004			AGL	36			
FALSE	FALSE	9	2003	Day	930	AGL	35		0	
TRUE	FALSE	9	2003	Day	1100	AGL	17			
TRUE	FALSE	9	2003			AGL	17			
TRUE	FALSE	5	2003			AGL	17			
TRUE	FALSE	4	2003			AGL	35			
TRUE	FALSE	4	2003	Dawn	635	AGL	17		0	
FALSE	FALSE	4	2003	Day	1330	AGL			1500	150

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TRUE	FALSE	11	2002	Day	1810	AGL		35		0	
TRUE	FALSE	10	2002		759	AGL		35			
TRUE	FALSE	10	2002		759	AGL		35			
TRUE	FALSE	9	2002			AGL		35			
FALSE	FALSE	9	2002	Dawn		AGL		26		0	95
TRUE	TRUE	8	2002	Day	900	AGL					
FALSE	FALSE	4	2002	Dawn	640	AGL		17			
TRUE	FALSE	4	2002			AGL		31			
TRUE	TRUE	9	2001	Dusk	1920	AGL				10	180
FALSE	FALSE	7	2001	Day	1400	AGL				500	140
FALSE	FALSE	9	2000	Night	215	AGL				2000	180
FALSE	FALSE	8	2000		1909	AGL		17		0	
FALSE	FALSE	9	2000	Night	145	AGL		17		2300	135
FALSE	FALSE	7	2000	Day		AGL		17		0	115
FALSE	FALSE	4	2000	Dawn	748	AGL		26		50	120
FALSE	FALSE	3	2000	Day	940	AGL		35		1700	120
FALSE	FALSE	9	1999	Day	1230	AGL		26		0	100
FALSE	FALSE	9	1999			AGL				0	120
TRUE	TRUE	8	1999	Day	1445	AGL				1500	300
FALSE	FALSE	10	1998	Dawn		AGL		17		10	140

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TRUE	TRUE	10	1997 Night	2150	AGL								
TRUE	TRUE	10	1997 Night	2150	AGL								
FALSE	FALSE	9	1997 Day		AGL		17			50		120	
FALSE	FALSE	7	1997 Day		AGL		8			0		45	
FALSE	FALSE	6	1997 Day		AGL					0		140	
FALSE	FALSE	9	1996 Day		AGL					20		130	
FALSE	FALSE	9	1994 Day		AGL		35			0		90	
FALSE	FALSE	9	1994 Day		AGL					50		140	
TRUE	TRUE	8	1994 Day	1515	AGL					0		120	
FALSE	FALSE	8	1993 Night		AGL		13			7000		145	
TRUE	TRUE	10	1991 Day	1507	AGL					200		255	
FALSE	FALSE	10	1991 Day		AGL		35			50		160	

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TRUE	TRUE	4	1991	Night	2100	AGL				1500	170
FALSE	FALSE	10	1990			AGL				0	120

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0		FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
0	Take-off run	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
0		FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
0	Landing Roll	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
	Approach	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
	Descent	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE
0		FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
0	Landing Roll	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
0		FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
0		FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
	Approach	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
	Approach	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
	Descent	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
0		FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
0	Landing Roll	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
0	Landing Roll	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
0	Take-off run	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
0.1	Approach	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
	Approach	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE

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	Approach	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
0	Take-off run	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE

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FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
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FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	TRUE	FALSE	FALSE	FALSE

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STR TAIL	DAM TAIL	STR LGHTS	DAM LGHTS	STR OTHER	DAM OTHER	OTHER SPECIFY	EFFECT	EFFECT OTHER	SKY	PRECIP
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		None		Overcast	None
FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	PART NOT REPTD			Some Cloud	None
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		None		No Cloud	
FALSE	FALSE	TRUE	TRUE	FALSE	FALSE					
FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	PART NOT REPTD				
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	PART NOT REPTD				
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		None		No Cloud	None
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		None		Some Cloud	
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		None		No Cloud	None
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE				Overcast	Rain
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					

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FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		None		No Cloud	None
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		None		Overcast	Rain
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	PART NOT REPTD				
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		None		Overcast	None
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		None		Overcast	Rain
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		None		Some Cloud	None
FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	PART NOT REPTD	None			
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		None		Some Cloud	None
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		Precautionary Landing		No Cloud	None
FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	PART NOT REPTD			Some Cloud	None

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FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		None		Overcast	None
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		Precautionary Landing		No Cloud	None
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		None		Overcast	None
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	PART NOT REPTD			Some Cloud	None
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FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		None		No Cloud	None
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	TRUE	FALSE	FALSE	FALSE		Precautionary Landing		No Cloud	None

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FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
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FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	PART NOT REPTD	None		Some Cloud	None
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FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	PART NOT REPTD			Some Cloud	None
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
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FALSE	FALSE	FALSE	FALSE	TRUE	TRUE	EXHAUST STACK	Precautionary Landing		No Cloud	None

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FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		None		No Cloud	None
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FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	PART NOT REPTD			Overcast	None
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FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	PART NOT REPTD			No Cloud	None
FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	PART NOT REPTD			Some Cloud	None
FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	PART NOT REPTD	Precautionary Landing	EMERGENCY DECLARED		
FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	PART NOT REPTD			Some Cloud	None
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FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					

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FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
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FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	PART NOT REPTD				
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FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					

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FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		None		No Cloud	None
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FALSE	FALSE	FALSE	FALSE	FALSE	FALSE				Overcast	Snow
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FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		None		Some Cloud	None

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FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
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FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	PART NOT REPTD	None		Overcast	None
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FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	PART NOT REPTD	None			

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FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
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FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	PART NOT REPTD	None		Overcast	None
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		None		Some Cloud	None
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FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		None		Overcast	None
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		None		No Cloud	None
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		None		Some Cloud	None
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FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	PART NOT REPTD	None		Some Cloud	None
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE				No Cloud	None
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					

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FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	PART NOT REPTD	None		No Cloud	None
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FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
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FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	PART NOT REPTD	None		Overcast	Rain
FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	PART NOT REPTD	None		Overcast	Rain
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FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		None		Some Cloud	None
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		None		No Cloud	None

This page contains no comments

FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		None		Overcast	None
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		None		Overcast	None
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		None		Overcast	None
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		None		No Cloud	None
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		Precautionary Landing		No Clouds	Rain
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		None		No Clouds	None
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		None		No Clouds	None
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		Precautionary Landing		No Clouds	None
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		None		No Cloud	None
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		Precautionary Landing		No Cloud	None
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		None		Some Cloud	None
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		None		No Cloud	None
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		None		Overcast	Rain
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		None		Overcast	None
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		None		Overcast	None

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FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		None		Some Cloud	None
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		None		Overcast	None
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE				No Cloud	None
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE				Overcast	None
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		Aborted Take-off		Some Cloud	None
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		None		Overcast	None
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	TRUE	FALSE	FALSE	FALSE		Other	ODOR IN A/C	No Cloud	None
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		ENGINE SHUT DOWN		No Cloud	None

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TRUE	FALSE	FALSE	FALSE	FALSE	FALSE					
FALSE	FALSE	FALSE	FALSE	FALSE	FALSE		Aborted Take-off			

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BIRDS SEEN	BIRDS STRUCK	SIZE	WARNED	COMMENTS	REMARKS	AOS
				SOURCE = BASH NR xxxxxxx		
1		Medium	Y	SOURCE = TWO xxxxx-x (xxxx-x-xx-xxxxxx, x-xx-xxxxxx), DAILY REPT APP EVENT xxxxxxx	HEN MALLARD. NO DMG. BIRD WAS STRUCK AT ROTATION.	
		1 Small	Y	SOURCE = ONE xxxxx-x (xxxx-x-xx-xxxxxx), FAA DAILY REPORT APP EVENT ID xxxxxxx	OPS NOTIFIED BY ATC. REMOVED CARCASS FROM THE RWY 13/31 AND RWY 18/36 INTXN.	
		1 Small		xxxxx-x-xx-xxxxxx	12:20 PM DAY	
		1 Small	N	SOURCE = TWO xxxxx-x (xxxx-x-xx-xxxxxx, Rx) OPERATOR / OWNER = UNIVERSITY OF NORTH DAKOTA / UND AEROSPACE FOUNDATION	ID BY SMITHSONIAN. NO VISIBLE DMG. DID NOT SEE BIRDS AT NIGHT. DID NOT NOTICE UNTIL POSTFLIGHT AND FOUND FEATHERS. RIGHT STRUT. LOCATION REPORTED AS: 10 S KFAIR.	
2 to 10	2 to 10			MOR FAR-M-xxxxx/xx/xx-xxxx	REPORTED HITTING 2 BIRDS, ONE ON CAPT WINDSHIELD AND ONE OF THE RT SIDE WING, DAMAGING THE LANDING LIGHT. A/C LANDED W/O INCIDENT.	
		1		EVENT ID xxxxxxx	DAL1456 REPTD STRIKING A BIRD N 1 MILE FINAL. NO REPTD DMG.	
		1 Small		xxxxx-x-xx-xxxxxx	LANDING AIRCRAFT REPORTED BIRD ON EDGE OF RWY 36. FOUND REMAINS ON RWY 36 APPROX. 100' NORTH OF THRESHOLD. 15:35 PM DAY	
		1 Small		xxxxx-x-xx-xxxxxx	LANDING AIRCRAFT SPOTTED ON SIDE OF RWY. 11:30 AM DAY	
2 to 10		Small	Y	xxxxx-x-xx-xxxxxx	A/C REPTD NUMEROUS BIRD ON T/O.	
		1 Small		xxxxx-x-xx-xxxxxx	NO FIREPS. PILOT SPOTTED BIRD ON RWY. NOT FRESH. 9:30 AM DAY	
		1 Small		xxxxx-x-xx-xxxxxx	FOUND ON RWY 18 SOUTH OF RWY 27 DURING DRI. CARCASS INTACT. NO REPORTED BIRD STRIKES. 3:05 AM NIGHT	
2 to 10		Small	N	xxxxx-x-xx-xxxxxx		
1		1 Small		OPER = LONG AIR SERVICES LTD. xxxxx-x-xx-xxxxxx	PILOT REPTD BIRD STRUCK FUSELAGE. NO DMG.	
1		1 Small	Y	SOURCE = TWO xxxxx-x (xxxx-x-xx-xxxxxx, x-xx-xxxxxx), MOR FAR-M-xxxxx/xx/xx-xxxx	AF/D WARNING FOR BIRDS. PILOT REPTD STRIKE ON GLLIMBOUT. NO DMG. FLT CONTD. 1 INTACT CARCASS WAS FOUND AROUND THE 4000' MARK OF RWY 18.	
		1 Small	Y	SOURCE = TWO xxxxx-x (xxxx-x-xx-xxxxxx, Rx)	CONTRACT MX FOUND NO DMG. INTACT REMAINS FOUND ON RWY.	
		1 Large		xxxxx-x-xx-xxxxxx	FOUND CARCASS MIDFIELD ON RWY DURING ROUTINE INSPN. NO STRIKE REPTD. 400 AM NIGHT.	

This page contains no comments

	1				SOURCE = TWO xxxxx-x (xxxx-x-xx-xxxxxx, xxxxxx)		
		1		Y	xxxx-x-xx-xxxxxx	A/C REPTD BIRDSTRIKE ON ROTATION. SEARCHED RWY AND SURROUNDING GRASS WITH NEGATIVE RESULTS.	
		1	Small		xxxx-xx-xx-xxxxxx	FOUND DECAPITATED ON RWY EDGE DURING FIELD INSPN NEAR A3. 1328 PM DAY.	
		1	Medium		xxxx-xx-xx-xxxxxx	FOUND INTACT IMMATURE HERRING GULL CARCASS ON THE DEPT END OF RWY 27. NO STRIKE REPTD. 1320 PM DAY.	
		1	Small		xxxx-xx-xx-xxxxxx	GULL REMAINS FOUND AT RWY 9, TWY A. 1830 PM DUSK.	
		1	Medium	Y	xxxx-xx-x-xxxxxx	IMMATURE RING-BILLED GULL.	
11 to 100		1	Small	Y	SOURCE = TWO xxxxx-x (xxxx-xx-x-xxxxxx, xx-x-xxxxxx)		
						PILOT REPTD SEEING BIRDS BUT WASNT SURE IF HE STRUCK ANY. INITIAL A/C INSPN FOUND BLOOD STREAK ON VAN OUTBD FROM ENG NACELLE. NO APPARENT DMG. HOWEVER, PILOT IS WAITING FOR A MORE THOROUGH INSPN FROM A MECHANIC. EXPECTING A CALL BACK WITH UPATED INFORMATION.	
11 to 100	2 to 10		Small	Y	SOURCE = TWO xxxxx-x (xxxx-xx-x-xxxxxx, xx-x-xxxxxx)		
		1	Small		xxxx-x-xx-xxxxxx	1740 PM DAY.	
		1	Small		xxxx-x-xx-xxxxxx	1600 PM DAY.	
		1	Small		SOURCE = TWO xxxxx-x (xxxx-x-xx-xxxxxx, Rx)	ID BY SMITHSONIAN. BIRD FOUND ON 36 AT ECHO. 1345 PM DAY.	
	2 to 10		Small	Y	SOURCE = TWO xxxxx-x (xxxx-x-xx-xxxxxx, xxxxxx) (y/xx/Rx UPDATED PART & REMARKS)	2 SWALLOW BODY PARTS RECOVERED ON RWY 1B BY TWY E. CAPT REPTD NO DMG. BIRDSTRIKE NEAR LEFT FLAP AREA.	
		1			xxxx-x-xx-xxxxxx (y/xx/Rx UPDATED REMARKS)	PILOT REPTD STRIKE DURING ROTATION. CONTD FLT TO DESTINATION. NO REPTD DMG. (DATA ENTRY NOTE: AIRLINE HAD NO INFO ON THIS STRIKE)	
		1	Small	N	SOURCE = THREE xxxxx-x (xxxx-x-xx-xxxxxx, xxxxxx, Rx)	PILOT REPTD STRIKING BIRD ON LGD ROLL UPON INITIAL CONTACT WITH GROUND CONTROL. NO DMG. BIRD WAS A YOUNG W MEADOWLARK.	
		1	Small	N	xxxx-x-xx-xxxxxx OPERATOR / OWNER = UNIVERSITY OF NORTH DAKOTA	LOCATION REPTD AS 2NM, NE KFAR. JUST CONTINUED THE VFR PATTERN AND LANDED THE A/C WITH NO ASSISTANCE REQUIRED.	
		1	Medium	Y	SOURCE = TWO xxxxx-x (xxxx-x-xx-xxxxxx, Rx)	BIRD WAS BANDED. USGS BAND # 175756039 DRAKE. (A/C = EMB 175)	

This page contains no comments

	1	Small	Y	SOURCE = TWO xxxxx-x (xxxx-x-x-xxxxxx, x-x-xxxxxx)	CAPT REPTD BIRD STRUCK METAL FRAME IMMEDIATELY ABOVE CAPT'S SIDE OF WINDSHLD. REPTD NO APPARENT DMG UPON INITIAL INSPN.	
		1	Small	SOURCE = TWO xxxxx-x (xxxx-x-x-xxxxxx, Rx)	FOUND ON RWY 18 AT 4300 FT MARKER DURING RWY INSPN. 1315 PM DAY.	
		1	Large	xxxx-x-x-xxxxxx	FOUND ON RWY BY ECHO TWY. NO STRIKE REPTD. 2214 PM NIGHT.	
		1	Medium	N SOURCE = THREE xxxxx-x (xxxx-x-x-xxxxxx, x-x-xxxxxx, Rx) OPERATOR / OWNER = UND AEROSPACE / UNIVERSITY OF NORTH DAKOTA	ID BY SMITHSONIAN. AFTER PARKING AND UPON EXTERIOR INSPN. FOUND SIGNIFICANT DMG TO RT WING LE. INCLUDING WHITE FEATHERS AS A RESULT OF A BIRDSTRIKE. LOCATION REPTD AS APPROX 5-8 MILE FINAL.	100
	1	1	Medium	SOURCE = THREE xxxxx-x (xxxx-x-x-xxxxxx, xxxxxxx & xx-xx-xxxxxx) & FAA ACCIDENT/INCIDENT PRELIM DATA	BIRD FOUND IN 2 PIECES 2500 FT FROM APCH END OF RWY. BLOOD ON RADOME AND LDG GEAR DOORS. BIRD FIRST REPTD AS HAWK.	
			Small	SOURCE = BASH NR xxxxxx		
		1	Small	xxxx-x-x-xxxxxx	CARCASS FOUND INTACT NEAR BRAVO INTXN. 1855 PM DAY.	
		1	Small	xxxx-x-x-xxxxxx	A/C REPTD BIRD CARCASS ON RWY. CARCASS INTACT. FOUND MIDFLD. NO STRIKE REPTD. 600 AM DAWN.	
		1	Small	xxxx-x-x-xxxxxx	FOUND BIRD IN TWO PIECES ON FIRST 1/3 OF RWY DURING ROUTINE INSPN. NO STRIKE REPTD. 1300 PM DAY.	
	1	1	Small	Y xxxx-x-x-xxxxxx		
		1	Small	xxxx-x-x-xxxxxx	FOUND DECAPITATED BIRD ALONG EDGE OF RWY WHILE PERFORMING ROUTINE INSPN. NO STRIKE REPTD. 401 AM NIGHT.	
	1	1	Large	N xxxx-x-x-xxxxxx	FRONT RT FUSELAGE DIRECTLY BEHIND AND ADJ TO RADOME HAD DENT IN METAL LARGER THAN 12 INCHES x 6 INCHES IN SIZE. APPEARED TO HAVE SMALL CRACK IN SKIN AT RIB BEHIND DENT. BIRD DESCRIBED AS LARGE WHITE BIRD. MAYBE OWL?	
		1	Small	N xxxx-x-x-xxxxxx OPERATOR / OWNER = UND AEROSPACE FOUNDATION	LOCATION REPTD AS 2 MILES N KFAR ON FINAL APRCH.	
		1	Small	N		
				SOURCE = BASH NR xxxxxx		
	1	1	Medium	SOURCE = THREE xxxxx-x (xxxx-x-x-xxxxxx & x-x-xxxxxx)	ARPT OPS COLLECTED REMAINS. A/C FLEW AROUND PATTERN THREE TIMES TO BURN OFF FUEL. LANDED W/O INCIDENT.	2

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		1	Small		xxxx-x-xx-xxxxxx	DATA ENTRY NOTE: # STRUCK NOT REPTD. ASSUME 1.
	2 to 10		Small	Y	xxxx-x-xx-xxxxxx	BIRD REMAINS FOUND ON RWY BTWN ECHO AND A3.
		1	Small		xxxx-x-xx-xxxxxx	PILOT REPTD DEAD BIRD ON RWY. NO REPTD STRIKE. 1915 PM DUSK.
		1	Small		xxxx-x-xx-xxxxxx	PILOT REPTD SEEING A DEAD BIRD ON RWY. NO REPTD STRIKE. 1830 PM DAY.
	2 to 10		Large		xxxx-x-xx-xxxxxx	WHILE RESPONDING TO ATC REPT OF RABBIT STRIKE WE FOUND A RABBIT (ASSUME WHITE-TAILED JACKRABBIT) AND A SKUNK (ASSUME STRIPED SKUNK) DEAD ON RWY 36 NEAR B3. NO INFO ON WHO MAY HAVE STRUCK ANIMALS. 2315 PM NIGHT.
	2 to 10		Small	Y	xxxx-x-xx-xxxxxx	TWO FRANKLIN'S GULLS FOUND RT ON THE NUMBERS OF RWY 36. PILOT HAD REPTD TO TOWER THAT THEY MIGHT HAVE A BIRDSSTRIKE. WENT OUT ABOUT 1/2 HR AFTER TO INVESTIGATE.
		1	Small		xxxx-x-xx-xxxxxx	FOUND DEAD ON RWY. NO RETPD STRIKE. 0945 AM DAY.
	2 to 10		Small		xxxx-x-xx-xxxxxx	FOUND PARTIAL REMAINS OF TWO GULLS ON APRCH END OF RWY 36 WHILE HARASSING GULLS. NO REPTD STRIKES. 0930 AM DAY.
		1	Small		xxxx-x-xx-xxxxxx	FOUND ON RWY 18 NEAR A3 DURING AIRFLD INSPN. NO REPTD STRIKES. 1345 PM DAY.
		1	Small		xxxx-x-xx-xxxxxx	CARCASS PARTS FOUND ON RWY DURING FLD INSPN. NO REPTD STRIKES. 0400 AM NIGHT.
		1	Small	Y	xxxx-x-xx-xxxxxx	FOUND DEAD ON RWY DURING FIELD INSPN. 1328 PM DAY.
		1	Large	Y	xxxx-x-xx-xxxxxx (w/xx UPDATED ALTITUDE)	PART NOT REPTD. ASSUME LANDING GEAR. ALSO ASSUME 0' AGL.
1	2 to 10		Large	N	xxxx-x-xx-xxxxxx OPERATOR / OWNER = UND AEROSPACE FOUNDATION / UNIV OF N DAKOTA	POSSIBLE GEESE. SOFT BALL SIZED DENT. 1/4-3/8 IN DEEP TO ENG EXHAUST STACK. LOCATION REPTD AS 1 MILE S OF RWY.

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					UPON COMPLETION OF POSTFLT INSPN WE NOTICED A BIRDSTRIKE ON LT NOSE SECTION. AS TO WHERE EXACTLY IT HAPPENED IS INKNWON DUE TO NIGHT FLT CONDITIONS. I REMEMBER A FAINT SOUND RESEMBLING A SMALL BIRDSTRIKE ON FINAL FOR RWY 36 INTO KFAR.	
		1	Small	N	xxxx-x-xx-xxxxxx	
1		1	Medium	N	xxxx-x-xx-xxxxxx. x'x'xx UPDATED REMARKS) (x'xx'xx UPDATED REMARKS WITH BAND #)	USGS BAND # 103585913. PILOT TOLD TOWER HE HIT A BIRD. DATA ENTRY NOTE: OPERATOR AND MODEL OF CITATION NOT REPTD. PHASE NOT REPTD. ASSUME ON ARPT AS REMAINS WERE COLLECTED.
		1	Small	Y	xxxx-xx-xx-xxxxxx (x'xx'xx UPDATED DISTANCE, OPERATOR)	REMAINS FOUND ON RWY. A/C WAS A FLT FROM FAR TO MSP, PHASE OF FLT UNKN. (DATA ENTRY NOTE: AIRLINE REPTD AS DELTA, BUT THEY DO NOT FLY EMB 175. PROBABLY A DELTA COMMUTER. COULD NOT LOCATE ANY WITH THE FLT NUMBER 3394.)
		1	Medium		xxxx-xx-x-xxxxxx	REMAINS FOUND AT INTXN RWY 18 AND 27. 1300 PM DAY.
		1	Small		xxxx-x-xx-xxxxxx	FOUND APPROX 1/3 WAY DOWN RWY 18. 1100 AM DAY.
11 to 100		1	Small	Y	xxxx-x-xx-xxxxxx	REMAINS FOUND IN PIECES AT INTXN OF B3 AND RWY. DATA ENTRY NOTE: PHASE WAS EITHER APRCH OR L/R.
		1	Small	Y	xxxx-x-xx-xxxxxx	FOUND ON RWY NEAR A3.
2 to 10			Small		SOURCE = DAILY REPT. AON DAIL INCIDENTS & NEWS MEDIA	MULTIPLE BIRDSTRIKE ON T/O. A/C WAS RETURNING TO FAR AFTER BURNING OFF FUEL WHEN AN EMERGENCY WAS DECLARED DUE TO A BACK-UP HDRAULIC INDICATOR LIGHT. BIRDSTRIKE DID NOT CAUSE DAMAGE.
		1	Small	Y	xxxx-x-xx-xxxxxx	FOUND REMAINS ON RWY 36 AT A3 INTXN. (DATA ENTRY NOTE: FLT # MAY BE INCORRECT)
		1	Small		xxxx-x-xx-xxxxxx	FOUND ALONG EDGE OF RWY. MIDFLD DURING FIELD INSPN. CARCASS DAMAGED. NO BIRDSTRIKES REPTD. 1230 PM DAY.
		1	Small	Y	xxxx-x-xx-xxxxxx (xx'x'xx UPDATED A/C DATA)	IMMATURE BONAPARTES GULL. DATA ENTRY NOTE: PHASE OF FLT EITHER T/O RUN OR CLIMB.
		1	Small		xxxx-x-xx-xxxxxx	FOUND NEAR ECHO ON RWY DURING FIELD INSPN. CARCASS INTACT. NO PILOT REPTS OF BIRDSTRIKES. 0930 AM DAY.

This page contains no comments

		1	Medium		xxxx-x-x-xxxxxx	FOUND DEAD ALONG EDGE OF RWY NEAR B3 DURING FIELD INSPN. CARCASS INTACT. NO PILOT REPTS OF BIRDSTRIKE. 0930 AMD AY.	
		1	Small	Y	xxxx-x-xx-xxxxxx	A/C HIT BIRD ON T/D RUN ABOUT FIRST THIRD OF RWY 18.	
		1	Small		xxxx-x-xx-xxxxxx	FOUND DEAD ALONG EDGE OF RWY, MIDFLD DURING FLD INSPN. 1230 PM DAY.	
		1	Small	Y	SOURCE = THREE xxxxx-x (xxxx-x-xx-xxxxxx & Px)	ID BY SMITHSONIAN, FAA 3405. MICRO. SMALL PORTION OF BIRD FOUND NEAR T/D PORTION OF RWY.	
			Small		SOURCE = BASH NR xxxxxx		
11 to 100	2 to 10		Medium	N	OPER = UNIV OF NORTH DAKOTA NDUxx	ENGINE COWLING DAMAGED.	
		1	Large		xxxx-x-x-xxxxxx (x/xx/xx & x/xx/xxxx UPDATED ID)	JACK RABBIT FOUND AT B3 INTXN. NO ONE REPTD STRIKING RABBIT. 07:00 AM DAWN. (ASSUME WHITE-TAILED DUE TO LOCATION)	
Over 100		1	Small	Y	TWO xxxxx-x (xxxx-xx-xx-xxxxxx)	REMAINS FOUND ON RWY 36 AT INTXN OF RWY 31	
		1	Small		xxxx-xx-x-xxxxxx	FOUND DEAD ON RWY. CARCASS INTACT. 3:30 AM NIGHT.	
		1	Small		xxxx-xx-x-xxxxxx	FOUND DEAD ALONG EDGE OF RWY NEAR ALPHA 3. CARCASS INTACT. 3:30 PM DAY.	
			Medium			NO DMG	
		1	Medium	N	xxxx-xx-xx-xxxxxx	BIRDSTRIKE TO F/O WINDSHLD. INSPN. NO DEFECTS NOTED.	
		1	Small		xxxx-x-x-xxxxxx	FOUND ON INTXN OF A-3 & 36. 4:00 AM DAWN.	
		1	Medium			# STRUCK NOT REPTD, ASSUME 1. ((DATA ENTRY NOTE: 2 DAYS LATER A FRANKLIN'S GULL WAS FOUND BUT DONT KNOW IF THIS IS THE GULL THAT WAS STRUCK ON THE 1ST.)	
Over 100		1	Medium	Y		(DATA ENTRY NOTE: 2 DAYS LATER A FRANKLIN'S GULL WAS FOUND BUT DONT KNOW IF THIS IS THE GULL THAT WAS STRUCK ON THE 1ST.)	
Over 100	2 to 10		Medium	Y	xxxx-xx sent question to tim pugh re species.	GULL. POSS CASPIAN TERN. A FLOCK OF GULLS HAD BEEN CHASED OFF ARPT ABOUT 30 MINUTIES EARLIER. (DATE ENTRY NOTE: ASSUME BIRD WAS A GULL AND NOT A TERN FROM THIS INFO)	
	1	1	Medium		(x/xxxxx UPDATED DISTANCE)	500 FT SHORT OF RWY 9. REPTD NO DMG. (# STRUCK NOT REPTD, ASSUME 1, SAME AS # SEEN)	
			Small		SOURCE = BASH NR xxxxxx		

This page contains no comments

		1 Medium		OPER = PRO AIRE CARGO "WISCAIR"	
		1 Small		xxxx-x-xx-xxxxxx	INTACT REMAINS FOUND MIDFIELD RWY 36 BY TWY E. TIME 1345, DAY.
	2 to 10	Small		TWO xxxxx-x REPTS (xxxx-x-xx-xxxxxx)	CAPT STATED THEY HIT A FEW BIRDS MIDFIELD JUST AFTER ROTATION. 1 HIT CAPT'S WINDOW & POSSIBLY BODY OF PLANE. FLT CONTD TO ORD.
		1 Small		xxxx-x-x-xxxxxx	REMAINS FOUND DURING FIELD CHECK NEAR B3. INTACT. 1430, DAY.
		1 Medium		xxxx-x-x-xxxxxx	FOUND REMAINS ABOUT 1 FT FROM EDGE ALONG RWY 36 NEAR ALPHA 3.
		1 Small		xxxx-x-xx-xxxxxx	HALF OF CARCASS FOUND MIDFIELD ON RWY. TIME 1445, DAY.
		1 Medium	Y		PERFORMED BIRDSTRIKE AND ENG FOD INSPN. NO DMG NOTED. BIRD HIT F/O WINDSHLD ON LANDING ROLLOUT.
		1 Small		xxxx-x-xx-xxxxxx (x/xx/xx UPDATED DISTANCE)	FOUND INTACT ON RWY MIDFIELD. THIS WAS A CONFIRMED STRIKE BUT THE TOWER DID NOT SUPPLY DETAILS.
		1 Small		xxxx-xx-xx-xxxxxx	FOUND REMAINS ON RWY NEAR TWY C. 1130, DAY.
		1 Medium		xxxx-xx-xx-xxxxxx	REMAINS FOUND ON INTXN OF 26 @ ALPHA 3. TIME 1240L, DAY.
	2 to 10	Medium		xxxx-xx-xx-xxxxxx	REMAINS FOUND FOR 3 BIRDS ON RWY 36 @ 1445, DAY.
	1 2 to 10	Medium	Y	SOURCE = TWO xxxxx-x (xxxx-xx-xx-xxxxxx)	FOUND 2 RING-BILLED GULLS N OF ECHO. REMOVED FROM RWY AT 1230, DAY. (THE REMAINS FOUND DID NOT MENTION THE AIRLINE, ASSUME SAME STRIKE SINCE TIME WAS WITHIN 15 MINS OF REPTD STRIKE.)
		Medium		SOURCE = BASH NR xxxxxx	
11 to 100	2 to 10	Medium	Y	SOURCE = TWO xxxxx-x (xxxx-xx-x-xxxxxx) & AIRLINE	SAW A COUPLE OF SML FLOCKS OF BIRD DURING INITIAL ROLL. ABOUT A DOZEN IN EACH FLOCK. I ELECTED TO CONTINUE T/O SINCE WE HAD ALREADY BEGUN THE ROLL AND THRUST WAS SET TO T/O POWER. AS WE APPROACHED V1, WE HEARD THE SOUNDS OF 2 IMPACTS. FLT CONTD. NO DMG EVIDENCE. NOTIFIED MX. FOUND IMPACT ON LWR L FUSELAGE JUST FWD OF DOOR 1L AND JUST INBD OF ENG ON L WING LE. NO DMG. REMAINS OF 2 IMMATURE RING-BILLED GULLS FOUND ON RWY AT MIDFIELD.

This page contains no comments

		1	Small		xxxx-x-xx-xxxxxx	IMMATURE FOUND ON RWY IN T/D AREA. 0830, DAY.
		1	Small		xxxx-x-xx-xxxxxx	REMAINS FOUND ON RWY MIDFIELD DURING INSPN. 1345, DAY.
		1	Medium		xxxx-x-xx-xxxxxx	HIT BELOW CAPT'S WINDOW ON FINAL APCH. INSPN. BIRDSTRIKE AT HINGE POINT ON RADOME. ALL CHECKED GOOD.
		1	Medium			# STRUCK NOT REPTD, ASSUME 1.
		1	Small		xxxx-x-xx-xxxxxx	READ HALF OF CARCASS FOUND ON RWY DURING INSPN. AT 0400, NIGHT.
		1	Small		xxxx-x-xx-xxxxxx	REMAINS FOUND ON RWY 36 S OF RWY 27. 0940, DAY.
		1	Small		xxxx-x-xx-xxxxxx	REMAINS FOUND ON RWY DURING ARFLD INSPN. TIME 1400, DAY.
		1	Small		xxxx-x-xx-xxxxxx	REMAINS FOUND ON RWY DURING FIELD INSPN. 1430, DAY.
1		1	Medium	Y	SOURCE = TWO xxx-x (xxxx-x-xx-xxxxxx)	REMAINS OF IMMATURE RGGU FOUND ON RWY 18 S OF TWY E.
		1	Small		xxxx-x-xx-xxxxxx	REMAINS OF IMMATURE FRANKLIN'S GULL FOUND ON RWY 36 CUT IN HALF DURING FIELD INSPN. TIME 1410, DAY.
		1	Small		xxxx-x-xx-xxxxxx	REMAINS FOUND ON INTXN OF RWYS 18 & 27. TIME 1440, DAY.
		1	Small		xxxx-x-xx-xxxxxx	PARTIAL REMAINS FOUND ON FIELD INSPN, MIDFIELD RWY 18. TIME 1415, DAY.
		1	Small		xxxx-x-xx-xxxxxx	REMOVED 2 INTACT CLIFF SWALLOWS. TIME 0930, DAY.
		1	Small		xxxx-x-xx-xxxxxx	REMAINS FOUND DURING DAT.
			Medium		SOURCE = BASH NR xxxxxx	
		1	Small		xxxx-x-xx-xxxxxx	REMAINS FOUND DURING RWY INSPN. AT1400, DAY.
2 to 10		1	Small	N	TWO xxx-x (xxxx-x-xx-xxxxxx)	REPTD TO DEPTR DURING CLIMBOUT
		1	Small		xxxx-x-xx-xxxxxx	PICKED UP BIRD PARTS ON RWY 36. DAY.
		1	Large		xxxx-x-xx-xxxxxx	JACK RABBIT REMAINS FOUND DURING FIELD INSPN. CARCASS INTACT (only jackrabbit at FAR is Whitet-tailed)
		1	Small		xxxx-x-xx-xxxxxx	FOUND INTACT CARCASS AT 1200, DAY.
		1	Small		xxxx-x-xx-xxxxxx	FOUND REMAINS ON RWY DURING FIELD INSPN. INTACT. DAY. 1400 HRS.
		1	Medium		xxxx-x-xx-xxxxxx (xx/xx)xx. UPDATED PHASE OF FLT: y/xx/xxxx REMOVED STATE FROM ENRT)	BIRDSTRIKE AT 1700' VFR. GEAR DOWN. (PHAS NOT REPTD, ASSUME APCH). INSPN FOUND NO DMG.

This page contains no comments

	1	Medium		xxxxx-xx-xxxxxxx	FOUND DEAD ON RWY AT 1310, DAY.	
	1	Small	Y	xxxxx-xx-xxxxxxx	REMOVED FROM MIDPOINT OF RWY CARCASS INTACT.	
	1	Small		xxxxx-xx-xxxxxxx	FOUND REMAINS ON N END OF RWY 18 AT 1345, DAY DURING RWY CHECK.	
	1	Small	Y	xxxxx-xx-xxxxxxx	PILOT REPTD STRIKE (PHASE NOT REPTD). RETRIEVED BIRD FROM RWY.	
1	1	Small	Y	xxxxx-xx-xxxxxxx	BLOOD IMPACT MARK ON TOP EDGE OF RT WING	1
		Small		SOURCE = BASH NR xxxxxxx		0
2 to 10		Medium			BIRDSTRIKES ON SHORT FINAL. FOUND REMAINS ON RADOME AND L INBD SLAT AND L WINGROOT. (# NOT REPTD, ASSUME 2-10)	
	1	Small	Y	xxxxx-xx-xxxxxxx OPER = THARALDSON EXECUTIVE MGT		
1	1	Small	Y	SOURCE = AIRLINE & xxxxx-x (xxxx-xx-xxxxxxx)	HIT BIRD DURING ROTATION JUST BELOW F/O'S WINDSHLD. LOGBOOK ENTRY MADE. REMAINS COLLECTED.	
	1	Large		xxxxx-xx-xxxxxxx	FOUND IN MANY PIECES DURING FIELD INSPN, MIDPOINT RWY36. 0830, DAY.	
Over 100	1	Small	Y	SOURCE = xxxxx-x (xxxx-xx-xxxxxxx) & ASRS xxxxxxx OPER PROBABLY MESABA	LARGE NUMBERS OF GULL WERE PRESENT ON THE ARPT AND HAD BEEN SEEN ON THE FLT IN BY CREW. JUST AFTER LIFT OFF 1 HIT THE LWR FWD FUSELAGE. ALL ENG INDICATIONS WERE NORMAL AND FLT CONTD TO MSP. CARCASS FOUND IN 2 PIECES MIDFIELD.	
	1	Small		xxxxx-xx-xxxxxxx	FOUND AT 0415, NIGHT DURING INSPN.	
	1	Small		xxxxx-xx-xxxxxxx	FOUND CUT IN HALF DURING FIELD INSPN ON RWY 9/27 W OF ALPHA, TIME 1430, DAY.	
	1	Small		xxxxx-xx-xxxxxxx	REMAINS FOUND IN 2 PIECES DURING RWY INSPN. BY TWY ECHO AT 1300, DAY.	
		Small		SOURCE = BASH NR xxxxxxx		0
	1	Small		xxxxx-xx-xxxxxxx	FOUND IN PIECES ON RWY AT 2215, NIGHT	
	1	Small	N	xxxxx-xx-xxxxxxx	CARCASS INTACT, FOUND AT EDGE OF RWY.	
	1	Small		xxxxx-xx-xxxxxxx	FOUND ALONG RWY EDGE, INTACT AT 1505, DAY.	
	1	Medium	N	xxxxx-xx-xxxxxxx ** EMAILED CAPT ABOUT ID x0/x0x	BIRD WAS NEVER SEEN, JUST HEARD THE STRIKE ON DESCENT. (DATA ENTRY NOTE: BIRD REPTD AS CROW, NOT SURE HOW THEY KNEW IF THE BIRD WAS NOT SEEN). PILOT REPLIED IT WAS A GUESS HE SAW BLACK FEATHERS ON A/C. STRIKE SHIFTED RADOME OFF CENTER.	
		Medium		BASH Mishap ID xxxxxxx		0

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		1	Large	xxxx-x-xx-xxxxxx	FOUND ON RWY AT NIGHT DURING FIELD CHECK ABOUT 4AM		
	2 to 10		Medium	xxxx-x-xx-xxxxxx xxxxx-x-xx-xxxxxx (x/xx/xx UPDATED OPER)			
		1	Medium	xxxx-x-xx-xxxxxx	FOUND CARCASS ALONG EDGE OF RWY DURING FIELD CHECK. INTACT. TIME 1334. DAY.		
		1	Small	xxxx-x-xx-xxxxxx	FOUND ON RWY DURING FOD RESPONSE SWEEP AT 1330. DAY.		
		1	Large	xxxx-x-xx-xxxxxx	FOUND JACK RABBIT (ASSUME WHITE-TAILED FROM LOCATION) ON FIELD INSPN AT 420. NIGHT.		
		1	Small	xxxx-x-xx-xxxxxx	FOUND REMAINS AT 1500. DAY		
		1	Large	xxxx-x-xx-xxxxxx	JACK RABBIT FOUND ON RWY AT 0400 NIGHT. ASSUME WHITE-TAILED.		
	2 to 10		Medium		JUST PRIOR TO V1, SEVERAL LRG BIRDS WENT BY. 1 HIT JUST AFT OF F/O'S AFT SIDE WINDOW. A COUPLE OF SECONDS LATER, A FEW MORE BIRDS WENT BY. NO UNUSUAL ODORS OR ENG INDICATIONS TO INDICATE BIRDS HAD HIT THE A/C. FLT CONTD, APPEARED TO BE GULLS. NO DMG. OR EVIDENCE FOUND.		
		1	Medium		FOUND ON RWY NEAR 4000' MARKER. TIME 1115. DAY.		
		1	Small	xxxx-x-xx-xxxxxx	CARCASS INTACT FOUND ON CENTERLINE AT 1130. DAY.		
			Small	SOURCE = BASH xxxxxxx-x-xxxx			
		1	Small	xxxx-x-xx-xxxxxx	FOUND MIDFIELD NEAR RWY EDGE. TIME 0900. DAY. SOME CLOUD.		
		1	Large	xxxx-x-xx-xxxxxx (x/xx/xx UPDATED SPECIES)	FOUND SEVERAL PIECES OF RABBIT ON RWY. TIME - 1030. DAY.		
		1	Small	xxxx-x-xx-xxxxxx			
		1	Medium	xxxx-x-xx-xxxxxx	IMMATURE RBGU FOUND IN GRASS ALONG RWY AT MIDFIELD. INTACT.		
	2 to 10		Small	xxxx-x-xx-xxxxxx	IMMATURE. FOUND 4 INTACT CARCASSES ON RWY AT 0645. DAY.		
		1	Medium	xxxx-x-xx-xxxxxx	FOUND HEN AT APCH END OF 17. 0825. DAY.		
		1	Medium	xxxx-x-xx-xxxxxx (x/xx/xx UPDATED ARPT & RWY)	CARCASS LOCATED AT BASE OF 35. TIME FOUND 1530. DAY.		
	1		Medium N	SOURCE = TWO xxxxx-x (xxxx-x-xx-xxxxxx & x-xx-xxxxxx)	CARCASS WAS FOUND AT INTXN OF 26 & 17. NO DMG.		
		1	Medium	SOURCE = BASH NR xxxxx	No remains gathered (mistakenly).		0

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		1	Large		xxxx-xx-x-xxxxxx (UPDATED OPER xlsx/xx & x/y/xx)	TWR REPTD FOD ON RWY. ARPT OPS FOUND FOX CARCASS. A/C OPER WAS NOTIFIED AND FOUND NO DMG. PART STRUCK NOT REPTD. ASSUME LANDING GEAR.	
	2 to 10		Small	N	xxxx-xx-x-xxxxxx	A/C REPTD BIRDSTRIKE ON ARRIVAL IN DEN. CREW SAW NO DMG.	
	2 to 10		Small		xxxx-xx-x-xxxxxx	A/C REPTD STRIKE ON ARRIVAL IN DEN. CREW COULD NOT SEE ANY SIGNS OF DMG.	
	2 to 10		Small		xxxx-xx-x-xxxxxx	TIME FOUND 0902. NO A/C REPTD STRIKE. BELIEVE IT WAS AT TAKE OFF. PIECES OF 9 BIRDS RECOVERED ON TWY RWY INTXN.	
11 to 100	2 to 10		Medium	N	OPER = ABERDEEN FLYING SERVICE	WARNED ABOUT BIRDS FLYING OFF OF THE DEPTR END BUT NOT WARNED OF BIRDS ON RWY. HIT BIRD ABOUT 2300' DOWN THE RWY	
2 to 10		1	Small		SOURCE = BASH NR xxxxx		
		1	Small		xxxx-xx-xx-xxxxxx	A/C REPTD BIRD STRIKE TO ATCT. OPS RECOVERED PIECES FROM RWY	
		1	Small		xxxx-xx-xx-xxxxxx	FOUND AT 1530. DAY. FOUND OFF RWY END.	
		1	Small		SOURCE = BASH NR xxxxx		0
		1	Medium		SOURCE = BASH NR xxxxx	Crew found evidence of strike on the number two engine intake during post flight inspection.	0
	2 to 10		Small		SOURCE = BASH NR xxxxx	Aircraft struck 3 birds - One hit windscreen - One hit right inboard leading edge - One hit right outboard flap No damage, no remains	0
	1	1	Medium	N		FLT 1052. PILOT REPTD STRIKING A BIRD CLIMBING OUT	
	1	1	Small	N			
	1	1	Small	N		FLT 1273. BIRD HIT 3000' FROM THRESHOLD	
2 to 10		1	Medium	Y		ATIS WARNING	
2 to 10	2 to 10		Medium	N		F/O SAW WHAT HE THOUGHT TO BE 3 DUCKS PASS QUICKLY OVER WING. HE HEARD A THUD AT SAME TIME. NO EVIDENCE OF IMPACT FOUND.	
2 to 10	2 to 10		Small		OPER = DOUG ANDERSON A/C = DOUG ANDERSON GRAND xx (x/y/xx UPDATED A/C)	NO DMG	
		1	Medium		ASR# xxxxxx/Dxx	NO DMG.	
	1	1	Small		SOURCE = BASH NR xxxxx	REMARKS - : AIRCRAFT - F - 16 - A; IMPACT - UPPER SIDE OF RADOME AND FRONT OF CANOPY; NUMBER OF BIRDS (S, F, or Z) - S	
11 to 100	2 to 10		Medium	N	SOURCE = xxx-x & AIRLINE REPT	FLT 230. NO DAMAGE. NO MENTION OF BIRDS ON ATIS OR TWR AT FAR. FOUND BIRD PARTS ON LFT MAIN LDG GEAR & BLOOD ON LE OF RT WING	

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1		1	Small		SOURCE = BASH NR xxxxx	REMARKS - GROUND FOUND; AIRCRAFT - F - 16 - A; IMPACT - FUSELAGE; NUMBER OF BIRDS (S, F, or Z) - S	
1		1	Small	Y	SOURCE = BASH NR xxxxx	REMARKS - GROUND FOUND; AIRCRAFT - F - 16 - A; IMPACT - FUSELAGE; NUMBER OF BIRDS (S, F, or Z) - S	
2 to 10		1	Small	N	OPERATOR = WEATHER MODIFICATION INC	TIME = 1020LCL FLT 1281.	
1		1	Small	N		TIME = 0630 LCL	
		1	Small	N		NO REPT OF DAMAGE	
		1	Small	N	OPERATOR = UND	HIT GEAR DOOR. NO DAMAGE. BUSINESS IS LISTED AS A CORPORATION BY NJ	
11 to 100			Medium	Y		TOWER WARNED OF BIRDS ON RY AND IN AREA. TAKEOFF STARTED SLOWLY WHILE LOOKING AHEAD FOR BIRDS. BECAUSE THEIR COLORS BLENDED WITH RY THEY WERE NOT SEEN UNTIL 900' IN FRONT OF A/C. I SAW LARGE FLOCK ON RY AND STARTED TO ABORT T/O. WE FELT NO IMPACT & AFTER INSPECTION FOUND BLOOD AND FEATHERS ON LEFT WING. NO DAMAGE.	
	2 to 10		Small	Y			
1		1	Small		SOURCE = BASH NR xxxxx	REMARKS - ; AIRCRAFT - KC - 135 - R; IMPACT - #1 ENGINE INLET; NUMBER OF BIRDS (S, F, or Z) - S	
		1	Medium	N	OPERATOR = P BUFFINGTON	HEARD LOUD THUD & SAW LIQUID RUNNING UP WINDSHIELD. NEITHER I NOR INSTRUCTOR KNEW WHAT HAD HAPPENED UNTIL SMELL ENTERED COCKPIT. ENG TEMP GAUGE ROSE. BIRD STRUCK PROP AND ENTERED ENG COWLING AND CAME TO REST ON #4 CYLINDER. ALTERNATE AIR VALVE OPENED BECAUSE BIRD JAMMED PRIMARY AIR INTAKE. LANDED SAFELY. MODERATE DAMAGE. STRIKE OCCURRED ABOUT 40 NW OF KFAR. LANDING LIGHT INOP DUE TO DAMAGE. DIFFICULTY FLYING VFR FROM BLOOD ON WINDSHLD.	
2 to 10	2 to 10		Small		SOURCE = BASH NR xxxxx	REMARKS - ; AIRCRAFT - F - 16 - ; IMPACT - CANOPY; NUMBER OF BIRDS (S, F, or Z) - F	
2 to 10		1	Small	Y	OPERATOR = QUADION CORP	1 BIRD INGESTED. MINOR DAMAGE TO FAN ON ENG #4. SHUT DOWN ENG AS A PRECAUTION. SMALL ENG VIBRATION. NO THRUST LOST	

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1		1	Small		SOURCE = BASH NR xxxxx	REMARKS - ; AIRCRAFT - C - 130 - B; IMPACT - VERTICAL STAB; NUMBER OF BIRDS (S, F, or Z) - S
11 to 100		1	Small	Y	SOURCE = FAA TECH CENTER BIRD INGESTION REPT. ENG MANU & FAA AIRCRAFT ACCIDENT/INCIDENT REPT. (UPDATED x/x/xx)	VIBRATION HIGH; 3 FAN BLADES DAMAGED. SIGNIFICANT DAMAGE. EVENT #433. (DATA ENTRY NOTE: DATES REPTD AS 1ST AND 2ND)

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Pilot			10/15/2015 0:00	FALSE	FALSE
Tower			9/9/2015 0:00	FALSE	FALSE
Carcass Found			8/18/2015 0:00	FALSE	FALSE
Airport Operations			6/25/2015 0:00	FALSE	FALSE
Tower			4/14/2015 0:00	FALSE	TRUE
Tower			1/21/2015 0:00	FALSE	FALSE
Carcass Found			1/6/2015 0:00	FALSE	FALSE
Carcass Found			1/6/2015 0:00	FALSE	FALSE
Airport Operations			1/21/2015 0:00	FALSE	FALSE
Carcass Found			1/6/2015 0:00	FALSE	FALSE
Carcass Found			1/6/2015 0:00	FALSE	FALSE
Airport Operations			1/21/2015 0:00	FALSE	FALSE
Tower			1/21/2015 0:00	FALSE	FALSE
Tower			1/21/2015 0:00	FALSE	FALSE
Airport Operations			10/23/2014 0:00	FALSE	FALSE
Carcass Found			9/17/2014 0:00	FALSE	FALSE

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Pilot			9/16/2014 0:00	FALSE	FALSE
Airport Operations			9/17/2014 0:00	FALSE	FALSE
Carcass Found			4/24/2014 0:00	FALSE	FALSE
Carcass Found			2/26/2014 0:00	FALSE	FALSE
Carcass Found			2/26/2014 0:00	FALSE	FALSE
Airport Operations			2/27/2014 0:00	FALSE	FALSE
Pilot			2/27/2014 0:00	FALSE	FALSE
Tower			2/27/2014 0:00	FALSE	FALSE
Carcass Found			1/16/2014 0:00	FALSE	FALSE
Carcass Found			11/21/2013 0:00	FALSE	FALSE
Carcass Found			9/26/2013 0:00	FALSE	FALSE
Tower			9/30/2013 0:00	FALSE	FALSE
Tower			9/30/2013 0:00	FALSE	FALSE
Tower			9/26/2013 0:00	FALSE	FALSE
Pilot			9/26/2013 0:00	FALSE	FALSE
Airport Operations			8/7/2013 0:00	FALSE	FALSE

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			8/7/2013 0:00	FALSE	FALSE
Tower					
Carcass Found			6/27/2013 0:00	FALSE	FALSE
Carcass Found			5/23/2013 0:00	FALSE	FALSE
Pilot			5/23/2013 0:00	FALSE	TRUE
Pilot			1/23/2013 0:00	FALSE	FALSE
			10/22/2012 0:00	FALSE	FALSE
Carcass Found			11/6/2012 0:00	FALSE	FALSE
Carcass Found			9/20/2012 0:00	FALSE	FALSE
Carcass Found			9/20/2012 0:00	FALSE	FALSE
Airport Operations			9/20/2012 0:00	FALSE	FALSE
Carcass Found			9/20/2012 0:00	FALSE	FALSE
Pilot			8/14/2012 0:00	FALSE	TRUE
			7/11/2012 0:00	FALSE	FALSE
			6/5/2012 0:00	FALSE	FALSE
			9/11/2012 0:00	FALSE	FALSE
Pilot			5/10/2012 0:00	FALSE	FALSE

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Carcass Found			2/8/2012 0:00	FALSE	FALSE
Airport Operations			8/25/2011 0:00	FALSE	FALSE
Carcass Found			2/4/2011 0:00	FALSE	FALSE
Carcass Found			1/12/2011 0:00	FALSE	FALSE
Carcass Found			1/12/2011 0:00	FALSE	FALSE
Airport Operations			1/12/2011 0:00	FALSE	FALSE
Carcass Found			12/28/2010 0:00	FALSE	FALSE
Carcass Found			12/28/2010 0:00	FALSE	FALSE
Carcass Found			12/28/2010 0:00	FALSE	FALSE
Carcass Found			12/28/2010 0:00	FALSE	FALSE
Airport Operations			10/28/2010 0:00	FALSE	FALSE
Carcass Found			10/28/2010 0:00	FALSE	FALSE
Airport Operations			5/7/2014 0:00	FALSE	FALSE
Pilot			9/2/2010 0:00	FALSE	TRUE

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Pilot			8/5/2010 0:00	FALSE	FALSE
			5/15/2014 0:00	FALSE	FALSE
Airport Operations			5/13/2014 0:00	FALSE	FALSE
Carcass Found			3/22/2010 0:00	FALSE	FALSE
Carcass Found			2/19/2010 0:00	FALSE	FALSE
Airport Operations			1/28/2010 0:00	FALSE	FALSE
Airport Operations			1/28/2010 0:00	FALSE	FALSE
Tower			1/14/2010 0:00	FALSE	FALSE
Airport Operations			1/14/2010 0:00	FALSE	FALSE
Carcass Found			1/28/2010 0:00	FALSE	FALSE
Airport Operations			10/3/2014 0:00	FALSE	FALSE
Carcass Found			1/28/2010 0:00	FALSE	FALSE

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Carcass Found			1/28/2010 0:00	FALSE	FALSE
Airport Operations			12/21/2009 0:00	FALSE	FALSE
Carcass Found			12/23/2009 0:00	FALSE	FALSE
Airport Operations			12/23/2009 0:00	FALSE	FALSE
			10/21/2009 0:00	FALSE	FALSE
			9/21/2009 0:00	FALSE	TRUE
Carcass Found			5/26/2015 0:00	FALSE	FALSE
Tower			3/3/2009 0:00	FALSE	FALSE
Carcass Found			3/13/2009 0:00	FALSE	FALSE
Carcass Found			3/13/2009 0:00	FALSE	FALSE
Air Transport Operations			2/19/2009 0:00	FALSE	FALSE
Air Transport Operations			1/28/2009 0:00	FALSE	FALSE
Carcass Found			2/21/2009 0:00	FALSE	FALSE
Tower			1/13/2009 0:00	FALSE	FALSE
Tower			1/13/2009 0:00	FALSE	FALSE
Tower			12/24/2008 0:00	FALSE	FALSE
			7/8/2015 0:00	FALSE	FALSE
			10/21/2009 0:00	FALSE	FALSE

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Tower			12/8/2008 0:00	FALSE	FALSE
Carcass Found			11/16/2008 0:00	FALSE	FALSE
Airport Operations			11/5/2008 0:00	FALSE	FALSE
Carcass Found			10/15/2008 0:00	FALSE	FALSE
Carcass Found			7/22/2008 0:00	FALSE	FALSE
Carcass Found			7/16/2008 0:00	FALSE	FALSE
Air Transport Operations			7/2/2008 0:00	FALSE	FALSE
Airport Operations			5/13/2014 0:00	FALSE	FALSE
Carcass Found			4/14/2008 0:00	FALSE	FALSE
Carcass Found			2/14/2008 0:00	FALSE	FALSE
Carcass Found			2/14/2008 0:00	FALSE	FALSE
Airport Operations			2/13/2008 0:00	FALSE	FALSE
			10/21/2009 0:00	FALSE	FALSE
Air Transport Operations			2/1/2008 0:00	FALSE	FALSE

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Carcass Found			1/21/2008 0:00	FALSE	FALSE
Carcass Found			12/12/2007 0:00	FALSE	FALSE
Air Transport Operations			12/12/2007 0:00	FALSE	FALSE
Tower			12/10/2007 0:00	FALSE	FALSE
Carcass Found			12/10/2007 0:00	FALSE	FALSE
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Carcass Found			11/28/2007 0:00	FALSE	FALSE
Carcass Found			11/28/2007 0:00	FALSE	FALSE
Airport Operations			11/26/2007 0:00	FALSE	FALSE
Carcass Found			11/21/2007 0:00	FALSE	FALSE
Carcass Found			11/21/2007 0:00	FALSE	FALSE
Carcass Found			11/21/2007 0:00	FALSE	FALSE
Carcass Found			11/5/2007 0:00	FALSE	FALSE
Carcass Found			10/30/2007 0:00	FALSE	FALSE
Carcass Found			10/21/2009 0:00	FALSE	FALSE
Carcass Found			10/25/2007 0:00	FALSE	FALSE
Airport Operations			10/23/2007 0:00	FALSE	FALSE
Carcass Found			10/22/2007 0:00	FALSE	FALSE
Carcass Found			9/5/2007 0:00	FALSE	FALSE
Carcass Found			9/4/2007 0:00	FALSE	FALSE
Carcass Found			8/28/2007 0:00	FALSE	FALSE
Air Transport Operations			6/25/2015 0:00	FALSE	FALSE

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Carcass Found			1/8/2007 0:00	FALSE	FALSE
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Airport Operations			12/19/2006 0:00	FALSE	FALSE
Pilot			12/14/2006 0:00	FALSE	FALSE
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Air Transport Operations			12/5/2006 0:00	FALSE	FALSE
Airport Operations			11/21/2006 0:00	FALSE	FALSE
Air Transport Operations			11/21/2006 0:00	FALSE	FALSE
Carcass Found			11/13/2006 0:00	FALSE	FALSE
Pilot			3/19/2007 0:00	FALSE	FALSE
Carcass Found			11/1/2006 0:00	FALSE	FALSE
Carcass Found			10/31/2006 0:00	FALSE	FALSE
Carcass Found			10/25/2006 0:00	FALSE	FALSE
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Carcass Found			10/16/2006 0:00	FALSE	FALSE
Airport Operations			10/4/2006 0:00	FALSE	FALSE
Carcass Found			9/8/2006 0:00	FALSE	FALSE
Pilot			8/8/2006 0:00	FALSE	TRUE
			10/21/2009 0:00	FALSE	FALSE

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Carcass Found			11/29/2005 0:00	FALSE	FALSE
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Carcass Found			10/24/2005 0:00	FALSE	FALSE
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Carcass Found			10/18/2005 0:00	FALSE	FALSE
Carcass Found			10/6/2005 0:00	FALSE	FALSE
Carcass Found			8/9/2005 0:00	FALSE	FALSE
Air Transport Operations			1/16/2005 0:00	FALSE	FALSE
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Carcass Found			12/6/2004 0:00	FALSE	FALSE
			0 10/21/2009 0:00	FALSE	FALSE
Carcass Found			10/21/2004 0:00	FALSE	FALSE
Carcass Found			1/5/2011 0:00	FALSE	FALSE
Airport Operations			1/13/2004 0:00	FALSE	FALSE
Airport Operations			12/19/2003 0:00	FALSE	FALSE
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Carcass Found			8/28/2003 0:00	FALSE	FALSE
Carcass Found			3/19/2013 0:00	FALSE	FALSE
Air Transport Operations			9/18/2003 0:00	FALSE	FALSE
Other			10/21/2009 0:00	FALSE	FALSE

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Airport Operations			5/2/2013 0:00	FALSE	FALSE
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Carcass Found			1/31/2003 0:00	FALSE	FALSE
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			10/17/2000 0:00	FALSE	FALSE
			11/30/2000 0:00	FALSE	FALSE
Pilot			10/2/2000 0:00	FALSE	FALSE
Pilot			6/8/2000 0:00	FALSE	FALSE
Tower			5/9/2000 0:00	FALSE	FALSE
			3/5/2013 0:00	FALSE	FALSE
Air Transport Operations			4/25/2005 0:00	FALSE	FALSE
			10/21/2009 0:00	FALSE	FALSE
Pilot			12/8/1998 0:00	FALSE	FALSE

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			10/21/2009 0:00	FALSE	FALSE
			10/21/2009 0:00	FALSE	FALSE
			12/15/1997 0:00	FALSE	FALSE
			10/27/1997 0:00	FALSE	FALSE
Tower			8/26/1997 0:00	FALSE	FALSE
			3/24/1998 0:00	FALSE	FALSE
Pilot			5/22/1998 0:00	FALSE	FALSE
Pilot			4/12/1996 0:00	FALSE	FALSE
			10/21/2009 0:00	FALSE	FALSE
Pilot			10/11/2006 0:00	FALSE	TRUE
			10/21/2009 0:00	FALSE	FALSE
Pilot			5/12/2003 0:00	FALSE	TRUE

This page contains no comments

			10/21/2009 0:00	FALSE	FALSE
Other			5/5/2008 0:00	FALSE	TRUE

From: marcus.larson@exhostmail.com
To: [*Review, Environmental \(DNR\)](#)
Subject: Fargo Moorhead Flood Risk Management Project DEIS - Mass Wasting, Riparian Degradation
Date: Wednesday, October 28, 2015 3:09:04 PM
Attachments: [DNR Comments - Marcus Larson \(Mass Wasting, River Degradation\) 2015-10-28.pdf](#)

Commenter 111 cont.

Summary of Comments on MarcusLarson_Commenter111o_p_Email6.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/19/2015 9:24:44 AM -06'00'
Commenter 111 cont.

Author: Date: Indeterminate

Dear Project Manager,

Attached are comments pertaining to "Mass Wasting and Riparian Degradation" assessment associated with the Fargo Moorhead Flood Risk Management Project.

Thank you for considering my comments.

Respectfully submitted,

Marcus Larson
513 7th St
Hickson, ND 58047
701-588-4412 home
701-893-6975 cell

October 28, 2015

Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road
St. Paul, Minnesota, 55155-4025

RE: Fargo Moorhead Flood Risk Management Project DEIS

Subject: Stream Stability, Riverbank Degradation and Loss of Riparian

Page: 2

Author: Medopera Subject: Highlight Date: 4/5/2016 12:22:15 PM
Comment ID: 1110 (includes attached photographs)
Topic: Stream Stability, Mitigation

The MN DNR Draft EIS section 3.3.1 Affected Environment (paragraph 3) states:

"Red River, Wild Rice River and Wolverton Creek within the inundation area are currently prone to and commonly exhibit bank slumping as a result of the flood flows"

"Riverbanks in the project area are particularly vulnerable to slumping as they consist of an upper layer of sediment called the Sherack Formation, resting on a more easily deformable clay of the Brenna Formations (Harris and others 1974 and Harris 2003). "

"Increased shear stress from high (i.e., flood) velocity flows and bank saturation increase the potential for bank slumping."

Operation of Class 1 High Hazard Dam would invariably increase mass wasting (slump) along slopes of the Red River, Wild Rice River, Wolverton Creek and numerous county drains and smaller inflow areas.

Areas located within the proposed staging and storage area would experience extended inundations time that would exceed the natural banks and limits of floodways making these areas susceptible to saturation and accelerated degradation of bank slopes and riparian vegetation for bank stability and wildlife habitat.

The MN DNR Draft EIS or USACE documentation does not indicate maintenance to remove debris associated to mass wasting that could increase velocity, undercut and additional bank slumping.

Having lived and worked within the proposed staging and storage area, I am familiar with several reaches of river bank where acceleration could occur and specific areas of concern relating to mass wasting and instability in and around river crossings where degradation, aggradation, width adjustment, or planform changes are actively occurring and would most likely accelerate as a result of project operation.

There does not appear to be a quantified cost to address damages to river crossings, piers, footings or abutments as a result of project operation.

There also does not appear to be a concise benchmark inventory listing or register of mass wasting areas to monitor for comparison if the proposed project were constructed and operated.

There are nearly 380 miles of river bank from Kent, MN to the Canada - U.S. border. When comparing the highest recorded historical flood events to USACE VE13a alignment tied to the EOE, there would be significant increases in water surface elevation from the F-M project area the entire way to Drayton, ND as a result of the proposed project - which could lead to accelerated stream instability, degradation and other net morphological changes.

I have attached several photos of the most easily accessible mass wasting (slump) areas, however, the most inaccessible area are viewable by traveling the river.

The impacts to Minnesota far exceed any benefit suggested by the USACE and non-federal local sponsor.

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Removal of the Class 1 High Hazard Dam component(s) would allow the Red River, Wild Rice and Wolverton Creek waterway to evolve under a natural time frame, without project induced mass wasting and riparian degradation.

Alternately, moving the Class 1 High Hazard Dam north of the Wild Rice and Red River confluence and limiting the structure and staging height, with freeboard, to remain within 1 mile (*no further than Hwy 75*) of the Red River main-stem on the Minnesota side would allow the natural flood plain to attenuate flooding and reduce the overall socio-economic impacts to Minnesota interests and the cumulative effects of mass wasting and riparian degradation.

Sincerely,



Marcus E. Larson
513 7th St
Hickson, ND 58047
701-588-4412

Page: 14

Author: Medopera Subject: Highlight Date: 4/5/2016 12:23:08 PM
Comment ID: 111p
Topic: Alternatives, Alternative: Move Dam North of Red/Wild Rice Confluence

From: marcus.larson@exhostmail.com
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo Moorhead Flood Risk Management Project DEIS - Executive Order 11988
Date: Wednesday, October 28, 2015 4:20:40 PM
Attachments: [DNR Comments - Marcus Larson \(EO11988\) 2015-10-28.pdf](#)

Committer 111 cont.

Summary of Comments on MarcusLarson_Committer111q-s_Email7.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/19/2015 9:33:48 AM -06'00'
Committer 111 cont.

Author: Date: Indeterminate

Dear Project Manager,

Attached are comments pertaining to "Executive Order 11988" associated with the Fargo Moorhead Flood Risk Management Project and development practices in Fargo and Cass County, ND that directly and indirectly affect Minnesota interests.

Thank you for considering my comments.

Respectfully submitted,

Marcus Larson
513 7th St
Hickson, ND 58047
701-588-4412 home
701-893-6975 cell

October 28, 2015

Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road
St. Paul, Minnesota, 55155-4025

RE: Fargo Moorhead Flood Risk Management Project DEIS

Subject: Stream Stability, Riverbank Degradation and Loss of Riparian

The MN DNR Draft EIS does not appear to address the violation of Executive Order 11988.

Executive Order 11988: Flood Plain Management

Executive Order 11988 requires federal agencies to avoid to the extent possible the long and short-term adverse impacts associated with the occupancy and modification of flood plains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. In accomplishing this objective, "each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by flood plains in carrying out its responsibilities" for the following actions:

- acquiring, managing, and disposing of federal lands and facilities;
- providing federally-undertaken, financed, or assisted construction and improvements;
- conducting federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulation, and licensing activities.

The stated project purpose violates Executive Order 11988 on several points, however, the most evident is the failure to minimize impacts to the natural flood plain by fostering maximum flood plain encroachment.

On September 28, 2011 FEMA Region 8 warned Diversion Authority Chairman and Cass County Commissioner Darrell Vanyo about floodplain encroachment:

Regulatory floodways are areas defined as the channels of a stream, plus any adjacent floodplain areas, that must be kept free of encroachment so that the base flood discharge can be conveyed without increasing the BFEs more than a specified amount.

The non-federal local sponsor ignored FEMA warning and accelerated encroachment and development of the natural flood plain upstream of Fargo, ND.

The USACE refused to modify the project to comply with EO-11988 and removed regulatory obstacles wherever possible to ensure the USACE proposal would receive a Record of Decision to advance the project further.

This placed Minnesota at a severe disadvantage. Nancy Otto (Moorhead) and Kevin Campbell (Clay County) Minnesota member representatives on the Diversion Authority Board did not protect Minnesota interests. Quite the contrary, Otto and Campbell collaborated with North Dakota development interests and furthered the proposed project agenda by refusing to address Fargo's south-side development and related impacts to Minnesota environment, populations and socio-economic interests.

Not one reference in the MN DNR Draft EIS or USACE FEIS reflects or quantifies the acre feet of water that Fargo has displaced with development southward from 194 into the natural flood plain.

Author: Medopera Subject: Highlight Date: 4/5/2016 12:25:31 PM
Comment ID: 111q
Topic: Federal Executive Order 11988, Not Addressed or Inadequately Addressed

Author: Medopera Subject: Highlight Date: 4/5/2016 12:25:44 PM
Comment ID: 111r
Topic: Land Use, Fargo's Comprehensive Plan

In 1969 the peak CFS discharge was 25,300 CFS. Comparing the same CFS discharge during the 2009 flood, the Red River gaged 25.2 inches higher.

Fargo, ND has enjoyed decades of negligent city planning and irresponsible flood plain encroachment inducing water displacement, which is a violation of EO-11988. 100 percent of the lowest land that falls inside the currently proposed project has historically flooded during every flood event.

On or around September 21, 2015 the Fargo City Commission was presented Project No. MS-14-20

The following map was included in the presentation, which clearly details natural flood plain areas depicted in blue which have, over time, been encroached upon.

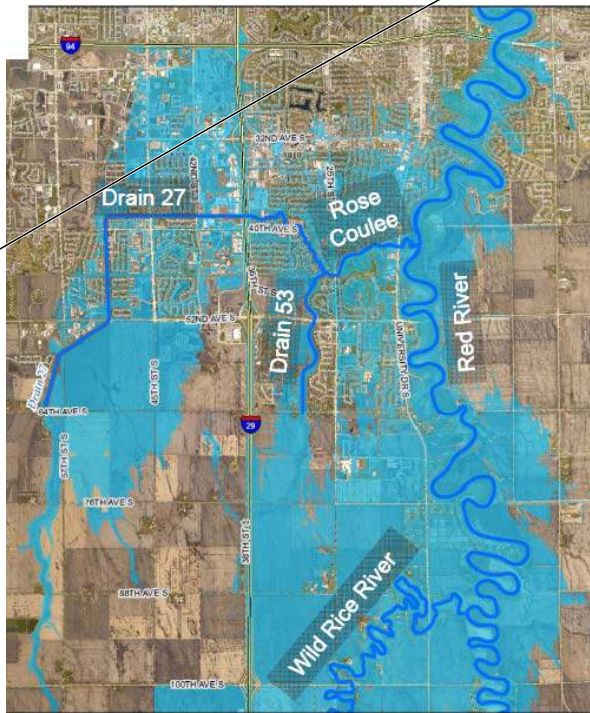
The proposed project does not address the cumulative effects of encroachment and water displacement.

The proposed project does not quantify the acre feet of water displaced or measures taken to offset irresponsible flood plain development.

The USACE and non-federal local sponsor assert a project purpose that further violates EO 11988 and drives unprecedented growth into higher risk areas at the expense of Minnesota interests and future development areas that are not currently flood prone.

The map illustration clearly shows the amount of water under "existing conditions" that

would be displaced onto Minnesota interests as an impact without benefit and could lead to potential rated protection benefit of permanent floodwalls and levees constructed in Minnesota to protect the population and city infrastructure in Moorhead, MN.



Author: Medopera Subject: Highlight Date: 11/19/2015 9:40:33 AM -06'00'
Comment ID: 111r cont.

Author: Medopera Subject: Highlight Date: 11/19/2015 9:41:06 AM -06'00'
Comment ID: 111q cont.

Fargo Mayor Tim Mahoney was quoted in an October 26, 2015 Fargo Fourm article:

"...it's important to not go against market forces, which has led to successful neighborhoods such as Osgood in the city's southwest.."

The above represents the irresponsible development nature of Fargo and a majority of the environs in and around the Osgood area was at one time natural flood plain that being utilized to leverage property owners and decision makers with the threat of mandatory flood insurance with the end goal of prejudicing the proposed project and foster further violation of Executive Order 11988.

Preservation of the natural flood plain upstream of the Fargo - Moorhead metro is vital in ensuring the metro area population achieved reasonable and adequate flood protection. Completion of internal floodwalls and levees would augment that protection without a Class 1 High Hazard Dam.

Sincerely,



Marcus E. Larson
513 7th St
Hickson, ND 58047
701-588-4412

Author: Medopera Subject: Highlight Date: 4/5/2016 12:26:30 PM
Comment ID: 1115
Topic: Alternatives, Alternative: Existing Floodplain + Flood Damage Reduction Projects

From: marcus.larson@exhostmail.com
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo Moorhead Flood Risk Management Project DEIS - Executive Order 11988 (corrected)
Date: Wednesday, October 28, 2015 4:24:47 PM
Attachments: [DNR Comments - Marcus Larson \(EO11988\) 2015-10-28.pdf](#)

Commenter 111 cont.



Dear Project Manager,

Attached are comments pertaining to "Executive Order 11988" associated with the Fargo Moorhead Flood Risk Management Project and development practices in Fargo and Cass County, ND that directly and indirectly affect Minnesota interests.

Thank you for considering my comments.

Respectfully submitted,

Marcus Larson
513 7th St
Hickson, ND 58047
701-588-4412 home
701-893-6975 cell

Summary of Comments on MarcusLarson_Commenter111duplicate_Email8.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/19/2015 9:46:50 AM -06'00'
Commenter 111 cont.

Author: Medopera Subject: Sticky Note Date: 11/19/2015 9:47:34 AM -06'00'
Comment ID: 111q-s - duplicate

Author: Date: Indeterminate

This page contains no comments

October 28, 2015

Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road
St. Paul, Minnesota, 55155-4025

RE: Fargo Moorhead Flood Risk Management Project DEIS

Subject: EO11988

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Executive Order 11988: Flood Plain Management

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The stated project purpose violates Executive Order 11988 on several points, however, the most evident is the failure to minimize impacts to the natural flood plain by fostering maximum flood plain encroachment.

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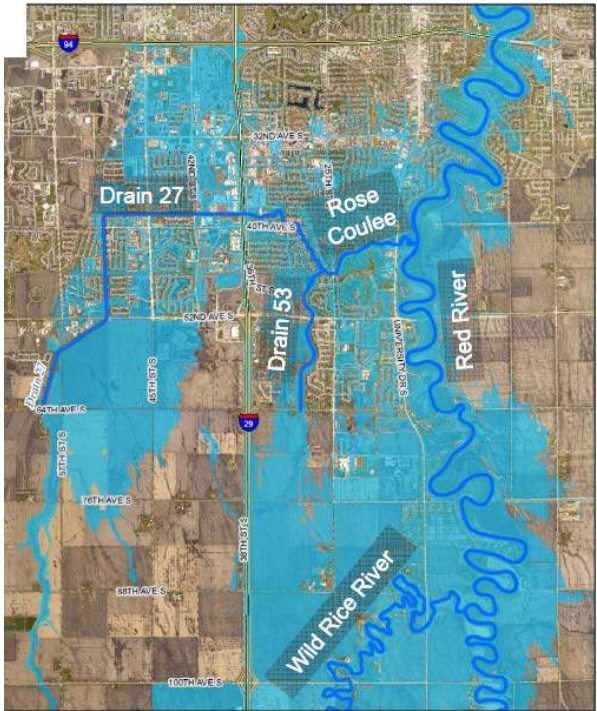
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would be displaced onto Minnesota interests as an impact without benefit and could lead to potential rated protection benefit of permanent floodwalls and levees constructed in Minnesota to protect the population and city infrastructure in Moorhead, MN.



This page contains no comments

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“..it’s important to not go against market forces, which has led to successful neighborhoods such as Osgood in the city’s southwest..”

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Preservation of the natural flood plain upstream of the Fargo - Moorhead metro is vital in ensuring the metro area population achieved reasonable and adequate flood protection. Completion of internal floodwalls and levees would augment that protection without a Class 1 High Hazard Dam.

Sincerely,

A handwritten signature in cursive script, appearing to read "Marcus E. Larson".

Marcus E. Larson
513 7th St
Hickson, ND 58047
701-588-4412

From: [Mark Askegaard](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: " Fargo-Moorhead Flood Risk Management Project DEIS"
Date: Wednesday, October 28, 2015 8:16:42 AM

Commenter 112

Summary of Comments on Mark&BarbaraAskegaard_Commenter112a-i_Email1.pdf

Page: 1

We would like to raise concerns about the failure of the draft EIS to consider the impacts to the farming community within the staging area. As organic farmers whose entire farming operation is located within the staging area of the proposed Locally Preferred Plan (LPP) on the Minnesota side of the river, we would like to see the EIS address the true impacts to the staging of water on organic farmland and certification. The analysis should address the impacts to organic farming from genetically modified seed movement onto organic farmland from flooding within the staging area, weed seed movement and its impacts on organic farmland from flooding, chemical contamination with soil and water movement, nutrient movement as well as depletion from water staging, impacts to organic crop rotations, soil pathogens, potential planting delays, loss of federal crop insurance for losses due to when project is in operation and its relationship to income potential and land valuations, what potential easements payments should be for organic farmland, as well as damages to the ecosystem from long periods of inundation.

The EIS should explore all alternatives which do not involve a high hazard dam placed on the Red River and the staging of water upstream from the dam that would provide long term 100+ year FEMA certifiable flood protection to the Fargo-Moorhead area as well as providing additional flood protection to the greater area. These alternatives should include but not be limited to:

1. A complete evaluation of the Minnesota 35K diversion which was shown to be in the nation's best interest as being the least impactful and least expensive measure to provide flood protection to the F-M area.
2. An analysis of the combined effect of basin wide retention projects used in conjunction with large scale water impoundments within Fargo city limits while limiting further natural flood plain development that include all current and planned flood protection work presently completed and ongoing within the 2 cities.
3. An analysis of the flood reducing potential impact of drain tiling farmland within the valley when used in conjunction with the aforementioned practices.
4. A thorough analysis of allowing more water to run through the main Red River channel (example of 35') in the F-M area in addition to the aforementioned practices when incorporated into the model for the current plan or a much smaller project.
5. An analysis of how potential downstream water retention projects from the F-M area could

Author: Medopera Subject: Text Box Date: 11/18/2015 3:40:24 PM -06'00'
Commenter 112

Author: Medopera Subject: Highlight Date: 4/5/2016 12:27:50 PM
Comment ID: 112a
Topic: Socioeconomics, Organic Farms

Author: Medopera Subject: Highlight Date: 4/5/2016 12:28:48 PM
Comment ID: 112b
Topic: Alternatives, Alternative: NED Plan for MN 35K

Author: Medopera Subject: Highlight Date: 4/5/2016 12:29:56 PM
Comment ID: 112e
Topic: Alternatives, Alternative: NED Plan plus more

Author: Medopera Subject: Highlight Date: 4/5/2016 12:29:20 PM
Comment ID: 112c
Topic: Alternatives, Alternative: DSA plus more

Author: Medopera Subject: Highlight Date: 4/5/2016 12:30:48 PM
Comment ID: 112d
Topic: Alternatives, Alternative: NED Plan plus more

Author: Medopera Subject: Highlight Date: 4/5/2016 12:31:18 PM
Comment ID: 112f
Topic: Alternatives, Alternatives: NED Plan plus more

eliminate downstream impacts from the LPP or a much downsized diversion channel when used in conjunction with all of the aforementioned practices.

6. An analysis of how the 20% Long term flow reduction study and goal for the basin would lower peak flows through the F-M area if further natural flood plain development upstream and around the city of Fargo were limited, large scale internal water impoundments were implemented in the city of Fargo in conjunction with completing internal flood protection measures.

7. An analysis of how/if the Buffalo-Red Watershed district will suffer damage to drainage systems (watershed) in the staging area that all flow eventually to the Wolverton Coulee or the Red River and if there are damages who should pay for them.


8. A complete analysis should be conducted on the true potential loss of life from a failure of the high hazard dam and tie back levees if the protected area were fully developed and a breach happened.


Thank you for allowing us to comment.


Mark and Barbara Askegaard
2519 Viking Circle
Fargo, ND 58103

Page: 2

 Author: Medopera Subject: Highlight Date: 11/18/2015 3:57:13 PM -06'00'
Comment ID: 112f cont.

 Author: Medopera Subject: Highlight Date: 4/5/2016 12:31:47 PM
Comment ID: 112g
Topic: Alternatives, Alternative: DSA plus more

 Author: Medopera Subject: Highlight Date: 4/19/2016 2:42:31 PM
Comment ID: 112h
Topic: Hydrology and Hydraulics, Wolverton Creek and Comstock Coulee

 Author: Medopera Subject: Highlight Date: 4/5/2016 12:32:43 PM
Comment ID: 112i
Topic: Dam Safety, Risk and Loss of Life Concerns

From: [Mark Herwig](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: red river project comment
Date: Tuesday, September 15, 2015 8:40:41 AM

Commenter 113

Summary of Comments on MarkHerwig_Commenter113a_Email1.pdf

Page: 1

the project's first priority should be wetland restoration in the watershed.....along with an strong upland component for pollinators and other wildlife.....this will also improve water quality.....a dam won't do any of these things. Dams only create more problems and expense.....let's do something more sustainable with our/my tax dollars: wetland/upland restoration.

Author: Medopera Subject: Text Box Date: 11/18/2015 4:02:22 PM -06'00'
Commenter 113

Author: Medopera Subject: Highlight Date: 4/5/2016 12:34:54 PM
Comment ID: 113a
Topic: Alternatives, Alternative: Restoration

Mark Herwig
1958 Florence St.
White Bear Lake, MN 55110

From: [matt_ness](#)
To: ["Review_Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Tuesday, October 27, 2015 10:11:28 PM

Commenter 114

Summary of Comments on Matt&RachelNess_Commenter114a-c_Email1.pdf

Page: 1

Dear DNR,

Thank you for letting me have the chance to make a few comments in regards to the proposed Fargo/Moorhead diversion project. This project, as you know, is extremely large as well as complex. Even though this project is claimed to have been analyzed and studied thoroughly, much of analyzing and studying has been done by the proponents of the project. It is time for this project to be looked upon by an unbiased organization that has the tools to do such, and has no financial or political affiliation with the project.

I am a fourth generation farmer that farms in the proposed staging area. Most of the land I farm is in the staging area, as well as farming some adjacent to the staging area, but this land will still be negatively affected by the prolonged staging of water. Our farmstead, out buildings, and grain bins will be subject to flooding when this project is in operation. The economic harm done to individuals as well as families, and the community as a whole, will be a very detrimental game changer. There are a number of other tools that can be used to help protect Fargo, as well as the entire Red River Valley with reasonable flood protection.

First, a combination of Internal storage just south of Fargo has been identified by Fargo leaders, along with their levee system when complete, will take them out of the 100 year flood plain. This is natural storage area as shown in previous floods. Then you add in the retention areas that the Red River Basin study has identified to reduce peak flows of more than 20%. Other additional tools would be to implement a partial waffle plan that controls the water run off by controlling how fast water flows through the culverts towards the tributaries leading to the Red River. Also, having controlled sub surface drainage (drain tile) that has control structures in place has shown to draw moisture down during spring floods. If you could implement all, or some combination of these plans, this would provide more than adequate protection for Fargo, and the rest of the Red River Valley. At the very least, a much smaller diversion project would make sense, and would not require a high hazard dam on the Red River.

In addition, some benefits these ideas would have over the current proposed plan, A) it would be much safer as an evacuation plan would not be necessary as no high hazard dam would be required. B) much more fiscally conservative, would not cost as much as current plan. C) more environmentally friendly, less river bank sloughing, less cemeteries flooded, less well water contamination damage from being covered with water for extended times. D) less contamination and clean up in staging area as, no staging area would be needed.

Lastly, as a farmer that relies on being a steward of the land, as my father, grandfather, and great grandfather have done before me, is to preserve the land to the best quality and sustainability that our experience and knowledge from past years and hoping and trying to be better stewards in future years. This current diversion plan takes away many years of tending to the land with one major flood. Chemical contamination, resistant weed seeds, soil salinity and the top soil erosion take all those years of being a steward of the land away. Multiply this in one localized area, one community, and this creates a huge loss, economically, socially, mentally, and physically.

I thank you for your time and encourage you to combine these tools as well as other ideas individuals have to come up with a solution and proper flood protection that will work for the entire Red River Valley.

Matt and Rachel Ness
4763 Douglas Dr
Fargo, ND 58104

Author: Medopera Subject: Text Box Date: 11/18/2015 4:04:39 PM -06'00'
Commenter 114

Author: Medopera Subject: Highlight Date: 4/5/2016 12:40:28 PM
Comment ID: 114a
Topic: Alternative, Alternative: DSA plus more

Author: Medopera Subject: Highlight Date: 4/5/2016 12:41:00 PM
Comment ID: 114b
Topic: Alternative, Alternative: Project with Smaller Dam

Author: Medopera Subject: Highlight Date: 4/5/2016 12:41:10 PM
Comment ID: 114c
Topic: Socioeconomics, Century Farmers

From: meghanc@ricks-bar.com
To: [*Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 2:52:42 PM

Commenter 115

Summary of Comments on MeghanCarik_Commenter115a_Email1.pdf

Page: 1

To Whom It May Concern,

I support permanent flood protection for the Fargo-Moorhead metro area, but not the Northern Alignment Alternative (NAA). I feel the prior proposal by the FM Diversion Authority, which has approval from the US Army Corp of Engineers and Congress, is better suited.

The NAA proposal shifts the staging area one-and-a-half miles to the north from the accepted FM Diversion project. This results in an increase of affected home and property owners, and affects an overall larger area. This creates the need for an increase in funding, not only to complete land buy-outs but additional construction costs. The fact that the NAA has not been evaluated by the US Army Corp, will also increase costs as evaluation and approval is costly. The shift north places the project closer to Horace, ND and Fargo, ND. This will be problematic as these communities continue to grow.

The NAA is unnecessary. It is a more expensive option. It impacts a greater number of people, structures and property. It hinders the economic growth. It's approval process will delay permanent flood protection even more. The FM Diversion Authority alternative more than met the purpose defined for the project, and is better suited to the region.

Meghan S. Carik

7005 112th Ave S

Horace, ND 58047

Author: Medopera Subject: Text Box Date: 11/18/2015 4:12:58 PM -06'00'
Commenter 115

Author: Medopera Subject: Highlight Date: 4/5/2016 12:42:58 PM
Comment ID: 115a
Topic: Northern Alignment Alternative, General Opposition
Unsubstantive

From: [Cam Knutson](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 12:04:27 PM

Commenter 116

Summary of Comments on MemoryFireworks_CamKnutson_Commenter116a_Email1.p df

Page: 1

Cam Knutson

Representative for RVK Ventures LLP DBA Memory Fireworks

10333 38th St. S.,

Horace, ND 58047

Author: Medopera Subject: Text Box Date: 11/18/2015 4:15:10 PM -06'00'
Commenter 116

Author: Medopera Subject: Highlight Date: 4/5/2016 12:45:38 PM
Comment ID: 116a
Topic: Northern Alignment Alternative, General Opposition
Unsubstantive

I am writing on behalf of the building and business owners of Memory Fireworks. The ownership group is opposed to the Northern Alignment Alternative. This proposal, if adopted, would severely affect the business and thousands of customers that it serves each year. The facility was just fully completed in 2013 and was built to house this business for many years to come.

Also, other businesses and homeowners nearby would be affected resulting in delays and increased cost to the existing diversion plan. The greater good of the Fargo/Moorhead area is at risk if the NAA moves forward. Please continue with the proposed diversion project and move past the NAA plan.

Thank you for all of your efforts thus far and into the future with this important project.

Sincerely,

Cam Knutson

Cam Knutson
Cam.Knutson@gmail.com // 701.220.4124

From: [michael.brandt](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo Moorhead flood risk management project deis
Date: Wednesday, October 28, 2015 1:59:19 PM

Commenter 117

Summary of Comments on MichaelBrandt_Commenter117a_Email1.pdf

Page: 1

The Comstock wolverton Creek was never considered in the eis to be studied about the amount of water that flows threw there .

Michael Brandt
5624 160 Ave s Moorhead

Water runs down hill not up hill

Sent from my Verizon Wireless 4G LTE smartphone

Author: Medopera Subject: Text Box Date: 11/18/2015 4:17:11 PM -06'00'
Commenter 117

Author: Medopera Subject: Highlight Date: 4/19/2016 2:44:13 PM
Comment ID: 117a
Topic: Hydrology and Hydraulics, Wolverton Creek and Comstock Coulee

From: [MICHAEL GUNTER](#)
To: ["Review, Environmental \(DNR\)"](#)
Cc: jly@eissolutions.com
Subject: Fargo-Moorhead Risk Management Project DEIS
Date: Friday, October 23, 2015 1:39:33 PM

Commenter 118

Summary of Comments on MichaelGunter_Commenter118a_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/18/2015 4:20:01 PM -06'00'
Commenter 118

Author: Medopera Subject: Highlight Date: 4/5/2016 1:04:13 PM
Comment ID: 118a
Topic: Proposed Project, General Support
Unsubstantive

Ms. Jill Townley
Environmental Policy and Review Unit
Box 25 Ecological and Water Resources Division
Department of Natural Resources
500 Lafayette Road
St. Paul, MN 55155-4025

Dear Ms. Townley,

Please consider this letter my statement of support for the Fargo-Moorhead Flood Risk Management Project, and specifically for the proposed alternative described in the draft EIS prepared by your agency for it.

The proposed alternative is the only one that meets the purpose defined by the Fargo-Moorhead Flood Diversion Authority, as being to reduce flood risk, flood damages, and flood control costs. The "no action" alternatives would not even provide moderate term protections, and unreasonably assume that all currently planned projects will be completed in due course. The "no action – with emergency measures" alternative would have us continue to rely on "bucket brigades" piling sandbags – which is neither reliable nor permanent, and presents its own logistical problems both during and after a flood event. The Northern Alignment alternative would be more expensive, to the tune of \$81 million, and would impact more homes than the proposed alternative.

The Northern Alignment alternative would also require a new federal Environmental Impact Statement, a lengthy and expensive process that has already been conducted for the proposed alternative. Re-dong the process for an inferior alternative would not only be an enormous waste of time and money, but would undo all the exceptional work that the Corps of Engineers and the DNR after, have done in paving the way for the project. This would also delay the project enough that a FEMA remapping could be done, placing dozens of new homes and businesses within the flood plain. This will have devastating financial repercussions for those property owners.

The proposed alternative has been fully studied, and is the best alternative for meeting the community's flood protection needs with the least possible impact.

It is extremely important for the continued growth of Moorhead to have adequate flood protection. The possibility of FEMA changing the flood plain level in future years would eliminate all of the gains we have made to remove properties from the flood plain. Homes required to carry the higher level flood insurance can reduce their market value by several thousand dollars. This can be especially difficult for home owners who need to sell for reasons out of their control. A higher property tax spread

over the community to support the project would be far more equitable than the cost of flood insurance on individuals.

Page: 2

Author: Medopera Subject: Highlight Date: 11/18/2015 4:21:01 PM -06'00'
Comment ID: 118a cont.

Sincerely,

Mike W Gunter
1415 Bleisy Blvd
Moorhead, MN 56560

Kvamme Real Estate, Inc
3401 South 8th St
Moorhead, MN 56560
701-729-9309

Visit Mike's Real Estate website at
www.moorheadfargohomes.com



From: [Kurt Wickstrom](#)
To: [*Review, Environmental \(DNR\)](#)
Cc: [Tom D. Knudsen](#); [Suzann M. Moffet](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Tuesday, October 27, 2015 2:44:08 PM
Attachments: [Final MN DNR.pdf](#)

Commenter 119

Summary of Comments on MinnDakFarmersCooperative_KurtWickstrom_Commenter1 19a-c_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/18/2015 4:21:50 PM -06'00'

Commenter 119

Author: Date: Indeterminate

To whom it may concern,

Please find attached comments from Minn-Dak Farmers Cooperative regarding the Fargo-Moorhead Flood Risk Management Project DEIS.

Best regards,

Kurt Wickstrom
President & CEO
Minn-Dak Farmers Cooperative



October 27, 2015

Ecological and Water Resources Division, DNR
Attn: Jill Townley, Project Manager
500 Lafayette Road
St. Paul, MN 55155-4025

Minn-Dak Farmers Cooperative (MDFC), established in 1974, is a grower owned sugarbeet processing entity located in the southern end of the Red River Valley. The factory is located in Wahpeton, North Dakota. Annually our grower owners produce 2.5 to 3.0 million tons of sugarbeets from 115,000 acres. Total revenues in 2016 are estimated at approximately \$270,000,000.

The area being considered for storage and retention has us very concerned. If implemented we would lose 2,000 acres of production annually. On a rotation basis that number would likely escalate to 6,000 to 8,000 acres. We have heard from experts associated with the project that delays in planting will have a minimal economic impact on growers. That is not true for sugarbeets. The practical goal of any farmer is to sow their crop as early in the spring as Mother Nature will allow. The best time to plant sugarbeets is from mid April to the first of May. Planting delays, for any reason, that stretch beyond this timeframe have a direct correlation to the growth potential of the best crop and subsequent grower payment. As an example, for each week that planting is delayed beyond May 12th, growers lose an average of approximately \$50 - 100 per acre per week from the loss in growth potential (that's a weekly revenue loss of \$25,000 for a 500 acre grower just on his sugarbeet crop alone). We do not foresee the retention and storage areas being emptied in a manner that will not have a significant economic impact on MDFC sugarbeet growers. Sugarbeets are one of the most intensive and expensive crops to produce in the Red River Valley. The uncertainty of spring planting is difficult enough without the storage/retention question mark.

Infrastructure to move the crop from field to market is also a major concern. During the mitigation and flowage easement process critical roads may disappear. The window for harvesting and delivering sugarbeets is very small and good roads are crucial. No one will plant a sugarbeet crop if roads are lacking.



Page: 2

Author: Medopera Subject: Highlight Date: 4/5/2016 1:07:38 PM
Comment ID: 119a
Topic: Socioeconomics, Agriculture Impacts and Mitigation (Planting Delays)

Author: Medopera Subject: Highlight Date: 4/19/2016 3:34:15 PM
Comment ID: 119b
Topic: Infrastructure and Public Services, Flood Impacts to Roadways, Ditches and Culverts

Given the potential risks to sugarbeet production and logistics, we have significant concerns regarding continued sugarbeet production within the storage/retention area. In short, our current view is that sugarbeets would no longer be grown in the affected geography, causing likely financial injury to growers and MDFC. Some of the shareholders in the affect area have been with us since the Cooperatives formation in 1974. They would lose fields, farms and their livelihood and that is something we cannot support under any circumstances.

We fully agree that Fargo-Moorhead needs protection. We have watched and worried for them as the struggle annually to defeat the Red River. Fargo-Moorhead is our economic hub and we agree we cannot stand to lose that area to a major flood.

We feel the Minnesota Department of Natural Resources, Army Corps of Engineers and other key stakeholders need to more fully consider the implications of the essentially eliminating 25,000 acres and everything inside that area. A diversion for Fargo is needed. Downstream interests and impacts need to be considered (and have). Now attention needs to shift to upstream interests. There does not have to be winners and losers if time is taken to look at more creative solutions.

Upstream storage near the source of major tributaries of the Red River is constantly brought up as potential viable options. We strongly encourage giving as much consideration to other viable options as has been given for the current proposal and assess other storage systems such as Red Path, Mud Lake and Lake Traverse. If the Corp can source 400,000 acre feet of storage using these less invasive methods Fargo-Moorhead can have their diversion, downstream interests are taken care of and the current proposed upstream storage/retention area can be eliminated.

Thank you for your time,



Kurt Wickstrom
President and CEO
Minn-Dak Farmers Cooperative

Author: Medopera Subject: Highlight Date: 11/18/2015 4:28:53 PM -06'00'
Comment ID: 119a cont.

Author: Medopera Subject: Highlight Date: 4/5/2016 1:09:12 PM
Comment ID: 119c
Topic: Alternatives, Alternative: North Dakota/South Dakota Retention Project

From: [Roxanne & David Morken](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 11:53:35 AM
Attachments: [Morken DNR EIS Comment 11988.pdf](#)

Commenter 120

Summary of Comments on MNDakUpstreamCoalition_DaveMorken_Commenter120a_ Email1.pdf

Page: 1

[Attached find my comment/question on the Fargo-Moorhead Flood Risk Management Project DEIS.](#)

Thank you for the opportunity to comment on this study.

Dave Morken, Chair
MnDak Upstream Coalition
17555 62nd St, SE
Walcott, ND 58077

Author: Medopera Subject: Text Box Date: 11/20/2015 8:41:03 AM -06'00'

Commenter 120

Author: Date: Indeterminate



This email has been checked for viruses by Avast antivirus software.

www.avast.com

Thank you for the opportunity to offer comments on the DNR's Draft Environmental Impact Statement for the Fargo Moorhead Flood Mitigation Project. I offer these comments on behalf of MnDak Upstream Coalition. Our organization offered comments in the USACE's environmental review as an organization, and many of our members did as well.

MnDak Upstream Coalition recognizes that Fargo and Moorhead deserve flood protection equivalent to other communities along Red. We support Fargo's efforts to obtain reliable flood protection for its developed areas equivalent to the level of protection afforded to other developed communities.

Our position has been that the Locally Preferred Projects attempt to flood protect 50 square miles of floodplain and then transfer that water onto our farms and communities is a violation of federal law. A similar plan developed in 2009 would have removed 20 square miles was dropped because it violated EO11988. A USACE "Read Ahead" memo conveyed to Governor's Pawlenty and Hoven specifically bars any project that seeks to accomplish that objective and states:

The Fargo Southside project as currently proposed would not be in compliance with Executive Order 11988 as a Federal project, because it facilitates development of over 20 square miles of undeveloped floodplain. Legislation would be necessary to exempt the Southside project from this executive order. The Corps NED plan may include alternative Measures to protect existing development in the area.

This document was discovered only recently, well after Minnesota's environmental review began. It appears from the EIS that the drafter of the EIS did not consider this document when it looked at EO 11988 because it is not referenced or discussed in the DNR's Draft EIS.

In our comments to the USACE Draft EIS in June of 2011, MnDak Upstream Coalition criticized the local sponsor's choice of the Locally Preferred Project, because that configuration violates EO 11988. In that letter, we specifically called USACE's attention to the 8 step sequencing process and urged the USACE to follow its own and the federal government's adopted regulations and procedure for addressing the Executive Order.

The MnDak Upstream Coalition feels that more in-depth study should have been done in regards to Executive Order 11988 and its bearing on the Fargo Moorhead Flood Mitigation Project.

Author: Medopera Subject: Highlight Date: 11/20/2015 8:46:20 AM -06'00'
Comment ID: 120a cont.

Dave Morken, Chairman
MnDak Upstream Coalition
17555 62nd St SE
Walcott, ND 58077

This page contains no comments

BRIEFING PAPER: FARGO MOORHEAD METRO STUDY
25 April 2009 version 7

Purpose: To identify a process whereby a flood risk management project for the Fargo Moorhead metro area could be included in WMA 2010.

Background: A flood risk management reconnaissance study for the Fargo-Moorhead metro area was initiated in April 2007 and completed in April 2008. The Corps and the cities of Fargo, ND and Moorhead, MN signed a Feasibility Cost Sharing Agreement on 27 Sep 2008 to proceed with a more in-depth study. The study will assess the feasibility of measures to reduce flood risk in the entire metropolitan area. The study will consider an array of potential alternatives including nonstructural flood proofing, diversion channels, levee/floodwall systems, and flood storage. For projects currently under development by other agencies, including the Southside project, the study will consider both scenarios of with and without these projects for the initial condition assessment.

Fiscal: Total study cost: \$5.3 M (\$2.7M Fed and \$2.6M MF). FY09 funds: \$478,000; Fed. Funds to date: \$1,078,000; ARMA: \$222,000. Non-fed funds to date: \$1,110,000. (Non-fed funds for FY09 were requested on 14-Apr-09; \$140,000 is still anticipated from Moorhead.)

Schedule:

Sept 08	Initiate Feasibility Study
May 09	Feasibility Scoping Meeting
April 10	Alt. Formulation Brief and Prelim. Draft Report
Sept 10	Civil Works Review Board
Dec 10	Chiefs Report and ROD

Talking Points:

1. The Corps is heavily engaged in flood fight emergency operations in the Red River Valley in general and Fargo/Moorhead in particular. The Corps has supplied over 11 million sandbags, 141 pumps and 81,600 linear feet of rapidly deployable HESCO barriers. To date, \$32 million has been expended on emergency operations. Over \$1.4 billion in damages prevented have been documented so far with more expected.
2. Legislative options have been identified pertaining to the Southside project in Fargo. These options include 1) removing the Southside project from the future without project conditions, 2) identifying the Southside project as a locally preferred plan, and 3) providing the local interests with credit for their work on the Southside project. MWF is drafting language for each option.
3. The Fargo Southside project as currently proposed would not be in compliance with Executive Order 11988 as a Federal project, because it facilitates development of over 20 square miles of undeveloped floodplain. Legislation would be necessary to exempt the Southside project from this executive order. The Corps NED plan may include alternative measures to protect existing development in the area.
4. Prior to implementation of a non-Federal project at Southside, the city would be required to obtain a 404 permit. The city has not yet applied for a permit, but is coordinating hydraulic analysis with NWO.
5. As with any Flood Risk Management system, there will always be residual risks regardless of what measures are put in place. Residents and communities should understand those risks and make informed decisions.
6. Whenever a Feasibility study is undertaken, there is a risk that there will not be sufficient economic justification to warrant Federal participation in all or parts of the desired solution.

This page contains no comments

BRIEFING PAPER: FARGO, ND SOUTHSIDE FLOOD CONTROL PROJECT
28 Apr 2009 Version 1

Background: The Fargo Southside Flood Control Project is a non Corps project proposed by the City of Fargo and the Southeast Cass Water Resource District. The project would provide a 100-year plus 4 feet level of protection to 38 square miles south of Interstate Highway 94 between the Red River, Wild Rice River and Sheyenne River. Over 20 square miles of the protected area is sparsely developed agricultural land within the 100 year flood plain. Current cost estimate = \$161 million. The City of Fargo would like to incorporate this project into a larger Federal project if possible.

Talking Points:

- Fargo and Moorhead declined Metro study opportunities from 2001 until reconnaissance study started for Metro area in 2007. Fargo preferred to work independently on Southside project.
- Fargo has requested Corps funding in the past, but did not want Corps' planning assistance. Without a feasibility study to recommend a Federal project, Corps unable to support construction funds.
- FEMA provided \$10 million after 1997 flood; city using for this project.
- City held public meetings December 2006; several alternative plans; estimated to cost \$50 million.
- After incorporating mitigation for the hydrologic effects, estimated cost increased to \$161 million.
- Fargo has a preferred alternative; working towards permitting and plans and specs.
 - City working with Omaha District to review H&H modeling; ensure no induced flooding upstream or downstream of project.
 - City has yet to apply for Corps' permit from Omaha District; EPA may require EIS.
- Local officials are proceeding with independent design efforts, but hope to incorporate the Southside project into a Federal project as a locally preferred plan.
- Senator Jordan has verbally requested Corps assistance exploring options to include the Southside project in a federal project.
- The current plan appears to violate Executive Order 11988, because it encourages significant development of the existing 100-year flood plain.
- Project literature states, "The benefit of the plan is to provide protection from a 100-year flood so that mandatory flood insurance will not be required for those properties located within the proposed 100-year floodplain."

From: [Mara Morken](#)
To: [*Review, Environmental \(DNR\)](#)
Cc: [dyanyo@hotmail.com](#); [rocky.schneider@ae2s.com](#); [David Hunstad](#); [Mike Edenborg \(C MN Credit Union\)](#); [rep.ben.lien@house.mn](#); [sen.kent.eken@senate.mn](#); [rep.paul.marquart@house.mn](#); [mayor.council@cityofmoorhead.com](#)
Subject: Fargo Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 10:30:38 AM
Attachments: [mba_diversion](#)

Commenter 121

Summary of Comments on MoorheadBusinessAssociation_MichaelEdenborg_DavidHunstad_Commenter121a_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/20/2015 8:52:46 AM -06'00'

Commenter 121

Author: Date: Indeterminate

October 27, 2015

Jill Townley
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road
St. Paul, MN 55155-4025

Dear Ms. Townley,

We are writing on behalf of the Moorhead Business Association to comment on the DNR's Draft Environmental Impact Statement (DEIS) in support of the proposed Fargo-Moorhead Diversion.

The MBA fosters growth of Moorhead business through advocacy, networking, and information for its members. We are committed to building a better community to enhance current business and encourage new business growth.

Having adequate flood protection to protect the businesses in Moorhead and their customers is critical to us as an organization. The city needs accredited 100-year flood protection with the ability to fight larger floods. Our membership has a broad range of views and opinions, but we have come together to promote our city and our economic vitality as a whole.

As an association, we need to consider this issue with the acknowledgement that we are part of a larger community. A recent study by the Greater Fargo-Moorhead Economic Development Corporation showed that 39% of Moorhead citizens work across the river in North Dakota. It is also true that many of the employees working in Moorhead are North Dakota residents who cross the river daily into Minnesota. A natural disaster occurring anywhere in the metro area would have dramatic effects that ripple across our membership.

We are empathetic to the various opinions about this project, but we are also thankful for the work of the DNR. It gives us all a path forward and allows us to turn our sights to how to most effectively and efficiently implement the project, so that we never again have to face the destruction from flooding of our community.

Forever Moorhead Proud,

Michael Edenberg
President

David Hunstad
Executive Director

CC: Sen. Kent Eken
Rep. Paul Marquardt
Rep. Ben Lien
Mayor Del Rae Williams
Moorhead City Council

This page contains no comments

Please find the attached copy of the Moorhead Business Association's letter copied above.

Sincerely,
Mara Morken

cell: 917.701.9404
office: 218.236.1224
mara@firstavepromo.com

October 27, 2015



Jill Townley
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road
St. Paul, MN 55155-4025

Page: 3

Author: Medopera Subject: Highlight Date: 4/5/2016 1:17:56 PM
Comment ID: 121a
Topic: General, General
Unsubstantive

Dear Ms. Townley,

We are writing on behalf of the Moorhead Business Association to comment on the DNR's Draft Environmental Impact Statement (DEIS) in support of the proposed Fargo-Moorhead Diversion.

The MBA fosters growth of Moorhead business through advocacy, networking, and information for its members. We are committed to building a better community to enhance current business and encourage new business growth.

Having adequate flood protection to protect the businesses in Moorhead and their customers is critical to us as an organization. The city needs accredited 100-year flood protection with the ability to fight larger floods. Our membership has a broad range of views and opinions, but we have come together to promote our city and our economic vitality as a whole.

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We are empathetic to the various opinions about this project, but we are also thankful for the work of the DNR. It gives us all a path forward and allows us to turn our sights to how to most effectively and efficiently implement the project, so that we never again have to face the destruction from flooding of our community.

Forever Moorhead Proud,

A handwritten signature in blue ink, appearing to read 'Michael Edenborg'.

Michael Edenborg
President

A handwritten signature in blue ink, appearing to read 'David Hunstad'.

David Hunstad
Executive Director

CC: Sen. Kent Eken
Rep. Paul Marquardt
Rep. Ben Lien
Mayor Del Rae Williams
Moorhead City Council

From: [Nancy and Jon Rich](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: " Fargo-Moorhead Flood Risk Management Project DEIS"
Date: Monday, October 26, 2015 8:42:16 PM

Commenter 122

Summary of Comments on JonRich_Commenter122a-b_Email1.pdf

Page: 1

Dear Sir or Madam:

I grew up in Kindred, ND and I believe the FM Dam project is totally wrong for the State of North Dakota. Fargo wants to develop in a flood plane- a terrible idea to begin with and then flood higher ground which just happens to be some fantastic farmland which includes 3rd and 4th generations of farm families. This farmland is irreplaceable.

Grand Forks and Moorhead have solved their problems with smaller projects which will not displace miles of great farmland. With this lake they want to flood many towns, cemeteries, churches, and farmsteads and change the whole dynamics of the water flow and the Red, Wild Rice and Sheyenne Rivers which will greatly affect my home town of Kindred and many other communities in the valley and beyond. The nature flow of the water will have a negative effect on a large area of the southeast state. The depreciated values farmers will receive are not fair when Oxbow people get 300% of their value and Fargo gets 110%. Then how much clean up will they do before flooding- probably not enough, so we will have much more pollution of the rivers and ground water. We can not flood the cemeteries of our pioneers. It really bothers me when they can go ahead and start this project ringing dikes and other construction at night when the whole project has not passed all the steps for approval.

This construction will be disastrous for the Minnesota residents, farmers, and land owners on the east bank of the Red River. Two of my high school classmates will loose their family homesteads if this project is approved. I am asking you to take action to prevent the constructions of the F-M diversion. There are better smaller projects to maintain and protect the land and rivers from floods, pollution, and runoff.

Sincerely,

Jon Rich
20891 Aztec St NW
Anoka, Mn 55303

Author: Medopera Subject: Text Box Date: 11/20/2015 8:57:29 AM -06'00'
Commenter 122

Author: Medopera Subject: Highlight Date: 4/5/2016 1:21:11 PM
Comment ID: 122a
Topic: Proposed Project and Northern Alignment Alternative, General Opposition
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/5/2016 1:21:47 PM
Comment ID: 122b
Topic: Permitting Approval, Reject the Project
Unsubstantive

From: [Nancy and Jon Rich](#)
To: ["Review, Environmental \(DNR\): Nancy Rich](#)
Subject: FM Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 2:28:23 PM

Commenter 123

Summary of Comments on Nancy&JonRich_Commenter123a_Email1.pdf

Page: 1

Dear Sir or Madam:

The Imperial Fargo wants it all. Build in a flood plane and flood out neighbors to the south.

The Corp of Engineers make lots of mistakes look at Minot if you want. The Corp and Fargo say their are not any other ways to solve this flood problem. Look at what Grand Forks and Moorhead did to the Red River there.

The Red River Basin Commission has looked at the flood problem and they say it can be solved by using many flood control measures. All the Corps meetings have never asked for input just telling whats going to happen.

The main cause of the flooding is by removing swamps, wetlands, streams, rivers and buffer zones. These need to be put back

and plant trees and shrubs. This will have a positive impact by reducing flooding the full length of river, better water quality, no dam needed, improve soil quality, and make better habitat for wildlife and pollinators with less dirt blowing in the wind.

Let us fix the flooding problem correctly with more input and other alternatives that do not take away some of the best farmland in the state.

This big a project with have a negative effect over a very large area of southeast North Dakota my home state(Jon).

Sincerely,
Jon and Nancy Rich
20891 Aztec St NW
Anoka, Mn 55303

Author: Medopera Subject: Text Box Date: 11/20/2015 9:01:33 AM -06'00'

Commenter 123

Author: Medopera Subject: Highlight Date: 4/5/2016 1:23:55 PM
Comment ID: 123a
Topic: Alternatives, Alternative: Restoration

From: [Nancy and Jon Rich](#)
To: ["Review, Environmental \(DNR\): Nancy Rich](#)
Subject: FM Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 2:44:46 PM

Commenter 124

Summary of Comments on KrisRich_Commenter124a-c_Email1.pdf

Page: 1

Dear Sir or Madam:

The proposed FM Dam massive project with this new high hazard dam to flood fanastic farmland-land that has not been flooded is not good for North Dakota and Minnesota. This project will impact private property, farmland, all the structures on a farm, public structures, roads, and cemeteries. The Minnesota environmental review was necessary because Corps study several years ago, did not focus on local wetlands and stream stability.

The best way to solve the flooding is to replace ponds, streams, and buffer zones with habitat for wildlife and help the run off go into the river slowly the way nature intended. There are alternatives to this very expensive project if the diversion authority will take a look at them. I am asking you to take action to prevent construction of this project.

Sincerely,
Kris Rich
20891 Aztec St NW
Anoka, Mn 55303

graduate of U of M Wildlife Management minor Forestry and Environment

Author: Medopera Subject: Text Box Date: 11/20/2015 9:04:35 AM -06'00'
Commenter 124

Author: Medopera Subject: Highlight Date: 4/5/2016 1:26:16 PM
Comment ID: 124a
Topic: Proposed Project, General Opposition
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/5/2016 1:26:39 PM
Comment ID: 124b
Topic: Alternatives, Alternative: Restoration

Author: Medopera Subject: Highlight Date: 4/5/2016 1:27:24 PM
Comment ID: 124c
Topic: Permitting Approval, Reject the Project
Unsubstantive

From: [Nancy Ulven](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Tuesday, October 27, 2015 9:31:51 PM

Commenter 125

Summary of Comments on NancyUlven_Commenter125a-b_Email1.pdf

Page: 1

I oppose the dam portion of the Fargo Moorhead Diversion project. ~~Through retention, tiling, dry dam construction~~ we could make the flow of the Wild Rice River peak at a different time allowing the Red River to go through the channel and a new diversion. Retention, tiling, and dry dam could control up to 200,000 acres of water. This would mean a reduction in flood height of 12 to 16 inches. This would guarantee Fargo would be safe at their 42.5 foot protection. Wayne N. Ulven

Sent from my iPad

Author: Medopera Subject: Text Box Date: 11/20/2015 9:10:04 AM -06'00'

Commenter 125

Author: Medopera Subject: Highlight Date: 4/5/2016 1:29:12 PM
Comment ID: 125a
Topic: Proposed Project and Northern Alignment Alternative, General Opposition
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/5/2016 1:29:45 PM
Comment ID: 125b
Topic: Alternatives, Alternative: Change Wild Rice Peak

From: [Nick](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Monday, September 14, 2015 9:37:29 PM

Commenter 126

Summary of Comments on NickSaviking44_Commenter126a_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/20/2015 9:13:44 AM -06'00'
Commenter 126

Author: Medopera Subject: Highlight Date: 4/5/2016 1:31:37 PM
Comment ID: Comment 126a
Topic: Infrastructure and Public Services, Railroad Study

To protect the integrity of the diversion and the assets it will protect, a study to consolidate and re-route the metro area's main rail lines north of the diversion should be performed.

Sent from my iPhone

From: [Nicholas Matz](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Monday, September 14, 2015 1:57:35 PM

Commenter 127

Summary of Comments on NickMatz_Commenter127a_Email1.pdf

Page: 1

My biggest issue with the project is the dam. As a lifelong resident of the area, I have fished the river my entire life. Over the past twenty years I have seen the removal of many of the dams on the Red River. With the removal of these dams there has been a drastic increase in fishing opportunities in the Wahpeton - Breckenridge area. It is clear that the removal of these dams has increased the populations of all species of fish. After all this progress, why would we want to go back. Sure, they'll put a fish ladder in, but where is the research that shows fish ladders work on the Red River. What about the lake Sturgeon stocking effort the MN DNR has been involved in? Will sturgeon use a fish ladder? I guess to me the idea of a dam on the Red River is just destroying too much progress.

Nick Matz

Author: Medopera Subject: Text Box Date: 11/20/2015 9:29:56 AM -06'00'

Commenter 127

Author: Medopera Subject: Highlight Date: 4/5/2016 1:33:05 PM
Comment ID: 127a
Topic: Fish Passage and Biological Connectivity, Dam Impacts on Fish

From: [Weispfenning, Linda L.](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: " Fargo-Moorhead Flood Risk Management Project "
Date: Wednesday, October 28, 2015 11:32:51 AM
Attachments: [0214_001.pdf](#)

Commenter 128

Summary of Comments on NorthDakotaStateWaterCommission_ToddSando_Commenter128a-o_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/20/2015 9:34:02 AM -06'00'

Commenter 128

Author: Date: Indeterminate

Dear Ms. Townley,

Attached please find the letter from Todd Sando, North Dakota State Engineer and Chief Engineer-Secretary to the North Dakota State Water Commission, that provides comments to the Minnesota Department of Natural Resources regarding the Fargo-Moorhead Flood Risk Management Project Draft Environmental Impact Statement. A hard copy of the attached letter with the attachment comments has also been mailed by US Mail.

Please confirm that you have received this email with the attached letter from Todd Sando, ND State Engineer and Chief Engineer- Secretary to the ND State Water Commission.

Thank you.

Sincerely,

Linda Weispfenning
ND State Water Commission
900 E. Blvd. Ave., Dept. 770
Bismarck, ND 58505-0850

701.328.4967 (w)



North Dakota State Water Commission

900 EAST BOULEVARD AVENUE, DEPT 710 • BISMARCK, NORTH DAKOTA 58505-0850
701-328-2750 • TDD 701-328-2750 • FAX 701-323-3696 • INTERNET: <http://swc.nd.gov>

Page: 2

Author: Medopera Subject: Highlight Date: 4/5/2016 1:34:47 PM
Comment ID: 128a
Topic: Proposed Project, General Support
Unsubstantive

October 27, 2015

Jill Townley, Project Manager
Division of Ecological and Water Resources
Box 25, Department of Natural Resources
500 Lafayette Road
St. Paul MN, 55155-4025

Dear Ms. Townley:

Thank you for providing the opportunity to review and comment on the Fargo-Moorhead Flood Risk Management Project Draft Environmental Impact Statement (Draft EIS) that was developed by the MN Department of Natural Resources.

Regarding general comments on the Draft EIS, we offer the following:

- The Draft EIS reinforces the US Army Corps of Engineers' (Corps) conclusion that the Federally Recommended Plan (Supplemental Environmental Assessment, USACE 2013) or "Project" is the best alternative to meet the purpose and need to provide permanent flood protection to the Fargo-Moorhead metro area while providing the most benefits and the least amount of impacts as opposed to the Northern Alignment Alternative Project. The Northern Alignment Alternative Project would result in protecting 9% less area for the 100-year flood event, more structures in the inundated area, and higher costs.
- The Draft EIS also reinforces the Corps' conclusion that the Project requires the staging area, as well as other components, in order to meet the purpose and need that have been identified to provide permanent flood protection for the Fargo-Moorhead area. While understanding the issues that affected property owners may have with the inundation of the staging area, the process will ensure fair compensation to those impacted by the Project.

In addition, based on studies, the Corps' Federally Recommended Plan or Project is the best alternative to reduce flood risks and damages, and will reduce the need for emergency flood fighting efforts in the area. Not only must the Project advance as quickly as possible to secure the continued economic viability of the region, but more importantly, the Project would insure protection, and provide safety to the Fargo-Moorhead metropolitan area when the next disastrous flood event occurs. For as we all know, it is not a matter of "if" another major flood will occur in the region, but rather "when" it will occur.

State Water Commission staff review comments related to specific sections of the document are provided in the enclosed attachment, "Draft EIS Fargo-Moorhead Flood Risk Management Project - ND State Water Commission's Specific Comments."

JACK DALRYMPLE, GOVERNOR
CHAIRMAN

TODD SANDO, P.E.
SECRETARY AND STATE ENGINEER

This page contains no comments

In conclusion, we hope that the Draft EIS will be completed and finalized, and that a determination of adequacy is made in as timely a manner as possible. We appreciate your consideration of these comments and we look forward to working together to provide the Fargo-Moorhead metropolitan area with the permanent flood protection that is so desperately needed.

If you have any questions or would like clarification on any of the comments provided, please contact Randy Gjestvang at 701-390-3578, or email at rgjestvang@nd.gov.

Sincerely,



Todd Sande, P.E.
State Engineer and Chief Engineer-Secretary

TS:LW:dm/1928
Enclosure

Draft EIS Fargo-Moorhead Flood Risk Management Project ND State Water Commission's
Specific Comments

Page ES-14 and page 2-4, 2.1.1.5:

Comment: The first sentence states that 225,000 acre-feet or 32,000 acres are required for staging water before directing it to the connecting channel. That volume, and acreage, is the total for the staging area. Wouldn't water have been directed to the connecting channel, and down the diversion channel long before reaching this capacity?

Author: Medopera Subject: Highlight Date: 4/20/2016 11:05:50 AM
Comment ID: 128b
Topic: Proposed Project Operation, Project Operation

Author: Medopera Subject: Highlight Date: 4/5/2016 1:35:29 PM
Comment ID: 128c
Topic: Stream Stability, Recurrence Intervals

Page ES-14, 1st paragraph, 2nd to last sentence and page 2-4, 2.1.1.5:

Comment: It appears to read that the water elevation in the staging area would be 922.2 msl for all events. Would the water elevation in the staging area be raised to an elevation of 922.2 msl for the 100-year event, and remain at the same elevation up to the 500-year event?

Author: Medopera Subject: Highlight Date: 4/5/2016 1:36:23 PM
Comment ID: 128d
Topic: Chapter 2, Edit Accepted

Author: Medopera Subject: Highlight Date: 4/5/2016 1:37:27 PM
Comment ID: 128e
Topic: AMMP, Edit Accepted

Page ES-17 and page 2-8:

Comment: Regarding inapplicability of the average bankfull event in Minnesota, the Draft EIS relates the bankfull condition of the Sheyenne and Maple Rivers to the average recurrence interval flow for bankfull conditions in Minnesota. As the hydrologic and hydraulic conditions vary between Minnesota and North Dakota, this comment is potentially misleading and could be misrepresentative of actual conditions in North Dakota.

Page ES-22, last paragraph and page 2-16, 2.1.1.15:

Comment: There may be some additional permit requirements from the Office of the State Engineer in North Dakota for property in North Dakota that may be impacted by the project.

Page ES-29, "Red River hydrology and hydraulics should be monitored from USGS gages as part of the Geomorphology Monitoring Plan."

Comment: A Geomorphology Monitoring Plan is an important monitoring tool; however, the details of the plan need to be further refined. Consideration should be given to how geomorphology is affected by current emergency measures (i.e. emergency levees) and how the projects' effects would compare. A less scheduled, more adaptive plan would be preferred to allow for data collection and analysis based pre- and post construction and post-event monitoring results. The proposed plan appears quite labor intensive. Providing a more adaptive, results-driven monitoring plan rather than a scheduled monitoring plan would provide similar results at greater efficiency.

Page ES-30, "Adaptive management approach: Following Project operation, if bank failures or increasing bank instability is observed under the typical receding limb rate, the drawdown should be decreased systematically until a solution is reached by the AMMP."

Comment: Efforts to mitigate bank failures and to reduce bank instability should be taken; however, it is likely that these may be unpreventable in some circumstances regardless of how the Project is operated. The adaptive management plan should include multiple operation considerations including the purpose of the Project and growing season constraints for inundated farmland.

Page ES-30, "Cross Sections: No less than three pre-construction surveys should occur in the next five years. Post-construction surveys every two years for three sampling cycles (assumes Project operation has not occurred). Following three sampling events, Geomorphology Monitoring Team (GMT) would assess findings and determine whether more sampling is necessary and at what frequency."

Comment: Roughly 170 cross-section locations are proposed to be surveyed for each sampling cycle. With unlimited resources, this would be an ideal dataset; however, one needs to consider that until the project is operated it will likely have little impact to areas not immediately near the control structures, and even after operation, the effects will likely be favorable in many areas compared to the current emergency

levee system. A subset of key cross-sections could be selected to characterize the potential effects of the project on such a frequent basis.

Page ES-31, "Bathymetry: Every 10-20 years in absence of large geomorphic change events."

Comment: It is recommended that bathymetry should be considered after large geomorphic changing events, and to monitor areas near the control structures every 10 to 20 years.

Page ES-32, "LiDAR: Should be completed to complement cross section data on the reaches in areas that are not surveyed. To occur once every three years focused in the river corridor."

Comment: LiDAR is a useful tool; however, collections every three years is excessive. Consideration should be given to an as needed basis (e.g. pre- and post construction, and post major geomorphological event).

Page ES-37, Regarding fate of Rush and Lower Rush Rivers between the Project and the Red River.

Comment: It is the Office of the State Engineer's understanding that the 2.7 and 2.3-mile remnants of the Rush and Lower Rush Rivers, respectively, will continue to convey local drainage to the Red River after the Project is constructed. The Draft EIS references these remnants as "channel abandonment". Clarification of the fate of the orphaned channels could alleviate confusion on the term "abandonment" and potential impacts to local drainage between the Project and the Red River.

Page 1-12, 1.5.6.3, "Office of State Engineer Sovereign Lands Permit"

Comment: It is recommended that the "Office of State Engineer Sovereign Lands Permit" and "... ordinary high water mark of state identified navigable lakes and streams" should be changed as follows: "Office of the State Engineer Sovereign Lands Permit" and "... ordinary high water mark of state identified the state's navigable lakes and streams."

Regarding Sovereign Lands Permits, the Office of the State Engineer's Sovereign Lands Permit is applicable for any feature of the Project that occurs partly or wholly on sovereign lands. Any reference of a Project-wide permit should be updated accordingly.

Page 2-13, 2.1.1.14, 1st paragraph: "... (10 percent chance flood, i.e., 110-year flood) "

Comment: The 110-year should be 10-year.

Page 3-25, Section 3.3.1.1, 2nd paragraph.

Comment: The 2nd paragraph is repeated twice.

Page 3-43, Section 3.4.1.2, Regulatory Framework, first paragraph, last sentence: "North Dakota does not have a state wetland conservation wetland law; however, CWA Section 404 does apply."

Comment: The following change is recommended: "North Dakota does not have a state wetland conservation law; however, CWA Section 404 does apply. Any drainage of a wetland with a watershed area greater than 80 acres would require an Application for Surface Drain be submitted to the North Dakota Office of the State Engineer."

Comment: Regarding application for surface drain, the Office of the State Engineer's authority to regulate surface drainage is exercised through the Application for Surface Drain. Any references to a surface water drain or waters drain permit should be updated accordingly. The Application for Surface Drain will first be submitted to the North Dakota Office of the State Engineer for all proposed drainage of a pond, slough, lake, or sheetwater, or any series thereof with a watershed of eighty acres or more. The county water resource district will then be forwarded the Application for review and approval. Depending on the nature of the drain, the Application may need to be reviewed by the North Dakota Office of the State Engineer for final approval.

Page: 5

Author: Medopera Subject: Highlight Date: 11/20/2015 10:18:00 AM -06'00'
Comment ID: 128a cont.

Author: Medopera Subject: Highlight Date: 4/20/2016 10:53:06 AM
Comment ID: 128f
Topic: Proposed Project Description, Rush and Lower Rush Rivers

Author: Medopera Subject: Highlight Date: 4/5/2016 1:38:33 PM
Comment ID: 128g
Topic: Chapter 1, Edit Accepted

Author: Medopera Subject: Highlight Date: 4/5/2016 1:39:05 PM
Comment ID: 128h
Topic: 2.1.1.14 and other, Edit Accepted

Author: Medopera Subject: Highlight Date: 4/5/2016 1:39:43 PM
Comment ID: 128i
Topic: 3.3.1.1, Edit Accepted

Author: Medopera Subject: Highlight Date: 4/5/2016 1:40:14 PM
Comment ID: 128j
Topic: 3.4.1.2 and other, Edit Accepted

Page 3-115, Wild Rice Dam:

Comment: The dam is located near the community of Wild Rice. The town of Horace is 4 1/2 miles west.

Appendix B – Adaptive Management and Monitoring Plan Comments:

Page 4, 2nd paragraph: "2. Determine the system's biological responses to specific criteria or parameters."

Comment: Responses from the system are not limited biological responses. For example, the system may have a physical response such as changes in bank stability in certain areas.

Page 19, 1st paragraph: "Every five years, or following Project operation (whichever occurs first), a cumulative report will be prepared by the Project Proposer with the AMMP) to include monitoring findings and recommendations, necessary modifications, Project operation, modeling or design updates, budget and other pertinent information."

Comment: The assessment of damages and potential mitigation options, reporting and comment period appears time intensive. If applicable, project operation that occurs over consecutive years (or multiple times within one year) should be assessed together to use the most current data and reflect the best mitigation options.

Page 82, Attachment 2, Geomorphology Monitoring Plan, Data Management and Analysis Section: The RIVERMORPH data management software package associated with the Rosgen Stream assessments is a DNR preferred storage format and should be part of the data management and analysis package supported by the monitoring plan implementation.

Comment: It is important to use a compatible and universal data format; however, the format should be selected by the AMMP. Use of a non-commercial software platform is preferred as that limits the use of the data.

GENERAL COMMENTS:

Comment: Regarding Sheyenne and Maple River aqueduct functions, it is the Office of the State Engineer's understanding that the Sheyenne and Maple River aqueducts will pass the bankfull flow event across the Diversion channel. At bankfull flow, a portion of the flow will be intercepted by the Project and returned to the Red River downstream of the Fargo-Moorhead area. Any reference to the Rush, Lower Rush, Sheyenne, and Maple Rivers being intercepted by the Project should have the above clarification regarding the aqueduct operations.

Comment: Regarding North Dakota's regulatory authority, the appropriate permitting authority for Sovereign Lands, Construction, and Application for Surface Drain Permits is the North Dakota Office of the State Engineer. Any reference to a purported regulatory function of the North Dakota State Water Commission should be updated accordingly.

Comment: Regarding construction permits, the Office of the State Engineer's Construction Permit authorizes the construction of dams, dikes, diversions, or other structures as outlined in North Dakota Century Code Chapter 61-16.1. As part of the permitting process for a dam, the Dam Safety Engineer, through the North Dakota Dam Safety Program, specify the design requirements associated with the appropriate hazard classification of the proposed structure.

A completed construction permit application must include: plans and specifications; evidence establishing a property right for the property (includes land and structures) that will be affected by the construction of the dam, dike, or other device; and any additional information required by the State Engineer.

Page: 6

Author: Medopera Subject: Highlight Date: 4/5/2016 1:40:39 PM
Comment ID: 128k
Topic: Page 3-115 and other, Edit Accepted

Author: Medopera Subject: Highlight Date: 4/5/2016 1:41:04 PM
Comment ID: 128l
Topic: AMMP, Edit Accepted

Author: Medopera Subject: Highlight Date: 11/20/2015 10:36:19 AM -06'00'
Comment ID: 128e cont.

Author: Medopera Subject: Highlight Date: 4/20/2016 10:53:27 AM
Comment ID: 128m
Topic: Proposed Project Description, Edit

Author: Medopera Subject: Highlight Date: 4/5/2016 1:42:01 PM
Comment ID: 128n
Topic: Chapter 1 and other, Edit Accepted

Author: Medopera Subject: Highlight Date: 4/5/2016 1:42:27 PM
Comment ID: 128o
Topic: Dam Safety, North Dakota Dam Safety Program Additions

From: [Patrick Chase](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Comments on the proposed dams on the Red River
Date: Monday, September 14, 2015 2:46:08 PM

Commenter 129

Summary of Comments on PatrickChase_Commenter129a_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/20/2015 10:48:25 AM -06'00'
Commenter 129

Author: Medopera Subject: Highlight Date: 4/5/2016 1:44:05 PM
Comment ID: 129a
Topic: Existing Conditions, Causes of Flooding

An explanation of the causes of the Red River flooding is expected and would be an educational for the general public. It seems that "100 year flood" occurs every ten to twenty years.
In the long run it would be more advantageous dealing with the "causes" than building dams.
Western Minnesota has lost more than 80 % marshes, ponds, low lands that retained water in the spring. We need to educate and encourage the retaining of water. It will reduce pollution and floods, and, in time, replenish our underground water.
It is similar to the obesity problem. We spend billions on the affects of being over weight and far less on the causes. It doesn't make sense.

Sent from my iPad

From: [Paula Ekman](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 10:11:09 AM

Commenter 130

Comment for Submission

As a Township Supervisor for Stanley Township I am deeply disappointed with the lack of notice regarding this issue. Our affected residents that were given less than a week to even begin to process this information after receiving a letter. Our Township was not notified that this was even on the table, negating our ability for due diligence by even attending the meeting. It all seems very clandestine and without transparency.

To ask taxpayers to foot a bill of an additional \$81 million dollars while displacing up to sixty families, many businesses and acres of farmland....all while restricting Fargo growth by another mile and a half AND slowing down our regions flood protection by FOUR YEARS is unrealistic and irresponsible.

I respectfully request that the NORTHERN ALIGNMENT ALTERNATIVE option be dismissed immediately.

I respectfully insist that our Township Board, elected by the residents of North Dakota's Stanley Township to represent them, be notified in a timely manner going forward regarding ANY and ALL issues that affect our residents. PARTICULARLY when it displaces them from their homes! This whole situation has been handled unprofessionally and caused unnecessary anxiety for our residents.

Sincerely,
Paula Ekman
Stanley Township Supervisor
1615 Round Hill Dr.
Fargo ND 58104
701-306-8223
paula@ekman.com

Summary of Comments on StanleyTownship_PaulaEkman_Commenter130a-b_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/20/2015 10:54:01 AM -06'00'
Commenter 130

Author: Medopera Subject: Highlight Date: 4/5/2016 1:48:29 PM
Comment ID: 130a
Topic: Communication Concerns, MNDNR

Author: Medopera Subject: Highlight Date: 4/5/2016 1:49:20 PM
Comment ID: 130b
Topic: Permitting Approval, Reject the Northern Alignment Alternative
Unsubstantive

Author: Medopera Subject: Highlight Date: 11/20/2015 11:00:38 AM -06'00'
Comment ID: 130a cont.

From: [Paul Heuer](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Monday, October 26, 2015 10:00:25 PM

Commenter 131

Summary of Comments on PaulHeuer_Commenter131a-b_Email1.pdf

Page: 1

We ask the DNR to reject the Northern Alignment Alternative (NAA) in favor of the proposed, federally authorized plan. Since it has not been evaluated by the responsible federal agency, the NAA would by law require a whole new environmental review, analysis, and Environmental Impact Statement from the Corps of Engineers. There is no reason to waste time and public money and resources on doing an environmental review on this alternative when one has already been done on the proposed project. Selecting the NAA would be an enormous waste of resources.

The main feature of the NAA would be to shift the impoundment downstream 1.5 miles, moving it north into more developed areas. In doing so, more homes will be affected. Even if a handful of homes will be spared impact by adopting the NAA over the proposed alternative, this benefit would be offset and more by the fact that as many as 60 additional homes would be impacted under the NAA than would under the proposed plan. In addition, a number of businesses, and more farmland would be affected by the NAA than by the proposed action.

The NAA would also place one of our region's most historic landmarks in jeopardy--St. Benedict's Catholic Church, the oldest Roman Catholic Church in the area. All of this for an additional price tag of \$81 million. The NAA is not worth it and should be rejected by the DNR.

Sincerely,

Paul Heuer

8305 River View Rd, Fargo, ND

pdh_56@yahoo.com

Author: Medopera Subject: Text Box Date: 11/20/2015 11:02:28 AM -06'00'

Commenter 131

Author: Medopera Subject: Highlight Date: 4/5/2016 1:51:12 PM
Comment ID: 131a
Topic: Northern Alignment Alternative, General Opposition
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/5/2016 1:51:41 PM
Comment ID: 131b
Topic: Permitting Approval, Reject the Northern Alignment Alternative
Unsubstantive

From: [Peter Orecchia](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Tuesday, October 27, 2015 1:10:49 PM

Commenter 132

Summary of Comments on Theresa&PeterOrecchia_Commenter132a-c_Email1.pdf

Page: 1

Dear Ms. Townley,

I am writing to express my support of the Fargo-Moorhead Risk Management project as already authorized by congress and the U.S. Army Corp of Engineers, and ask that the authorized proposed alternative be approved by the DNR, instead of the Northern Alignment Alternative,(NAA) which goes directly through our home. The MN DNR may see it as just a "structure" but this is our HOME.

The NAA has not been approved by the Corp of Engineers, and as such, will require a whole new Environmental Impact Statement in accordance with federal law; and would add approximately 10 years, to the already 7 or more it will take to complete the current project. Along with just the location of the NAA, there is the cost, which will add more than \$81 million to the already \$1 billion cost.

The evaluation that you, the MN DNR, provided on the already approved proposed alignment states that it is a very well thought out and engineered project that places the various flood control structures, including the staging area, in the absolute best location for meeting the goals of providing permanent 100-year (or greater) flood projection. The NAA's location is not only a less feasible location, but one that will affect many more homes, commercial structures, and even my church-St. Benedicts, where my husband and I look forward to every Sunday service and visiting with our friends and neighbors, who, over the past 12 years, have become more like family.

The shifting of the impoundment north will bring it into contact with more developed areas of the region, and place more residences within its impoundment acreage, which is also larger than that called for in the proposed alternative.

Finally, I ask that you take a minute and think about *your* home, which you value it as your place of retreat, where your family and friends gather; where you have laughed and cried, and have spent some of the best times of your life. Now imagine someone saying that what you have worked your whole life saving for and the relationships you have with your neighbors, will be erased by the NAA, which will not make any more of a difference than the already authorized project.

Thank you for your time and consideration. Attached is a picture of fawns in our backyard, they live in the woods right behind our house.

Theresa & Peter Orecchia

Author: Medopera Subject: Text Box Date: 11/20/2015 11:04:21 AM -06'00'
Commenter 132

Author: Medopera Subject: Highlight Date: 4/5/2016 1:53:42 PM
Comment ID: 132a
Topic: Permitting Approval, Approve the Project
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/5/2016 1:54:08 PM
Comment ID: 132b
Topic: Northern Alignment Alternative, General Opposition
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/5/2016 1:54:32 PM
Comment ID: 132c
Topic: Proposed Project, General Support
Unsubstantive

This page contains no comments



From: [Pleasant Township - MaryJane Nipstad](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo Moorhead Flood Risk Management Project DEIS
Date: Monday, October 26, 2015 9:59:39 PM
Attachments: [MN DEIS Public Comment Submission 10.26.15.pdf](#)

Commenter 133

Summary of Comments on PleasantTownship_MaryJaneNipstad_Commenter133a- n_Email1.pdf

Page: 1

To whom it may concern:

Please accept the above public response from Pleasant Township regarding the proposed FM Diversion project in Cass/Clay Counties.

Please confirm this communication is received. Thank you.

MaryJane Nipstad
Clerk, Pleasant Township
701.588.4008 (home)
701.361.5191 (cell)

Author: Medopera Subject: Text Box Date: 11/20/2015 11:13:09 AM -06'00'

Commenter 133

Author: Date: Indeterminate

TO: Jill Townley, EIS Project Manager
Environmental Review Unit
Division of Ecological and Water Resources
Minnesota DNR

FROM: Pleasant Township, Cass County, North Dakota

DATE: October 26, 2015

RE: Public Comment Period
 Fargo-Moorhead Flood Risk Management Project DEIS

Pleasant Township is not opposed to permanent flood protection of the metro area of Fargo, North Dakota and Moorhead, Minnesota. Although it is opposed to a proposed project design which features a 30 mile long diversion channel, 6 mile long connecting channels, 12 miles of tie back embankments, and 4 miles of overflow embankment. When in operation, the proposed project would inundate Pleasant Township entirely flooding prime agricultural farm land, destroying roads, and considerable loss of tax base.

AGRICULTURAL LAND

Farm groups in North Dakota and Minnesota stand firmly against damming the Red River south of Fargo, North Dakota. A dam is part of the Diversion Authority's plan to remove land from the current flood plain south of Fargo and make it suitable for commercial and residential development. The result would be to back up water in the proposed storage area on about 35,000 acres of prime agricultural farm land on both sides of the Red River.

It is recognized that the economic vitality of the Red River Valley relies on a healthy Ag industry. The proposed diversion project and its alternatives undermines the farms and communities who will feel the effects of the dam and reservoir. Agriculture is the only natural resource that never runs out. It produces food and economic activity year after year, long after the oil and coal will run out. It is a resource that must be protected, and on that, all of our region's agricultural groups agree.

Socioeconomic Section – Agriculture

The DEIS does an inadequate job of thoroughly reviewing the socioeconomic impacts to the agricultural industry affected by the proposed project. The DEIS states the "Project Proposer has developed draft mitigation options to address impacts to agricultural lands". One of the 524 page document, Appendix V, one page in length with vague information of a hopeful mitigation plan – needing much more due diligence. Socioeconomic impacts needing further review include hydrology, road repair to gain access to farm land, debris removal, flowage easements, crop insurance and soil quality after the use of the dam to name a few.

Organic farm concerns are researched in the DEIS as a socioeconomic concern and noted there is "uncertainty of how the organic certification of an organic farm would be affected by the Project or the Northern Alignment Alternative (NAA), which would be determined once operation occurs". This is unacceptable and all mitigation must be researched and studied thoroughly up front to make an educated determination!

Page: 2

Author: Medopera Subject: Highlight Date: 4/5/2016 1:56:54 PM
Comment ID: 133a
Topic: Proposed Project and Northern Alignment Alternative, General Opposition
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/22/2016 8:47:38 AM
Comment ID: 133b
Topic: Socioeconomics, Economic Vitality
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/5/2016 1:58:01 PM
Comment ID: 133c
Topic: Socioeconomics, Agriculture Mitigation

Author: Medopera Subject: Highlight Date: 4/20/2016 11:01:10 AM
Comment ID: 133f
Topic: Proposed Project Operation, Flood Debris and Cleanup

Author: Medopera Subject: Highlight Date: 4/19/2016 3:35:42 PM
Comment ID: 133e
Topic: Infrastructure and Public Services, Flood Impacts to Roadways, Ditches and Culverts

Author: Medopera Subject: Highlight Date: 4/5/2016 1:58:17 PM
Comment ID: 133d
Topic: Socioeconomics, Staging Area Hydrology Impacts

Author: Medopera Subject: Highlight Date: 11/20/2015 11:27:29 AM -06'00'
Comment ID: 133c cont.

Author: Medopera Subject: Highlight Date: 4/5/2016 1:59:54 PM
Comment ID: 133g
Topic: Socioeconomics, Organic Farms

CEMETERIES

The Executive Summary and Cemetery Mitigation Plan make comment several times that the "Mitigation for impacts to the cemeteries is not required by the Fifth Amendment of the US Constitution because there is no taking". In addition, the document further states, "However experiences at some cemeteries show that flooding generally has only minimal impact and that the cemeteries may need to clean off debris and/or reset headstones, families would not be able to visit loved ones and the cemeteries would not be able to bury people during the flooding". How can the DEIS argue there is "no taking" of the cemeteries when the sites are impacted by the project? This is considered loss of use and most likely more damage than what the analysis states which requires mitigation.

The USACE state the cost to protect the cemeteries upstream of the proposed diversion project will cost \$14 Million, and it is not worth it! The proposed project will cause these cemeteries to flood. The tax payers are currently paying more than \$10 Million for a clubhouse and private golf course located behind the Oxbow-Hickson-Bakke (OHB) Ring Levee, but people who devoted all they had to give us life and a future is not worth it? In deed there will be devastating impacts to the cemeteries located in the upstream staging area of the proposed project.

ARROGANCE AND GREED

The board governances of both Cass County and the City of Fargo over time have created their flooding nightmares. They have allowed construction and development in areas of natural flood plain land. They want to continue their development and building, thus to shift their flooding problems to their rural neighbors. The Diversion Authority's apparent goals are to provide 100 year flood protection for Fargo's current infrastructure, and remove approximately 20,000 acres from the flood plain south of Fargo for future development. Flooding is a concern for the entire Red River basin.

The proposed dam is classified as a Class I High Hazard Dam, which Minnesota has not given a permit out for this type of dam in over 20 years. The Minnesota DNR has made it clear that in order to get a permit the Diversion Authority will have to prove that the benefit to Minnesota outweighs the risk of the dam and damage to rural parts of the state. Further, the City of Fargo's attorneys readily admit the benefit of the proposed plan and it's alternatives to Minnesota is less than 10%.

The Diversion Authority neglected to adhere to the rules and due process of the State of Minnesota. The governance chose not to abide by the wishes of Minnesota on several occasions when asked to stop all construction on the OHB Ring Levee. Further court documents show that Minnesota law does need to be followed and construction of the OHB Ring Levee was halted. If the permit to the dam is not issued, if the alignment of proposed project is moved north (NAA), or if the project needs to become smaller due to overall cost – arrogance and greed will have costed taxpayers \$100's of Millions of dollars. At this stage of the process, there is no reason to have started building the OHB Ring Levee. Cass County and City of Fargo officials should have been focusing their efforts and using tax payer funds appropriately by building up internal levee systems within the City of Fargo.

Page: 3

Author: Medopera Subject: Highlight Date: 4/5/2016 2:00:21 PM
Comment ID: 133h
Topic: Cultural Resources, Cemetery Taking

Author: Medopera Subject: Highlight Date: 4/5/2016 2:00:44 PM
Comment ID: 133i
Topic: Cultural Resources, Cemetery Mitigation

Author: Medopera Subject: Highlight Date: 4/20/2016 11:35:14 AM
Comment ID: 133j
Topic: Proposed Project Purpose and Need, Questions Project Purpose

Author: Medopera Subject: Highlight Date: 4/5/2016 2:01:52 PM
Comment ID: 133k
Topic: Dam Safety, Permit Decisions

Author: Medopera Subject: Highlight Date: 4/5/2016 2:02:15 PM
Comment ID: 133l
Topic: OHB Ring Levee, Prohibition

ALTERNATIVE OPTIONS

The DEIS poses various options and alternatives. One of the alternatives being the Northern Alignment Alternative (NAA). While moving the proposed alignment of the project 1 ½ miles to the north with this alternative, why was an additional alignment even farther to the north not researched and explored? The purpose and wishes of permanent flood protection is to protect the City of Fargo – Pleasant Township does not agree that it needs to also protect future development areas of the City. The City of Fargo has made it clear they want a diversion, so why can not a smaller version of this project be examined? A majority of the proposed staging area does not even flood, so what is the purpose of such a "grand project"?

In closing, does a 30 mile long diversion channel on the North Dakota side of the Red River benefit Minnesota? Has this process been clean and smooth? The answer is NO – there is severe controversy, litigation, and unanswered questions. The proposed project does not benefit Minnesota, and thus the Minnesota DNR should not issue a permit to build a Class I High Hazard Dam on the Red River.

Respectfully Submitted by the Board of Pleasant Township,



MaryJane Nipstad
Clerk

Page: 4

Author: Medopera Subject: Highlight Date: 4/5/2016 2:03:03 PM
Comment ID: 133m
Topic: Alternatives, Alternative: Northern-Northern Alignment Option

Author: Medopera Subject: Highlight Date: 4/5/2016 2:03:50 PM
Comment ID: 133n
Topic: Permitting Approval, Reject Both Plans
Unsubstantive

From: [Randy Gilbraith](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 2:31:00 PM

Commenter 134

Summary of Comments on RandyGilbraith_Commenter134a_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/20/2015 12:43:34 PM -06'00'
Commenter 134

Author: Medopera Subject: Highlight Date: 4/5/2016 2:05:35 PM
Comment ID: 134a
Topic: Northern Alignment Alternative, General Opposition
Unsubstantive

I am in favor of the diversion being put into place. However I am not in favor of the northern alignment. I'm being told that there will be extra costs and more families will be disrupted. We have neighbors that are trying to sell their home. They have already bought a home in another city where the husband is living. The wife of the family is still here in Fargo trying to sell the house. Because of the northern alignment now part of the equation nobody will even look at the house once they are told about this.

Thank You,

Randy Gilbraith
10318 6th St S
Fargo, ND 58104

Sent from my iPhone

From: [renee.clasen](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Friday, October 23, 2015 6:16:29 PM

Commenter 135

Comment for submission

We ask the DNR to reject the Northern Alignment Alternative (NAA) in favor of the proposed, federally authorized plan. Since it has not been evaluated by the responsible federal agency, the NAA would by law require a whole new environmental review, analysis, and Environmental Impact Statement from the Corps of Engineers. There is no reason to waste time and public money and resources on doing an environmental review on this alternative, when one has already been done on the proposed project. Selecting the NAA would be an enormous waste of resources.

The main feature of the NAA would be to shift the impoundment downstream 1.5 miles, moving it north into more developed areas. In doing so, more homes will be affected. Even if a handful of homes will be spared impact by adopting the NAA over the proposed alternative, this benefit would be offset and more by the fact that as many as 60 additional homes would be impacted under the NAA than would under the proposed plan. In addition, a number of businesses, and more farmland would be affected by the NAA than by the proposed action.

The NAA would also place one of our region's most historic landmarks in jeopardy - St. Benedicts Catholic Church, the oldest Roman Catholic Church in the area. All of this for an additional price tag of \$81 million. The NAA is not worth it, and should be rejected by the DNR.

Sincerely,
Renee & Cory Clasen
406 118th Ave South
Horace, ND 58047
701-238-1379
egg lady_nd@yahoo.com

Summary of Comments on Renee&CoryClasen_Commenter135a-b_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/20/2015 12:45:03 PM -06'00'
Commenter 135

Author: Medopera Subject: Highlight Date: 4/5/2016 2:07:13 PM
Comment ID: 135a
Topic: Northern Alignment Alternative, General Opposition
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/5/2016 2:07:51 PM
Comment ID: 135b
Topic: Permitting Approval, Reject the Northern Alignment Alternative
Unsubstantive

From: khouska707@aol.com
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project
Date: Wednesday, October 28, 2015 2:17:23 PM

Commenter 136

Summary of Comments on Richard&KristiHouska_Commenter136a_Email1.pdf

Page: 1

The Diversion Authority has not yet provided accurate and full costs of the diversion project. This needs to be evaluated further. For five years now, the Diversion Authority has been quoting a \$1.8 billion price tag – this price never once has changed. Yet, at that time, inflation, the Oxbow ring dike, excessive buyout prices, additional maintenance on cemeteries, roads, ditches, and the Corps own past history of under-estimating costs was not taken into account. The Diversion Authority needs to provide a breakdown on how this estimate was derived. Each aspect of the project should be broken down with subsets showing the division of costs.

Also, what will be the full annual maintenance of costs? The Diversion Authority is claiming roughly \$5 million. When you look at over 30 miles of diversion including mowing, slumping of land (which they're already fixing on the Breckenridge diversion), weed control, cemeteries, ring dikes, roads, ditches, equipment, etc. \$5 million appears totally under-estimated as well. Again, annual maintenance needs to be broken down by each aspect of the project.

Accurate and full costs will have a huge impact on the cost/benefit ratio. By breaking the costs down, it can be more readily seen what areas are under budgeted and need to be looked into further. Citizens on both sides of the river need to have knowledge exactly how their taxpayer money is being spent and to be able to question the costs.

Richard and Kristi Houska
111 Plum Tree Road
Hickson, ND 58047

Author: Medopera Subject: Text Box Date: 11/20/2015 12:47:14 PM -06'00'

Commenter 136

Author: Medopera Subject: Highlight Date: 4/5/2016 2:15:42 PM
Comment ID: 136a
Topic: Proposed Project, Project Cost

From: khouska707@aol.com
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 2:22:32 PM

Commenter 136 cont.

Summary of Comments on Richard&KristiHouska_Commenter136b_Email2.pdf

Page: 1

Based on the current placement of the diversion south of Fargo, it will require the displacement of waters from the natural floodplain onto high land, located in both ND & MN, which has never flooded.

Author: Medopera Subject: Text Box Date: 11/20/2015 12:48:45 PM -06'00'
Commenter 136 cont.

"Executive Order 11988 requires federal agencies to avoid to the extent possible the long and short-term adverse impacts associated with the occupancy and modification of flood plains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative."

Author: Medopera Subject: Highlight Date: 4/5/2016 2:17:31 PM
Comment ID: 136b
Topic: Federal Executive Order 11988, Violation

1. Stop building in the flood plain.
2. Use distributive storage to slow the speed of the volume of water that needs to flow through Fargo Moorhead.
3. Use internal storage to hold water nearer to Fargo using the floodplain as intended.
4. By using a combination of the above, the diversion can be moved north of current alignment and function without damming the river.

There are other alternatives available which need to be looked into further. A natural, undeveloped floodplain's water should not be drained and placed onto high land which has never flooded just so the floodplain can be used for developmental purposes.

Richard and Kristi Houska
111 Plum Tree Road
Hickson, ND 58049

From: khouska707@aol.com
To: [*Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 2:25:29 PM

Commenter 137

Summary of Comments on KristiHouska_Commenter137aandc_Email1.pdf

Page: 1

The Diversion Authority has decided not to provide any protection for the cemeteries, both on the MN and ND side, being impacted by this project – just let them flood. With feet of water sitting on the sacred grounds of these cemeteries for long periods of times, further analysis needs to be performed showing full costs associated with damages (many items which are irreplaceable), erosion of the soil, likely hood of loved ones' bodies coming out of the ground, emotional undue stress to families, ensuring grounds, buildings, and roads are fixed consistently and TIMELY. Who will be held accountable & how will citizens be assured the accountable party performs their job? Basically, what recourse will there be if the accountable party does not perform the necessary repairs? Weak promises and potential lack of future funds does not guarantee anything.

Author: Medopera Subject: Text Box Date: 11/20/2015 12:56:59 PM -06'00'
Commenter 137

Author: Medopera Subject: Highlight Date: 4/5/2016 2:19:31 PM
Comment ID: 137a
Topic: Cultural Resources, Cemetery Impact

Author: Medopera Subject: Highlight Date: 4/5/2016 2:19:45 PM
Comment ID: 137c
Topic: Cultural Resources, Cemetery Mitigation

Kristi Houska
111 Plum Tree Road
Hickson, ND 58047

From: khouska707@aol.com
To: [*Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 2:27:49 PM

Commenter 137 cont.

My husband and I have been residents in the Bakke subdivision both in the years of 1997 and 2009. Neither of those years was the development touched by flood waters. The Diversion Authority claims we need this ring dike to protect us against floods. We never once asked for their help; they came to us to tell us what they were going to do. This ring dike is totally unnecessary & a complete waste of taxpayer money unless the diversion/dam was built and fully operational. Further socio-economic analysis needs to be done on the Bakke/Hickson/Oxbow ring dike. What benefit is Bakke/Hickson receiving out of this? We are actually being left in a much worse scenario – no expansion, living behind a 12 ft wall, possibility of dike breaching, lose of life, only one escape route, undue stress, and internal flooding issues.

Kristi Houska
111 Plum Tree Road
Hickson, ND 58047

Summary of Comments on KristiHouska_Commenter137b_Email2.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/20/2015 12:58:57 PM -06'00'
Commenter 137 cont.

Author: Medopera Subject: Highlight Date: 4/5/2016 2:22:00 PM
Comment ID: 137b
Topic: Socioeconomics, OHB Ring Levee

From: [Brett D. Lambrecht](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: "Fargo-Moorhead Flood Risk Management Project DEIS"
Date: Wednesday, October 28, 2015 3:03:05 PM
Attachments: [20151028104513117.pdf](#)

Commenter 138

Summary of Comments on RichlandCountyEmergencyManagement_BrechtLambrecht_ Commenter138a-d_Email1.pdf

Page: 1

Please find enclosed a Letter and attachment for the Flood Diversion Comment Period.

Thanks,
Brett Lambrecht
Emergency Management -Director
U.S. Dept. Homeland Security
Flood Plain Administrator
Richland County
418 2nd Avenue North
Wahpeton, ND 58075
701-642-7788
701-642-7776 (fax)
blambrecht@co.richland.nd.us

Author: Medopera Subject: Text Box Date: 11/20/2015 1:00:06 PM -06'00'

Commenter 138

Author: Date: Indeterminate



Brett Lambrecht, Emergency Manager
418 2nd Avenue North
Wahpeton, North Dakota 58075
701.642.7788 Fax: 701.642.7776
blambrecht@co.richland.nd.us

Richland County Emergency Management

Tuesday, October 27th, 2015

Jim Townley, EIS Project Manager
Environmental Review Unit
Division of Ecological and Water Resources
Minnesota DNR
500 Lafayette Road
Saint Paul, Minnesota 55155-4025

Dear Minnesota DNR:

This letter is to express alternative ways that can be done for flood protection for the Fargo-Moorhead Area:

1. Please find attached an attachment that shows an area to be able to construct a dam on the North Dakota & South Dakota Border and the area to the south between ND Hwy #127 & Minnesota side going back to White Rock dam. The area could hold close to 45' feet depth of water in areas for over 5 miles long and by 2-3 miles in width. (See attachment provided).

While this would provide an additional new dam of holding water to Lake Traverse, Mud Lake holding behind White Rock Dam by - Army Corps of Engineers. The storage of water with this new dam could be held with possibly no releases downstream to Wahpeton- Breckenridge and then to Fargo-Moorhead during a flood event with this storage capacity and the impact to construct the dam would only effect 4-5 homes in that new area.

2. Also another alternative is to finish the Dikes in Fargo/Moorhead which I believe 95% of the metro area is protected to 44' feet. The State of North Dakota has funded much of the Dike protection for the Fargo/Moorhead Metro as they feel this is the best alternative to Local, State and Federal Laws in the legal process. The Cities of Grand Forks/East Grand Forks, Wahpeton/Breckenridge and other cities along the Red River have constructed great flood protection with permanent levies/dikes.

3. We have been in our wet cycle for 25+ years and looks like the cycle is changing according to the National Weather Service, so we experienced the worst flooding. Including the 2009 flood which had significant more water flow than 1997 flood according to cubic feet per second measured at all river gages in the Red River Valley.

"If you just set out to be liked, you will be prepared to compromise on anything at anytime, and would achieve nothing". (Margaret Thatcher)

Page: 2

Author: Medopera Subject: Highlight Date: 4/5/2016 2:24:00 PM
Comment ID: 138a
Topic: Alternatives, Alternative: North Dakota/South Dakota Retention Project

Author: Medopera Subject: Highlight Date: 4/5/2016 2:24:40 PM
Comment ID: 138b
Topic: Alternatives, Alternative:Fargo Flood Damage Reduction

Author: Medopera Subject: Highlight Date: 4/19/2016 1:19:57 PM
Comment ID: 138c
Topic: Hydrology and Hydraulics, Expert Opinion Evaluation Panel

October 28, 2015
Page 2

4. To note other agencies have noted additional storage areas in Counties south and north of Fargo/Moorhead that would provide great significances in Water Storage.

Sincerely,



Brett Lambrecht
Emergency Management -Director
U.S. Dept. Homeland Security
Flood Plain Administrator
Richland County
418 2nd Avenue North
Wahpeton, ND 58075
701-642-7788
701-642-7776 (fax)
blambrecht@co.richland.nd.us

Page: 3

Author: Medopera Subject: Highlight Date: 4/5/2016 2:25:35 PM
Comment ID: 138d
Topic: Alternatives, Alternative: Internal Storage

Proposed Retention Dam Area



50' depth Average

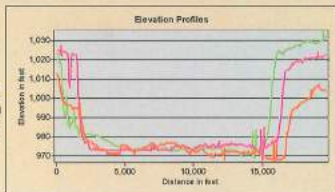
50' depth

50' depth



Disclaimer
 This data has been created as a public service. Every effort has been made to offer the most current, correct, and clearly expressed information possible, however inadvertent errors can occur. Therefore, this information should not replace an official survey. Richland County GIS shall assume no liability for any errors, omissions, or inaccuracies in the information provided regardless of how caused; or any decision made or action taken or not taken by reader in reliance upon any information or data furnished hereunder.

Matt Syvertson, Richland County GIS Coordinator
 msyvertson@co.richland.nd.us, 701-642-7850



From: [Zentgraf, Monica](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Tuesday, October 27, 2015 12:42:24 PM
Attachments: [1096_001.pdf](#)

Commenter 139

Summary of Comments on RichlandCountyWaterResourceDistrict_DonMoffet_Comme nter139a-e_Email1.pdf

Page: 1

Attached are the comments of the Richland County Water Resource District, 418 2nd Ave N,
Wahpeton, ND 58075.

Author: Medopera Subject: Text Box Date: 11/20/2015 1:14:04 PM -06'00'

Commenter 139

Manica Zentgraf
Richland County Water Resource District
418 2nd Avenue North
Wahpeton, ND 58075
mzentgraf@co.richland.nd.us
701-642-7773

Author: Date: Indeterminate

**RICHLAND COUNTY
WATER RESOURCE DISTRICT**

MANAGERS:

Don Moffet, Chr. (Barney)
Robert Rostad, Vice Chr. (Coffax)
Ary Burvee (Fairmount)
James Haugen (McLeod)
Gary Friskop (Wahpeton)

SECRETARY/TREASURER:

Monica Zentgraf
(701)642-7773 (Phone)
(701)642-6332 (Fax)
mzentgraf@co.richland.nd.us (E-mail)

CIVIL TECHNICIAN:

Justin Johnson
(701)642-7835 (Phone)
(701)361-9780 (Cell)
justinj@co.richland.nd.us (E-mail)

Page: 2

October 27, 2015

Ms. Jill Townley
EIS Project Manager
Environmental Review Unit
Division of Ecological and Water Resources
Minnesota DNR
500 Lafayette Road
ST. Paul, MN 55155-4025

RE: Fargo-Moorhead Flood Risk Management Project DEIS

Dear Ms. Townley,

The Richland County Water Resource District represents the citizens of Richland County and maintains the legal agricultural drainage system within the County. On behalf to these two interests, we are providing comment on the referenced DEIS.

We believe the project, as proposed, unfairly places the entire burden of the project impacts on the upstream landowners and residents. We question why allowing some small impacts to the downstream area were entirely dismissed? It seems that if flood protection for the Fargo-Moorhead area is important to the entire region then the entire region should share the burden, including the downstream areas. Wouldn't a small raise in some of the downstream levies have been more cost effective over the massive staging area? More study on the feasibility of sharing the project impacts would seem reasonable.

The DEIS data clearly shows the "staging area" to increase flood levels in northern Richland County. In addition to the restriction that would be placed by FEMA on building structures in these areas and flooding and loss of cropland in the staging area, the operation of the legal drain system would be impaired. This impairment of the drain system does not appear to be accounted for in the assessment of the impacts. Since the legal drain system known as Legal Drain 5 in northern Richland County west of the Wild Rice River (shown on the project maps as Drain 27) would not function effectively, additional crop land would be flooded along the upper reaches of the drain. This will increase the impact to residents beyond what the Diversion Authority states would receive compensation.

We believe the hydrology model used for the project bears further review and study. The maximum recorded flow at the Red River gage in Fargo was 29,500 cfs in March of 2009. This is the highest flow in recorded history with over 100 years of records. The Expert Opinion Elicitation Panel (EOEP)

Author: Medopera Subject: Highlight Date: 4/5/2016 2:27:35 PM
Comment ID: 139a
Topic: Alternatives, Alternative: Shared Burden U.S. and D.S.

Author: Medopera Subject: Highlight Date: 4/20/2016 9:07:54 AM
Comment ID: 139b
Topic: Infrastructure and Public Services, Richland County Drain 5 (27) Impact and Mitigation

Author: Medopera Subject: Highlight Date: 4/19/2016 1:25:28 PM
Comment ID: 139c
Topic: Hydrology and Hydraulics, Expert Opinion Evaluation Panel

concluded that this flow is less than a one hundred year event as the project is using 34,700 cfs for a 100 year design flow. We understand that even 100 years of records is short in the grand scheme of things; however, using the "wet period of record" appears to ignore standard engineering practice. Using the extreme predictions to design the project appears to overbuild the staging area and push negative impacts to the south. The MNDNR has several comments in the project information that substantiate our concern over using this method. The MNDNR first states that the EOEP hydrology method ".....is not perfect but does have merit....". They further state that the "standard method" would produce smaller flows than the EOEP but these would still be higher than what FEMA has used in the past. If standard hydrology methods are what the Corps uses everywhere else and they still exceed what FEMA uses, how can other agencies, particularly permitting and funding agencies, agree to this unusual method? In addition to the negative impacts the staging area would cause by the use of the extreme design, it will increase the number of residences in Richland County that would need to buy flood insurance and reduce the number of acres that could be developed, stunting growth in Richland County unnecessarily. It should be further noted that the project is being designed to a 500 year flood protection level when the staging area and its impacts would be the maximum. The design flow for this event is over twice the maximum flow the Red River has ever seen, further highlighting the flaws in the hydrology method used.

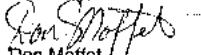
We also believe the Distributed Storage Alternative was dismissed too quickly and should be studied further. Richland County continues to study and prepare to build distributed storage within our borders for the substantial benefits it will provide for our residents. This storage is potentially five years or less from the start of construction. Our efforts, and others, such as the successes in the Bois-de-Sioux watershed highlight that this method is possible and will become a reality. While sufficient storage to negate the project staging area will take time so will construction of the project. We believe the project should further study this option and its real ability to mitigate the harmful effects of the project.

In summary, we believe sharing of the burden, the true extent of the agricultural impacts in Richland County, the EOEP hydrology, and the Distributed Storage Alternative, bear further study prior to the MNDNR completing their DEIS and considering issuance of the permit for a project which so unfairly harms upstream areas. In the light of sharing the burden, we believe that if alternatives to the project will not be considered further, the Northern Alignment be given more consideration. The Northern Alignment would at least reduce the impacts to the residents of Richland County and Fargo would share the burden by reducing the amount of land to the south that could be developed in the future. While upstream impacts would remain, at least by giving up some future development, Fargo would share the burden.

We welcome any questions you may have regarding our comments.

Thank you for your time and consideration.

Sincerely,


Don Moffet
Chairman of the Board

DM:mb

Author: Medopera Subject: Highlight Date: 11/20/2015 1:20:57 PM -06'00'
Comment ID: 139c cont.

Author: Medopera Subject: Highlight Date: 4/5/2016 2:28:52 PM
Comment ID: 139d
Topic: Alternatives, Alternative: DSA

Author: Medopera Subject: Highlight Date: 4/5/2016 2:29:19 PM
Comment ID: 139e
Topic: Proposed Project, General Opposition
Unsubstantive

From: rlalm@netscape.net
To: [*Review, Environmental \(DNR\)](#)
Subject: Fargo Moorhead Flood Risk Management Project DEIS
Date: Tuesday, October 27, 2015 7:05:05 PM

Commenter 140

Summary of Comments on RickAlm_Commenter140a_Email1.pdf

Page: 1

My biggest concern with the Fargo Dam is the potential loss of life. Flood protection for Fargo is simply a side effect of this unbridled greed. The logical placement of the dam for flood protection of current city of Fargo would have been much further north. The developers driving all of this have every intention of building homes and schools right up to the shadow of the high hazard dam.

We recently had a weather event that produced 60+ MPH winds in the FM area. Warnings were put out that waves of 8' were possible on Devils Lake. A body of water that would be similar to the size of the body of water that will be created by the dam. I've seen first hand what happens to well constructed roads in the Devils Lake area when waves above 4' occur there. This isn't called a High Hazzard Dam for no reason. I hate to think about the devastation that will occur when the Fargo dam fails.

I hope the DA is putting some money aside for the surviving family members.

Rick Alm
5956 175th Ave SE
Walcott ND

Author: Medopera Subject: Text Box Date: 11/20/2015 1:40:37 PM -06'00'

Commenter 140

Author: Medopera Subject: Highlight Date: 4/5/2016 2:31:01 PM
Comment ID: 140a
Topic: Dam Safety, Risk and Loss of Life Concerns

From: rlalm@netscape.net
To: [*Review, Environmental \(DNR\)](#)
Subject: Fargo Moorhead Flood Risk Management Project DEIS
Date: Tuesday, October 27, 2015 7:50:43 PM

Commenter 140 cont.

Summary of Comments on RickAlm_Commenter140b_Email2.pdf

Page: 1

I object to the whole process. I always thought that ND was part of the United States of America where people actually had some rights. I pretty much need my neighbors approval to run a fence down our property line if I were inclined to do so. The only people involved in the planning, design and all decisions related to the Fargo High Hazzard Dam are the people that stand to directly benefit from it's construction. Not one member of the board of the Fargo Diversion Authority lives south of the purposed dam.

A fresh look at flood protection for the city of Fargo is in order. I'm sorry that they spent all of this money trying to railroad the current plan through but that's just to bad in my book. If they had devoted even a 1/10 of what they have already spent to the internal flood control projects that were designed by the Corps after the 2009 flood the current city of Fargo would already have it's flood protection. But they couldn't do that and still claim that this dam is required.

Rick Alm
5956 175th Ave SE
Walcott ND

Author: Medopera Subject: Text Box Date: 11/20/2015 1:43:49 PM -06'00'
Commenter 140 cont.

Author: Medopera Subject: Highlight Date: 4/5/2016 2:32:44 PM
Comment ID: 140b
Topic: Proposed Project, Project is Immoral
Unsubstantive

From: [Riley Maanum](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 2:47:22 PM

Commenter 141

Summary of Comments on RileyMaanum_Commenter141a_Email1.pdf

Page: 1

To whom it may concern:

I recently attended the informational meeting that was put on by the MN DNR in Moorhead on October 14, 2015 . Unfortunately I had other commitments and could not stay for the presentations and comments session that started at 7:00. I did however ask several questions at the various topic tables, most of which were answered, but there was an issue that does not seem to be addressed in the DEIS.

I asked the Floodplain Regulations and Socioeconomics topic tables if there was any information on how federal crop insurance would be handled for farmers that have farmland in the newly created floodplain? It is my understanding that farmland located within certain floodplains, like the one the proposed diversion would create by holding water back, will not qualify for federal crop insurance. Both of the DNR employees that I talked with felt as though the impacts of this issue would merit it being included in the final EIS, and they urged me to send in comments. The final EIS should contain this important information.

If you have any questions, let me know. I appreciate the opportunity to provide comments on the DEIS and I look forward to your response.

Riley Maanum
1126 18 1/2 St. N.
Moorhead, MN 56560

Author: Medopera Subject: Text Box Date: 11/20/2015 1:53:03 PM -06'00'
Commenter 141

Author: Medopera Subject: Highlight Date: 4/5/2016 2:34:11 PM
Comment ID: 141a
Topic: Socioeconomics, Agriculture Mitigation

From: [Maureen Bozovsky](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Proposed dam south of Fargo
Date: Monday, September 14, 2015 1:52:47 PM

Commenter 142

Summary of Comments on RobertBozovsky_Commenter142a_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/20/2015 1:56:42 PM -06'00'
Commenter 142

Author: Medopera Subject: Highlight Date: 4/5/2016 2:35:52 PM
Comment ID: 142a
Topic: Alternatives, Alternative: Dam Tributaries

The area where the dam south of Fargo is proposed is rather flat and any dam built there will flood a large area of farm land in North Dakota and Minnesota. A better solution would be to build smaller dams on the tributaries of the the rivers flowing into the Red River. In places on those tributaries the banks are high and a smaller dam would back up water on land that is now used for pasture, rather than crop land. Because of the higher banks less acreage would be affected. It would require more smaller dams, but together those dams could hold as much water, with fewer acres flooded. The diversion ditch would help Fargo but what about those cities north of Fargo.

Robert Bozovsky

From: ckksbroom@netscape.net
To: [*Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 2:27:38 PM
Attachments: [DEIS comment 1 RM.doc](#)

Commenter 143

Summary of Comments on RodneyMathison_Commenter143a-b_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/20/2015 1:59:08 PM -06'00'
Commenter 143

Author: Date: Indeterminate

My comment is attached.

Thank you,

Rodney Mathison
5298 174 1/2 Ave SE
Hickson, ND 58047

vikingfanrod@aol.com

October 28, 2015

Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road
St. Paul, MN 55155-4025

(sent via e-mail to environmentalrev.dnr@state.mn.us)

Dear Ms. Townley,

I wish to submit a comment on the DEIS. My comment is concerning the cemeteries that will be affected by the proposed Fargo-Moorhead Flood Risk Management Project (Diversion/Dam). I have attached a photo of the eroding bank of the Red River where it runs past the Hemnes Cemetery. Every time the Red floods, more of the bank erodes into the river (see photo). The Diversion Authority wants to build a Class I High Hazard dam on unstable ground, uphill from Fargo, and they say that the water they plan to store to the south of this dam won't do much damage to the cemeteries? I would hate to be responsible for building it. I fear the ramifications will be terrible.

I do not believe the Dam/Diversion is a good idea and it's wasting a lot of taxpayer money. Don't permit the Dam to be built on the Red River.

Respectively,

Rodney Mathison
5298 174 ½ Ave SE
Hickson, ND 58047
vikingfanrod@aol.com

Page: 2

Author: Medopera Subject: Highlight Date: 4/5/2016 2:38:41 PM
Comment ID: 143a
Topic: Cultural Resources, Cemetery Mitigation

Author: Medopera Subject: Highlight Date: 4/5/2016 2:39:16 PM
Comment ID: 143b
Topic: Permitting Approval, Reject both plans
Unsubstantive



From: ckksbroom@netscape.net
To: [*Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 2:29:33 PM
Attachments: [DEIS comment 2 RM.doc](#)

Commenter 143 cont.

Summary of Comments on RodneyMathison_Commenter143c_Email2.pdf

Page: 1

My comment is attached.

Thank you,

Rodney Mathison
5298 174 1/2 Ave SE
Hickson, ND 58047

vikingfanrod@aol.com

Author: Medopera Subject: Text Box Date: 11/20/2015 2:08:23 PM -06'00'

Commenter 143 cont.

Author: Date: Indeterminate

October 28, 2015

Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road
St. Paul, MN 55155-4025

(sent via e-mail to environmentalrev.dnr@state.mn.us)

Dear Ms. Townley,

I wish to submit a comment on the DEIS regarding cleaning up the Red River so it flows better. One possible solution that I haven't seen anyone explore yet is the idea of River Maintenance Stations. Spread them out along the Red River between Wahpeton and Fargo (of even further north) with barge-type boats with equipment on board to remove river debris and dredge the bottom, using the dredged material to rebuild badly eroded areas. Then stabilize those areas. The Red River hasn't been cleaned up and dredged since the Riverboat times. This endeavor would also create jobs. I have heard some say cleaning and dredging the Red won't work, but I haven't seen anyone seriously study it or provide proof that it won't help. Just opinions from so-called experts saying "That won't work."

Respectively,

Rodney Mathison
5298 174 1/2 Ave SE
Hickson, ND 58047
vikingsfanrod@aol.com

Page: 2

Author: Medopera Subject: Highlight Date: 4/5/2016 3:08:20 PM
Comment ID: 143c
Topic: Alternatives, Alternative: Dredge the River

This page contains no comments



From: [Roger Minch](#)
To: ["Review, Environmental \(DNR\)](#)
Cc: [Lois Minch](#); [Robert Minch](#)
Subject: Comments on Draft EIS Fargo-Moorhead Flood Risk Management Project
Date: Thursday, September 17, 2015 5:18:53 PM

Commenter 144

I believe the EIS and related items correctly conclude that there are no better alternatives than the project currently proposed by the Diversion Authority and that the proposed project will have a net benefit to all concerned. I say that as a resident of Fargo but also as an owner of farmland in northern Richland County that might be occasionally flooded by the so-called "high-hazard dam on the Red River".

We need this project to be completed before Fargo-Moorhead has to go through a flood and fire such as that experienced by Grand Forks in 1997. Fargo has suffered the most so far and many of its neighborhoods near the river have already been destroyed to make way for certain future flooding without permanent protection.

I for one am perfectly willing to see my farmland flooded early in the spring every generation or so to keep a billion dollar disaster from befalling Fargo-Moorhead.

Summary of Comments on RogerMinch_Commenter144a-b_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/20/2015 2:09:19 PM -06'00'
Commenter 144

Author: Medopera Subject: Highlight Date: 4/5/2016 3:09:28 PM
Comment ID: 144a
Topic: Proposed Project, EIS Concludes

Author: Medopera Subject: Highlight Date: 4/5/2016 3:10:14 PM
Comment ID: 144b
Topic: Proposed Project, General Support
Unsubstantive

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From: [Roger Minch](#)
To: ["Review, Environmental \(DNR\)](#)
Cc: [Lois Minch](#); [Robert Minch](#)
Subject: Comments on Draft EIS Fargo-Moorhead Flood Risk Management Project
Date: Thursday, September 17, 2015 5:18:53 PM

Commenter 144

I believe the EIS and related items correctly conclude that there are no better alternatives than the project currently proposed by the Diversion Authority and that the proposed project will have a net benefit to all concerned. I say that as a resident of Fargo but also as an owner of farmland in northern Richland County that might be occasionally flooded by the so-called "high-hazard dam on the Red River".

We need this project to be completed before Fargo-Moorhead has to go through a flood and fire such as that experienced by Grand Forks in 1997. Fargo has suffered the most so far and many of its neighborhoods near the river have already been destroyed to make way for certain future flooding without permanent protection.

I for one am perfectly willing to see my farmland flooded early in the spring every generation or so to keep a billion dollar disaster from befalling Fargo-Moorhead.

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Summary of Comments on RogerMinch_Commenter144a-b_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/20/2015 2:09:19 PM -06'00'
Commenter 144

Author: Medopera Subject: Highlight Date: 4/20/2016 3:37:04 PM
Comment ID: 144a
Topic: Proposed Project, Environmental Impact Statement Concludes

Author: Medopera Subject: Highlight Date: 4/5/2016 3:10:14 PM
Comment ID: 144b
Topic: Proposed Project, General Support
Unsubstantive

From: [Ron Knutson](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Flood protection
Date: Wednesday, October 28, 2015 9:46:59 AM

Commenter 146

Summary of Comments on RonKnutson_Commenter146a_Email1.pdf

Page: 1

As a building owner who just spent 2 million dollars for land and a building I would like to have the flood protection as far south as possible. This makes more sense in terms of dollars and human suffering I have spent over a 100,000 dollars per year getting people to know where our new building is and this would be a financial catastrophe. Please leave the flood protection line where it is. Owner of Memory fireworks building Thank you

Author: Medopera Subject: Text Box Date: 11/20/2015 2:19:20 PM -06'00'
Commenter 146

Author: Medopera Subject: Highlight Date: 4/5/2016 3:13:12 PM
Comment ID: 146a
Topic: Proposed Project, General Support
Unsubstantive

Sent from my iPhone

From: [Ron Knutson](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: 3 million dollar land purchase
Date: Wednesday, October 28, 2015 9:49:19 AM

Commenter 146 cont.

Summary of Comments on RonKnutson_Commenter146a_Email2.pdf

Page: 1

We spent 20,500 for land a few years ago on the wild rice exit please leave the flood protection south of us. Ron Knutson partner on 130 acres on the SE corner of exit 60.

Sent from my iPhone

Author: Medopera Subject: Text Box Date: 11/20/2015 2:24:32 PM -06'00'
Commenter 146 cont.

Author: Medopera Subject: Highlight Date: 11/20/2015 2:24:19 PM -06'00'
Comment ID: 146a cont.

From: [Naomi Goral](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Tuesday, October 27, 2015 12:08:22 PM
Attachments: [RRWMB Comment Ltr - MN DEIS.pdf](#)
Importance: High

Commenter 147

Summary of Comments on RRWMB_JohnFinney_Commenter147a-i_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/20/2015 2:25:20 PM -06'00'
Commenter 147

Author: Date: Indeterminate

Please refer to attachment.

Thank you.

Naomi Goral, Administrator
Red River Watershed Management Board
PO Box 763
Detroit Lakes, MN 56502-0763

Phone: 218.844.6166
Fax: 218.844.6167
Email: rrwmb@arvig.net



Red River Watershed Management Board

October 27, 2015

Jill Townley, EIS Project Manager
Environmental Review Unit
Division of Ecological and Water Resources
Minnesota DNR
500 Lafayette Road
Saint Paul, Minnesota 55155-4025
Fax: 651-296-1811

RE: Fargo-Moorhead Flood Risk Management Project (Project), MNDNR Draft Environmental Impact Statement (DEIS)

Dear Ms. Townley:

The Red River Watershed Management Board (RRWMB) recognizes the need to improve flood protection to the cities of Fargo and Moorhead. Accordingly, the board has participated in developing specific recommendations included in the Long Term Flood Solution (LTFS) Plan of the Red River Basin Commission (RRBC).

The RRWMB has reviewed the Project DEIS and determined that flood protection measures provided by the proposed project should be augmented in order to achieve a 500-year protection level by reducing flood flows through upstream water retention projects. The 20% flood flow reduction goal identified by the RRBC in the LTFS Plan for the Red River can, and will, be attained in the future.

The following comments were developed by the RRWMB after review of the Project DEIS and are offered for your consideration.

1. One of the purposes for the Project is to reduce flood risk of floods exceeding the 1-percent event (100-year or greater), given the importance of the Metropolitan Area to the region and recent frequencies of potentially catastrophic flood events. The DEIS does not evaluate the use of the Distributed Storage Alternative (DSA) in combination with the proposed Project to further reduce flood risk of floods exceeding the 1-percent event. The DEIS fails to give due consideration to Distributed Storage that will provide increased resiliency and reduce reliance on emergency measures during floods exceeding the 1-percent event. The RRWMB suggests including Distributed Storage as an integral component of a 500-year flood protection strategy rather than an

Page: 2

Author: Medopera Subject: Highlight Date: 4/5/2016 3:15:20 PM
Comment ID: 147a
Topic: Alternatives, Alternative: Project + DSA

Author: Medopera Subject: Highlight Date: 4/5/2016 3:16:07 PM
Comment ID: 147b
Topic: Alternatives, Alternative: DSA plus Project

"alternative" to the proposed project. The implementation of Distributed Storage would demonstrate the benefits of this strategy.

2. Has the Distributed Storage Alternative (DSA) been correctly evaluated?

- DEIS uses the Halstad and Upstream (HUR) study to evaluate the effectiveness of Distributed Storage to provide protection to Fargo/Moorhead. In this assessment of the DSA, the EIS purports that "96 storage sites are required to protect Fargo and that, in fact, only 40 of those sites with combined storage capacity of 225,970 AF are upstream of the Red River gaging station in Fargo. It also states that an additional 26 sites with a combined capacity of 120,490 AF are located in the Maple/Rush/Sheyenne watershed that directly affects the northwest FM area. The remaining 30 sites with a combined capacity of 212,760 AF enter the Red River far downstream from the FM area."
- The DEIS states that "The DSA provides the communities on the Red River mainstem with limited protection from catastrophic events". What technical data is this based on? It should be recognized that Distributed Storage, as outlined in the HUR, is only a planning tool developed to assess whether a 20% flood flow reduction on the Red River could be achieved and to better define the amount of upstream storage that would be needed to realize such a goal. The RRWMB recognizes that a 20% flood flow reduction goal will not, by itself, provide the needed protection to the Fargo/Moorhead area. However, it will provide significant flood flow reductions which will provide both local and mainstem benefits to the region and if considered in conjunction with the proposed project, along with flood fighting efforts, the project will have a greater chance of achieving the 500-year flood protection goal.

3. The DEIS states that "it is unlikely that the distributed storage sites will achieve the 100-percent utilization of storage that was modeled in the HUR" due to a likely less even distribution of runoff from the upstream drainage area than was modeled.

- This is a speculative assertion that could be tested by running the HUR models with unbalanced runoff distributions such as historic runoff distributions. The HUR utilizes an evenly distributed runoff distribution so that comparisons can occur regarding the effectiveness of individual projects within the basin.

Author: Medopera Subject: Highlight Date: 11/20/2015 2:31:42 PM -06'00'
Comment ID: 147b cont.

Author: Medopera Subject: Highlight Date: 4/5/2016 3:16:56 PM
Comment ID: 147c
Topic: DSA, Technical Data Basis

4. The DEIS further states that the DSA flow reduction for a 500-year flood would likely be less than the 20% reduction calculated for the 100-year flood.

- This is a speculative assertion that could be tested by running the HUR models with the 500-year flood volume. The HUR was incorporated to assess the potential impacts of individual projects or the cumulative impacts of groups of distributed projects on reducing flood flows for the 1% chance of flood.

5. The benefit provided to a larger area affected by Distributed Storage should be part of the consideration.

- Project could be built to take the reduced flows provided by Distributed Storage into account in such a way to make it easier to add temporary protection in the event of a larger flood occurring before Distributed Storage is fully in place.
- The RRWMB, along with similar entities on the ND side, are actively working to implement Distributed Storage to provide basin-wide reduction in flood levels with the intent to benefit communities and local residents in the Red River Basin, including Fargo and Moorhead. How will the Project make sure that reductions in flood flows resulting from the implementation of the Distributed Storage above F-M will be passed through F-M to continue to provide reductions further downstream after the Project is constructed?

6. The draft EIS presents the current operation plan for the upstream staging area. It states that "Operation of the Project would occur when it becomes known that a stage of 35.0 feet would be exceeded at the USGS gage in Fargo. At this stage, the flow through Fargo would be approximately 17,000 cfs". It is possible that significant flood events and damages could occur in areas along the Red River downstream of the project when the flows above Fargo are less than 17,000 cfs. How could the operational plan be improved to utilize the flood storage capacity of the upstream staging area to provide added protection for areas downstream in the event that this situation occurs?

7. The DEIS does not appear to present information on the location or magnitude of downstream stage impacts that result from the project. It appears to avoid describing those impacts by stating that the increased flood levels will be reflected in revisions to the FEMA flood levels.

- Is it correct to assume that there are no downstream impacts? If not, the DEIS should describe those downstream impacts.
- Pre and post project flood flow and stage hydrographs should be presented for representative downstream areas for 5, 10, 25, 50, and 100-year flood events.

Author: Medopera Subject: Highlight Date: 11/20/2015 2:38:33 PM -06'00'
Comment ID: 147c cont.

Author: Medopera Subject: Highlight Date: 11/20/2015 2:42:56 PM -06'00'
Comment ID: 147a cont.

Author: Medopera Subject: Highlight Date: 4/19/2016 11:33:10 AM
Comment ID: 147d
Topic: Basin-wide Storage, Effect on Project and Project Operation

Author: Medopera Subject: Highlight Date: 4/5/2016 3:18:33 PM
Comment ID: 147e
Topic: Operation Plan, Downstream Impacts

Author: Medopera Subject: Highlight Date: 4/19/2016 12:36:03 PM
Comment ID: 147f
Topic: Hydrology and Hydraulics, Downstream Impacts

8. An operating plan is not clearly presented for a cursory review. It appears that the most recent operating plan is not included in the draft EIS, is that correct? Are there plans to include it? The following comments are based on the operating plan provided in the draft EIS:

- Operation plan in DEIS says that the gate to the diversion will not be opened until the peak flows from tributaries outletting into the diversion have reached the diversion. Why is this a criteria?
- Operation plan requires that drawdown of the staging area minimize upstream impacts without resulting in upstream stages falling faster than historic floods. What is the technical basis for this criteria?
- Statements that the Project will not be operated during lessor than 10 year floods are confusing and/or misleading. A correct statement may be that the control gates will not be operated. The diversion channel component of the project downstream of the control gates will always operate and will tend to increase downstream flows. This possibility is not clearly discussed.

Thank you for your consideration of our comments. We will continue to provide support to advance efforts that utilize comprehensive approaches toward flood damage reduction initiatives in the Red River Basin.

Sincerely,



John N. Finney
President

Author: Medopera Subject: Highlight Date: 4/5/2016 3:19:06 PM
Comment ID: 147g
Topic: Operation Plan, Operation Plan

Author: Medopera Subject: Highlight Date: 4/5/2016 3:19:43 PM
Comment ID: 147h
Topic: Operation Plan, Operation Plan Criteria

Author: Medopera Subject: Highlight Date: 4/5/2016 3:20:32 PM
Comment ID: 147i
Topic: Operation Plan, Edit
Not Accepted

From: [Ryan Hanson](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: DEIS Feedback
Date: Wednesday, October 21, 2015 10:38:28 AM

Commenter 148 cont.

Summary of Comments on RyanHanson_Commenter148a_c_Email2.pdf

Page: 1

To whom it may concern,

We need this diversion and the people south of Moorhead-Fargo don't matter. They are just standing in the way of progress.

That is what is being told to the people south of the Moorhead-Fargo Area. Well they do matter and the Diversion Authority will not listen to any other plan but theirs. What is going to happen to the wildlife during these flood years that put 10 ft of water in the staging area. Are they supposed to tread water? At least now they can usually find a high road or something to stand on during a flood. It is like that guy chasing the deer until it drowned and then what about all the clean up of dead animals, who is going to take care of that. This diversion is so way overblown. They are planning for something that has never happened. They could do with something more modest but they choose not to listen.

Thank You

Ryan Lee Hanson
3605 5th ST South
Moorhead, MN 56560
218-790-4553

Author: Medopera Subject: Text Box Date: 11/20/2015 3:19:16 PM -06'00'
Commenter 148 cont.

Author: Medopera Subject: Highlight Date: 11/20/2015 3:20:38 PM -06'00'
Comment ID: 148a cont.

Author: Medopera Subject: Highlight Date: 4/5/2016 3:22:06 PM
Comment ID: 148c
Topic: Wildlife and Wildlife Habitat, Disposal of Flood-Related Dead Animals

From: [Ryan Hanson](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo Moorhead Flood Risk Management Project DEIS
Date: Friday, October 02, 2015 8:02:01 AM

Commenter 148

During these flood events, what are the deer supposed to do? Tread water? Without the dam the deer should be able to still survive. With the dam the water will be too deep. This is a bad plan so the City of Fargo can secure land for future growth at the expense of Minnesota, farmers and wildlife. I urge you to not approve this project. The Diversion Authority has misled the people of Minnesota and North Dakota to believe that this is the only solution and they will not listen to any other ideas but their own and by starting the ring dike around OHB without the DNR's approval just shows the lack of respect they have for Minnesota Residents.

Thank You

Ryan Hanson
3605 5th St South
Moorhead, MN 56560

Summary of Comments on RyanHanson_Commenter148a-b_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/20/2015 3:16:30 PM -06'00'
Commenter 148

Author: Medopera Subject: Highlight Date: 4/5/2016 3:23:33 PM
Comment ID: 148a
Topic: Wildlife and Wildlife Habitat, Flood Impacts to Wildlife and Wildlife Habitat

Author: Medopera Subject: Highlight Date: 4/5/2016 3:24:08 PM
Comment ID: 148b
Topic: Permitting Approval, Reject the Project
Unsubstantive

From: meyerclan@byillemn.net
To: [*Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Tuesday, October 27, 2015 9:52:29 PM

Commenter 149

Summary of Comments on SandyMeyer_Commenter149a-j_Email1.pdf

Page: 1

To whom it may concern:

I am writing in regards to the proposed Fargo-Moorhead diversion. I am highly opposed to this project due to the devastating effects it would cause to our environment, farmland, cemeteries and family homesteads. There are many important aspects that need to be considered before proceeding with a massive project like this. One aspect is doing soil stability studies on the river banks on the Minnesota side of the Red River. Another area to consider is doing studies on the Wolverton creek. How far does it expand and how many acres does it erode when the project is in use? A health concern to also consider is the contamination of the soil and the debris cleanup after the water recedes. How will this contamination effect the well water which is drinking water for rural residents? How will the water duration and the volume of water effect the ecosystem? The economic loss for farmers and the value of production will have a direct effect on the Fargo-Moorhead economy. Will the contaminated soil cause diseases to the crops? How will you relocate or replace the caskets that contain loved ones that are buried in the local cemeteries? Please consider other retention projects upstream that could reduce the flow of the river. Every aspect and concern needs to be taken into careful consideration before proceeding with this massive and expensive project. Taxpayers should not be burden by the ongoing financial costs of this project. Thank you for your time.

Sandy Meyer
1102 8th Ave SE
Barnesville, MN 56514

Author: Medopera Subject: Text Box Date: 11/30/2015 2:23:07 PM -06'00'
Commenter 149

Author: Medopera Subject: Highlight Date: 4/5/2016 3:26:45 PM
Comment ID: 149a
Topic: Proposed Project and Northern Alignment Alternative, General Opposition
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/21/2016 9:47:42 AM
Comment ID: 149b
Topic: Stream Stability, Stream and Soil Stability Impacts

Author: Medopera Subject: Highlight Date: 4/19/2016 2:03:00 PM
Comment ID: 149c
Topic: Hydrology and Hydraulics, Wolverton Creek

Author: Medopera Subject: Highlight Date: 4/20/2016 11:02:26 AM
Comment ID: 149e
Topic: Proposed Project Operation, Flood Debris and Cleanup

Author: Medopera Subject: Highlight Date: 4/5/2016 3:28:20 PM
Comment ID: 149d
Topic: Potential Environmental Hazards, Soil Contamination

Author: Medopera Subject: Highlight Date: 4/21/2016 8:51:14 AM
Comment ID: 149f
Topic: Socioeconomics, Wells and Groundwater Quality

Author: Medopera Subject: Highlight Date: 4/5/2016 3:29:59 PM
Comment ID: 149h
Topic: Socioeconomics, Agriculture Impacts on Local Economy

Author: Medopera Subject: Highlight Date: 4/19/2016 2:03:15 PM
Comment ID: 149g
Topic: Hydrology and Hydraulics, General

Author: Medopera Subject: Highlight Date: 4/5/2016 3:31:45 PM
Comment ID: 149i
Topic: Cultural Resources, Cemetery Mitigation

Author: Medopera Subject: Highlight Date: 4/5/2016 3:32:47 PM
Comment ID: 149j
Topic: Alternatives, Alternative: DSA

From: [Westrick, Wendy](#) on behalf of [Christenson, Ann \(HR\)](#)
To: ["Review, Environmental \(DNR\)](#)
Cc: [Anderson, Dave](#); [Christenson, Ann \(HR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 2:25:46 PM

Commenter 150

Summary of Comments on SanfordHealth_WendyWestrick_Commenter150a- b_Email1.pdf

Page: 1

October 28, 2015

Author: Medopera Subject: Text Box Date: 11/30/2015 3:06:05 PM -06'00'
Commenter 150

Jill Townley, Project Manager

Environmental Policy and Review Unit, Box 25

Ecological and Water Resources Division

Minnesota Department of Natural Resources

500 Lafayette Road

St. Paul, MN 55155-4025

Author: Medopera Subject: Highlight Date: 4/5/2016 3:37:33 PM
Comment ID: 150a
Topic: Proposed Project, General Support
Unsubstantive

Re: Fargo-Moorhead Flood Risk Management Project

Ms. Townley,

At Sanford Health, the safety of our family, who are our patients, their loved ones and our employees, is our first priority. I am writing to you in support of permanent flood protection for our family in the Fargo-Moorhead area.

In 2009, we were forced to evacuate our downtown Fargo medical center while still in the grip of freezing winter temperatures, snow, rain and ice. Evacuation of the medical center was certainly not something we wanted to do. The risks, however, were far too great to remain when the threat of flood water breaching the dike system a few blocks away was a very imminent danger. It was clear to us that given the risks posed by the flood, we could no longer assure a safe physical environment for our patients and staff.

With our homes and the community around us paralyzed by high flood waters, there were serious restrictions on transportation. Sanford was placed in a position of having to move, in extreme conditions, hundreds of patients, including critically ill and injured, the elderly and expectant mothers. This is not something a medical center should have to face.

We have significant experience when it comes to dealing with the Red River of the North and its ever-increasing tendency to rise to unprecedented high water levels. While we are proud of our preparedness as a medical center and as a collaborative partner with our community, we need to implement a solution to make sure the experiences of the not too distant past are never repeated. Sanford supports a permanent flood control, emphasizing a solution that benefits the greatest number of people and properties while negatively impacting the least.

The flood mitigation discussions by representatives across the region over the past several years have been comprehensive and complete. With Minnesota's Department of Natural Resources analysis nearly complete, it's time to begin the long-awaited construction of this vital infrastructure. The need is critical, as the area has grown and prospered since the last major flood.

A permanent, engineered flood control system, like the one described in the proposed project, would prevent similar instances in the future. The proposed project will hold

floodwaters upstream and control its release into diversion channels to direct the waters around the metro area. Levees and floodwalls will also be part of the channels to protect the city. This would prevent water from making roads inaccessible, and make evacuation less necessary, decreasing risk to our patients and staff.

Our community is long overdue for permanent flood protection. This proposal has undergone a thorough federal environmental evaluation and was found to be compliant with all federal and state environmental guidelines. The risk to the environment and property is very low compared to the benefits for the community and region that will be realized by implementing a permanent and well-designed flood control plan. We ask the Department of Natural Resources to approve this project and recommend full funding.

Sincerely,

Ann Christenson
Executive Vice President
Human Resources, Facilities and Support Services
Sanford Health Fargo

Page: 2

Author: Medopera Subject: Highlight Date: 11/30/2015 3:08:33 PM -06'00'
Comment ID: 150a cont.

Author: Medopera Subject: Highlight Date: 4/5/2016 3:38:03 PM
Comment ID: 150b
Topic: Permitting Approval, Approve the Project
Unsubstantive

Confidentiality Notice: This e-mail message, including any attachments, is for the sole use of the intended recipient(s) and may contain privileged and confidential information. Any unauthorized review, use, disclosure or distribution is prohibited. If you are not the intended recipient, please contact the sender by reply e-mail and destroy all copies of the original message.

From: [Sara Boyer](#)
To: ["Review, Environmental \(DNR\)](#)
Cc: [Jerry Boyer](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Tuesday, October 27, 2015 7:55:09 PM

Commenter 151

Summary of Comments on Sara&JerryBoyer_Commenter151a-b_Email1.pdf

Page: 1

Dear Sir or Madam,

We live within the affected area and find it unacceptable this was hidden from the residents. Do NOT allow the diversion to be moved north.

Sara and Jerry Boyer
11031 Co Rd 17 S
Horace, ND

Author: Medopera Subject: Text Box Date: 11/30/2015 3:12:18 PM -06'00'
Commenter 151

Author: Medopera Subject: Highlight Date: 4/5/2016 4:15:38 PM
Comment ID: 151a
Topic: Communication Concerns, MNDNR

Author: Medopera Subject: Highlight Date: 4/5/2016 4:16:17 PM
Comment ID: 151b
Topic: Northern Alignment Alternative, General Opposition
Unsubstantive

From: Sarah Lavelle
To: *Review, Environmental (DNR)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Monday, October 26, 2015 4:58:59 PM

Commenter 152

Summary of Comments on SarahLavelle_Commenter152a-b_Email1.pdf

Page: 1

Comment for submission:

We ask the DNR to reject the Northern Alignment Alternative (NAA) in favor of the proposed, federally authorized plan. Since it has not been evaluated by the responsible federal agency, the NAA would by law require a whole new environmental review, analysis, and Environmental Impact Statement from the Corps of Engineers. There is no reason to waste time and public money and resources on doing an environmental review on this alternative, when one has already been done on the proposed project. Selecting the NAA would be an enormous waste of resources.

The main feature of the NAA would be to shift the impoundment downstream 1.5 miles, moving it north into more developed areas. In doing so, more homes will be affected. Even if a handful of homes will be spared impact by adopting the NAA over the proposed alternative, this benefit would be offset and more by the fact that as many as 60 additional homes would be impacted under the NAA than would under the proposed plan. In addition, a number of businesses, and more farmland would be affected by the NAA than by the proposed action.

The NAA would also place one of our region's most historic landmarks in jeopardy - St. Benedicts Catholic Church, the oldest Roman Catholic Church in the area. All of this for an additional price tag of \$81 million. The NAA is not worth it, and should be rejected by the DNR.

Sincerely,

Sarah Lavelle
1005 118th Ave S
Horace, ND 58047
Sarah_lavelle@outlook.com

Author: Medopera Subject: Text Box Date: 11/30/2015 3:15:05 PM -06'00'
Commenter 152

Author: Medopera Subject: Highlight Date: 4/5/2016 4:19:23 PM
Comment ID: 152a
Topic: Northern Alignment Alternative, General Opposition
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/5/2016 4:18:54 PM
Comment ID: 152b
Topic: Permitting Approval, Reject the Northern Alignment Alternative
Unsubstantive

Author: Medopera Subject: Highlight Date: 11/30/2015 3:16:53 PM -06'00'
Comment ID: 152b cont.

From: [Scott Handy](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 10:37:08 AM

Commenter 153

The Northern Alignment Alternative should be rejected by the MN DNR. Compared to the current design of the F-M Diversion Project, the Northern Alignment Alternative (NAA) offers only negative outcomes. The NAA:

- is more expensive by an estimated \$81 million
- provides a net increase in the number of homes and other structures negatively impacted
- requires a reset of the project timeline, adding an estimated (and unacceptable) 4 years to the project timeline
- requires a new and costly federal environmental analysis
- dismisses the advantage of already having federal project approval

I recognize that both project alternatives have a negative impact on some areas, but the NAA has a greater negative impact and should be rejected. Our region has waited long enough for permanent, effective flood protection. The current design of the F-M Diversion Project is well down the road, the impacts of it are understood and have been mitigated to the greatest degree possible, and it has the approval of federal authorities. It's time to move ahead and get this done.

Scott W. Handy
10124 6th St S
Fargo, ND 58104
scott.handy@outlook.com

Summary of Comments on ScottHandy_Commenter153a-b_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/30/2015 3:18:29 PM -06'00'
Commenter 153

Author: Medopera Subject: Highlight Date: 4/5/2016 4:22:14 PM
Comment ID: 153a
Topic: Northern Alignment Alternative, General Opposition
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/5/2016 4:21:41 PM
Comment ID: 153b
Topic: Permitting Approval, Reject the Northern Alignment Alternative
Unsubstantive

From: [Shane Cullen](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Tuesday, October 27, 2015 11:39:16 AM

Commenter 154

Summary of Comments on ShaneCullen_Commenter154a-b_Email1.pdf

Page: 1

Dear Ms. Townley,

The purpose of this letter is to register my strong support for the Fargo-Moorhead Flood Risk Management Project, and to formally ask the DNR to adopt the proposed alternative in the Draft Environmental Impact Statement.

The proposed project will achieve the purpose identified by the Fargo-Moorhead Flood Diversion Authority, which is to reduce flood risk, flood damages, and flood protection costs related to flooding in the Fargo-Moorhead Metro area. It will do this by impounding flood waters south of the cities in a staging area, and then controlling the release of those waters into diversion channels around the metro region, protecting developed areas with levees and flood walls, and protecting communities within the impoundment area with well-constructed ring levees.

This proposed action has authorized by Congress, and has undergone a full Environmental Impact Statement from the U.S. Army Corps of Engineers, who issues a Record of Decision supporting the project and recognizing its minimal environmental impact. This was a very thorough evaluation, supplemented by a similar evaluation by your department. It should be noted that the other action alternative, the Northern Alignment option, has NOT undergone a federal analysis, which would be required by law. Therefore, if that alternative were selected by the DNR, it would require many more months, possibly even years, of study before the project could be started.

We do not need to study this project to death. It has been more than adequately reviewed and analyzed, at many levels, and excessive study will not make the project any better, it will simply delay it, and increase the risk to local residents and business owners, both from flood events that will occur before permanent protections are in place, and also from a remapping by FEMA of the flood plain, which could very likely place more homes and businesses within the plain, driving their insurance costs through the roof.

This is an unnecessary risk to take; approving this project as proposed will fend off a remapping, and make sure that a permanent flood protection system is in place to protect the region as soon as possible.

I ask that you allow that to happen by approving the proposed action without delay.

Thank you,
Shane Cullen

Shane Cullen
Realtor, ABR, BPOR
Park Co. Realtors
28 N 10 St
Fargo, ND 58102

(701) 237 5031 (office)
(218) 686 5607 (cell-anytime)

Emails sent or received shall neither constitute acceptance of conducting transactions via electronic means nor create a binding contract until and unless a written contract is signed by the parties.

Author: Medopera Subject: Text Box Date: 11/30/2015 3:23:48 PM -06'00'
Commenter 154

Author: Medopera Subject: Highlight Date: 4/5/2016 4:24:15 PM
Comment ID: 154a
Topic: Proposed Project, General Support
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/5/2016 4:24:58 PM
Comment ID: 154b
Topic: Permitting Approval, Approve the Project
Unsubstantive

Author: Medopera Subject: Highlight Date: 11/30/2015 3:26:14 PM -06'00'
Comment ID: 154a cont.

From: [Shelley Lewis](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 3:23:12 PM
Attachments: [DEIS_Comment_1_Economics.docx](#)

Commenter 155

Summary of Comments on ShelleyLewis_Commenter155a_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/30/2015 3:27:17 PM -06'00'
Commenter 155

Please see attached.

Author: Date: Indeterminate

Written Comment on the DEIS for the proposed Fargo-Moorhead Flood Risk Management Project

Name: SHELLEY LEWIS Email: ShelleyLewis16054@gmail.com
Mailing Address: 16054 50TH ST S,
MOORHEAD, MN 56560-7822 Phone: 218-329-6739

Page: 2

Author: Medopera Subject: Highlight Date: 4/20/2016 11:36:32 AM
Comment ID: 155a
Topic: Proposed Project Purpose and Need, Questions Project Purpose

TOPIC: ECONOMICS

The Diversion Authority fabricated the need for a high-hazard dam with a goal of future development in the flood plain. The City of Fargo has had every intention of continuing such development south of Fargo, admitting to Governor Mark Dayton at a public meeting in Moorhead in September 2014 that one reason for the dam was, in fact, this development.

Fargo City Commissioners continue with plans to build within the flood plain, not only south of town but right along the Red River in the downtown area. For example, the City of Fargo has the opportunity to build its new City Hall away from the river and out of a flood-prone area; but, the City Commission voted to accept the City Hall Site Selection Committee's recommendation to locate the new City Hall at the site(s) of the current City Hall and Civic Center, which are just west of the river. [Five meeting videos from July 18, 2013 to September 19, 2013 are available for viewing online on the city's website.] The following report was retrieved (in full) from the World Wide Web on October 24, 2015; cityoffargo.com; [Home](#) > [City Info](#) > [Boards and Commissions](#):

//New City Hall Selection Committee

A City Hall Site Selection Committee was appointed by the Fargo City Commission to research, discuss and select the location for a new City Hall. In September 2013, the committee selected and the Fargo City Commission approved the current City Hall/Civic Center property as the future site of the new Fargo City Hall.

***This committee no longer meets.**

Committee members

- Dennis Walaker, Co-Chair
- Bruce Furness, Co-Chair
- Joe Burgum
- Karis Thompson
- Jessica Thomasson
- Linda Boyd
- Ann McConn
- Raul Gomez
- Norm Robinson
- Tony Grindberg
- John Gunkelman
- Judy Gehrke
- Tim O'Keeffe

Non-Voting members

- Fargo City Commissioners Mahoney, Sobolik, Williams & Wimmer (elected)
- Kent Costin (staff)
- April Walker (staff)

- Ben Hushka (staff)
- Pat Zavoral (staff)//

Page: 3

Author: Medopera Subject: Highlight Date: 11/30/2015 3:31:12 PM -06'00'
Comment ID: 155a cont.

From: [Shelley Lewis](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 3:25:12 PM
Attachments: [DEIS_Comment_2_Environment.docx](#)

Commenter 155 cont.

Summary of Comments on ShelleyLewis_Commenter155b-c_Email2.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/30/2015 3:35:22 PM -06'00'
Commenter 155 cont.

Please see attached.

Author: Date: Indeterminate

Written Comment on the DEIS for the proposed Fargo-Moorhead Flood Risk Management Project

Name: SHELLEY LEWIS Email: ShelleyLewis16054@gmail.com
Mailing Address: 16054 50TH ST S,
MOORHEAD, MN 56560-7822 Phone: 218-329-6739

Page: 2

Author: Medopera Subject: Highlight Date: 4/21/2016 8:52:42 AM
Comment ID: 155b
Topic: Socioeconomics, Wells and Groundwater Quality

Author: Medopera Subject: Highlight Date: 4/5/2016 4:31:33 PM
Comment ID: 155c
Topic: Mitigation and Maintenance, Funding

TOPIC: 3.7 POTENTIAL ENVIRONMENTAL HAZARDS

Prevention, rather than attempted remediation, of, in this case, ground water contamination, is of utmost importance. The diversion authority (DA) is to be responsible for property acquisition and various remediation; however, the DA does not have adequate funding to build the project; let alone, acquire impacted property; mitigate for negative impacts; or provide ongoing, future maintenance of the dam, levees, etc. for the entire project.

From: [Shelley Lewis](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 3:26:04 PM
Attachments: [DEIS_Comment_3_Socioeconomics_Cemeteries.docx](#)

Commenter 155 cont.

Summary of Comments on ShelleyLewis_Commenter155d_Email3.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/30/2015 3:41:22 PM -06'00'
Commenter 155 cont.

Author: Date: Indeterminate

Please see attached.

Written Comment on the DEIS for the proposed Fargo-Moorhead Flood Risk Management Project

Name: SHELLEY LEWIS Email: ShelleyLewis16054@gmail.com
Mailing Address: 16054 50TH ST S,
MOORHEAD, MN 56560-7822 Phone: 218-329-6739

Page: 2

Author: Medopera Subject: Highlight Date: 4/5/2016 4:33:10 PM
Comment ID: 155d
Topic: Cultural Resources, Cemetery Mitigation

TOPIC: SOCIOECONOMICS—CEMETERY MITIGATION

In a July 24, 2015, letter addressed to Terry Birkenstock (USACE, St. Paul District), Sarah J. Beimers of the Minnesota Historical Society writes “regarding alternatives for flood mitigation measures at the Clara Cemetery”:

“... the “Second Alternative” ... of a **permanent (?) fence** around the perimeter of the cemetery and anchoring of upright monuments, is **the less invasive of the two alternatives presented, but** still has the potential to adversely affect the historic property.

There is **not enough detailed information** ... for our office to consider potential adverse effects to the historic property.

... any perimeter fence installation should not radically change, obscure, or destroy character-defining features of historic materials of the historic property.

... anchoring system **appears** to meet the Standards [the Secretary of the Interior’s Standard’s for the Treatment of Historic Properties and Guidelines for the Treatment of Cultural Landscapes, sic].

Any required, post flood event, clean-up efforts - including repairs to structures, objects, circulation features, topography, and vegetation – must be completed in accordance with the Standards and **your agency should consider development of specific guidelines that “non-Federal sponsors” can utilize in these instances in order to ensure preservation of the historic property’s integrity.”**

[**Bold--Emphasis added.**]

The Corps’ has stated that a flowage easement will be obtained for the Comstock Cemetery. A perimeter fence to hold out large debris and anchoring of upright tombstones to avoid tipping and damage may be measures the Corps’ will use to mitigate the impact to Clara Cemetery. Specific details have not been provided; however, I received a letter from Terry Birkenstock, dated August 13, 2015, as to the Diversion Authority’s plans:

... the Diversion Authority plans to form a subcommittee to further address what they as the Non-federal sponsors of the Project **could** do, in addition to the **Federally-required** flowage easements, to mitigate impacts. They intend to form this group, to include representatives from the upstream cemeteries, and start meeting **after the Minnesota EIS is complete**, currently anticipated in February 2016. Comments received on the draft Plan will be further addressed at that time and a final Cemetery Mitigation Plan with comment responses will be developed after the subcommittee has completed their work. [**Emphasis added.**]

The 11 cemeteries are all unique and located where each site has many different variables to consider. The Corps’ appears to have looked at the majority of the cemeteries (or maybe overlooked them) and rubberstamped mitigation with the Federally-required flowage easements. Then, Terri Williams of the Corps’ went on to state at a Moorhead City

Council meeting that the Federal government was doing what was required and the Diversion Authority could assist with post-flood efforts if they (DA) so choose. This is unacceptable. Mitigation should be taking place now. Cemetery boards, churches, and people who are affected need to know what the Plan is, so the boards, congregations, and individuals can make their plans—both financially and respectfully.

Page: 3

Author: Medopera Subject: Highlight Date: 11/30/2015 3:45:28 PM -06'00'
Comment ID: 155d cont.

From: [Shelley Lewis](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 3:26:44 PM
Attachments: [DEIS_Comment_4_Clarification.docx](#)

Commenter 155 cont.

Summary of Comments on ShelleyLewis_Commenter155e_Email4.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/30/2015 3:47:01 PM -06'00'
Commenter 155 cont.

Author: Date: Indeterminate

Please see attached.

Written Comment on the DEIS for the proposed Fargo-Moorhead Flood Risk Management Project

Name: SHELLEY LEWIS
Mailing Address: 16054 50TH ST S,
MOORHEAD, MN 56560-7822
Email: Shelleyilewis16054@gmail.com
Phone: 218-329-6739

Page: 2

Author: Medopera Subject: Highlight Date: 4/5/2016 4:34:38 PM
Comment ID: 155e
Topic: 3.8.2.1.3, Edit
Accepted

TOPIC: CLARIFICATION

3.8 FISH PASSAGE AND BIOLOGICAL CONNECTIVITY

Section 3.8.2.1.3 Pg. 3-105

The meaning of the following sentence is unclear:

“The actual impact of the Project would not be fully known until the Project has been operated and likely for multiple flood events, and observations made.”

From: [Shelley Lewis](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 3:27:27 PM
Attachments: [DEIS_Comment_5_Mitigation.docx](#)

Commenter 155 cont.

Summary of Comments on ShelleyLewis_Commenter155f-g_Email5.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/30/2015 3:49:26 PM -06'00'
Commenter 155 cont.

Please see attached.

Author: Date: Indeterminate

Written Comment on the DEIS for the proposed Fargo-Moorhead Flood Risk Management Project

Name: SHELLEY LEWIS Email: ShelleyLewis16054@gmail.com
Mailing Address: 16054 50TH ST S,
MOORHEAD, MN 56560-7822 Phone: 218-329-6739

Page: 2

Author: Medopera Subject: Highlight Date: 4/20/2016 9:50:12 AM
Comment ID: 155f
Topic: Mitigation and Maintenance, Draft Adaptive Management and Monitoring Plan

Author: Medopera Subject: Highlight Date: 4/5/2016 4:36:01 PM
Comment ID: 155g
Topic: Comstock Ring Levee, Comstock Coordination

TOPIC: MITIGATION

The diversion authority must meet with stakeholders and arrive at mutually agreed upon mitigation PRIOR to any future construction on the dam, diversion channel, aqueducts, the Comstock levee, etc. Issues need to be addressed ahead of time, rather than after the Project has begun being built, and especially not after the Project has been in operation. Too many instances throughout the DEIS refer to mitigation being decided upon after negative impacts actually occur with the reason given that the results cannot fully be known. This method of mitigation is unacceptable.

"The design of the Comstock Ring Levee is conceptual at this time. The details that follow are subject to revision pending further design and coordination between the Diversion Authority and the City of Comstock." (ES 19-20)

From: [Shelley Lewis](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 3:28:02 PM
Attachments: [DEIS_Comment_6_FEMA_Flood_Levels.docx](#)

Commenter 155 cont.

Summary of Comments on ShelleyLewis_Commenter155h_Email6.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/30/2015 3:55:58 PM -06'00'
Commenter 155 cont.

Please see attached.

Author: Date: Indeterminate

Written Comment on the DEIS for the proposed Fargo-Moorhead Flood Risk Management Project

Name: SHELLEY LEWIS
Mailing Address: 16054 50TH ST S,
MOORHEAD, MN 56560-7822
Email: Shelleyilewis16054@gmail.com
Phone: 218-329-6739

Page: 2

Author: Medopera Subject: Highlight Date: 4/19/2016 1:26:56 PM
Comment ID: 155h
Topic: Hydrology and Hydraulics, Expert Opinion Evaluation Panel

TOPIC: FEMA FLOOD LEVELS

In 2010, the USACE failed to provide FEMA with information about Breckenridge, Minnesota's diversion and flood management improvements as they (Corps officials) said they would. The Corps needed the lower protection figures to show a basin-wide "need" for the F-M Diversion project, so skewed basin-wide numbers were used in their reports.

From: [Shelley Lewis](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 3:28:49 PM
Attachments: [DEIS_Comment_8_Design_Stage.docx](#)

Please see attached.

Commenter 155 cont.

Summary of Comments on ShelleyLewis_Commenter155i-j_Email7.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/30/2015 4:00:07 PM -06'00'
Commenter 155 cont.

Author: Date: Indeterminate

Written Comment on the DEIS for the proposed Fargo-Moorhead Flood Risk Management Project

Name: SHELLEY LEWIS Email: ShelleyLewis16054@gmail.com
Mailing Address: 16054 50TH ST S,
MOORHEAD, MN 56560-7822 Phone: 218-329-6739

Page: 2

Author: Medopera Subject: Highlight Date: 4/5/2016 4:39:19 PM
Comment ID: 1551
Topic: Environmental Review, EIS Process

Author: Medopera Subject: Highlight Date: 4/5/2016 4:39:54 PM
Comment ID: 155j
Topic: Federal Executive Order 11988, Violation

TOPIC: DESIGN STAGE OF PROJECT

The following Question & Answer was posted on the Diversion Authority's website:

Is this plan final or can the alignment be moved before the diversion channel is built?

As the design proceeds, minor adjustments to the alignment can be expected. Each alignment adjustment will be determined on a case-by-case basis. We can also consider major changes to the alignment, such as moving it west or south, during the design phase; however, we would still have to comply with current laws and policies to include the National Environmental Policy Act, the Clean Water Act and Executive Order 11988. (Executive Order 11988 requires agencies to minimize impacts on the floodplain). Changes may also require Congressional reauthorization.

Fmdiversion.com Retrieved 05-27-2015

If a major change was decided upon by the Diversion Authority (DA), would not a new MN-EIS be required?

Also, regarding Executive Order (EO) 11988: This shows the DA knows what the EO, so why are they not following the order?

From: [Shelley Lewis](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 3:30:13 PM
Attachments: [DEIS_Comment_7_Alternative_Flood_Protection.docx](#)

Commenter 155 cont.

Summary of Comments on ShelleyLewis_Commenter155k_Email8.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/30/2015 4:04:49 PM -06'00'
Commenter 155 cont.

Author: Date: Indeterminate

Please see attached.

Written Comment on the DEIS for the proposed Fargo-Moorhead Flood Risk Management Project

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Page: 2

Author: Medopera Subject: Highlight Date: 4/5/2016 4:43:34 PM
Comment ID: 155k
Topic: Alternatives, Alternative: Internal Storage

TOPIC: ALTERNATIVE (SUPPLEMENTAL) FLOOD CONTROL MEASURES

Ten-foot-deep holding ponds could be dug on 2,000 acres of undeveloped land between 52nd and 76th Avenues in south Fargo. This idea was suggested to the city by Houston Engineering; Fargo City Commissioner Tony Gehrig is supportive of the idea. Gehrig sees the need to do something as the diversion is a long way from coming to fruition. (KVRN-TV news report 09/27/2015)

This alternative, and even the suggestion of a supplement to the proposal, helps prove that all other alternatives were not considered before the Diversion Authority decided that the current diversion project proposal was the only plan that would work.

From: [Shelley Lewis](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 3:33:52 PM
Attachments: [DEIS_Comment_9_Cultural_Resources.docx](#)

Commenter 155 cont.

Summary of Comments on ShelleyLewis_Commenter155I_Email9.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/30/2015 4:07:17 PM -06'00'
Commenter 155 cont.

Please see attached.

Author: Date: Indeterminate

Written Comment on the DEIS for the proposed Fargo-Moorhead Flood Risk Management Project

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Page: 2

Author: Medopera Subject: Highlight Date: 4/5/2016 4:55:54 PM
Comment ID: 1551
Topic: Cultural Resources, Eligibility Undetermined

TOPIC: CULTURAL RESOURCES 3.12 — HISTORICAL SITES/BUILDINGS

The historical sites/buildings, etc. which are currently listed in **Table 3.48 Site Identification Results for Project** as “eligibility undetermined” must be researched and decided upon PRIOR to any future construction . . .

From: [Shelley Lewis](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 3:34:35 PM
Attachments: [DEIS_Comment_10_Alternatives.docx](#)

Commenter 155 cont.

Summary of Comments on ShelleyLewis_Commenter155m_Email10.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/30/2015 4:12:53 PM -06'00'
Commenter 155 cont.

Please see attached.

Author: Date: Indeterminate

Written Comment on the DEIS for the proposed Fargo-Moorhead Flood Risk Management Project

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Page: 2

Author: Medopera Subject: Highlight Date: 4/5/2016 4:57:52 PM
Comment ID: 155m
Topic: Alternatives, Alternative: DSA Plus More

TOPIC: DISTRIBUTED STORAGE

Has distributed storage(DS)been looked at in totality, meaning, all forms of DS used together as one massive DS system to include:

- Updated overall basin management (See: <http://www.redriverbasincommission.org/Projects>
Basin Wide Flood Flow Reduction Strategy; Final Report:
Establishing a Foundation for Ecological Infrastructure
Investments in the Red River Basin)
- Dry dams on all seven tributaries (placed further away from the Red River)
- Drop water level on Bald Hill Dam earlier in the fall
- Drop water level on Orwell Dam in the fall
- Retention up & down the entire valley—White Rock (SD) to Red Lake
- Hold back waters of northern tributaries
- Tiling (with or without open/close monitoring)
- Have water flow from tributaries into the Red River, when the river can handle the water

“The DSA Screening Analysis – Draft EIS Version February 17, 2015” states “. . . upstream storage areas . . . were often built with other structural and non-structural measures for flood risk reduction.” I propose that DNR officials study how various forms of DS, along with a diversion (located closer to Fargo) with no dam, and, possibly even, Fargo’s plan for holding flood water in areas between 52nd and 76th Avenues South (the flood plain??),. . . how this mix of flood management strategies would protect Fargo.

NOTE: Moorhead, by no means, needs a high-hazard dam for addition protection. The vast majority of any benefit of the Project is on the North Dakota side of the river. Minnesota entities are tied into the Diversion Authority as an afterthought. The Diversion Authority even organized a ND only group that meets following DA meetings to vote on many financial issues. This all came about when the Buffalo-Red River Watershed would not sign off on the DA’s budget as the board did not want to go against Minnesota law.

Other ideas:

- Ditch along I-29 to retain floodwater
- Break ice during the winter with amphibious ice-breaker (as done in Canada) to move flow along.
- During times of low flows in the Red River, pull logs and other loose debris from the river. Possible trim branches (leaving stumps/roots to fight slumping/erosion) that stop icebergs and other debris during spring melt.

From: [Shelley Lewis](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 3:35:21 PM
Attachments: [DEIS_Comment_11_Information_Availability.docx](#)

Commenter 155 cont.

Summary of Comments on ShelleyLewis_Commenter155n_Email11.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/30/2015 4:22:49 PM -06'00'
Commenter 155 cont.

Author: Date: Indeterminate

Please see attached.

Written Comment on the DEIS for the proposed Fargo-Moorhead Flood Risk Management Project

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Page: 2

Author: Medopera Subject: Highlight Date: 4/20/2016 3:31:46 PM
Comment ID: 155n
Topic: Proposed Project, Design Plans

TOPIC: INFORMATION AVAILABILITY

Overflow Embankment: The structure to be constructed south of the diversion inlet control structure along Cass County Highway 17 at an elevation lower than the east/west portion of the dam. This portion of the dam would act as an emergency spillway for extreme events that exceed the 0.2-percent chance flood (i.e., 500-year flood) event design capacity of the Project. An overflow embankment structure would be included as part of the Northern Alignment Alternative as well. Design plans were not available during the development of the EIS, therefore not all direct and indirect impacts have been evaluated at this time.

Plans or results in different segments of the DEIS are frequently not available. The plans and results need to be available so decisions can be made on whether or not to go ahead with the Project.

From: [Shelley Lewis](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 3:36:15 PM
Attachments: [DEIS_Comment_12_Endangered_Species.docx](#)

Commenter 155 cont.

Summary of Comments on ShelleyLewis_Commenter155o_Email12.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/30/2015 4:27:01 PM -06'00'
Commenter 155 cont.

Please see attached.

Author: Date: Indeterminate

Written Comment on the DEIS for the proposed Fargo-Moorhead Flood Risk Management Project

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COUNTY	SPECIES	STATUS	HABITAT
Clay	Northern long-eared bat <i>Myotis septentrionalis</i>	Threatened	Hibernates in caves and mines - swarming in surrounding wooded areas in autumn. Roosts and forages in upland forests during spring and summer.
	Sprague's pipit <i>(Anthus spragueii)</i>	Candidate	Large (>350 acre) patches of grassland - prefer native grassland, but also use non-native planted grasslands.
	Dakota skipper <i>(Hesperia dacotae)</i>	Threatened Critical Habitat Maps of Critical Habitat	Native prairie habitat
	Poweshiek skipperling <i>(Oarisma poweshiek)</i>	Endangered Critical Habitat Maps of Critical Habitat	Native Prairie

Endangered, etc. species in Clay County

Wilkin	Northern long-eared bat <i>Myotis septentrionalis</i>	Threatened	Hibernates in caves and mines - swarming in surrounding wooded areas in autumn. Roosts and forages in upland forests during spring and summer.
	Poweshiek skipperling <i>(Oarisma poweshiek)</i>	Endangered Critical Habitat Maps of Critical Habitat	Native Prairie

Endangered, etc. species in Wilkin county

TOPIC: ENDANGERED SPECIES

Concerns regarding endangered species: Will these endanger species really survive?

From: [Shelley Lewis](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 3:39:00 PM
Attachments: [DEIS_Comment_13_References.docx](#)

Commenter 155 cont.

Summary of Comments on ShelleyLewis_Commenter155p_Email13.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/30/2015 4:30:28 PM -06'00'
Commenter 155 cont.

Author: Date: Indeterminate

Please see attached.

Written Comment on the DEIS for the proposed Fargo-Moorhead Flood Risk Management Project

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Page: 2

Author: Medopera Subject: Highlight Date: 4/5/2016 5:04:05 PM
Comment ID: 155p
Topic: References, Edit
Accepted

TOPIC: REFERENCES

The EIS uses descriptions from Wikipedia. College students cannot even reference Wikipedia.
Some examples---

Degradation: (description) Damage to the ecosystem and loss of biodiversity.
(<https://en.wikipedia.org/wiki/Degradation>) (pg. xv)

Extirpation: Local extinction, or extirpation, is the condition of a species (or other taxon) that ceases to exist in the chosen geographic area of study, though it still exists elsewhere.
(https://en.wikipedia.org/wiki/Local_extinction)

Keystone Species: [Wikipedia](#)

Lithophile: [Wikipedia](#)

Pool-Riffle System: [Wikipedia](#)

From: [Shelley Lewis](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 3:39:46 PM
Attachments: [DEIS_Comment_14_Dam_Ownership.docx](#)

Commenter 155 cont.

Summary of Comments on ShelleyLewis_Commenter155q_Email14.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/30/2015 4:33:39 PM -06'00'
Commenter 155 cont.

Please see attached.

Author: Date: Indeterminate

Written Comment on the DEIS for the proposed Fargo-Moorhead Flood Risk Management Project

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Page: 2

Author: Medopera Subject: Highlight Date: 4/5/2016 5:10:31 PM
Comment ID: 155q
Topic: Proposed Project, Dam Ownership

TOPIC: DAM OWNERSHIP

Dam Owner: (description) The owner or lessee of the property to which the dam is attached, unless the dam is sponsored by a governmental agency which will be responsible for operation and maintenance of the dam, in which case that sponsoring agency shall be considered the owner (Minnesota Rules, part 6115.0320) (<https://www.revisor.mn.gov/rules/?id=6115.0320>). For the Project, the non-Federal Sponsor will be the Dam Owner. The non-Federal Sponsor is responsible for all operation, maintenance, repair, rehabilitation and replacement of the Project. The non-Federal Sponsor will apply for any applicable permits that are required for construction and would be responsible for implementing required mitigation. (pg. xv)

Is the USACE going to "own" or operate the high-hazard dam? If not, should that be an area of concern?

From: [Shelley Lewis](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 3:40:33 PM
Attachments: [DEIS_Comment_15_Cold_Water_Testing.docx](#)

Commenter 155 cont.

Summary of Comments on ShelleyLewis_Commenter155r_Email15.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/30/2015 4:35:36 PM -06'00'
Commenter 155 cont.

Please see attached.

Author: Date: Indeterminate

g

Written Comment on the DEIS for the proposed Fargo-Moorhead Flood Risk Management Project

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Page: 2

Author: Medopera Subject: Highlight Date: 4/5/2016 5:12:40 PM
Comment ID: 155f
Topic: Aqueducts, Cold Weather Studies

TOPIC: Cold weather testing pgs 3-54, 55+

(How can testing be done for the Sheyenne River aqueduct when it has not yet been designed? The Corps' states the Sheyenne aqueduct will be similar to the Maple River aqueduct, but certain changes in its design could require additional and different testing.

At the Maple River Aqueduct model in Rosemount, MN (June 2014) the characteristics of ice were simulated by rectangular and triangular pieces of plastic, which, I was told, were sanded on the surface to create friction or simulate the irregular shape of icebergs. I was not impressed. Terry Williams said the cold water station would do some testing, but I do not feel that is adequate. The movement, shape, size, jamming of icebergs on the Red River are properties that are difficult to simulate.

From: [Shelley Lewis](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 3:41:20 PM
Attachments: [DEIS_Comment_16_Diversion_Channel.docx](#)

Commenter 155 cont.

Summary of Comments on ShelleyLewis_Commenter155s_Email16.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/30/2015 4:38:09 PM -06'00'
Commenter 155 cont.

Please see attached.

Author: Date: Indeterminate

Written Comment on the DEIS for the proposed Fargo-Moorhead Flood Risk Management Project

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Page: 2

Author: Medopera Subject: Highlight Date: 4/5/2016 5:13:51 PM
Comment ID: 1555
Topic: Alternatives, Alternative: NED Plan for Minnesota 35k

TOPIC: DIVERSION CHANNEL

Diversion Channel

The diversion channel would start from the diversion inlet control structure near Cass County Highway 17 and extend approximately 30 miles downstream to its outlet north of the confluence of the Red and Sheyenne Rivers (ES Illustration 3). The diversion channel would route west of Horace, North Dakota and then continue north, **crossing** the Sheyenne, Maple, Lower Rush and Rush Rivers. (4 rivers)

(ES-14)

What was the basic for the Diversion Authority to choose the current Project? Why cross four rivers when you can build a diversion in Minnesota without crossing any tributaries?

From: [Shelley Lewis](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 3:41:57 PM
Attachments: [DEIS_Comment_17_Inundation_Area.docx](#)

Commenter 155 cont.

Summary of Comments on ShelleyLewis_Commenter155t_Email17.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/30/2015 4:40:12 PM -06'00'
Commenter 155 cont.

Author: Date: Indeterminate

Please see attached.

Written Comment on the DEIS for the proposed Fargo-Moorhead Flood Risk Management Project

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Page: 2

Author: Medopera Subject: Highlight Date: 4/19/2016 1:54:22 PM
Comment ID: 155t
Topic: Hydrology and Hydraulics, Flood Fringe Depths

TOPIC: INUNDATION AREA

Staging Area

Based on the estimated depth and duration of a 500-year flood, 225,000 acre-feet or 32,000 acres are required for staging water before directing it to the connecting channel. This required area is generally referred to as the staging area. Water would begin to pool and inundate behind the dam when the Red and Wild Rice River control structure gates are partially closed to limit flows through the F-M urban area. Red River and Wild Rice River control structures would be operated to raise water surface elevations to approximately 922.2 feet (North American Vertical Datum (NAVD) 88) at the diversion inlet for all events up to a 500-year flood. The staging area would be regulated so that the required volume is maintained.

All of the fringes of the inundated area within the staging area would experience additional flood depths of zero to one foot, while the majority of the land within the staging area would see additional depths greater than one foot. There are some areas within the staging area that would not become inundated during Project operation. In contrast, there are areas outside of the staging area that would become newly inundated or would experience additional depths of flooding as a result of Project operation. The majority of these inundated areas outside the staging area boundary would experience less than one foot of additional flood depth and are **not** considered as part of the required volume. The term "staging area" is used when referring to a Project component as in discussing where mitigation applies. The term "inundation area(s)" is used to describe any land that becomes flooded, regardless of depth. "Inundation area" is not tied to use with any specific flood event or to the Project or Project alternatives.

Staging area vs. Inundation area

How did the Corps' arrive at the zero to one-foot depth for the inundation area? Is the measurement arbitrary? Is that depth what the Corps' uses for all of its projects? If the measurement is arbitrary and/or a depth used on all Corps' projects, I believe the measurement should be reviewed. Each place in the country has different characteristics, topography, etc. The projects should be looked on a case-by-case basis. A specific project should also be reviewed for obvious variations which call for different depths to be used to define the inundation area and the staging area. If you have 6" or 1-1/2 feet of water, you are still impacted.

From: [Shelley Lewis](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 3:42:32 PM
Attachments: [DEIS_Comment_18_Slumping.docx](#)

Commenter 155 cont.

Summary of Comments on ShelleyLewis_Commenter155u_Email18.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/30/2015 4:42:22 PM -06'00'
Commenter 155 cont.

Please see attached.

Author: Date: Indeterminate

Written Comment on the DEIS for the proposed Fargo-Moorhead Flood Risk Management Project

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Page: 2

Author: Medopera Subject: Highlight Date: 4/19/2016 3:36:47 PM
Comment ID: 155u
Topic: Infrastructure and Public Services, Flood Impacts to Roadways, Ditches and Culverts

TOPIC: SLUMPING

Dam

The dam includes the three control structures (i.e., Red River, Wild Rice, and Diversion Inlet) and embankments. The control structures are gated structures that span the river to control the flow of water downstream. The embankments are raised structures constructed of soil and include the tieback embankment and the overflow embankment.

The length of dam between high ground in Minnesota to the diversion inlet control structure: ~12 miles.

Slumping is a major problem on many of the ditches that run through southern Clay County, particularly J.D. 1; the ditch one mile north of and running parallel to 160th Avenue South; and the ditch just that runs east and west just south of Rustad, MN. The Buffalo-Red River Watershed is responsible for maintaining these ditches, among others. The watershed cannot keep up with the repairs financially. The soil in the Red River Valley is known to have shifting problems. How will the ditches that already fail so often be able to stand after being saturated by flood waters for an extended period of time? The repair costs for fixing or moving these and other ditches after flood-events should be paid by the Diversion Authority. Most often, repair costs are assessed back to the landowners of current benefit for that area; however, this should in no way be an expense to the landowners, the township, county, state, or watershed. The costs will be a result of the construction of a high-hazard dam and the parties involved in the dam/diversion project must be held accountable.

From: [Shelley Lewis](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 4:11:53 PM
Attachments: [DEIS_Comment_19_Study_Definitions.docx](#)

Commenter 155 cont.

Summary of Comments on ShelleyLewis_Commenter155v-w_Email19.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/30/2015 4:50:35 PM -06'00'
Commenter 155 cont.

Author: Date: Indeterminate

Please see attached.

Written Comment on the DEIS for the proposed Fargo-Moorhead Flood Risk Management Project

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TOPIC: DEFINING THE STUDY

The Project would be located in the F-M area, within an area approximately 12 miles west to six miles east of the Red River and from 20 miles north to 20 miles south of Interstate 94.

This paragraph does not state whether it refers to the "Fargo-Moorhead Metropolitan Area" or the "Fargo-Moorhead urban area." As included in the study, a difference does exist, so each time Fargo-Moorhead is referred to in the report, a distinction should be made. Make no assumptions throughout, as to which one is correct.

Fargo-Moorhead Metropolitan Area: The urbanized and rural area within and surrounding the cities of Fargo and Moorhead specific to the United States Army Corps of Engineers' and Diversion Authorities' study and focus area for the Fargo-Moorhead Metro Flood Risk Management Feasibility Study. This area, which would include all of Cass and Clay counties, is larger area than the Fargo-Moorhead urban area.

Fargo-Moorhead urban area (F-M urban area): The urbanized area within and surrounding the cities of Fargo and Moorhead.

From page xvi of the *Definitions for Terms* section

The Project consists of a dam and diversion channel system (ES Figure 2) including, but not limited to: a tieback embankment and overflow embankment; control structures on the Red River and Wild Rice River; excavated channels; a diversion inlet control structure; aqueducts on the Maple and Sheyenne Rivers; an upstream flood water staging area (staging area); inlet structures on tributaries; the Oxbow, Hickson, Bakke (OHB) ring levee; the Comstock ring levee; levees and floodwalls in the F-M urban area; non-structural features.
(ES-9)

The phrase "but not limited to" should be removed as it would allow any structures, etc. to be added to the Project. At the very least, some constraints should be placed on this phrase.

Page: 2

Author: Medopera Subject: Sticky Note Date: 4/5/2016 5:17:32 PM
Comment ID: 155v
Topic: General, Edit
Accepted

Author: Medopera Subject: Highlight Date: 4/5/2016 5:18:02 PM
Comment 155w
Topic: General, Edit
Accepted

From: [Shelley Lewis](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 4:20:27 PM
Attachments: [DEIS_Comment_20_Fish_Passage.docx](#)

Commenter 155 cont.

Summary of Comments on ShelleyLewis_Commenter155x_Email20.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/30/2015 4:56:58 PM -06'00'
Commenter 155 cont.

Author: Date: Indeterminate

Please see attached.



Written Comment on the DEIS for the proposed Fargo-Moorhead Flood Risk Management Project

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Page: 2

Author: Medopera Subject: Sticky Note Date: 11/30/2015 4:58:10 PM -06'00'
Comment ID: 155x - No comment included with submittal.

From: [Shelley Lewis](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 4:21:19 PM
Attachments: [DEIS_Comment_21_Mitigation.docx](#)

Commenter 155 cont.

Summary of Comments on ShelleyLewis_Commenter155y_Email21.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/30/2015 4:58:42 PM -06'00'
Commenter 155 cont.

Please see attached.

Author: Date: Indeterminate

Written Comment on the DEIS for the proposed Fargo-Moorhead Flood Risk Management Project

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TOPIC: MITIGATION

All aspects of planning and mitigation, anything that impacts upstream--railroads/funding/buyouts/small-town levees/crop insurance issues/etc-- should be finalized before work is begun on the dam/diversion. Cemetery mitigation must also be agreed upon. Negotiations need to take place, not just the Corps' and/or Diversion Authority coming in and telling everyone upstream how their impacts will be mitigated.

Page: 2

-
- Author: Medopera Subject: Highlight Date: 11/30/2015 5:00:32 PM -06'00'
Comment ID: 155f cont.
-
- Author: Medopera Subject: Highlight Date: 11/30/2015 5:00:15 PM -06'00'
Comment ID: 155n cont.
-
- Author: Medopera Subject: Highlight Date: 4/5/2016 5:20:44 PM
Comment ID: 155y
Topic: Communication Concern, DA and USACE

From: [Shelley Lewis](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 4:28:53 PM
Attachments: [DEIS_Comment_22_Flood_Risk.docx](#)

Commenter 155 cont.

Summary of Comments on ShelleyLewis_Commenter155y_Email22.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 11/30/2015 5:02:13 PM -06'00'
Commenter 155 cont.

Pleased see attached (2).

Rather, I will send email separately.

Author: Date: Indeterminate

From: [Steve Gehrtz](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Letter of support for the FM Diversion
Date: Thursday, October 22, 2015 3:50:56 PM
Attachments: [2045_001.pdf](#)

Commenter 156

Summary of Comments on SteveGehrz_Commenter156a-b_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/1/2015 8:55:34 AM -06'00'
Commenter 156

Author: Date: Indeterminate

Attached is my letter of support for the FM Diversion. Thank you for your efforts on the EIS that you have completed.

Steve Gehrtz

3606 Westmoor Blvd

Moorhead, MN

Moorhead City Council, Ward 4

October 19, 2015

Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road,
St. Paul, Minnesota, 55155-4025

Email: environmentalrev.dnr@state.mn.us

Ref: Fargo-Moorhead Flood Risk Management Project

Dear Ms. Townley,

I strongly support the above referenced flood mitigation project, currently undergoing an Environmental Impact Statement process by the Department of Natural Resources, and accordingly recommend that the DNR approve the proposed action.

The proposed alternative is a well-engineered system designed to provide the Fargo-Moorhead region with much needed permanent, 100-year or greater flood protection. It includes ring levees to protect upstream communities, such as Oxbow, Hickson, Bakke, and Comstock, as well as levees and floodwalls in the F-M metro area. It also includes a class I impoundment dam, which will be built to meet or exceed the USACE standards written for such facilities. In fact, all of the features of the project will be built to federal standards or better.

The project will reduce flood risk, damages, and protection costs for the Fargo-Moorhead area, a major regional center on which many residents of western Minnesota depend. But it will do so without causing damage to our environment. Your analysis has properly stated that there will no impact whatsoever on water use, air emissions, erosion, or water quality, and will not increase traffic, noise, dust, odor or visual impacts. Further, the project outlines very specific mitigations to protect wetlands, wildlife, and fish populations.

The area of Fargo, Moorhead, West Fargo and Dilworth rely on each other community for jobs. There are numerous Moorhead and Dilworth residents that rely on jobs in Fargo and vice versa. To suffer a catastrophic flood event will affect the entire metro region. Therefore, permanent flood protection is the only long term solution.

The good work that your agency has done in evaluating the potential risks of the project comes on the heels of equally good and comprehensive work done by the U.S. Army Corps of Engineers in their own environmental review, which culminated in a favorable Record of Decision, and federal approval of the project.

As I stated in my testimony at the public hearing, I believe the other options listed in the EIS do not sufficiently serve the needs of region. Taking no action is not an acceptable course, as this will in no way help reduce flood risks, and will ultimately be more expensive, and also risk a FEMA remapping that could place

Page: 2

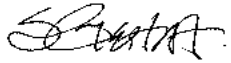
Author: Medopera Subject: Highlight Date: 4/5/2016 5:26:41 PM
Comment ID: 156a
Topic: Proposed Project, General Support
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/5/2016 5:27:18 PM
Comment ID: 156b
Topic: Permitting Approval, Approve the Project
Unsubstantive

more homes and businesses in the flood plain, driving up insurance rates and slashing property values. The Northern Alignment Alternative will impact many more homes by moving the impoundment pool north, and will cost \$81 million more. Each year that the project is delayed will add approximately 5% in increased construction costs.

The proposed action is clearly the best one for western Minnesota, and urge the DNR to follow up your good work with an approval of the project.

Sincerely,



Steve Gehrtz

3606 Westmoor Blvd

Moorhead, MN

Moorhead City Council

Ward 4.

Page: 3

Author: Medopera Subject: Highlight Date: 12/1/2015 8:58:44 AM -06'00'
Comment ID: 156a cont.

Author: Medopera Subject: Highlight Date: 12/1/2015 8:58:51 AM -06'00'
Comment ID: 156b cont.

From: [Steven Vigesaa](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo- Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 2:31:25 PM
Attachments: [Comment Draft No. 2.docx](#)

Commenter 157

Summary of Comments on StevenVigesaa_Commenter157a-d_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/1/2015 9:03:13 AM -06'00'
Commenter 157

Author: Date: Indeterminate

Please accept my attached comment regarding the above topic. A follow up copy will be submitted shortly in another format.

Respectfully Submitted:

Steven Vigesaa
7955 176th Ave SE
Wahpeton, ND 58075

Cell (701) 642-9561
stvigeesaa@Hotmail.com

October 28, 2015

Ms. Jill Townley

Project Manager Environmental Policy and Review Unit

Minnesota DNR

Subject: Comment on DEIS Regarding the Fargo Diversion

Dear Ms. Townley,

Thank you for the opportunity to comment on the Fargo-Moorhead Flood Risk Management Project DEIS.

First briefly, a word about myself: My name is Steven Vigesaas. I have a BS degree in Engineering from NDSU and am a retired Quality Engineer. In that position, I have had significant experience in problem solving and data analysis. I also served for 21 years as a Combat Engineer Officer in the Army National Guard. I live close to the Wild Rice River near Wahpeton ND and have had to deal with flooding issues several times since 1997.

My main concern is regarding alternatives to the project. It appears to me that there is no substantive difference between the proposed project and the Northern Alignment Alternative other than moving the entire project two miles north. I would like to see a serious review of true alternatives to the plan such as the one proposed by Senator Larry Luick from Fairmount, ND. His plan not only provides a flexible alternative, but results in a win-win-win condition for all parties involved. His plan not only meets the objectives of the project, but would actually reduce the amount of water flowing north into Canada, thereby reducing the damage from aquatic vegetation and algae being sent to our good neighbors to the north.

This brings up the objectives of the project itself. Since the Maple, Rush, and Lower Rush rivers enter the Red River downstream from Fargo, I do not agree that this project would have any impact on the flood risk potential caused by those rivers. One solution to this issue would be to simply reduce the scope of the project by eliminating references to those rivers.

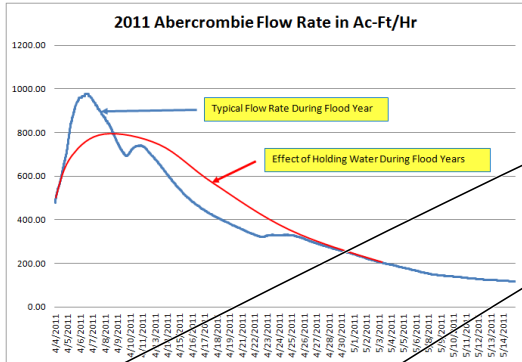
One of the problems with the Fargo Diversion is that because all the water retained by the dam is in one location and the rate of discharge would have to depend on the amount of rainfall during and after the spring melt. This can greatly extend the runoff period causing downstream

Author: Medopera Subject: Highlight Date: 4/5/2016 5:29:01 PM
Comment ID: 157a
Topic: Alternatives, Alternative: North Dakota/South Dakota Retention Project

Author: Medopera Subject: Highlight Date: 4/20/2016 11:20:22 AM
Comment ID: 157b
Topic: Proposed Project Purpose and Need, Purpose and Need too Narrow and/or Excessive

Author: Medopera Subject: Highlight Date: 4/19/2016 12:37:16 PM
Comment ID: 157c
Topic: Hydrology and Hydraulics, Downstream Impacts

residents to be inundated with water for an extended period of time which would delay or possibly prevent their spring planting. The graph below illustrates the issue: While the flood crest may not be as high as expected, downstream residents would have to deal with high water for an extended period of time.



- 1 Author: Medopera Subject: Highlight Date: 12/1/2015 9:18:03 AM -06'00'
 Comment ID: 157c cont.

- 2 Author: Medopera Subject: Sticky Note Date: 12/1/2015 9:18:14 AM -06'00'
 Comment ID: 157c cont.

- 3 Author: Medopera Subject: Highlight Date: 4/5/2016 5:30:40 PM
 Comment ID: 157d
 Topic: Dam Safety, Risk and Loss of Life Concerns

- 4 Author: Medopera Subject: Highlight Date: 12/1/2015 9:20:48 AM -06'00'
 Comment ID: 157a cont.

I also have a few comments regarding the Sen. Luick proposal: I'm not sure whether all the risks of the current proposal have been properly reviewed. If all the water were detained in one central location what would be the risks of devastating damage to property and individuals if the levee should fail, or if God forbid, a terrorist attack were to breach the dam at the height of the flooding season. Hundreds of thousands of acre feet of water would instantly rush into south Fargo. I would rather see a variety of small shallow storage areas distributed throughout the watershed as Sen. Luick suggested. That way if one or even two should fail; the result would not be catastrophic.

Finally, let me address the root cause of the problem. Most of the discussion regarding flood protection for Fargo-Moorhead involves detaining flood waters for a period of time to reduce the flood severity (although extending the flood duration) in downstream areas. I understand this need and do not object to it, but I believe we should consider additional mitigation solutions. The real problem we are all dealing with is excessive surface water in the Red River watershed. Why not address this problem directly instead of trying to deal with the result. I believe Senator Luick has identified two methods that do just that:

1. He has indicated that tiling fields can reduce the moisture content of the soil in the fall and improve it's percolation capability allowing it to absorb significantly more of the snow melt thereby reducing the amount of runoff .

2. Another concept he has identified is that increasing the amount of vegetation or humus in the soil makes it more absorbent and gives it the ability to retain more moisture than the typical clayey soils in the Red River watershed.

If we were to focus on these concepts and perhaps provide incentives to implement them, we could significantly reduce the problem and in most years, eliminate the need for additional water detention capacity.

The result would be a win for the city of Fargo. Their objectives would be met and the flooding problem virtually eliminated. It would be a win for the upstream farmers by keeping the moisture in the soil where it can benefit their crops during the dryer periods of the summer. A win for our friends in Canada by keeping much of the nutrient rich water in our soil instead of sending it to them. And a win for the environment by not destroying the Red River ecosystem in the flooded area. As you know, the Red River is an environmental paradise for wildlife providing ideal habitat for deer, fowl, fish and other wildlife. If the project goes forward as designed, the vegetation along the river will be destroyed by annual, extended periods of flooding.

Again, thank you for allowing me to comment, and I would be happy to discuss these issues further or to meet with you at any time.

Best Regards:

Steven T. Vigesaa

7955 176th Ave SE

Wahpeton, ND 58075

Cell: (701) 640-6720

STVigesaa@Hotmail.com

From: [Steven Vigesaa](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo- Moorhead Flood Risk Management Project DEIS
Date: Wednesday, October 28, 2015 2:49:06 PM
Attachments: [DEIS Comment - Steven Vigesaa 10-28-2015 0245 pm.pdf](#)

Commenter 157 cont.



Summary of Comments on StevenVigesaa_Commenter157duplicate_Email2.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/1/2015 9:23:08 AM -06'00'
Commenter 157 cont.

Author: Medopera Subject: Sticky Note Date: 12/1/2015 9:25:58 AM -06'00'
Comment ID: 157a-d duplicate

Author: Date: Indeterminate

As indicated, attached is another (signed) copy in .pdf format of my comment sent a few minutes ago.

Regards,

Steven T. Vigesaa
7955 176th Ave SE
Wahpeton, ND 58075

(Cell) 701-640-6720

stvigessaa@Hotmail.com

This page contains no comments

October 28, 2015

Ms. Jill Townley

Project Manager Environmental Policy and Review Unit

Minnesota DNR

Subject: Comment on DEIS Regarding the Fargo Diversion

Dear Ms. Townley,

Thank you for the opportunity to comment on the Fargo-Moorhead Flood Risk Management Project DEIS.

First briefly, a word about myself: My name is Steven Vigessaa, I have a BS degree in Engineering from NDSU and am a retired Quality Engineer. In that position, I have had significant experience in problem solving and data analysis. I also served for 21 years as a Combat Engineer Officer in the Army National Guard. I live close to the Wild Rice River near Wahpeton ND and have had to deal with flooding issues several times since 1997.

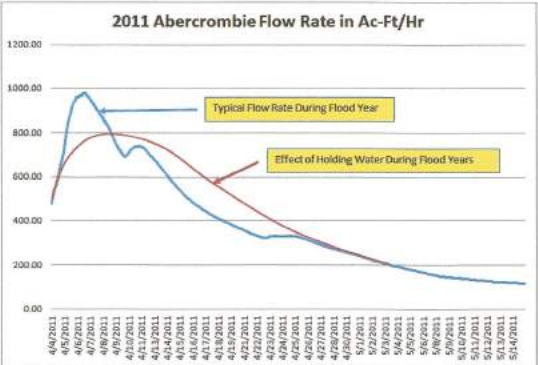
My main concern is regarding alternatives to the project. It appears to me that there is no substantive difference between the proposed project and the Northern Alignment Alternative other than moving the entire project two miles north. I would like to see a serious review of true alternatives to the plan such as the one proposed by Senator Larry Luick from Fairmount, ND. His plan not only provides a flexible alternative, but results in a win-win-win condition for all parties involved. His plan not only meets the objectives of the project, but would actually reduce the amount of water flowing north into Canada, thereby reducing the damage from aquatic vegetation and algae being sent to our good neighbors to the north.

This brings up the objectives of the project itself. Since the Maple, Rush, and Lower Rush rivers enter the Red River downstream from Fargo, I do not agree that this project would have any impact on the flood risk potential caused by those rivers. One solution to this issue would be to simply reduce the scope of the project by eliminating references to those rivers.

One of the problems with the Fargo Diversion is that because all the water retained by the dam is in one location and the rate of discharge would have to depend on the amount of rainfall during and after the spring melt. This can greatly extend the runoff period causing downstream

This page contains no comments

residents to be inundated with water for an extended period of time which would delay or possibly prevent their spring planting. The graph below illustrates the issue: While the flood crest may not be as high as expected, downstream residents would have to deal with high water for an extended period of time.



I also have a few comments regarding the Sen. Luick proposal: I'm not sure whether all the risks of the current proposal have been properly reviewed. If all the water were detained in one central location what would be the risks of devastating damage to property and individuals if the levee should fail, or if God forbid, a terrorist attack were to breach the dam at the height of the flooding season. Hundreds of thousands of acre feet of water would instantly rush into south Fargo. I would rather see a variety of small shallow storage areas distributed throughout the watershed as Sen. Luick suggested. That way if one or even two should fail; the result would not be catastrophic.

Finally, let me address the root cause of the problem. Most of the discussion regarding flood protection for Fargo-Moorhead involves detaining flood waters for a period of time to reduce the flood severity (although extending the flood duration) in downstream areas. I understand this need and do not object to it, but I believe we should consider additional mitigation solutions. The real problem we are all dealing with is excessive surface water in the Red River watershed. Why not address this problem directly instead of trying to deal with the result. I believe Senator Luick has identified two methods that do just that:

1. He has indicated that tiling fields can reduce the moisture content of the soil in the fall and improve its percolation capability allowing it to absorb significantly more of the snow melt thereby reducing the amount of runoff.

This page contains no comments

2. Another concept he has identified is that increasing the amount of vegetation or humus in the soil makes it more absorbent and gives it the ability to retain more moisture than the typical clayey soils in the Red River watershed.

If we were to focus on these concepts and perhaps provide incentives to implement them, we could significantly reduce the problem and in most years, eliminate the need for additional water detention capacity.

The result would be a win for the city of Fargo. Their objectives would be met and the flooding problem virtually eliminated. It would be a win for the upstream farmers by keeping the moisture in the soil where it can benefit their crops during the dryer periods of the summer. A win for our friends in Canada by keeping much of the nutrient rich water in our soil instead of sending it to them. And a win for the environment by not destroying the Red River ecosystem in the flooded area. As you know, the Red River is an environmental paradise for wildlife providing ideal habitat for deer, fowl, fish and other wildlife. If the project goes forward as designed, the vegetation along the river will be destroyed by annual, extended periods of flooding.

Again, thank you for allowing me to comment, and I would be happy to discuss these issues further or to meet with you at any time.

Best Regards:



Steven T. Vigesaa

7955 176th Ave SE

Wahpeton, ND 58075

Cell: (701) 640-6720

STVigesaa@Hotmail.com

From: Sue Evert
To: "Review, Environmental (DNR)"
Subject: Fargo-Moorhead Flood Risk Management Project EIS
Date: Thursday, October 22, 2015 12:57:17 PM

Commenter 158

Summary of Comments on SueEvert_Commenter158a-c_Email1.pdf

Page: 1

My name is Susan Evert. I am a part owner of land one mile south of Hickson, North Dakota. The land borders the Red River. We have had this farm in our family since the 1920's. Our farm is not large, a bit over 200 acres, but we love it. I no longer live in the Fargo-Moorhead area, but my mother lived on the farm until 2004 and she now lives in an assisted living area in F-M so I travel to the F-M area often.

If this diversion becomes reality, my farm will be (if not destroyed) highly impacted. We have had floods on the Red River, but the house on the farm site was never in trouble. Our forefathers built the farm structures on the highest part so though the river rose (way up the banks), no farm buildings were impacted. Our family and our home community consider the destruction of our area totally unfair. Fargo has built structures in low land areas or on river banks where houses were too close to the river. To destroy the area south of Fargo to "protect" Fargo is a concept that we in our family and in our community strongly oppose.

From a Natural Resources standpoint, I have several property questions. First, when the land is lost for a year from flooding, can we expect a payment from the US Government for the loss of financial gain? Or does some other agency with no local representation make that decision? Or is no specific compensation mentioned?

If land is deemed "unable to be farmed" for a year, I assume there will be some impact on the land the following year. Has there been a study to answer that?

If a long term time of flooding happens, with our rich farm land soil, I can guess that erosion is going to occur on the river banks. What compensation is given to land owners for that erosion and/or what will be done to stop the erosion?

Our family's cemetery is Wild River and Red River (located about 4 miles north of Hickson). I heard that repairs would be made if damaged occurred, but no details about costs or ring dyke costs or anything. Caskets were floating in South Carolina - might that happen here? And who will pay for repairs - federal government? diversion authority? Fargo?

Thank you for your careful consideration of the impact on the land and environment. I am currently a Minnesota resident and have been for 46 years. I am proud of the work our state does to ensure careful consideration for the love of the environment...the love of our land and my home community on the banks of the Red River.

Sincerely,

Susan Evert
11635 Flintwood St NW
Coon Rapids, Mn 55448

phone - 763-755-8065

Author: Medopera Subject: Text Box Date: 12/1/2015 9:26:28 AM -06'00'
Commenter 158

Author: Medopera Subject: Highlight Date: 4/5/2016 5:34:08 PM
Comment ID: 158a
Topic: Proposed Project and Northern Alignment Alternative, General Opposition
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/5/2016 5:34:48 PM
Comment ID: 158b
Topic: Socioeconomics, Agriculture Mitigation

Author: Medopera Subject: Highlight Date: 4/5/2016 5:34:58 PM
Comment ID: 158c
Topic: Cultural Resources, Cemetery Mitigation

From: [Tammy Stoffel](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: diversion
Date: Thursday, October 15, 2015 10:55:25 AM

Commenter 159

Summary of Comments on TammyStoffel_Commenter159a_Email1.pdf

Page: 1

just what is the effect of all this water moving doing to the North end of Moorhead and Fargo, our family land with a house is north of this along with a lot of others we seem to get a lot of water from everyone pushing the water places it does not want to go. I'm for the diversion(sort of) but why should the few you will be damaging have to foot the bill to fix our stuff back up, that this wonderful pet project of all you big business want, I think some of the diversion money should be set aside to cover damages that others will get to keep your wonderful town safe. Not low interest loans, not but only if'sif the buildings get damaged, things get ruined the diversion should foot the bill to replace or fix. You want other to just say sure you can flood us out for the good of the community even if we never had water problems before you came up with this idea. why not. You want people to jump on your bandwagon that would be one way to maybe get them to stop trying to sue you, besides that money put aside for lawyers could start earning interest instead of making them enough to build their own million dollar homes.

Author: Medopera Subject: Text Box Date: 12/1/2015 9:33:51 AM -06'00'
Commenter 159

Author: Medopera Subject: Highlight Date: 4/5/2016 5:37:53 PM
Comment ID: 159a
Topic: General, General
Unsubstantive

thanks
tammy

Kreisers Delivering excellence since 1905

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This email has been scanned for email related threats and delivered safely by Barracuda.

From: [T.M.Lavelle](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo-moorhead Flood Risk management Project DEIS
Date: Monday, October 26, 2015 4:59:22 PM

Commenter 160

Summary of Comments on ThomasLavelle_Commenter160a_Email1.pdf

Page: 1

Comment to the DNR: please consider rejecting the Northern Alignment Alternative (NAA) in favor of the proposed, federally authorized plan. There is no legitimate reason for the additional time money and resources to be spent redoing the job already done by the corps of Engineers.

In addition to the impact on as many as 60 homes, the restriction on Fargo growth and the jeopardizing of historic landmarks and cemeteries it come with a price tag of an additional 80 million dollars for a project that is already over budget and with the additional time involved will run the risk of that price growing even more.

For these reasons alone, not even considering the hardships that are involved we ask that this proposal be rejected.

Sincerely

Thomas Lavelle
806 118th Avenue South
Horace North Dakota 58047
tlavelle@itmltd.com

Author: Medopera Subject: Text Box Date: 12/1/2015 9:38:08 AM -06'00'
Commenter 160

Author: Medopera Subject: Highlight Date: 4/5/2016 5:40:16 PM
Comment ID: 160a
Topic: Permitting Approval, Reject the Northern Alignment Alternative
Unsubstantive

From: [TODD ELLIG](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Tuesday, October 27, 2015 11:58:19 AM

Commenter 161

Summary of Comments on ToddEllig_Commenter161a-b_Email1.pdf

Page: 1

Comment for submission

Concerning the recent reinclusion of the Northern alignment for consideration in the Fargo

Diversion plan; since when does it make sense to spend more and get less. To move the alignment north with the idea of moving the southern water storage boundary north by a similar distance is foolishness, isn't it more sensible to protect existing structures than to protect farm land that can still be farmed without impact in all but a few years. It is painful to watch such a political process flounder with incompetence. Going through yet another round of disturbance and debate after the Diversion Authority, FEMA and the Army Corps of Engineers have all approved the southern alignment is wasteful of both time and money. Is it OK to ask those in charge to wake up and smell the coffee? And be responsible to the citizenship affected and footing the bill of hardship?

Please reject the Northern Alignment Alternative (NAA) in favor of the proposed, federally authorized plan. It has not been evaluated by the responsible federal agency, the NAA would by law require a whole new environmental review, analysis, and Environmental Impact Statement from the Corps of Engineers. There is no reason to waste time and public money and resources on doing an environmental review on this alternative, when one has already been done on the proposed project. Selecting the NAA would be an enormous waste of resources.

The main feature of the NAA would be to shift the impoundment downstream 1.5 miles, moving it north into more developed areas. In doing so, more homes will be affected negatively than benefited. I really fail to see how this can make sense to anyone.

Sincerely,

Todd L. Ellig
Stanley Township Chairman
Cass County Planning Commissioner

2005 124th Ave So
Horace ND 58047
701 793-9695
esetter@prodigy.net

Author: Medopera Subject: Text Box Date: 12/1/2015 9:46:30 AM -06'00'
Commenter 161

Author: Medopera Subject: Highlight Date: 4/5/2016 5:42:40 PM
Comment ID: 161a
Topic: Northern Alignment Alternative, General Opposition
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/5/2016 5:43:22 PM
Comment ID: 161b
Topic: Permitting Approval, Reject the Northern Alignment Alternative
Unsubstantive

From: Tom Jacobs
To: "Review, Environmental (DNR)"
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Sunday, October 04, 2015 3:58:13 PM

Commenter 162

Summary of Comments on TomJacobs_Commenter162a-d_Email1.pdf

Page: 1

From Thomas P. Jacobs (Currently living at: 1617 Monte Vista Ln., Gillette WY 82716)

Owner and Future Retiree on property located at 1265 115th ave. Wolverton MN 56594

Email – tjacobs2759@gmail.com Phone 307-696-3658

Property description

North 20.5 acres of government lot 3 in

section 17 of T136N R48 W of

Wolverton Township in Wilkin County MN.

This property is currently being developed as a small family operated organic farm. The property is already certified organic. I intend on taking up permanent residence on the property in 2019-2020. I have a limited number of concerns pertaining to the Fargo-Moorhead Risk Management project.

My property lies within the 100 year flood plain as outlined by the available maps.

1. Will the property lose its designation as "Certified Organic" in the event of flooding?

2. In the spring of 2016 I will be planting trees for an orchard which ought to reach maturation in the summer of 2020. I did not see, in the plan, any type of consideration for compensation of perennial crops damaged by flooding. It did address small grains and root crops who's planting could be delayed by flooding.

a. Is there a plan in place for perennial crop damage compensation?

b. Is there a proposed method for preventing damage to perennial crops.

3. The property currently includes an older dwelling that is serviceable as seasonal shelter. We plan on building a more substantial permanent dwelling. The building site has already been determined to be above the current flood plain. I plan on elevating the house on compacted fill. To what elevation do I need to engineer the site?? For real!!! The maps indicate 6 inches, what is my real safety elevation??

a. Are the plans for cost sharing on building to avoid potential flood damage. (I do not want to be bought out and relocated, I do want to develop the site in a manner suited to minimizing damage and the inconveniences of potential flooding.)

According to the existing records my property has never been flooded in the past 200 years. Thus I see evidence that the use of "Distributed Storage Areas" (DSA) has been very effective in the past. In the 1980's we were talking about preventing the rapid drainage of farm ground to reduce flooding. Why isn't that option on the table?? The cost of paying farmers for water retention in the spring would surely come in under the budget planned for the current project. It would also prevent the inevitable environment damage that will be caused by flooding the proposed water retention site.

Thank You

Tom Jacobs

Author: Medopera Subject: Text Box Date: 12/1/2015 9:49:33 AM -06'00'
Commenter 162

Author: Medopera Subject: Highlight Date: 4/5/2016 5:45:04 PM
Comment ID: 162a
Topic: Socioeconomics, Organic Farms

Author: Medopera Subject: Highlight Date: 4/5/2016 5:45:27 PM
Comment ID: 162b
Topic: Socioeconomics, Perennial Crop Impacts and Mitigation

Author: Medopera Subject: Highlight Date: 4/5/2016 5:45:51 PM
Comment: 162c
Topic: FEMA, Flood Fringe Mitigation

Author: Medopera Subject: Highlight Date: 4/5/2016 5:46:44 PM
Comment ID: 162d
Topic: Distributed Storage Alternative, General Support
Unsubstantive

From: [Trana Rogne](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: comment to the DNR
Date: Sunday, October 18, 2015 6:51:04 PM

Commenter 163

Summary of Comments on TranaRogne_Commenter163a_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/1/2015 10:13:24 AM -06'00'
Commenter 163

Author: Medopera Subject: Highlight Date: 4/20/2016 11:21:30 AM
Comment ID: 163a
Topic: Proposed Purpose and Need, Purpose and Need
too Narrow and/or Excessive

The "purpose and need" of the project has fallen victim to "project creep". At first it was flood protection, with the MN side project.

When it became a ND side project it was configured to provide room for development. The Northern Inlet, North of the confluence of the Wild Rice and the Red River alignment was rejected because to quote the Value Engineering team study Appendix D of the FEIS July 2011, Appendix O, proposal #3—" Their reason for the location of the inlet being further south than the MN alignment was to accommodate the city of Fargo's current future plans of development—"

Then it was to remove FEMA regulatory controls from the flood plain.

Then the purpose is to provide FEMA certification for flood events to 100 year.

It appears that flood protection from a 100 year flood can be achieved but the DA wants others to "pay for" flood insurance for a city that has continued to build in the high risk flood area after the 1997 and 2009 floods.

This is a wholly unreasonable purpose. Flood protection is needed but to ask others to be impacted for development and the elimination of flood insurance is not acceptable.

The Northern Inlet location with the diversion channel in town levees and new controls on the gates, will provide flood protect for the city.

Thanks
Trana Rogne
5477 Co RD#1
Kindred ND 58051

From: [Trana Rogne](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Comment to the EIS
Date: Saturday, October 24, 2015 9:47:28 PM

Commenter 163 cont.

Summary of Comments on TranaRogne_Commenter163aa-bb_Email15.pdf

Page: 1

The mitigation for the loss of wetlands incurred by the Oxbow Ring Dike has not occurred. Ducks Unlimited was to purchase land in the Grand Forks area. The sale fell through as it was rejected by the state of North Dakota. The last information that is available is that the rejection was upheld.

<http://www.crookstontimes.com/article/20140917/News/140919622>

How can we expect that the wetland mitigation to occur. If the project is on hold until all mitigation is in place and a major flood is pending the project will be put in operation. This holds true of most if not all of the mitigation features.

How can we expect the continued maintenance on mitigation features?

How can we depend on the mitigation function of a low flow stream in the bottom of the diversion channel be functional when it is washed out each year.

Diversion channel flow precludes the low flow stream mitigation feature from functioning, also.

The river bank erosion when it occurs is a not condition that can be mitigated.

What is the enforcement of the findings of assessment of mitigation features?

Once the project is in operation there is no mitigation for some damages.

It behooves MNDNR to see that the project operation can not cause these damages.

Trana Rogne

5477 Co Rd #1 58051

Kindred ND

--

Trana

"The middle of the road is for yellow lines and dead armadillos."

Jim Hightower

Author: Medopera Subject: Text Box Date: 12/1/2015 12:51:47 PM -06'00'
Commenter 163 cont.

Author: Medopera Subject: Highlight Date: 4/6/2016 2:07:09 PM
Comment ID: 163aa
Topic: Wetlands, Wetland Mitigation

Author: Medopera Subject: Highlight Date: 4/6/2016 2:08:15 PM
Comment ID: 163bb
Topic: Mitigation and Monitoring, Will it be Followed Through?

From: [Trana Rogne](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Re: comment to the DNR
Date: Sunday, October 18, 2015 8:22:43 PM

Commenter 163 cont.

Summary of Comments on TranaRogne_Commenter163b_k_Email2.pdf

Page: 1

3.3.3.1.2 Unbenefited Area Stream Stability (Upstream of the Tieback Embankment)

"Duration of flooding during Project operation would correspond to the flood event. During a 100-year flood for example, inundation duration is estimated to be approximately 14 days."

This 14 day inundation will be greatly impacting agricultural production when combined with a dry up time. Crop planting delay could approach a month with normal climatic conditions. Rain and cloud cover would increase dry out time. The crop loss is substantial with this much delay. Federal crop would not cover this. The DA will thus be responsible for losses.

The mitigation for ag. impacts must cover all possible scenarios for all individual situations.

2.1.1.16 Recreation Features

The ND legislature had previously decided not to provide state funds for this feature.

2.1.1.1 Dam

There was a planned ditch west of Cass County HWY to carry break out water from the Sheyenne River to the diversion inlet area at Horace to the diversion. This is necessary as the break out water normally travels along HWY 46 and in to the Wild Rice River.

This occurred in 2009. This impacts the drain down time of the staging area and was considered a issue to be remedied.

Since the water is then to be put into the project at the Horace inlet when it is operating it is questionable that the drain to the north will solve the problem.

The solution to the problem is not feasible, the operation of the project would need to be halted until such time as the Sheyenne Basin drains down, or break outs cease. This would prohibit the drain down of the staging area.

Distributed retention is the only solution that would resolve the problem. Since that has been taken off the table the impact citizens have to stand the damages or seek other compensation.

2.1.1.14 Project Operation

The evacuation plan that is necessary has not been published. The reason this has not been done is unknown. It is suspected that it is bad PR to provide the plan.

The public needs to know the details of all aspects of the plan operation.

Author: Medopera Subject: Text Box Date: 12/1/2015 10:18:33 AM -06'00'
Commenter 163 cont.

Author: Medopera Subject: Highlight Date: 4/6/2016 10:08:08 AM
Comment ID: 163b
Topic: Socioeconomics, Agriculture Impacts and Mitigation (Planting Delays)

Author: Medopera Subject: Highlight Date: 4/6/2016 10:08:34 AM
Comment ID: 163c
Topic: Recreational Features, Funding

Author: Medopera Subject: Highlight Date: 4/19/2016 3:37:58 PM
Comment ID: 163d
Topic: Infrastructure and Public Services, Flood Impacts to Roadways, Ditches and Culverts

Author: Medopera Subject: Highlight Date: 4/6/2016 10:09:29 AM
Comment ID: 163e
Topic: Dam Safety, Evacuation Plan

Flow exiting the staging area via the overflow embankment would flow overland into the Sheyenne River basin.

Author: Medopera Subject: Highlight Date: 4/6/2016 10:10:03 AM
Comment ID: 163g
Topic: Overflow Embankment, Overflow Embankment Impacts and Mitigation

Since simultaneous events on the tributaries has not been modeled the impact of the operation of the overflow function is not known. This water will flow to Kindred, Davenport and north to I94.

Author: Medopera Subject: Highlight Date: 4/19/2016 2:27:41 PM
Comment ID: 163f
Topic: Hydrology and Hydraulics, Tributary Modeling

Mitigation for subsequent damages are not provided for and must be.

Author: Medopera Subject: Highlight Date: 4/19/2016 1:45:51 PM
Comment ID: 163h
Topic: Hydrology and Hydraulics, Expert Opinion Evaluation Panel

2.2.2.1.2 Flood Damage Reduction Projects

FDR projects have been designed for protection at the current, effective FEMA 100-year flood event. Because of the difference between the FEMA hydrology and the EOEP hydrology some of the FDR projects are at elevations above the EOEP 100-year flood elevation, but do not have sufficient free board and/or tie-in elevations for FEMA accreditation under the EOEP hydrology. This means there could be actual protection, but not accredited protection under the EOEP hydrology.

Author: Medopera Subject: Highlight Date: 4/6/2016 10:11:39 AM
Comment ID: 163i
Topic: Federal Executive Order 11988, Violation

The take away is that the project purpose is to get others to pay for flood insurance. Others will pay by deed restrictions, relocated home impacts to taxes etc. All because the flood plain is intended for new growth. Development in the flood plain is to be not provided for.

Author: Medopera Subject: Highlight Date: 4/6/2016 10:11:52 AM
Comment ID: 163j
Topic: Comparison of Alternatives, Flood Depth and Duration

The current flood plain should be used in conformity with EO 11988, which restricts impact to the function of the flood plain.

Author: Medopera Subject: Highlight Date: 4/19/2016 1:47:16 PM
Comment ID: 163k
Topic: Hydrology and Hydraulics, Expert Opinion Evaluation Panel

2.2.2.2 Northern Alignment Alternative

Therefore, direct impacts due to construction and indirect impacts due to construction and Project operation (i.e., inundation) would be shifted north. NAA operation would be similar; therefore the depth and duration of flooding of the current 100-year flood within the project area would increase upstream of the tieback embankment.

It is not clear the depth and duration of the flooding is the same, with a flood level of 919 feet as opposed to 922 feet?

3.1.1 Affected Environment

The Red River has exceeded flood stage approximately half of the years during the past century. The recent past has seen a higher frequency of large flood events with 2009 being a record setting year with a flood stage of 40.8 feet at the United States Geological Survey (USGS) Fargo stream gage

The 18 foot flood stage is not realistic, the flood events are at 30 feet.

The flood stages are heavily influenced by the lack of off channel storage that has diminished due to encroachment into the flood plain.

3.1.1.1 Hydrologic and Hydraulic Evaluation for Project Design

The EOEP concluded that the hydrologic record showed a "dry" period in the early decades of the 20th century and a "wet" period in later years continuing to the present and recommended developing revised flow frequency curves separately for the dry and wet periods.

The historical precipitation records do not show a "wet or dry period"

The precipitation has been relatively stable The river flow is dependent on the climate change(rejected by the EOEP) and the reduction of off channel storage due to development in the flood plain.

Discharge (CFS)from the river system without flood plain storage that attenuates the peak flow is not a accurate measure of the flood impacts.

The use of EOEP flood levels is misleading. Flood levels by the use of the full history of total river flows, not peak cfs, gives a true picture of river flow. If this was done the project would not a have been approved. The only way to resolve this issue is distributed retention.

Thanks
Trana Rogne
5477 Co RD#1
Kindred ND 58051

--
Trana
"The middle of the road is for yellow lines and dead
armadillos."
Jim Hightower

From: [Trana Rogne](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: comment
Date: Sunday, October 25, 2015 10:10:05 AM

Commenter 163 cont.



Here is a letter that was submitted to the Grand Forks Herald that makes the case for Basin wide solutions and not just to protect Fargo. It was one of the results of a series of opinion pieces published in the GFH. The question was, what benefit is the FM Diversion to Grand forks.

Thanks
Trana Rogne
5477 Co Rd #1
Kindred ND 58051

Andy Adamson, Jr.: Project should protect basin, not just Fargo

By [news@grandforksherald.com](#) on Nov 27, 2013 at 6:30 a.m.

Email

[Sign up for Breaking News Alerts](#)

DRAYTON, N.D. -- In his column, Darrell Vanyo, chairman of the Flood Diversion Board of Authority, seeks the approval of Grand Forks and East Grand Forks for the Fargo-Moorhead Diversion ("Fargo-Moorhead Diversion Authority asks for GF-EGF's support," Page F1, Nov. 24).

The commissioner needs to realize that the Red River flows north of Grand Forks through Walsh and Pembina counties in North Dakota and Marshall and Kittson counties in Minnesota.

So, communities such as Oslo, Minn., and Drayton and Pembina, N.D., along with thousands of acres of prime Red

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Summary of Comments on TranaRogne_Commenter163cc_Email16.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/1/2015 1:03:36 PM -06'00'
Commenter 163 cont.

Author: Medopera Subject: Sticky Note Date: 4/6/2016 2:09:39 PM
Comment ID: 163cc
Topic: General, General
Unsubstantive

This page contains no comments

River Valley farmland and farmsteads need flood protection as well.

These communities could use a diversion of their own.

For the past 50 or more years Fargo, Moorhead and West Fargo have expanded and built into the flood plain. They now expect the state and federal governments to fix this problem with our tax dollars.

A flood control project of this size should be expanded to provide protection to the entire Red River Valley, small and large communities alike. Otherwise, a \$2 billion project such as this one, if approved, undoubtedly will make it difficult for other areas that need flood protection to get funds.

As columnist Trana Rogne mentioned, many other problems with the diversion still need to be solved, and it's obvious that basinwide protection will not happen ("Basinwide protection? Not if pricey diversion goes through," Page F1, Nov. 24).

The Fargo-Moorhead Diversion is a 35-mile-long, \$2 billion Band-Aid that leaves 3/4 of the cut open and still bleeding.

Adamson is a Pembina County commissioner.

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Jim Hightower

From: [Trana Rogne](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: comment
Date: Sunday, October 25, 2015 12:30:30 PM

Commenter 163 cont.

Summary of Comments on TranaRogne_Commenter163dd_Email17.pdf

Page: 1

This a article that the **JPA** editorial team wrote, I am one member.



Author: Medopera Subject: Text Box Date: 12/1/2015 1:05:56 PM -06'00'
Commenter 163 cont.

Richland-Wilkin Joint Powers Authority

Original Publication Date:
January 16th, 2014

[Wahpeton Daily News](#)

Republished with permission from:
Editorial Team, Richland Wilkin JPA

Author: Medopera Subject: Sticky Note Date: 4/6/2016 2:14:25 PM
Comment ID: 163dd
Topic: General, General
Unsubstantive

When you drive south of Fargo on Interstate 29, you see the giant steel poles that are part of the CAPX2020 power line project.

The high voltage line will move electricity between eastern North Dakota and the Twin Cities. Its original path was to follow Interstate 94 from St. Cloud, Minn., to near Mapleton, N.D., but Fargo asked that the route be changed. They asked that it be moved south of their proposed diversion and dam. It seems unusual that the power line would be built where there would be almost 10 feet of water.

The reason is revealed in the June 20, 2011 and Jan. 9, 2012 letters to the North Dakota Public Service Commission from Fargo's Mayor Walaker: "The 300-foot-wide easements obtained for the CapX project will have prohibitions and restrictions that preclude development. The presence of the very tall structures in the wrong location (inside the area protected by the Metro Flood Project) will impair development beyond the width of the easements themselves ... we prefer that such land not be consumed by the easements, with their restrictions on development, acquired by CapX and development of that land not be impaired by the presence of the CapX structures."

In other words, get the poles off our land.

From the PSC's executive summary Oct. 3, 2011: "Stakeholders (Fargo) also requested that the company consider a route that followed the proposed diversion channel. In response, the company developed a corridor west of West Fargo and east of Mapleton." The development area west of West Fargo and east of Mapleton now get the "prohibitions and restrictions that preclude development" thanks to Fargo's request.

Walaker was very pleased when the mitigation for the new location was not to be paid for by Fargo. "It would be unfortunate if Metro Flood Project sponsors were asked to mitigate against the impacts caused by staged water at project sponsors' expense. We have been informed by CapX representatives that they will account for the possibility of floodwaters in their design and no mitigation will be necessary. We are pleased with that response as well." Fargo is "pleased" that others will pay for their city's development. How neighborly of them.

The behavior pattern of Fargo city leaders is the same whether it's the CAPX2020 power line, or their proposed diversion. It appears someone has to lose, in order for them to win. The Red River Valley is a small area in a very large world. If we're going to succeed as a region we should do it together.

Trana Rogne

5477 Co Rd #1

Kindred ND 50851

--

Trana

"The middle of the road is for yellow lines and dead

_armadillos."
Jim Hightower

This page contains no comments

From: [Trana Rogne](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: comment
Date: Sunday, October 25, 2015 7:24:13 PM

Commenter 163 cont.

Summary of Comments on TranaRogne_Commenter163ee_Email19.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/1/2015 1:10:25 PM -06'00'
Commenter 163 cont.

Author: Medopera Subject: Highlight Date: 4/19/2016 3:39:13 PM
Comment ID: 163ee
Topic: Infrastructure and Public Services, Flood Impacts to Roadways, Ditches and Culverts

The DA and the Corps have denied that there will be road damage from overland flooding in the staging area.

This is not true. The damage to Walcott township in the overland flood, water from the Sheyenne River flowed east to my home. This water did not drain through culverts. They were frozen or unable to take the volume of water. As each section filled up with water the water crested the road ways washing them out. Even one major drain was crested and the water flowed overland closing Richland Co. Rd #1. Damage was to roads, ditches and building sites. The bill paid by FEMA was \$268,430 which was 94% of the costs.

This type of damage has occurred in 2006,2009 and 2011.

When water can not flow through culverts or drains, or the volume is to large the water goes over the road ways. It does not mater if the flooding is from excessive water from the North I. E. the dam and levee that could cause the flooding of the staging area or over flow from the break outs on the Red, Wild of Sheyenne River.

In the case of the staging area the fill time and drain down time would be impacted by frozen culverts and drains. Road damage will occur during fill time and drain down time, unless the rate of fill is very prolonged. That raises other problems. Which is can the project be operated in a manner as to not cause infrastructure damage and still function as per the operation plan requires it to.

If there is to be no mitigation for damages funded by the DA will FEMA pay damages. The townships can not fund the repairs necessary to provide the access. In the valley Cass, Clay Wilkin and Richland the section roads are the necessary access to farm land. If you can not get to it you can not plant it.

The only solution is to not let water accumulate. Or find a acceptable mitigation plan. In some instances a total buy out of impacted property will be necessary.

Trana Rogne

5477 CoRd #1

Kindred ND 58051

--

Trana

"The middle of the road is for yellow lines and dead armadillos."

Jim Hightower

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From: [Trana Rogne](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: comment
Date: Sunday, October 25, 2015 8:35:31 PM

Commenter 163 cont.

Summary of Comments on TranaRogne_Commenter163ff_Email20.pdf

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The issue of mitigation of agricultural damages has been discussed with little resolution. The flowage easement payment as per the plan are not acceptable. As the mitigation for damages to the agricultural community will not cover the projects losses incurred by the project. The anticipated flowage easement will barely cover the costs to plant a crop. Let alone be appropriate mitigation in perpetuity. It is anticipated that three no plant or late plant situations will cause a financial hard ship that is not mitigated. There are many ramifications to be addressed.

Currently the DA is conducting agricultural impact studies, which have been highly contested and there is not a compressive analysis of the issues raised. See the Daily News JPA article. http://bismarcktribune.com/news/opinion/mailbag/ag-impact-study-by-ndsu/article_bf0a3421-a3cd-53f7-a1a2-d1999f71273a.html

Trana Rogne
5477 CoRD #1
Kindred ND 58051--

Trana

"The middle of the road is for yellow lines and dead armadillos."

Jim Hightower

Author: Medopera Subject: Text Box Date: 12/1/2015 1:17:45 PM -06'00'
Commenter 163 cont.

Author: Medopera Subject: Highlight Date: 4/6/2016 2:41:59 PM
Comment ID: 163ff
Topic: Socioeconomics, Agriculture Mitigation

From: [Trana Rogne](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: comment
Date: Tuesday, October 27, 2015 10:24:22 AM

Commenter 163 cont.

Summary of Comments on TranaRogne_Commenter163gg_Email21.pdf

Page: 1

http://bismarcktribune.com/news/state-and-regional/fargo-mulls-huge-water-storage-project/article_f3726e29-feda-5e5f-a81a-8789a0bb5b5b.html#.Vi-CzCD0yRw.email

Author: Medopera Subject: Text Box Date: 12/1/2015 1:21:50 PM -06'00'
Commenter 163 cont.

This must be considered as part of a combination of features that would provide flood protection.

Author: Medopera Subject: Highlight Date: 4/6/2016 2:43:20 PM
Comment ID: 163gg
Topic: Alternatives, Alternative: Fargo Lake Retention

Trana Rogne
5477 Co Rd #1
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58051

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Trana
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Jim Hightower

From: [Trana Rogne](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: comments
Date: Tuesday, October 27, 2015 11:15:01 PM

Commenter 163 cont.



Summary of Comments on TranaRogne_Commenter163hh_Email22.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/1/2015 1:31:21 PM -06'00'
Commenter 163 cont.

Author: Medopera Subject: Sticky Note Date: 4/6/2016 2:44:46 PM
Comment ID: 163hh
Topic: General, General
Unsubstantive

Note the DA has their own group which is only the ND side project **sponsors** get to vote. This is called the DAKOTA METRO FLOOD BOARD. It appears that MN local sponsors are not **voting members**.

The DA has refused to provide a part of the \$25 **million** that they have put aside for retention. It was refused **because** the Buffalo-Red River **WD** did not vote to approve the F_M Diversion budget. It appears to be retribution for the failure of the vote to fund the project construction activities. the exclusion of all Mn sponsors from voting may delegitimise the F-M Diversion actions while MN entities are not entitled to a vote. Mr. Mark Anderson on the board can give you all the details. The Chair of the board is a non voting member of the DA board, a Gerald L. Van Amburg.

" Buffalo-Red River Watershed District Retention Project Funding A funding request was received from the Buffalo-Red River Watershed District (**BRRWD**) for the Stony Creek Flood Damage Reduction (FDR) and Restoration Project. The Finance Committee reviewed the application and recommended that the request be forwarded to the Technical Committee and Red River Retention Authority. Mr. **VanAmburg** said this is one of several projects the **BRRWD** is considering for retention and would provide 6,500 acre feet of storage. If the guidelines provided by the Red River Basin Commission working committee were followed, the maximum eligible Diversion Authority funds are \$1,749,600. The request today is for 5% of the total for Phase I activities in the amount of \$87,480. Eric Jones from Houston Engineering showed a map of the area. He provided information about the project, which would help reduce overland flooding and is part of a multi-project approach. Mr. **Mahoney** asked if this project would lower the flows through Fargo-**Moorhead**. Mr. Jones said flows north of Fargo would be lowered, but said it will take a number of these types of projects to notice an impact on water level reductions. Mr. Jones said there will be a direct benefit to Georgetown. Mr. Campbell said this project could benefit properties in northern Cass and Clay Counties

.Mr. **Berndt** asked if a Minnesota **EIS** would be needed in or der for the project to proceed. Mr. Jones said an **EIS** would not be required with this retention project. MOTION, passed Mr. **Pawluk** moved and Mr. Campbell seconded to refer the **BuffaloRed** River Watershed District funding request for Stony Creek Flood Damage Reduction and Restoration project to the Technical Committee and Red River Retention Authority for their review and recommendation. Motion carried."
Flood Diversion Board of Authority—March 12, 2015

Technical Committee members are not widely known. They as I recall they larger DA working group. (The list is lost in my computer)

Trana Rogne
5477 CoRd #1
Kindred ND
58051

This page contains no comments

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Trana

"The middle of the road is for yellow lines and dead
armadillos."

Jim Hightower

From: [Trana Rogne](#)
To: ["Review, Environmental \(DNR\)](#)
Cc: [Paul Marquart](#)
Subject: comment to the DNRnEIS
Date: Saturday, October 24, 2015 1:08:18 PM

Commenter 163 cont.

Summary of Comments on TranaRogne_Commenter163ii_Email10.pdf

Page: 1

http://www.fmdiversion.com/pdf/CorpsReports1/Appendix_P_Non-Structural.pdf

Author: Medopera Subject: Text Box Date: 12/1/2015 11:54:25 AM -06'00'
Commenter 163 cont.

1.3 Floodplain and Flood Risk Characteristics

Author: Medopera Subject: Highlight Date: 4/20/2016 11:46:13 AM
Comment ID: 163ii
Topic: Proposed Project Purpose and Need, Questions Project Purpose

"What this paragraph discussion is really saying is from the perspective of reducing flood risk in the Fargo-Moorhead Metro Area in its totality, further floodplain development within this total Metro Area would appear now to make most sense to be in the eastern portion of Moorhead rather than within Fargo."

This is why the FEIS is addressing the Fargo flood plain. Moorhead is the place to develop not Fargo. If we want to reduce flood risk, promote development in an area of higher in elevation. Then the job is to protect those in the current flood plain from the flood threat, not to flood more new people.

"Looking at the Moorhead Metro Area, the same is probably true with the caveat that there does exist locations within Moorhead that are on higher ground, but probably still located within the above definition of floodplain."

" but probably still located within the above definition of floodplain." Probably" defined flood plain, using the suspect "above definition of the floodplain" is telling.

It becomes obvious the propose of the project t it to promote development in Fargo

--

Trana

"The middle of the road is for yellow lines and dead armadillos."

Jim Hightower

From: [Trana Rogne](#)
To: ["Review, Environmental \(DNR\)](#)
Cc: [Paul Marguart](#)
Subject: Re: comment to the DNRnEIS
Date: Saturday, October 24, 2015 1:10:25 PM

Commenter 163 cont.

Summary of Comments on TranaRogne_Commenter163iiduplicate_Email11.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/1/2015 12:41:06 PM -06'00'
Commenter 163 cont.

Author: Medopera Subject: Sticky Note Date: 4/6/2016 1:12:34 PM
Comment ID: 163ii duplicate



On Sat, Oct 24, 2015 at 1:08 PM, Trana Rogne <tranarogne@gmail.com> wrote:

http://www.fmdiversion.com/pdf/CorpsReports1/Appendix_P_Non-Structural.pdf

1.3 Floodplain and Flood Risk Characteristics

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Jim Hightower

This page contains no comments

From: [Trana Rogne](#)
To: [*Review, Environmental \(DNR\)](#)
Subject: Fwd: comment to the DNRnEIS
Date: Saturday, October 24, 2015 6:15:19 PM

Commenter 163 cont.



Summary of Comments on TranaRogne_Commenter163iiduplicate_Email14.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/1/2015 12:50:11 PM -06'00'
Commenter 163 cont.

Author: Medopera Subject: Sticky Note Date: 4/6/2016 1:12:12 PM
Comment ID: 163ii duplicate

----- Forwarded message -----

From: **Trana Rogne** <tranarogne@gmail.com>
Date: Sat, Oct 24, 2015 at 1:08 PM
Subject: comment to the DNRnEIS
To: "*Review, Environmental (DNR)" <EnvironmentalRev.Dnr@state.mn.us>
Cc: Paul Marquart <rep.paul.marquart@house.mn>

http://www.fmdiversion.com/pdf/CorpsReports1/Appendix_P_Non-Structural.pdf

1.3 Floodplain and Flood Risk Characteristics

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"Looking at the Moorhead Metro Area, the same is probably true with the caveat that there does exist locations within Moorhead that are on higher ground, but probably still located within the above definition of floodplain."

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Jim Hightower

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"The middle of the road is for yellow lines and dead
armadillos."

Jim Hightower

From: [Trana Rogne](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Comments
Date: Sunday, October 18, 2015 8:35:00 PM

Commenter 163 cont.

Summary of Comments on TranaRogne_Commenter163I-s_Email3.pdf

Page: 1

Below are my comments to the "FARGO-MOORHEAD METRO AREA FLOOD RISK MANAGEMENT PROJECT CEMETERY MITIGATION PLAN" They appear in bold text:
Trana Rogne
5477 Co Rd #1

Kindred ND 58051

EXECUTIVE SUMMARY, of the "Fargo-Moorhead Metro Areas Flood risk Management Project Cemetery Mitigation Plan"

1. "Mitigation for impacts to the cemeteries is not required by the Fifth Amendment of the U.S. Constitution because there is no taking."

We do not agree that the project impacts are not a "taking", as there is a "taking" when the use of the site is impacted by the project.

2. "No Federal mitigation is required for cemeteries located outside the staging area."

The Corps has admitted impacts, increased flood levels cause loss of use and damage to the cemeteries outside of the staging area and therefore mitigation is required.

3. "In addition to obtaining flowage easements, the Non-federal Sponsors as part of the Project Operation and Maintenance (O&M) Plan shall clean-up or offer assistance to clean-up the staging area (cemeteries, roads, ditches, fields, etc.) after operation of the Project."

If this is part of the mitigation, then a bond to provide necessary funds to last as long as the project is to last has to be provided for.

CEMETERY MITIGATION PLAN

1. INTRODUCTION

"Eleven of the cemeteries located upstream of the Project would potentially be impacted by the Project. Of the 11 potentially impacted sites, 7 are located within the Project's designated staging area and 4 are located outside and upstream of the staging area."

In No 2 in executive summary, they state that no mitigation is needed for those outside of the staging area. They admit impacts but do not take responsibility for mitigation for the impacts.

"Comments were requested but none were received so the study was considered final."

This was not our understanding. We were led to believe that we were to wait to make comments for this current study to be completed.

"In addition, any flood mitigation measure that involves physically altering the cemetery site, such as by adding a ring levee or fence may adversely affect the historical integrity of the site and affect the visual and spiritual experiences of individuals with links to the cemetery."

It is absurd that the Corps would be concerned with the visual and spiritual experiences, yet consider flooding them is not impact to the visual and spiritual experience.

"The Federal mitigation plan consists of requiring the Non-federal Sponsors to obtain flowage easements for the cemeteries within the staging area."

The Corps plans on putting a price on the sacred burial ground of our ancestors.

"Note that constructing protective berms for all potentially impacted sites would cost approximately \$11 million."

1.7 Addressing Specific Issues/Concerns:

"Historically in this part of the country, the average soil cover is 4 feet and there has not been any reported issues of substance with caskets or vaults rising out of the ground; therefore buoyancy is not an issue."

This is in dispute as one casket did rise out of the ground in Kindred, ND. Local grave diggers dispute the claim of 4 feet soil cover.

"Raising Roads to Provide/Maintain Access: Raising roads within the staging area may impact hydraulics during some flood events. Analysis using the Project's Phase 7 HEC-RAS model shows that raising roads to access cemeteries during floods will impact water surface elevations in the area."

This has not been a concern with the Oxbow/Hickson/Bakke ring dike. The impact to water surface elevations is minuscule in comparison to the impact to surface elevations of the OHB ring dike.

"Bank Stability: There are cemeteries located on or in the vicinity of river banks. According to a Geomorphology Study conducted during the FMM Feasibility Study, the timing, depth, and duration of additional flooding upstream caused by the Project would not result in changes to bank stability."

Author: Medopera Subject: Text Box Date: 12/1/2015 11:00:57 AM -06'00'
Commenter 163 cont.

Author: Medopera Subject: Highlight Date: 12/1/2015 11:07:19 AM -06'00'
Comment ID: 163l
Topic: Cultural Resources, Cemetery Taking

Author: Medopera Subject: Highlight Date: 4/6/2016 10:36:25 AM
Comment ID: 163m
Topic: Cultural Resources, Cemetery Mitigation

Author: Medopera Subject: Highlight Date: 4/6/2016 10:37:02 AM
Comment ID: 163n
Topic: Cultural Resources, Cemetery Mitigation

Author: Medopera Subject: Highlight Date: 12/1/2015 11:12:04 AM -06'00'
Comment ID: 163m cont.

Author: Medopera Subject: Highlight Date: 4/22/2016 9:10:13 AM
Comment ID: 163o
Topic: Communication Concerns, USACE
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/6/2016 10:38:03 AM
Comment ID: 163p
Topic: Cultural Resources, Cemetery Impacts

Author: Medopera Subject: Highlight Date: 4/6/2016 10:38:20 AM
Comment ID: 163q
Topic: Cultural Resources, Cemetery Impacts

Author: Medopera Subject: Highlight Date: 4/22/2016 8:32:49 AM
Comment ID: 163r
Topic: Cultural Resources, Cemetery Mitigation
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/6/2016 10:39:31 AM
Comment ID: 163s
Topic: Stream Stability, Cemetery Mitigation

This is highly questionable. The assertion in the EMM Feasibility Study is not to be accepted as true.

River bank stability has been effected by river levels. There are numerous examples of river levels causing bank instability: Fort Abercrombie, Trollwood (Fargo, ND), Double Ditch Indian Village (Bismarck, ND), and even Hennes cemetery.

2.3 Hennes Cemetery – Richland County, ND

"Hennes Cemetery has an existing serious riverbank erosion problem. Since the 1997 flood, the adjacent bank of the Red River has been actively sliding and has consumed a third of the parking area and part of the access road nearest the cemetery. Bank erosion is currently only 20 feet from graves in the northeast corner of the cemetery (Figure 4)."

Higher river levels, the 1997 flood caused slumping of river banks, due to the "cut bank" process.

3 CONCLUSIONS

"50-Year Event: Several cemeteries would experience new flooding during the 50-year event with the Project (Eagle Valley, Wolverton, North Pleasant, Hennes, Clara, and Roen). However, experiences at other cemeteries show that flooding generally has only a minimal impact on the cemeteries. The cemeteries may need to clean off debris or reset headstones, but an analysis has shown that caskets would remain interred. Families would not be able to visit loved ones and the cemeteries would not be able to bury people during the flooding, but the disruption would be limited in duration. Similarly, trees and other vegetation may be impacted, but the flooding would be limited in duration and would generally occur prior to commencement of the growing season. Together, the impacts are of limited duration, would occur infrequently, and would cause minimal physical damage. Therefore, the Project would not result in a taking under the Fifth Amendment of the U.S. Constitution at these cemeteries."

"Lower Wild Rice and Red River and Hoff Cemeteries: These sites incur the greatest depth of flooding both under existing conditions and with the Project in place for the 100-year event. They would also incur additional flooding at the 10-year event with the Project in place. For the Lower Wild Rice and Red River Cemetery, the increase in depth and duration of the induced flooding from the Project would not cause an impact beyond making the cemetery inaccessibile for additional two days at the 50-year event, and no taking would result. Likewise, parts of the Hoff Cemetery would flood at the 10-year event both with and without the Project. Even with additional areas being flooded, the physical damage to the cemetery would be minimal, and along with the infrequency of the flooding, no taking would result."

"Summary: Mitigation for impacts to the cemeteries is not required by the Fifth Amendment because there is no taking. None of the induced flooding would be more frequent than once every ten years, nine of the 11 cemeteries would not have induced flooding at even the 10-year event, and the two cemeteries with induced flooding at the 10-year event would suffer only very minor additional flooding. In the past, flooding has caused only minimal damage to cemeteries in the area, and the induced flooding from the Project is likely to also cause only minor damage."

Again the Corps does not consider the impacts to be a "taking". We consider the loss of use and damage as a "taking" by the Government that requires mitigation."

3.3 Mitigation Plan – Federal

"As specified in the FEIS, flowage easements are required on land within the staging area for operation of the Project. Therefore the Non-federal Sponsors will be required to obtain flowage easements for cemeteries in the staging area. Normal cemetery operations including burials and operation and maintenance activities will not be restricted by the flowage easements. No Federal mitigation is required for cemeteries located outside the staging area. Raising roads to provide access to cemeteries will not be performed as it would impact water surface elevations in the area and encourage public access into flooded areas, a life-safety issue."

The impact on water elevation is very little compared to the Oxbow/Hickson/Bakke ring dike. It is hard to accept the lack of road raises to provide access to cemeteries by this reasoning.

Final Comments-"no taking" and "existing conditions"

It is critical to understand what the decision of "No taking" is."No taking" is code for the Corps determination that the impacts to the public do not rise to a level that requires compensation. In the Cemetery study, the Corps has admitted loss of use and other damages exist, but no compensation is provided.

The study claims that the impacts are of short duration and low impact that "No taking" will occur. This conclusion is self serving and and must be rejected.

The use of "existing conditions," I.E. EDE flood levels, are just a hypothetical calculation of what the Corps feels the flood level will be, and what the duration of flooding, does not reflect real world conditions.

The "existing conditions" have never occurred and are over twice the flood level that occurred in the 4 largest floods in the valley in recorded history.

The "existing conditions" are 2-4 feet over real flood levels.

The time that cemeteries are impacted by flood water is much longer that admitted by the Corps, due to the use of "existing conditions". Also the "dry out time" to use the site and the access roads is dependent on the weather and the damage to the access roads. Considering the loss of tax base anticipated by the Corps' own study, the road repair to cemeteries, as opposed to other services, will be down on the list of priorities.

The Cemetery study is a rationale to avoid just compensation for damages inflicted on the cemeteries in the impacted area. Thanks,

Trana Rogne
5477 Co Rd #1

Kindred ND 58051

701-367-8911

Chairman of the MnDak Upstream Steering Committee

Page: 2

Author: Medopera Subject: Highlight Date: 12/1/2015 11:25:49 AM -06'00'
Comment ID: 163s cont.

Author: Medopera Subject: Highlight Date: 12/1/2015 11:27:05 AM -06'00'
Comment ID: 163l cont.

Author: Medopera Subject: Highlight Date: 12/1/2015 11:28:00 AM -06'00'
Comment ID: 163r cont.

Author: Medopera Subject: Highlight Date: 12/1/2015 11:29:19 AM -06'00'
NOTE: Final comments noted within previous comments addressed.

--

Trana

"The middle of the road is for yellow lines and dead
armadillos."

Jim Hightower

This page contains no comments

From: [Trana Rogne](#)
To: [*Review, Environmental \(DNR\): Al & Pat Otto; Cash Aaland; Craig Heritsgaard; Dave Morken; Don Nelson; Doug Lingen; Joel Hanson; Kelly Duchscherer; Larry Luick; Marcus Larson; Mark Askegaard; Matt Ness; Nathan Berseth; Perry Miller; Shelley Lewis; Tim Fox; Trana Rogne; Wayne Ulven](#)
Subject: Soil stability
Date: Monday, October 19, 2015 10:03:37 PM

Commenter 163 cont.

Summary of Comments on TranaRogne_Commenter163t_Email4.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/1/2015 11:31:21 AM -06'00'
Commenter 163 cont.

Author: Medopera Subject: Highlight Date: 4/6/2016 10:43:44 AM
Comment ID: 163t
Topic: Dam Safety, Risk Concerns

Soil failures

1. Veterans Boulevard West Fargo and I94. The north over pass sloughed.
2. Major redesign of Stanford Hospital West Fargo. After multi million dollar hospital was designed the soil was determent not suitable to handle the load. The soil was characterized as "jello" by a hospital representative.
3. Rose Creek and University Ave Fargo. Sometime after construction of a new bridge the supporting soil some many feet below the road way failed.
4. Soil underling road way failed at HWY 46 and the Wild Rice River.

The road bank failure West of HWY 75 and Rusted MN. The failure was to the road and the ditch bank extending toward the Red River,

Has DNR done independent studies on the suitable of soils east of the intended control structure?

See below

https://www.ndsu.edu/fargo_geology/briefhistory.htm

https://www.ndsu.edu/nd_geology/stockwood/

--
Trana
"The middle of the road is for yellow lines and dead armadillos."
Jim Hightower

From: [Trana Rogne](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Project is to promote the construction industry
Date: Monday, October 19, 2015 11:25:27 PM

Commenter 163 cont.



The Home Builders Association in the letter supporting the tax assessment district confirm what at the Corps documents tell us. The "flood proofing costs" raise the cost of development in the flood plain.

From the letter by the HBA of Fargo and the FMAAR posted April 27 2015. see link below.

"There are also additional flood-proofing costs involved with building a home in Fargo that may be pricing some buyers out of the market."

This explains the support the project receives from the business communities.

These reasons are not justifiable for the impacts to the upstream communities and does not justify the cost to the taxpayers.

Their concern is ""Fargo is the only community in the metro that saw a decrease in housing permits, going from 27 in 2014 to 20 in 2015 and value decreasing about 33 percent. Moorhead, Dilworth and West Fargo each saw substantial increases."

NOTE : "MOORHEAD, DILWORTH AND WEST FARGO EACH SAW SUBSTANTAIL INCREASES"

The HBA of F-M and the FMAAR® support a "yes" vote (on the Assessment district funding for the FM Diversion) from local governments and from property owners in Fargo for the following reasons: "

"-From a real estate standpoint, it's a good thing that the city of Fargo and Cass County are picking up the majority of the liability so the real estate market and our local economy isn't unduly harmed."

The case the HBA of F-M and FMAAR is making is the FM Diversion reduces the costs of development in the flood plain so these costs will compare favorable with the cost in Moorhead, Dilowrth and West Fargo.

They are pleased that the the City of Fargo and Cass County are taking the major of the liability necessary to increase sales of homes in the flood plain.

Summary of Comments on TranaRogne_Commenter163u_Email5.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/1/2015 11:33:35 AM -06'00'
Commenter 163 cont.

Author: Medopera Subject: Sticky Note Date: 4/6/2016 10:45:23 AM
Comment ID: 163u
Topic: General, General Support
Unsubstantive

Needed to say any taxes and liability for funding the FM Diversion rest squarely on the shoulders of tax payers of MN and ND not on the city or county or the HBA of FM and FMAAR.

- See more at: <http://homebuildersassociation.areavoices.com/2015/04/27/home-builders-realtors-urge-fargo-city-commission-to-maintain-support-of-assessment-district/#sthash.1Z68fXWc.dpuf>

Trana Rogne
5477 Co Rd #
Kindred ND
58051

This page contains no comments

From: [Trana Rogne](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: ND Diversion Alignment: East or West?
Date: Tuesday, October 20, 2015 12:01:55 AM

Commenter 163 cont.

Summary of Comments on TranaRogne_Commenter163v_Email6.pdf

Page: 1

In this document you see the work the Corps and the DA went to deny West Fargo the ability to grow into the flood plain as they allowed Fargo to grow and impact the natural flood plain. The also went as far to say that reducing the flood plain caused down stream impacts as if impacting the Fargo flood plain did not?
11988 only applies to others not the DA's desired plan.

Author: Medopera Subject: Text Box Date: 12/1/2015 11:39:39 AM -06'00'
Commenter 163 cont.

Author: Medopera Subject: Highlight Date: 4/6/2016 1:25:53 PM
Comment ID: 163v
Topic: Alternatives, Federal Ranking Criteria

Also from the document see below;

Draft EIS Comments related to E.O. 11988 FEMA – "...the documents can be improved by identifying measures to reduce the alternatives' indirect support of future development in the floodplain...Section 10 of USACE Regulation No. 1165-2-26 (March 30, 1984) g
..."consideration shall be given to deletion of separable segments of a plan when such segments protect undeveloped land and would likely induce development in the flood plain for which another practicable non-flood plain alternative may exist."

"The non-flood plain alternative may exist" That is Moorhead MN.

http://www.iwinst.org/feasibility/110113_FMM_Work_Group.pdf

--

Trana

"The middle of the road is for yellow lines and dead
armadillos."

Jim Hightower

From: Trana Rogne
To: "Review, Environmental (DNR); Aaland, Cash; Craig Hertsgaard"
Subject: comments
Date: Sunday, October 25, 2015 3:47:52 PM

Commenter 163 cont.

Summary of Comments on TranaRogne_Commenter163vcont_Email18.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/1/2015 1:07:26 PM -06'00'
Commenter 163 cont.

Author: Medopera Subject: Highlight Date: 12/1/2015 1:09:17 PM -06'00'
Comment ID: 163v cont.

http://www.fmdiversion.com/pdf/Final%20Report%20and%20Appendices%20FEIS%20%20Combined_20121010.pdf

5.6 FLOODPLAIN CONSIDERATIONS

"In assessment of alignment alternatives, consideration should be given for the area removed from the floodplain. Executive Order 11988 provides guidance related to development in floodplains. Part of this guidance is that, in the case that impact to the base floodplain (1-percent chance floodplain) is unavoidable; it is preferable to minimize the amount of area removed from the base floodplain. Because of the nature and location of the project, impacts to the floodplain are unavoidable. Additionally, large portions of the area south of Fargo and Moorhead are in the base floodplain based on mapping performed for the FR/FEIS and this study. In general, more congruence to the number of acres impacted by the approved FRP, the more favorable an alternative."

"it is preferable to minimize the amount of area removed from the base floodplain."

Then in spite of the above EO policy they give the real reason for the decision to use the 13 A location.

" In general, more congruence to the number of acres impacted by the approved FRP, the more favorable an alternative."

Got to love the big words "congruence".

6.2 RANKING OF OPTIONS

"VE13A has the lowest assessment factor score with VE13C being very close. The difference between the scores is small enough that the scores could be considered equal."

"VE13A, with flows through the flood damage reduction area and with diversion inlet gates, is the technically recommended alternative."

A review of the assessment factor score reveals the inherits bias in the assessment process.

see table 6.1 Relative weights of the assessment factors

5% rating to flood plain considerations.

So much for EO 1988

5.2 IMPLEMENTABILITY

Implementability is base on how much the new location 13A or 13C is implementable.

"Implementability is a qualitative criterion, as it is difficult to quantify from a technical perspective. Ultimately, decision makers need to weigh available data and making a qualified judgment when making a decision. Key implementability considerations include:

Compliance with USACE Record of Decision and Chief's Report and other permitting requirements. "

The above criteria mean that the alternate must be most like the approved plan.

Author: Medopera Subject: Highlight Date: 12/1/2015 1:09:35 PM -06'00'
Comment ID: 163v cont.

" Public policy considerations."

This means the alternate must best comply with what they perceive is the "public policy" of the Diversion Authority itself. Which is to quote----"remove much of the Fargo-Moorhead area from the regulatory flood plain" letter April 28 2011 to the Kindred Public library from Aaron M.Snyder

When you boil this "Final Report--" down, it comes to -

We, the DA want the largest protected area and we don't care about EO 11988

Trana Rogne

5477 Co Rd #1

kindred ND 58051

--

Trana

"The middle of the road is for yellow lines and dead armadillos."

Jim Hightower

From: [Trana Rogne](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fwd: ND Diversion Alignment: East or West?
Date: Tuesday, October 20, 2015 12:21:12 AM

Commenter 163 cont.

Summary of Comments on TranaRogne_Commenter163vduplicate_Email8.pdf

Page: 1

----- Forwarded message -----

From: **Trana Rogne** <tranarogne@gmail.com>
Date: Tue, Oct 20, 2015 at 12:01 AM
Subject: ND Diversion Alignment: East or West?
To: "*Review, Environmental (DNR)" <EnvironmentalRev.Dnr@state.mn.us>



Author: Medopera Subject: Text Box Date: 12/1/2015 11:47:18 AM -06'00'
Commenter 163 cont.

Author: Medopera Subject: Sticky Note Date: 12/1/2015 11:47:28 AM -06'00'
Comment ID: 163v duplicate

In this document you see the work the Corps and the DA went to deny West Fargo the ability to grow into the flood plain as they allowed Fargo to grow and impact the natural flood plain. The also went as far to say that reducing the flood plain caused down stream impacts as if impacting the Fargo flood plain did not?
11988 only applies to others not the DA's desired plan.

Also from the document see below;

Draft EIS Comments related to E.O. 11988 FEMA – "...the documents can be improved by identifying measures to reduce the alternatives' indirect support of future development in the floodplain...Section 10 of USACE Regulation No. 1165-2-26 (March 30, 1984) g ..."consideration shall be given to deletion of separable segments of a plan when such segments protect undeveloped land and would likely induce development in the flood plain for which another practicable non-flood plain alternative may exist."

"The non-flood plain alternative may exist" That is Moorhead MN.

http://www.iwinst.org/feasibility/110113_FMM_Work_Group.pdf

Trana Rogne
5477 Co Rd #1
KIndred ND

--
Trana
"The middle of the road is for yellow lines and dead
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Jim Hightower

--
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"The middle of the road is for yellow lines and dead

armadillos."
Jim Hightower

This page contains no comments

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From: [Trana Rogne](#)
To: ["Bjorn, Environmental \(DRS\)"](#); [Al & Pat Otto](#); [Cath Astand](#); [Craig Hertigstad](#); [Dana Morken](#); [Don Nelson](#); [Doug Linzer](#); [Jed Hansen](#); [Kelly Duchoniers](#); [Larry Luick](#); [Marcus Larson](#); [Mark Aaksoaak](#); [Matt Ness](#); [Nathan Berseff](#); [Patty Miller](#); [Shelley Lewis](#); [Tim Fox](#); [Trana Rogne](#); [Wayne Olson](#); [Marylene Skjoldal](#); [_rfo@sanilowship@aol.com](#); [_rfo@sanilowship@aol.com](#); [Paul Marquet](#)
Subject: Internal storage?
Date: Tuesday, October 20, 2015 12:18:51 AM

The NNR EIS seems not to have looked at internal storage. There is area that is low in the protected area that may be very suitable.

Also it appears that the city of Fargo is looking at a internal storage system. Much detail is not being released to us at this time. As there is to be a presentation Oct 22 at the Cass County joint board (CCJWRD) a FOIA would not speed up access to the project documents.

<http://files.cityoffargo.com/content/487268c865c3b8320c125e7a4dda167bc1424f2d/Commission%20Informational%20Meeting%209-21.pdf>

Trana Rogne
5477 Co RD #1
Kindred ND

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Trana
"The middle of the road is for yellow lines and dead armadillos."
Jim Hightower

Commenter 163 cont.

Summary of Comments on TranaRogne_Commenter163w_Email7.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/1/2015 11:45:02 AM -06'00'
Commenter 163 cont.

Author: Medopera Subject: Highlight Date: 4/6/2016 1:31:11 PM
Comment ID: 163w
Topic: Alternatives, Alternative: Internal Storage

From: [Trana Rogne](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: comment
Date: Saturday, October 24, 2015 11:58:03 AM

Commenter 163 cont.

Summary of Comments on TranaRogne_Commenter163vcont-x_Email9.pdf

Page: 1

http://www.fndiversion.com/pdf/CorpsReports1/Appendix_D_Other_Social_Effects.pdf

With Project Conditions, Loss of life analysis.

"Potential failure modes of the feasibility study alternatives include structural failure of the control structure, seepage and piping at the tie-back levee, overtopping of the tie-back levee, seepage and piping of the diversion channel containment levee, and overtopping of diversion channel containment levee. In general, these failure modes all would lead to inundation of primarily rural areas with very low population densities as compared with to the areas threatened by the failure of the existing system."

It is important note the "failure modes" assumes a low population densities. The Corps fails to consider that the low population is not a static condition. The project is based on the condition that the currently low population densities are to be populated. See

http://www.fndiversion.com/pdf/CorpsReports1/Appendix_C_Economics.pdf

3.7.5 Flood proofing Cost Savings Benefits

This section discussed the cost savings achieved by the project in place, to achieve the necessary growth area.

"This benefit is expected for each of the diversion alternatives since each will reduce the flood plain footprint sufficiently to accommodate future demand for flood-free developable land."

The Corps argues that the current flood plain that could be inundation has low population density and the current flood plain will reduce the flood plain sufficiently to accommodate future growth in the flood plain. "This benefit is expected for each of the diversion alternatives since each will reduce the flood plain footprint sufficiently to accommodate future demand for flood-free developable land."

This logic requires a intended manipulation of facts to support the development of the flood plain.

This is a violation of intent if not the letter of EO11988

Thanks

Trana Rogne

5477 co Rd #1

Author: Medopera Subject: Text Box Date: 12/1/2015 11:48:42 AM -06'00'

Commenter 163 cont.

Author: Medopera Subject: Highlight Date: 4/6/2016 1:29:05 PM
Comment: 163x
Topic: Dam Safety, Risk and Loss of Life Concerns

Author: Medopera Subject: Highlight Date: 12/1/2015 11:53:07 AM -06'00'

Comment ID: 163v cont.

Kindred ND 58051

This page contains no comments

--

Trana

"The middle of the road is for yellow lines and dead
armadillos."

Jim Hightower

From: [Trana Rogne](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: PP3
Date: Saturday, October 24, 2015 4:45:09 PM

Commenter 163 cont.

Summary of Comments on TranaRogne_Commenter163y_Email12.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/1/2015 12:42:26 PM -06'00'
Commenter 163 cont.

Author: Medopera Subject: Highlight Date: 4/6/2016 10:59:31 AM
Comment ID: 163y
Topic: Proposed Project, Funding
Unsubstantive

Diversion Authority Approves P3 Project Delivery Method

- See more at:

<http://www.noodls.com/view/2B8A2541FBEDC30A5420FEFF46B88F1387201427?9520xxx1441249271#sthash.lSL9cJOv.dpuf>

"Keith Berndt, Cass County Administrator. "The Authority gets schedule and cost certainty. It delivers the best value for the public's money, provides performance guarantees and long-term warranties that otherwise would not be available, promotes delivery innovation, and shortens the schedule to achieve flood risk reduction sooner than we otherwise could."

"The portions of the Project that the USACE will implement through traditional methods are collectively referred to as the Southern Embankment and Associated Infrastructure (SEAI)".

The Corps will build the Southern Embankment and Associated Infrastructure (SEAI)", the implication is that the Corps does not have any "long-term warranties"

PPP Delivery Goals, (among others)

"Innovative design, construction, and financing that results in cost savings and schedule improvements.

As if the Corps design is open to innovative design? The innovative design will only result in higher costs as the design work is far along.

Risk assignment, including long-term operation and maintenance by the PPP Developer."

"Risk assignment taken by the PPP Developer,"

If the federal government can not be expected to take the risk assignment who is finically able to.

Page: 2

Author: Medopera Subject: Highlight Date: 12/1/2015 12:45:43 PM -06'00'
Comment ID: 163y cont.

"The long-term operation and maintenance by the PPP provider"

The finical ability to provide the long term maintenance and operation by the PPP provider must be assessed before the tax payer accedes to a private provider for these services.

The F-M diversion project must not be allowed to move forward until there adequate long term warrantee of the ability to provide the services as part of any PPP plan.

Trana Rogne

5477 Co Rd #1

Kindred ND 58051

--

Trana

"The middle of the road is for yellow lines and dead
armadillos."

Jim Hightower

From: [Trana Rogne](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: comment
Date: Saturday, October 24, 2015 6:13:20 PM

Commenter 163 cont.

Summary of Comments on TranaRogne_Commenter163z_Email13.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/1/2015 12:47:38 PM -06'00'
Commenter 163 cont.

Author: Medopera Subject: Highlight Date: 4/19/2016 1:48:30 PM
Comment ID: 163z
Topic: Hydrology and Hydraulics, Expert Opinion Evaluation Panel

"On May 16, 2010 the Fargo Forum published an article that indicates that the Corps, but not FEMA, was raising the 100-year flood plain level to 42.4 feet. The 2010 Forum article quotes Craig Evans of the Corps, commenting on the Corps' process. Evans stated that it was an "unusual move for the Corps, and one that does not translate to other cities along the Red River. It's something that seems to be occurring at Fargo and Moorhead that isn't necessarily transferable to any other place."

Other reference

<http://www.claimsjournal.com/news/midwest/2010/05/17/109911.htm>

The new estimate was based on the amount of water flowing through the Red River, how often it floods and how high the water rises as it flows through the cities, said the corps' Craig Evans. It takes into account last year's record flooding.

The corps had set the estimate at 39.3 feet based on an analysis of Red River basin records dating back to the late 1800s. But, Evans said, the Fargo-Moorhead area has been plagued by wet conditions since the 1940s, so the corps worked with a panel of experts to come up with the new estimate accounting for the wet period.

Evans called it an unusual move for the corps, and one that doesn't translate to other cities along the Red River.

"It's something that seems to be occurring at Fargo and Moorhead that isn't necessarily transferable to any other place," he said.

"The EOE level was only for Fargo-Moorhead and they had wet conditions. --- isn't necessarily transferable to any other place'.

This is not believable proposition. That only Fargo-Moorhead is "Wet

Now it is transferable to any other place.

Trana Rogne

5477 CoRd #1

kindred ND 58051

This page contains no comments

--

Trana

"The middle of the road is for yellow lines and dead
armadillos."

Jim Hightower

From: [Evans, Craig O.MVP](#)
To: [*Review, Environmental \(DNR\)](#)
Cc: [Townley, Jill \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS (UNCLASSIFIED)
Date: Thursday, October 22, 2015 2:00:20 PM
Attachments: [151022_USACE_Comment_Letter_on_Draft_MnDNR_EIS_Fargo-Moorhead.pdf](#)
[USACE_Detailed_Comments_on_FMM_StateDEIS_151022.pdf](#)

Commenter 164

Summary of Comments on USACE_Commenter164_1-119_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/4/2015 9:26:05 AM -06'00'
Commenter 164

Author: Date: Indeterminate

Author: Date: Indeterminate

Classification: UNCLASSIFIED
Caveats: NONE

Ms. Townley,
Comments from the US Army Corps of Engineers, St. Paul District, are attached in two PDF files. One file is a summary letter, and the second file contains our detailed comments.

You will receive official paper copies of both documents via the Postal Service.

You may use the following address as our official address for comment tracking purposes:

Ms. Terry Williams, Project Manager
USACE, St. Paul District
180 Fifth Street East, Suite 700
St. Paul, MN 55101-1678

Classification: UNCLASSIFIED
Caveats: NONE

Author: Medopera Subject: Sticky Note Date: 12/4/2015 2:29:04 PM -05'00'
Comment ID: 164-1 cont. - see attached spreadsheet.

Author: Medopera Subject: Sticky Note Date: 12/4/2015 2:31:10 PM -05'00'
Comment ID: 164-26 and 164-81 cont. see spreadsheet.



DEPARTMENT OF THE ARMY
ST. PAUL DISTRICT CORPS OF ENGINEERS
1400
ST. PAUL, MN 55101-1010

OCT 2 2015

CENM/PLMB

Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Wetter Resources Division, DNR
500 Lafayette Road
St. Paul, MN 55155-4025

SUBJECT: Comments on Draft EIS Farg, Moorhead Flood Risk Management Project by
Minnesota Department of Natural Resources, dated September 2015

Dear Ms. Townley:

The Corps of Engineers is providing these comments as part of the public review of the subject Draft Environmental Impact Statement (DEIS). Our detailed comments are provided in the attached spreadsheet, which includes both substantive and editorial comments. This letter highlights our primary concerns.

Purpose and Need

Throughout the DEIS, whenever the project purpose is mentioned, it is described as being "developed by the Diversion Authority," "the proponent's defined Project purpose and need," or "as defined by the Diversion Authority," without any acknowledgment of DNR's role in establishing the purpose and need. The purpose and need statements were sufficient to several discussions with DNR, and DNR concurred that the statements were sufficient to support the EIS process. To repeatedly state only that it is the Diversion Authority's purpose and need indicates that DNR has no role and does not necessarily agree that the stated purpose and need are reasonable. If DNR believes the purpose and need are not reasonable or would adversely affect neighboring the Project, that should have been disclosed prior to finalizing the Scoping Decision Document and commencing work on the EIS.

Sovereign Immunity and Pre-emption

The doctrines of sovereign immunity and pre-emption may apply to certain State and local regulations related to the Project and may be applicable to permitting requirements for Class I Dams and flood plain management. To accurately communicate these legal issues, we have requested that DNR include the following statement in the DEIS: "In implementing a federal project, the USACE is required to comply with State and local laws, regulations and ordinances only to the extent specifically required by federal law." As both the Corps and the Sponsors are committed to working with State and local agencies and ensuring the diversion project is constructed and operated in a safe and environmentally-sound manner, we anticipate complying with permit conditions to the

Author: Medopera Subject: Sticky Note Date: 4/8/2016 12:22:31 PM
Comment ID: 164-119
Topic: Federal Executive Order 11988, Compliance

Author: Medopera Subject: Sticky Note Date: 12/4/2015 2:32:18 PM -05'00'
Comment ID: 164-25, 164-43, 164-45, and 164-57 cont, see spreadsheet

Author: Medopera Subject: Sticky Note Date: 4/8/2016 12:23:01 PM
Comment ID: 164-118
Topic: FEMA, CLOMR

extent practicable, whether or not the laws or regulations apply to a Federal project. We will continue to work cooperatively with DNR in assessing and developing the proposed diversion project.

-2-

Corps' Regulatory Requirements under Section 404 of the Clean Water Act

The DEIS makes several incorrect statements about the Corps' regulatory requirements and procedures under Section 404 of the Clean Water Act as they apply to this Federal project. Many of our detailed comments address these concerns. We would like to work closely with DNR as the EIS is finalized to ensure that statements concerning Corps' regulatory requirements are accurate.

Floodplain Mitigation

As acknowledged in the DEIS, the Corps, the Project Sponsors, and FEMA are currently working together to determine how Conditional Letter of Map Revision (CLOMR) requirements will apply to the project. Statements in the EIS that the project must comply with 44 CFR 65.7 and that the CLOMR process will require mitigation for impacts greater than 0.00 feet may be inconsistent with the ultimate requirements for the diversion project. FEMA and the Corps have developed the "FEMAMUSACE Coordination Plan" (Appendix F of the DEIS), which defines a floodplain revision reach based on the locations where pre- and post-project water surfaces differ by six inches. Details of anticipated floodplain impacts from the Project and proposed mitigation will be included in the CLOMR request to FEMA. additional hydraulic modeling is completed.

Executive Order (EO) 11988

In the scoping document that preceded the development of the DEIS, the DNR committed to addressing compliance with EO 11988. The Project authorized by Congress in WRRDA 2014 fully complies with EO 11988. Requirements of the Executive Order include determining whether a project must be located in the floodplain, minimizing potential harm to the floodplain consistent with agency regulations, and notifying the states and the public that the project must be located in the floodplain. As a flood risk management project, the Project must be located in the floodplain. Impacts to the floodplain were minimized, consistent with the purpose of minimizing flood risk and damages. For example, the alignment closely tracks the Shivelyne Diversion in the western portion of the Project, instead of taking additional land out of the floodplain to the west (see section 3.7.3.6 of the Federal EIS). The Corps thoroughly described floodplain impacts, including Executive Order 11988 implications, in the Federal EIS (see sections 3.8.3.4.5 and 5.2.3.2.10 in particular), and those impacts were disclosed to the states and the public through meetings and the document itself.

Although the Project would remove more land from the floodplain than other possible alternatives, such as the no action alternative, it also protects more people and structures than those alternatives, which is the purpose of the project. The Executive Order is a federal issue between the President and the Executive agencies, and no Federal agencies raised EO 11988 as an issue during final review of the Federal EIS; neither the U.S. Environmental Protection Agency nor the Federal Emergency Management Agency (FEMA) provided any comments on the Federal EIS or Chief's Report regarding EO 11988.



-3-

Unbalanced Comparisons

The Corps has several concerns about how the impacts of the Northern Alignment Alternative are described in the DEIS and compared to those of the Project. In general, the two plans are very similar, and differences in environmental impacts are minor. The Corps considered an alignment similar to the NAA and dismissed it, as described in the 2013 Supplemental Environmental Assessment. The DEIS presents the fact that NAAs is significantly more expensive, provides less economic benefits, and impacts a larger number of people, but it repeatedly discounts economics as a rationale for making permitting decisions. The DEIS includes comparisons of the ease of obtaining a CLOMR, socioeconomic effects of the Conistock levee, and potential impacts to fish passage on Wolverine Creek that are subjective and appear to favor NAA inappropriately. The DEIS describes the difference in the number of cameleons impacted by each plan (fewer with NAA) but omits relevant information to compare the magnitude and frequency of those impacts (far less with the Project). Our specific comments include recommendations to address these concerns and improve the balance in the Final EIS and provide more complete information for use in the permitting process.

Conclusion

We appreciate the great effort DNR has put forth in preparing this EIS. We are also grateful for the opportunities we have had to provide input and share information developed during the Federal feasibility study and design phases. We look forward to working closely with DNR as the Project proceeds toward construction. Thank you for considering our input regarding the DEIS.

Sincerely,

Judith L.A. Deahamais PE
Deputy for Programs
and Project Management
St. Paul District
U.S. Army Corps of Engineers

Enclosure

Project Name: Fargo Moorhead Flood Risk Management Project
 Document Name: DEIS Review
 Date Issued: September 14, 2015
 Reviewer(s): Gnabaisk, Evans, Hunt, Buesing, Sobiech, Stefanik, Smith, Williams, Soileau
 Review Comment Due Date: October 28, 2015

USACE COMMENTS 22-OCT-15

Com ment No.	Reviewer Initials	Chapter/ Section/ Appendix/ Figure	Table topic area, Alternative, Page # Bullet #	Reviewer Comments	Reviewer Requested Action	Requires Changes to: (list other areas in EIS this comment may need to be
1	MMH-COE	Project	ES-9	Throughout the DEIS, whenever the project purpose is mentioned, it is described as being "developed by the Diversion Authority", "the proposer's defined Project purpose and need", or "as defined by the Diversion Authority", without any acknowledgment of DNR's role in establishing the purpose and need. The purpose and need statements were subject to several discussions with DNR, and DNR concurred that the statements were sufficient to support the EIS process. To repeatedly state only that it is the Diversion Authority's purpose and need indicates that DNR had no role and does not necessarily agree that such a purpose and need is reasonable. If DNR believes the purpose and need are not reasonable or would adversely affect permitting the Project, that should have been disclosed prior to finalizing the Scoping Decision Document and commencing work on the EIS.	DNR should describe in Section 1.4 of the Final EIS the process and rationale DNR used to assess the purpose and need statements prior to conducting an extensive and costly EIS effort. Consider referring only to "purpose" rather than "Diversion Authority's purpose" after describing in Section 1.4 how these statements were developed.	Pages ES-25, 1-5 (1.4), 2-18 (2.2.1.2), twice on 2-21 (2.2.1.3), 2-23 (2.2.1.3.2), 5-1 (5.1), 5-2 (5.1.1), 5-2 (5.1.2), 5-3 (5.1.3)
2	AWB	Executive Summary	ES-12 Dam	The project design is not based on one single event as suggested by the last sentence of the second paragraph of the Dam section.	Delete "design capacity of the Project" such that the last sentence of the second paragraph of the Dam section reads, "This portion of the dam would act as an emergency spillway for extreme events that exceed the 0.2-percent chance (i.e., 500-year flood)."	

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Com ment No.	Reviewer Initials	Chapter/ Section/ Appendix/ Figure	Page #	Table topic area, Alternative, Bullet #	Reviewer Comments	Reviewer Requested Action	Requires Changes to: (list other areas in EIS this comment may need to be
3	AWB	Executive Summary	ES-14	Staging Area	The first sentence incorrectly states that 225,000 acre-feet of storage is required before directing it to the connecting channel. It also incorrectly focuses on just the 500-year flood. 225,000 acre-feet is the total amount of storage in the staging area for both the 100-year and 500-year floods (they both have a staging area elevation of 922.2), and the connecting channel fills as the rest of the staging area fills.	Replace the first sentence with the following two sentences: "In order to minimize downstream impacts, an additional 150,000 acre-ft of storage is required upstream of the diversion for the 100-year flood. Roughly 32,000 acres is required for the storage needed for project operation."	
4	AWB	Executive Summary	ES-24	No Action Alternative (with Emergency Measures) The No Action Alternative (with Emergency Measures) is similar	Last three sentences on page ES-24 incorrectly imply that FDR projects would be accredited if not for the Corps' EOE hydrology. Even a standard update of the hydrology would prevent FDR projects from being accredited by FEMA.	In the last three sentences on page ES-24, replace "EOEP" with "updated".	
5	AWB	Executive Summary	ES-27	Staging Area	The first sentence of the "Staging Area" section incorrectly states that approximately 150,000 acre-feet of storage is required. What's required is 150,000 acre-feet of additional storage.	In the first sentence of the "Staging Area" section, replace "150,000 acre-feet of storage" with "150,000 acre-feet of additional storage".	
6	COE	Executive Summary	ES-29	ES Table 2, Proposed Mitigation, first bullet	Incorrectly says that farmsteads with more than 2 feet of flood inundation would be considered for nonstructural measures. Any structures with more than 2 feet of inundation would be buyouts.	Delete last 2 sentences of this bullet: "Farmsteads . . . feasible"	

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7	COE	ES	ES-30 ES Table 2, Proposed Mitigation, first bullet	First bullet says "All inundated land within the staging area would be mapped as FEMA floodway." FEMA/USACE Coordination Plan says "The areal extent of flood inundation required by the Project for operation in the Staging Area will be mapped as floodway . . ." Only the portion of the inundated area that is required for operation of the project would become floodway, per the FEMA/USACE Coordination Plan. The floodway boundary will be defined in the CLOMR request.	Replace existing bullet with the quote from the FEMA/USACE Coordination Plan: "The areal extent of flood inundation required by the Project for operation in the Staging Area will be mapped as floodway."	
8	AWB	Executive Summary	ES-30 ES Table 3, Column 3, First bullet	Bank failures occur under existing conditions and will continue to occur under project conditions.	First bullet should be modified to indicate that Project operations should only be adjusted if the project makes conditions worse.	
9	JS/rss	Executive Summary	ES-30 ES Table 3 3rd Column	It is stated that "no less than three pre-construction surveys should occur in the next five years." USACE does not agree with this. As discussed in geomorphic monitoring work group meetings and adaptive management group meetings, three new complete monitoring data sets pre construction may not be necessary --and so should not be considered a minimum requirement --due to the availability of existing data and the generally slow rate of change in the system being investigated. It may also not be feasible based on resourcing, weather, and schedules. The minimum is two, not three.	Change wording to: "Cross section data sets...should be obtained two to three times in the next 5 years before the project is constructed..."	Also applies to Table 6.3, page 6-10

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10	JS/rss	Executive Summary	ES 31 ES Table 3 3rd Column	It is stated that, "assessments should be completed by those trained in Rosgen III channel stability Assessments." USACE does not agree with this statement and have made this known during several AMMP meetings. USACE believes that there are other professionals in multiple agencies with sufficient knowledge and experience to conduct the surveys and analysis that are not certified through the DNR or other Rosgen courses.	Please reinstate the following more inclusive language that may have been lost unintentionally lost through the re-drafting processes: "Geomorphic Assessment Quality Assurance and Quality Control: The GMT will evaluate the standards of experience and sampling protocols that will be applied in the study. A system for identifying qualified people for data collection and analysis will be developed by the GMT as well as protocols for each of the data collection parameters listed in the monitoring plan."	Also applies to Table 6.3, page 6-11
11	rss	Executive Summary	ES 31 ES Table 3 3rd Column	"Data management analysis should use one consistent data management tool; recommended data management tool is the RIVERMORPH" is not the inclusive language included in the Geomorphic Monitoring Team documentation. Recommend revising to paraphrased version on right for table and longer version in Geomorphic Monitoring plan.	Suggest: "Data management analysis should use consistent data management tools used widely by agencies such as, but not limited to: RIVERMORPH data management software and DSS (Data Support System). Data tool choice and integration will be considered in the more detailed monitoring plan development.	Also applies to Table 6.3, page 6-11
12	AWB	Executive Summary	ES-32 ES Table 3, Column 3, 2nd bullet on page	The bullet indicates that LIDAR will be collected once every three years in the river corridor. It seems that this requirement could be relaxed similar to other requirements if problems are not observed.	Review this requirement to make sure that LIDAR needs to be collected once every three years regardless of whether problems are observed.	
13	COE	ES-37	ES-37 ES Table 11, Proposed Mitigation, Red River Connectivity	Table incorrectly says DA/USACE propose to build in-town levees to increase flows through town above 17,000 cfs. In-town levees are included in the Project to allow passing flows up to 17,000 cfs, but any additional flows higher than 17,000 cfs are not proposed by the DA or USACE.	Move this bullet to EIS Recommended column as DNR's proposal for potential future adaptive management.	

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Com ment No.	Reviewer Initials	Chapter/ Section/ Appendix/ Figure	Page #	Table topic area, Alternative, Bullet #	Reviewer Comments	Reviewer Requested Action	Requires Changes to: (list other areas in EIS this comment may need to be
14	JS	ES	ES-37	ES Table 11	It states that Fish community monitoring at all 23 sites from identified in the USACE assessment should be conducted, etc.. My comment is that from the original 23 sites the AMMP team has already decided to eliminate some of those sites and may add additional sites adaptively, we don't want to be tied to the original 23 sites.	Change the wording to say approximately 20 sites.	
15	COE	ES	ES-43	ES Table 17, Proposed Mitigation, Second bullet	Second bullet says "FEMA would require that the inundated portions of the staging area be designated as floodway." Only the portion required for operation of the project would become floodway, per the FEMA/USACE Coordination Plan. The floodway boundary will be defined in the CLOMR request.	Revise bullet to read as follows: "FEMA would require that the areal extent of flood inundation required by the Project for operation in the staging area be designated as floodway."	
16	VRG	Executive Summary, ES Table 20	ES-45	Governing Agency column, State Agencies: North Dakota, row 6	For "Section 106 Consultation," need to correct name of state agency	Change "North Dakota State Historical Society" to "Archaeology and Historic Preservation Division, State Historical Society of North Dakota (ND SHPO)"	Table 1.1 on page 1-6
17	VRG	Executive Summary, ES Table 20	ES-46	Governing Agency column, State Agencies: Minnesota, row 10	For "Section 106 Consultation," need to correct name of state agency	Change "Minnesota State Preservation Historic Office" to "Minnesota State Historic Preservation Office (MN SHPO)"	Table 1.1 on pages 1-6 and 1-7

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Com ment No.	Reviewer Initials	Chapter/ Section/ Appendix/ Figure	Table topic area, Alternative, Page # Bullet #	Reviewer Comments	Reviewer Requested Action	Requires Changes to: (list other areas in EIS this comment may need to be
					Add following entry to Definitions (based on 36 CFR 800.16(l)(1)): "Historic Property: Any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe that meet the National Register criteria."	
18	VRG	Definitions	D-18	Add "Historic Property" to Definitions section	This incorrectly says LPP in FFREIS was the ND35k plan. See FFREIS pages 105 & 118: LPP was 20k ND Diversion with upstream staging and storage.	
19	COE	Definitions	D-20	Locally Preferred Plan	Need to correct term for Phase II cultural resources work	
20	VRG	Definitions	D-23		Term "Phase II Cultural Resources Survey" should be "Phase II Cultural Resources Evaluation"	
21	VRG	Definitions	D-23	Need to complete definition of "Phase III Cultural Resources Mitigation"	Add the following sentence to the end of the existing definition -- "For NRHP-eligible architectural properties (buildings and structures), mitigation typically involves scaled drawings (elevations, planviews, cross-sections), large-format photographs (4" x 5" negatives), and a detailed history of the building or structure.	
22	MMH		D-26	The definition of "waters of the state" is incorrect. The Corps does not regulate "waters of the state". It regulates "waters of the U.S." Also, FYI, a jurisdictional determination is not what makes a waterbody a water of the U.S.	Delete first sentence of the definition.	

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Com ment No.	Reviewer Initials	Chapter/ Section/ Appendix/ Figure	Table topic area, Alternative, Page # Bullet #	Reviewer Comments	Reviewer Requested Action	Requires Changes to: (list other areas in EIS this comment may need to be
23	COE-MMH	1.5	1-6	USACE provided the following statement during review of the PDEIS: "In implementing a federal project, the USACE is required to comply with State and local laws, regulations and ordinances only to the extent specifically required by federal law". A softened and somewhat confusing statement is included just before Table 1.1 on page 1-6, but I suggest the more straightforward sentence be included.	Replace the last sentence before Table 1.1 with the following: "In implementing a federal project, the USACE is required to comply with State and local laws, regulations and ordinances only to the extent specifically required by federal law."	3.14.2
24	TS	1.5.1.1	1-8	1st Paragraph The Corps regulatory program implements Section 404 of the CWA and Sections 9 and 10 of the RHA. The ESA and Section 106 of the NHPA are not laws we implement. We must comply with those laws and with many other applicable Federal laws but to say that the regulatory program includes these is an incorrect statement.	clarify in text.	
25	TS	1.5.1.1	1-8	1st paragraph, last sentence The last sentence should be revised to read "...the USACE would be required to make a determination that the project complies with the Section 404(b)(1) guidelines."	The last sentence should be revised to read "...the USACE would be required to make a determination that the project complies with the Section 404(b)(1) guidelines."	
26	MMH	1.5.7.3	1-13	As previously discussed with DNR, no determination has been made whether there is a waiver of sovereign immunity for a dam safety permit, particularly with regard to the Corps' construction of the dam.	Instead of stating that a dam safety permit "would be" required, it should state "may be" required.	ES Table 18, section 3.15.

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Com ment No.	Reviewer Initials	Chapter/ Section/ Appendix/ Figure	Table topic area, Alternative, Page # Bullet #	Reviewer Comments	Reviewer Requested Action	Requires Changes to: (list other areas in EIS this comment may need to be
27	AWB	2.1.1.5	2-4	The first sentence of section 2.1.1.5 incorrectly states that 225,000 acre-feet of storage is required before directing it to the connecting channel. It also incorrectly focuses on just the 500-year flood. 225,000 acre-feet is the total amount of storage in the staging area for both the 100-year and 500-year floods (they both have a staging area elevation of 922.2), and the connecting channel fills as the rest of the staging area fills. What's important is the additional storage provided by the project. The additional storage required to minimize downstream impacts is approximately 150,000 acre-feet for the 100-year flood (225,000 - 150,000 = 75,000 acre-feet of existing floodplain storage in the staging area for the 100-year flood.	Replace the first sentence of section 2.1.1.5 with the following two sentences: In order to minimize downstream impacts, an additional 150,000 acre-ft of storage is required upstream of the diversion for the 100-year flood. Roughly 32,000 acres is required for the storage needed for project operation.	
28	AWB	2.1.1.6	2-6	The first sentence on page 2-6 is not correct in describing the diversion channel outlet structure as a spillway.	The first sentence on page 2-6 should be changed to be consistent with the description of the diversion outlet structure provided on ES-15: "The diversion outlet structure, located where the diversion channel returns to the Red River in Wiser Township (Cass County), North Dakota, would consist of a rock ramp with a crest width of 300 feet designed to allow fish passage"	

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Com ment No.	Reviewer Initials	Chapter/ Section/ Appendix/ Figure	Page #	Table topic area, Alternative, Bullet #	Reviewer Comments	Reviewer Requested Action	Requires Changes to: (list other areas in EIS this comment may need to be
29	MMH	2.1.1.11	2-10		Text on page 2-10 omits the depth of flooding in Comstock without a ring levee. Text on page 3-234 says the 100-year flood depth at Comstock is "up to one foot without the levee." This information is provided for the OHB levee (8 feet), and since the elevations are the same the reader may infer that the inundation at Comstock would also be around 8 feet. Since this is not the case, information should be provided on how deep the water would be at Comstock so the reader can compare the impacts.	Revise text on page 2-10 to say: "Without a ring levee, operation of the Project would cause up to 1 foot of new inundation to 26 residential structures in this community during the 100-year flood." Per text on page 3-234.	
30	COE	2.1.1.10	2-10	Bottom of 2nd paragraph	Text incorrectly describes overtopping of the OHB levee as a "breach." The term "breach" means that the levee has been degraded from erosion or seepage. The intent with OHB levee would be to safely allow "overtopping" at a point where erosion would be prevented, thus avoiding a "breach" of the levee.	Replace the term "breach" with "overtop"	
31	AWB	2.2.2.1.2	2-27		Last three sentences on page 2-27 (last word of the third sentence is on page 2-28) incorrectly implies that FDR projects would be accredited if not for the Corps' EOE hydrology. Even a standard update of the hydrology would prevent FDR projects from being accredited by FEMA.	In the last three sentences on page 2-27, replace "EOEP" with "updated".	
32	VRG	2.0/Section 2.2.2.2, line 10	2-35	page 2-35	Include wording that the south boundary of the NAA upstream staging area is up to 3 miles farther north than the south boundary of the proposed Project staging area and reference Figure 7.	Add sentence after "connecting channel proposed location" -- "The southern boundary of the NAA staging area is approximately 1.5 to 3 miles north of that boundary for the proposed Project staging area (Figure 7)."	Section 2.2.2.5 on page 2-35 and Section 5.1.3 on page 5-2
33	AWB	3.1.2.1	3-7		The last sentence on page 3-7 incorrectly states that the Red and Wild Rice River control structures would be allowed to rise to 922.2 before the peak of an event greater than the 100-year flood.	Replace the paragraphs of section 3.1.2.1 with the paragraphs of the Project Operation section, section 2.1.1.14.	

This page contains no comments

Com ment No.	Reviewer Initials	Chapter/ Section/ Appendix/ Figure	Page #	Table topic area, Alternative, Bullet #	Reviewer Comments	Reviewer Requested Action	Requires Changes to: (list other areas in EIS this comment may need to be
34	COE	3.2.2.1	3-19	FEMA revision reach boundary	Description of the FEMA revision reach is incorrect.	Replace current text with corrected text from the FEMA/USACE Coordination Plan: "The downstream end of the revision reach is at the outlet of the diversion channel. The upstream end of the reach will be near model station 2650000 on the Red River, approximately 2 miles east and 0.75 miles north of Christine, ND. Christine, ND is within the revision area. The upstream end of the reach on the Wild Rice River coincides with the northern boundary of Richland County, ND."	
35	COE	Table 3.4	3-21	Table 3.4, Mitigation requirement for areas with more than 2 feet flood depth.	Text only mentions homes, but all structures in this category would be acquired.	Replace "homes" with "structures"	
36	COE	Table 3.4	3-22	Table 3.4, Mitigation requirement for Staging Area	Mitigation requirement says "Mapped as FEMA floodway -- flowage easements would be obtained." Only the portion of the inundated area that is required for operation of the project would become floodway, per the FEMA/USACE Coordination Plan. The floodway boundary will be defined in the CLOMR request.	Replace existing text with : "Areal extent required for operation mapped as floodway, other inundated areas mapped as floodplain-- flowage easements would be obtained."	

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Com ment No.	Reviewer Initials	Chapter/ Section/ Appendix/ Figure	Table topic area, Alternative, Page # Bullet #	Reviewer Comments	Reviewer Requested Action	Requires Changes to: (list other areas in EIS this comment may need to be
37	rss	3.3.1.4.2	3-31 Cross section comparison	Final sentence should probably be omitted. "This indicates that the 30 reaches exhibited variable rates of erosion, as detected using the data available, and ranging from -3.2 and 1.6 feet." Your text shows that the maximum (1.6) in the quote was on a cross section with erroneous data and the minimum (-3.2) was on a section with structure or other change that wouldn't be representative of fluvial erosion processes. So the sentence-- as a summary statement-- misleads the reader as to the magnitude and frequency of the changes in channel.	Remove the final sentence. The data table and explanatory paragraphs preceding give the more accurate portrayal of the data.	
38	AWB	3.3.3	3-33	The last sentence of section 3.3.3 incorrectly indicates that the flow through the F-M urban area is 17,000 cfs for all flood events greater than the 10-percent chance flood.	Delete "to 17,000 cfs at the Fargo gage in the F-M urban area" from the last sentence of section 3.3.3.	
39	COE	3.3.3.1.2	3-35 Last sentence of first paragraph	Text incorrectly says: "... which is equal to or larger than the bankfull discharge of the Red River or a 10-year flood."	Delete "or a 10-year flood" from this sentence.	
40	MMH	3.4.1.2	3-44	The reference to 40 CFR 230.3 is too broad in this context. It is referenced as identifying isolated wetlands and other waterbodies that are not jurisdictional. 230.3 actually defines waters of the U.S., among many other terms. If the intent is to reference waters that are not jurisdictional, I would cite to 40 CFR 230.3(o)(2), which defines water that are not jurisdictional.	Change the reference to 40 CFR 230.3 to 40 CFR 230.3(o)(2).	

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41	MMH	3.4.1.2	3-44	The last paragraph in section 3.4.1.2 regarding jurisdictional determinations is incorrect. The Corps does not assert regulatory authority through a jurisdictional determination. A jurisdictional determination can be requested by a property owner, and informs the landowner of the Corps' view that a particular property contains waters of the United States. In addition, if a waterbody is jurisdictional, it does not mean all impacts to the waterbody are regulated under Section 404 of the CWA. Only discharges of dredged or fill material are regulated under Section 404.	Suggested revision is to delete this paragraph, as it contains multiple incorrect statements and is not relevant to this project.	
42	MMH	3.4.2.4	3-49	The last sentence of the first paragraph indicates that Comstock is not anticipated to have "significant inundation" and therefore a ring levee "may not be needed" with the NAA. In Table 5.1, it is much more definitively stated that a Comstock ring levee would not be needed with the NAA (i.e., "Comstock ring levee would not be required"), and therefore the NAA has fewer impacts. If it is unclear if Comstock will need a ring levee with the NAA, or will be subject to additional unprotected flood risk with the NAA, then that needs to be made more clear throughout, including in Table 5.1. DNR should ensure that its analysis is neutral and does not unfairly preference the NAA by assuming the best for the NAA, particularly without acknowledging the uncertainties.	Soften the language in Table 5.1 (and elsewhere, if applicable) to indicate that a Comstock levee "may not be needed" and therefore the NAA "may" avoid the impacts with the ring levee, and also include that while Comstock may not have "significant" additional inundation with the NAA, it may have some inundation and therefore would be placed at additional risk with the NAA unless a ring levee is built.	

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43	TS	3.4.3	3-50	1st paragraph	The statement, "USACE compensatory wetland mitigation is regulated by 33 CFR 332.3(n)(1) which describes use of a financial assurance" is an oversimplification and perhaps inaccurate summary of the USACE mitigation process for this project. The requirement of a financial assurance is not the driver behind decisions regarding compensatory mitigation. A financial assurance is used to ensure a high level of confidence that mitigation will be completed and maintained in accordance with the applicable performance standards. Since that same paragraph in the regulation gives the District Engineer the flexibility to determine that a financial assurance is not necessary we would not refer to this section as being critical to the mitigation process.	Instead, we suggest the following, "USACE compensatory mitigation policy is directed at replacing the lost functions and values associated with unavoidable impacts to aquatic resources, including wetlands. The standards and criteria for compensatory mitigation required by CWA Section 404 permits are contained in the Federal Mitigation Rule at 33 CFR 332."	
44	TS	3.4.3	3-50	2nd paragraph	The reference to Minnesota Rule part 8420.0552, subpart 9(A) is incorrect. The correct reference is to Minnesota Rule part 8420.0522, subpart 9(A). This statement should also be clarified so that the reader understands that the local government unit can waive the requirement if it determines the financial assurance is not necessary to ensure successful replacement.	Clarify the statement and change the number to the correct rule part.	
45	TS	3.4.3	3-50	3rd paragraph, final sentence.	It is more accurate to state the North Dakota Regulatory Office of the U.S. Army Corps of Engineers Omaha District has responsibility for implementing the CWA Section 404 permitting program in North Dakota, including decisions regarding the type and amount of compensatory mitigation required to offset unavoidable impacts to waters of the United States.	Change accordingly using text in comment.	

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46	TS	3.4.3	3-50	4th paragraph	This paragraph contains a statement indicating that, under WCA rules, there are no wetland bank options in Minnesota that would provide the necessary credits for project impacts occurring in Minnesota. This statement seems unfounded because (1) the Board of Water and Soil Resources wetland banking tool does identify several banks that have credits available that would satisfy at least some of the WCA mitigation requirement.	This statement in the EIS should be clarified and/or revised.	
47	TS	3.4.3	3-50	6th paragraph	The second sentence of this paragraph states that the wetland mitigation plan prepared by the Corps is "habitat based with a goal of replacing impacted wetland habitat and certain functions rather than designing the plan purely on wetland design criteria." This statement is inaccurate in that the mitigation for non-forested wetlands proposed to be in the diversion channel is based on wetland function and not on habitat (see Sections 2.5 and 3.3 of the Corps AMP). The forested wetland mitigation is habitat based since the mitigation requirement was determined using the U.S. Fish and Wildlife Service Habitat Evaluation Procedure and the quality of the mitigation will be evaluated using the same tool (see sections 2.4 and 3.3 of the Corps AMP).	The EIS should be revised so that it is clear to the reader that there are two methods being used for wetland mitigation.	
48	JS	3.4.3	3-51	1st paragraph	36-mile diversion channel should be changed to say 30 mile diversion channel and 6 mile connecting channel.	Recommend changing this to be consistent with the rest of the document.	
49	TS	3.4.3	3-51	first paragraph	Per the previous comment re: 6th paragraph on page 3-50, the references to a habitat-based approach should be revised/clarified in this paragraph.	The EIS should be revised so that it is clear to the reader that there are two methods being used for wetland mitigation.	

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50	TS/JS	3.4.3.1	3-51	first paragraph The blue books referred to in this section are species-specific habitat models developed by the U.S. Fish and Wildlife Service for use in the Habitat Evaluation Procedures (HEP) the agency developed to evaluate potential project impacts. For clarification, the models were previously developed by the U.S. Fish and Wildlife Service and were used by the St. Paul District during the feasibility study.	Omaha District should be removed from the paragraph and MN DNR, ND Game and Fish should be added since all parties concurred to the approach.	
51	TS	3.4.3.1	3-51	third paragraph The EIS suggests that temporal losses were not considered, or should be considered further in the context of impacts to forested wetlands. For clarification, the HEP analysis completed by the St. Paul District did take into consideration the temporal lag associated with developing forested mitigation sites (see the AMP). The commitment in the FEIS to a 2:1 ratio for mitigation for these impacts is partly attributable to an appreciation of the time it takes for these areas to reach a mature condition.	Revise and clarify.	
52	JS	3.4.4	3-52	3rd paragraph Needs more elaboration on what type of monitoring is being discussed here.	Describe type of monitoring that is being recommended.	
53	TS	3.4.3.2.1	3-52	first paragraph The first sentence of this paragraph states that the wetland mitigation in the diversion channel follows a habitat-based approach. This is an incorrect statement since the mitigation in the diversion channel is functionally based and evaluated using MNRAM.	This statement should be revised or deleted.	

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54	TS	3.4.3.2.1	3-52	2nd paragraph	The second sentence of this paragraph indicates that some wetland impacts associated with the project would be self mitigating when the impacted wetland is lowered topographically and replaced in the 2 percent slope area adjacent to the low flow channel. For clarification, the Corps did not consider these impacts to be "self-mitigating" as a result of the wetland development in the diversion channel. They were simply viewed as wetland impacts that resulted in a loss of the resource and that impact was determined to require compensatory mitigation. The term "self-mitigating" is not utilized when identifying impacts and determining mitigation requirements under CWA Section 404.	References to self mitigating should be deleted.	
55	TS	3.4.3.2.1	3-52	2nd paragraph	The last sentence in this paragraph needs further clarification or should be deleted. Currently it suggests that the mitigation plan to offset the impacts to non-forested wetlands is insufficient.	Needs further clarification, the mitigation plan to offset impacts to non-forested wetlands is sufficient.	
56	JS	3.4.3.2.2	3-53	Table 3.17	This information was updated in the SEA 2013, the impact numbers in the table is outdated.	Explain how these acres were determined.	
57	TS	3.4.3.2.2	3-53		This section should also contain a statement that the wetland impacts associated with the tieback embankment would also require mitigation under CWA Section 404.	Add additional statement.	
58	TS	3.4.3.2.3	3-54	first paragraph	This paragraph again references a habitat-based approach for development of the mitigation plan. The compensatory mitigation for wetlands was determined using a functional approach with MNRAM being the accepted tool for evaluating wetland functions.	Clarify	

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59	TS	3.4.3.2.3	3-54	first paragraph	The text should clarify that once credits were purchased from the DU ILF the non-Federal sponsor satisfied that portion of the mitigation requirement in the CWA Section 404 permit.	The text should clarify that once credits were purchased from the DU ILF the non-Federal sponsor satisfied that portion of the mitigation requirement in the CWA Section 404 permit.	
60	JS	3.6.1	3-67	Table 3.24	It should be pointed out that much of the 1780 acres (approximately 85%) of it is also cropland. Which would increase the acreage of cropland considerably.	This should be explained in the text.	
61	JS	3.6.2.1.3	3-70		I am not sure where 1200 acres of Type 1 wetland impacts comes from? The number should be over 1400 acres? Later in the document (Non-forested wetlands, page 3-124) there is a reference to approximately 85% of the impacted wetland is type 1 which also indicates the Type 1 wetland is over 1400 acres.	Explain where the 1200 acres comes from and why it is different then what is described in other areas of the document or change it to over 1400 acres to be consistent.	
62	JS	3.6.2.1.4	3-70		It should be pointed out that these impacts will also be mitigated for on a 2 to 1 basis just like the forested wetland land.	Add this information for clarification.	
63	ES	3.8	3-84	2nd paragraph	The QHEI isn't specific to macroinverts, it's a separate physical habitat characterization. Macroinverts used their own IBI.	Revise the statements to explain what QHEI and IBI are measuring.	
64	JS	3.8.1.1	3-85	Last Paragraph	It is stated that data is not available for this river, I think it should also say that there is no intention of sampling this river in the future as well.	Add a sentence stating that there are no plans to sample in the Lower Rush in the future.	
65	ES/JS	3.8.2.1.1	3-97	Table 3.41	We did not consider the habitat at the outlet structure as "lost" habitat, especially in the same context of habitat lost from abandonment. We identified it would be influenced, but not lost and not mitigated for (discussed in the main text and Att 6 of the USACE EIS). Information about impacts from constructing the outlet structure was addressed in the SEA and supplemental 404.	Differentiate between impacts of habitat effected from abandonment versus habitat effected at the outlet with rock placement.	

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66	COE	3.8.2.1.1	3-99	first sentence on page 3-99	The last paragraph on page 3-98 includes the duration of the 100-yr and 500-yr events, then first sentence on page 3-99 talks about "more substantial flood events above 17,000 cfs" resulting in "longer operation" and longer adverse conditions for fish. This sentence is redundant and implies higher impacts than would occur. The longest duration of impassable conditions is approx 14 days, as stated earlier in the paragraph.	Delete first complete sentence on page 3-99.	
67	ES	3.8.2.1.3 (and to a lesser extent 3.8.2.1.1)	3-105		Text states: The new features created by the Project are not considered aquatic habitat that would be used to offset the potential impacts.", This is a not exactly accurate. USACE Attachment 6 stated: "For the purpose of this assessment, it is assumed that habitat within the footprint will be completely lost, with mitigation to create or improve habitat nearby. In reality, some habitat would exist within the newly excavated channels leading into and out of project structures. These newly excavated areas will be evaluated during post-project monitoring to determine what habitat they provide. However, to be conservative with our impact assessment and mitigation estimates, it is assumed that existing river channel substantially modified or abandoned under the project will be permanently lost."	Clarify within the text that habitat within the newly constructed channels will be considered as habitat when fine tuning the mitigation needs for the final project. This will be part of Adaptive Management.	
68	AWB	3.8.2.1.3	3-109	Stranding in the Diversion Channel	The fourth sentence of the "Stranding in the Diversion Channel" section fails to mention the Maple River aqueduct. (1) Project features may not necessarily be located in uplands adjacent to existing river channels. There may be wetlands present in these areas that would be impacted by project features	In the fourth sentence of the "Stranding in the Diversion Channel" section, change "Sheyenne Rivers" to "Sheyenne and Maple Rivers". Clarify that features may be adjacent to the channels but may still require filling of wetlands.	
69	TS	3.8.3.1.1	3-112	first paragraph			

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70	JS	3.9.2.1.1	3-124	1st paragraph	It should be clear that yes USACE did include upland shelterbelts and other non-riparian wooded areas in the floodplain forest calculation but the total acres impacted when they are all combined is 131 acres and not 62 acres. There will be 62 acres of forested wetlands impacted.	Language should be added to make it clear that the 62 acres does not include shelter belts and other non-riparian wooded areas.	
71	COE	3.9.2.1.2	3-126	Last sentence of 4th paragraph on page 3-126	Text incorrectly says: "... would have long-term effects ..."; according to context of the sentence, the conclusion should be "would not have long-term effects."	Add "not" to this sentence.	
72	COE	3.9.2.1.2	3-127	Second paragraph on page 3-127	Text says: "Increased flow velocities and the extended duration ...". Flow velocities in the impounded area should not increase with operation of the project--only depths will increase.	Delete reference to "flow velocities" from this sentence.	
73	VRG	3.0/Section 3.12	3-144	3-144 to 3-164	If DNR chooses to update Cultural Resources site information in this section for the final EIS, will have to change cut-off date of June 19, 2015, at various places in this section and will also need to make changes to Tables 3.48, 3.49 and 5.1. If update Cemeteries information in this section, particularly in connection with St. Benedict's Cemetery, will have to make changes in sections 3.12.1.1.11, 3.12.2.1.6, and 3.12.2.4.1, as well as in tables listed. Changes may also need to be made to Figure 21.	Contact USACE staff for updated cultural information if necessary.	Table 5.1, Cultural Resources subsection is on pages 5-19 and 5-20
74	TLW/VRG	3.12.2.4.1	3-162	Cemeteries w/ NAA	Information should be added to this section to make it comparable to the discussion of cemeteries affected by the Project in Section 3.12.2.1.6 (page 3-160).	Add the depth and duration under NAA operation at St. Benedicts cemetery and the range of impacts at other affected cemeteries.	
75	COE	3.13.2.1.1	3-169	In-Town Levees and Floodwalls	The in-town levee and floodwall features are included in the Base No Action Alternative and should not be discussed as part of the Proposed Project.	Move this paragraph to the Base No Action discussion.	

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76	COE	3.13.2.1.1	3-170 Comstock Ring Levee	Details in this paragraph are incorrect. FEMA does not require 4 feet of freeboard, and it is not clear what it meant by saying an earthen levee would be constructed where the levee crosses Highway 2.	Investigate the details of the Comstock levee and revise this paragraph accordingly.	
77	AWB	3.13.3.1.1	3-176 Clay County, Minnesota	Clay County, Minnesota bullet list incorrectly does not include the raise of Hwy. 75.	Add "Hwy. 75 would be raised above the 100-year/500-year staging area elevation" to the bullet list.	
78	MMH	3.14.1	3-178	During review of the PDEIS, USACE proposed adding the following statement: "In implementing a federal project, the USACE is required to comply with State and local laws, regulations and ordinances only to the extent specifically required by federal law". A softened and somewhat confusing statement is included at the end of 3.14.3 on page 3-200. USACE prefers the more straightforward sentence be included in a more prominent location.	Add the following statement to the discussion of other laws and ordinances that may apply: "In implementing a federal project, the USACE is required to comply with State and local laws, regulations and ordinances only to the extent specifically required by federal law."	3.14.2
79	COE	3.14.2.4	3-200 First paragraph	Text incorrectly says: "The NAA tieback embankment would be located in Kurtz Township, which is the same as the Project." Project tieback embankment is in Holy Cross Township.	Delete "which is the same as the Project."	
80	COE	3.15.1.1	3-204 First paragraph on page 3-204	Text says a PE registered in MN must prepare the engineering documents for the dam. It is likely that application materials would include designs prepared by USACE, and therefore may not be prepared by a professional engineer registered in the state of Minnesota. This is allowed by Minn. Stat. 326.13(3) and the doctrine of Federal supremacy.	Clarify that the doctrine of Federal supremacy and Minn. Stat. 326.13(3) exempts engineers that practice solely as an officer or employee of the United States from the usual State professional registration requirements.	

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81	MMH	3.15.3.1	3-205	As DNR is aware, the Corps has sovereign immunity from many state and local requirements. Given that the parties have been working together, the Corps and the Department of Justice have not made a determination whether the Corps would be required to obtain a dam safety permit. The Corps intends to work with DNR and satisfy its concerns to the extent allowed and required by federal law.	No action, just a comment for the record.	
82	MMH	3.16.2.4.4	3-241	The last paragraph regarding community ring levees discusses only the negatives of a ring levee, without acknowledging that the ring levee may reduce stress or increase economic vitality because Comstock would be protected from the large floods it would currently be subjected to. In addition, why would the Project reduce economic vitality, when the ring levee would provide protection from floods the area is currently subjected to. Any negatives are purely speculative; if DNR is going to speculate, it should acknowledge the positive possibilities as well.	Acknowledge the positives of a ring levee, not just the possible negatives.	
83	COE	3.16.2.6.9	3-261	Benefited and Unbenefited Areas, first paragraph Text incorrectly says "5 percent chance flood (50-year flood)." A 50-year flood is a 2 percent chance flood.	Replace "5" with "2"	
84	COE	Table 3.102	3-276	Table 3.102, Mitigation requirement for Staging Area Mitigation requirement says "Mapped as FEMA floodway – flowage easements would be obtained." Only the portion of the inundated area that is required for operation of the project would become floodway, per the FEMA/USACE Coordination Plan. The floodway boundary will be defined in the CLOMR request.	Replace existing text with: "Areal extent required for operation mapped as floodway, other inundated areas mapped as floodplain-- flowage easements would be obtained."	
85	COE	4.2.2.2.1	4-11	Third sentence of this section Text incorrectly says "the magnitude of flood events would be limited up to a 10-year flood . . ." Should say "limited to", not "limited up to"	Delete "up"	

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86	MMH	5.1	5-1	First sentence, I believe you intend to reference Minnesota rules 4410.2300, subpart G. There is no subpart G of 4410.3900.	Change reference to 4410.2300.	
87	COE	Table 5.1	5-6	First bullet says "The CLOMR will likely be easier to obtain with NAA due to limited new inundation in Richland and Wilkin Counties." This statement is speculative and subjective. USACE does not expect significant problems obtaining a CLOMR for either project. There is no significant difference in the number of affected jurisdictions, and effects in Richland and Wilkin counties are relatively minor under both plans. This is not a measurable or significant issue of comparison, and should be deleted.	Delete this bullet.	
88	JS	5	5-11	Cover Types 4500 acres of cropland seems low, the project is actually impacting over 6,000 acres of cropland. Is this because the farmed wetlands aren't included?	Explain that there are more acres that are cropland but they are also wetland.	
89	JS	5	5-12	Cover Types I have mentioned this before but I am not sure where the 1200 acres comes from, I am thinking it is over 1400 acres?	Either explain where the 1200 acres comes from or change this number to over 1400 acres.	
90	TLW/VRG	Table 5.1	5-20	Cultural Resources, Context Context related to cemeteries is missing. Current comparison is based only on number of cemeteries and does not include context of the magnitude and frequency of impacts.	Add 2 bullets to Context column: 1) The 3 cemeteries dropped from the Project staging area (North Pleasant, Hemmes, and Comstock) are located 3.5 to 6 miles upstream of the Red River Control Structure. Project impacts would range from 0.3' to 1.7' and 2-5 days for a 100-year event. 2) Under the NAA, St. Benedict's cemetery would be located in the staging area one mile from the Red River Control Structure and experience several feet of inundation every time the Project is operated, approximately once every ten years, on average.	

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91	MMH	Table 5.1	5-25	<p>This states that "Under NAA, Comstock ring levee could allow for relocations of displaced residences, which could increase the tax base for the City and the school district." But in many other locations (including later in that column) it states that one of the benefits of the NAA would be that there would not be a Comstock ring levee, and therefore the NAA would have fewer impacts. Did DNR intend to state that under the Project the Comstock ring levee could allow for relocations, etc.? DNR should not claim that the NAA has benefits from there being no Comstock ring levee and also benefits from having a Comstock ring levee.</p>	<p>Correct sentence so it reads, "Under Project Comstock ring levee could allow for relocations of displaced residences, which could increase the tax base for the City and the school district." Add sentence that "Under Project, Comstock would be protected from flooding from larger flood events that it might otherwise be subject to, potentially reducing stress and increasing economic vitality."</p>	
92	MMH	Table 5.1	5-25	<p>The socioeconomic discussion states that the Comstock ring levee would cause stress, without acknowledging that the Comstock ring levee would alleviate stress from higher flood events that the city could otherwise be subject to. It is also likely that Comstock residents would have less stress under the Project than under the NAA, since with the Project they will have a ring levee protecting them and under the NAA they are relying on assurances that 100-year flood levels will not reach them and will have no protection from larger events.</p>	<p>Add sentence that "Under Project, Comstock would be protected from flooding from larger flood events that it might otherwise be subject to, potentially reducing stress and increasing economic vitality."</p>	

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93	COE	Table 6.2	6-9	Table 6.2, 100-year flood inundation, Proposed Mitigation	First bullet says "All inundated land within the staging area would be mapped as FEMA floodway." FEMA USACE Coordination Plan says "The areal extent of flood inundation required by the Project for operation in the Staging Area will be mapped as floodway . . ." Only the portion of the inundated area that is required for operation of the project would become floodway, per the FEMA/USACE Coordination Plan. The floodway boundary will be defined in the CLOMR request.	Replace existing bullet with : "Areal extent of flood inundation required for operation within the Staging Area mapped as FEMA floodway, other inundated areas within the Staging Area mapped as FEMA floodplain. Flowage easements would be obtained."	
94	JS	6	6-10	Table 6.3 Stream Stability	See comments regarding ES Table 3 that also apply to Table 6.3.	Revise text on pages 6-10 and 6-11 per comments about ES Table 3 above.	
95	COE	Table 6.10	6-18	Proposed mitigation column, Red River Connectivity row	Table incorrectly says DA/USACE propose to build in-town levees to increase flows through town above 17,000 cfs. In-town levees are included in the Project to allow passing flows up to 17,000 cfs, but any additional flows higher than 17,000 cfs are not proposed by the DA or USACE.	Move this bullet to EIS Recommended column as DNR's proposal for potential future adaptive management, if that was the intent of this bullet.	
96	JS	6	6-18	6.11 Fish Passage	Last column on the last row it says that all 23 sites will be monitored, this is not true we have already adaptively subtracted some of the sites that were monitored in the past. (lower rush river sites). As we move forward we may monitor 25, or 21 or whatever our information is telling us to monitor. It is an adaptive process I don't want to lock ourselves into a specific number.	Change the wording to say approximately 20 sites.	
97	MMH	Table 6.17	6-25	Proposed mitigation column	This states "The USACE has indicated regulations would be followed as required by federal law . . ." This incorrectly conveys that federal law requires compliance with regulations.	Change to "In implementing a federal project, the USACE is required to comply with State and local laws, regulations and ordinances only to the extent specifically required by federal law."	

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98	COE	Table 6.17	6-25 Table 6.17, Proposed Mitigation, second bullet	Bullet says "FEMA would require that the inundated portions of the staging area be designated as floodway." FEMA/USACE Coordination Plan says "The areal extent of flood inundation required by the Project for operation in the Staging Area will be mapped as floodway . . ." Only the portion of the inundated area that is required for operation of the project would become floodway, per the FEMA/USACE Coordination Plan. The floodway boundary will be defined in the CLOMR request. Recommend that The frequency of pre-project construction monitoring is a minimum of 2 rather than the stated 3, unless the 3 includes the existing data sets which will be augmented by longitudinal profiles and additional sections in subsequent monitoring events.	Replace first sentence with : "FEMA would require that the areal extent of flood inundation required for operation within the Staging Area be mapped as FEMA floodway, other inundated areas within the Staging Area would be mapped as FEMA floodplain."	
99	rss	Appendix B	p.80 Sample Frequency & Timing 2nd to last parag.		Change the wording from "three" to "two to three".	
EDITORIAL COMMENTS (PROVIDED FOR INFORMATION ONLY)						
100	COE	Table 1.1, Footnote 1	1-8 Footnote 1	Footnote contains extra text "879" and "880" that should be deleted.	Delete extraneous numbers from text.	
101	VRG	1.0/Section 1.5.1.3	1-9 1-9, line 8	Give correct name for North Dakota SHPO	Change "North Dakota State Historical Society" to "Archaeology and Historic Preservation Division, State Historical Society of North Dakota"	
102	COE	2.1.1.14	2-13 First paragraph	Text "110-year flood" should be "10-year flood"	Replace "110" with "10"	
103	rss	3.3.1	page3- 24 Affected Environment	This section was much improved over the previous draft with inclusion of stratigraphic information on the soils and changes in the paragraphs that result in clear and consistent language describing the conditions.	Nice work.	

This page contains no comments

Com ment No.	Reviewer Initials	Chapter/ Section/ Appendix/ Figure	Page #	Table topic area, Alternative, Bullet #	Reviewer Comments	Reviewer Requested Action	Requires Changes to: (list other areas in EIS this comment may need to be
104	COE	3.4.3.1	3-51	2nd paragraph, first sentence	First sentence is unclear: "Forested wetland impacts, all within North Dakota, associated with the Red River control structure would ..."	Replace with: "All forested wetland impacts in North Dakota would ..."	
105	COE	3.5.1.1	3-56	second-to-last sentence on page 3-56	Incorrect text: "The historical flows of daily discharges . . ." should be "The historical LOWS of daily discharges . . ."	Replace "flows" with "lows"	
106	ES	3.5.3.2	3-67		Don't disagree with the concept but doesn't fit into the purpose of this subsection which is "COLD WEATHER IMPACTS ON AQUEDUCT FUNCTION AND BIOTIES"	Relocate this information to a more appropriate section.	
107	ES	Table 3.42	3-106		note that acreages are listed in different decimals (two in whole numbers; one in tenths of an acre).	Change to make consistent.	
108	COE	3.10.2.1.1	3-133	Third paragraph on page 3-133	Text says greatest potential for sediment accumulation would be "below" the tieback embankment. Should say "above", since "below" usually means downstream, and the sediment is expected to accumulate upstream in the inundation area.	Replace "below" with "above"	
109	COE	3.14.1.4	3-183	Table 3.57	"Cass County Joint Watershed District, ND" should be "Cass County Joint Water Resource District, ND"	Replace "Watershed" with "Water Resource"	multiple locations
110	COE	3.16.3.1.3	3-275		Text includes incorrect commas: "... the Project within, the staging area, be mapped ..."	Delete these commas.	
111	MMH	5.3	5-4		In the quote from the statute, why is emphasis added, in particular to the phrase about a feasible and prudent alternative? It indicates the possibility that DNR has pre-determined that there is a feasible and prudent alternative to the Project or that DNR is otherwise biased against the Project. In order to ensure that DNR appears neutral, suggest not altering the quote.	Suggest deleting the emphasis.	

This page contains no comments

Com ment No.	Reviewer Initials	Chapter/ Section/ Appendix/ Figure	Table topic area, Alternative, Bullet #	Reviewer Comments	Reviewer Requested Action	Requires Changes to: (list other areas in EIS this comment may need to be
112	VRG	Executive Summary, ES Figure 2	ES-11 ES-11	Should add off-Project environmental mitigation project areas to figure	Add Wild Rice Dam Fish Passage Environmental Mitigation Project to figure. It is downstream of Wild Rice River control structure nearer confluence of the Wild Rice River with the Red River. Drayton Dam Fish Passage Environmental Mitigation Project is well off the figure to the north.	Figure 2
113	VRG	Executive Summary	ES-20 ES-20, para 2, lines 5-6	Two more utilities exist in the staging area: an electrical substation and two communication towers in upstream staging area. Substation in T137N, R49W, Sec 12 on west side of Hwy 81. Communication Tower (ND) in T137N, R49W, Sec 26, SWSWSW, Cass County. Communication Tower (MN) in T137N, R48W, Sec 22, SESESW, Clay County.	Consider mentioning electrical substation and two communication towers in this paragraph.	Section 2.1.1.13, paragraph 1 on page 2-12
114	rss	Executive Summary	ES 29 Table 1/R1/C3	In the three new gages description the word "diversion" before channel inlet was recommended for deletion in previous draft comments.	remove the word "diversion"	
115	rss	Appendix B	p.52 Monitoring Components	"tributaries in the project"	Capitalize "Project" for consistency with use of terms described just prior in the paragraph.	
116	rss	Appendix B	p.53 Table 1	previous comment suggestions were incorporated accurately to Table 1 and preceding paragraph.	Thank you!	
117	rss	Appendix B	p. 61 Bullet #3	Missing letter "T"	add letter "T" in front of "wo"	

From: [MICHAEL VALERIE PETERSON](#)
To: ["Review_Environmental \(DNR\)"](#)
Cc: mpeterson@petersonmech.com
Subject: Fargo-Moorhead Flood Risk Management Project DEIS, stop wasting time and money !
Date: Wednesday, October 28, 2015 10:02:00 AM

Commenter 165

Summary of Comments on ValeriePeterson_2015 1028_Commenter165a-b_Email1.pdf

Page: 1

To whom it may concern,

My family and I ask the DNR to reject the Northern Alignment Alternative (NAA) in favor of the proposed, federally authorized plan. Since it has **not** been evaluated by the responsible federal agency, the NAA would by law require a whole *new environmental review*, analysis, and Environmental Impact Statement from the Corps of Engineers. **There is no reason to waste time and public money and resources on doing an environmental review** on this alternative when one has already been done on the proposed project. Selecting the NAA would be an **enormous waste of resources and time.**

The main feature of the NAA would be to shift the impoundment downstream 1.5 miles, moving it north into more developed areas. In doing so, more homes will be affected. Even if a handful of homes will be spared impact by adopting the NAA over the proposed alternative, this benefit would be offset and more by the fact that as many as 60 additional homes would be impacted under the NAA than would under the proposed plan. In addition, a number of businesses, and more farmland would be affected by the NAA than by the proposed action.

The NAA would also place one of our region's most historic landmarks in jeopardy--St. Benedict's Catholic Church, the oldest Roman Catholic Church in the area. All of this for an additional price tag of \$81 million. The NAA is not worth it and should be **rejected** by the DNR. Please stop holding up the process and thus the needed work to protect our community.

Sincerely,
Valerie Peterson
7803 15 St S
Fargo, ND 58104
mvpeterson12@msn.com

Author: Medopera Subject: Text Box Date: 12/1/2015 1:45:57 PM -06'00'
Commenter 165

Author: Medopera Subject: Highlight Date: 4/6/2016 2:47:04 PM
Comment ID: 165a
Topic: Northern Alignment Alternative, General Opposition
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/6/2016 2:47:24 PM
Comment ID: 165b
Topic: Permitting Approval, Reject the Northern Alignment Alternative
Unsubstantive

From: VJohn1935@aol.com
To: [*Review, Environmental \(DNR\)](#)
Subject: Fargo Moorhead Flood Protection
Date: Monday, October 05, 2015 9:57:07 AM

Commenter 166

Summary of Comments on VernonJohnson_Commenter166a-b_Email1.pdf

Page: 1

It looks to me like a couple of alternatives are being overlooked.

1. Make provisions for more water to get out of FM to the North. As long as water backs up there will be flooding. If the water can leave faster there will not be flooding. The river is crooked and filled with dead trees, this limits the water flow. I know you are fitting nature with ice dams, etc, in the spring, but they can also be taken care of with a little dynamite if necessary to open the ice. A common practice in other areas in the US and Europe.

2. Provide an outlet for some of the water to go into the Minnesota river SE of Breckenridge. It's not too far and pretty level land.

Be a little creative in looking at this. If we are getting more water than before we need to provide more options in the flow path, than insisting everything must flow as it has in the past.

Vernon Johnson
3003 W. 96th St.
Bloomington, MN 55431.

Author: Medopera Subject: Text Box Date: 12/1/2015 1:50:01 PM -06'00'
Commenter 166

Author: Medopera Subject: Highlight Date: 4/6/2016 2:48:47 PM
Comment ID: 166a
Topic: Alternatives, Alternative: Increase Northern Flows

Author: Medopera Subject: Highlight Date: 4/6/2016 2:49:08 PM
Comment ID: 166b
Topic: Alternatives, Alternative: Outlet to Minnesota River

From: [Vicky Matson](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo-Moorhead Risk Management Project DEIS
Date: Monday, October 26, 2015 3:06:46 PM

Commenter 167

October 23rd, 2015

Jill Townley
Environmental Policy and Review Unit
Box 25 Ecological and Water Resources Division
Department of Natural Resources
500 Lafayette Rd.
St. Paul, MN 55155-4025
Email: environmentalrev.dnr@state.mn.us
Ref: [Fargo-Moorhead Flood Risk Management Project EIS](#)

-
Dear Ms. Townley and Division staff,

I firmly support the idea of permanent 100-year flood protection for the Fargo-Moorhead area, and the proposed alternative in the EIS to achieve it. I think the Corps of Engineers, the DNR, and the Fargo-Moorhead Flood Diversion Authority have all done a good job in recognizing and defining the need, which cannot be overstated: we critically need a system to reduce flood risk, damages, and control costs, one which is permanent, well-engineered, and effective. The proposed action does all of this.

It is not simply a matter of protecting the city and its residents – this is a crucial state issue. Many Minnesotans in the western part of our state depend on the Fargo-Moorhead metropolitan area for their needs, from commercial, to cultural, to educational. Fargo-Moorhead is a major center which supports the economy of a much larger region. Additionally, many Minnesotans work on the North Dakota side of the Red River, making Fargo even more economically important to them. In fact, about the only part of the DNR EIS I take issue with is the part in the socio-economic analysis that states that 38% of Moorhead residents work in Fargo; I believe, and the state's economic development numbers back me up on this, that it is more like 60% of Moorhead residents who work across the river.

The point is that this project is of critical importance to Minnesotans. It will prevent flood waters from shutting down major markets and transport hubs, it will save property and lives, and over time will save millions upon millions of dollars in flood damage costs and emergency control costs. Implementing this project now will also ward off the need for a FEMA re-mapping, which would raise the flood plain level and impose enormous financial hardships on an untold number of residents, who will suddenly find themselves having to pay exorbitantly higher insurance premiums as their homes are re-mapped into the flood plain.

This Flood Risk Management Project will bring many benefits to the region. I urge your department to approve it without further delay.

-
Sincerely,

Vicky Matson, Broker Associate

Summary of Comments on VickyMatson_Commenter167a-c_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/1/2015 1:57:35 PM -06'00'
Commenter 167

Author: Medopera Subject: Highlight Date: 4/6/2016 2:50:20 PM
Comment ID: 167a
Topic: Proposed Project, General Support
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/20/2016 4:17:57 PM
Comment ID: 167b
Topic: Socioeconomics, Economics

Author: Medopera Subject: Highlight Date: 12/1/2015 2:00:35 PM -06'00'
Comment ID: 167a cont.

Author: Medopera Subject: Highlight Date: 4/6/2016 2:51:35 PM
Comment ID: 167c
Topic: Permitting Approval, Approve the Project
Unsubstantive

ABR ASP CRS GRI RRS SFR
FMAAR Director 2014-2016
NDAR Professional Development Chair 2015

Park Co. Realtors
28 N 10th St
Fargo ND 58102

M 701.200.4019
www.VickyMatson.com

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This page contains no comments

From: wm2brtrd@wtc-mail.net
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Monday, September 21, 2015 8:53:29 AM

Commenter 168

Summary of Comments on Wayne&MarilynFarsdale_Commenter168a_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/1/2015 2:02:18 PM -06'00'
Commenter 168

Author: Medopera Subject: Highlight Date: 4/6/2016 2:52:52 PM
Comment ID: 168a
Topic: Alternatives, Alternative: Distributed Storage Alternative

There is a 99.8% chance a flood of this magnitude would never happen. In the mean time, there is way to much prime valley farmland that would be impacted to say nothing of the generational farmsteads, cemeteries and church communities that would be affected by this diversion, with a dam, plan. The upstream and downstream retention plans would protect basin wide and not destroy all the precious things we want to protect just like Fargo wants to protect their city.

Wayne & Marilyn Farsdale
16845 County Road 2
Walcott, ND
58077

From: [Nancy Ulven](#)
To: ["Review, Environmental \(DNR\)](#)
Subject: Fargo-Moorhead Flood Risk Management Project
Date: Tuesday, October 27, 2015 9:39:22 PM

Commenter 169

Summary of Comments on WayneUlven_Commenter169a_Email1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/1/2015 2:08:12 PM -06'00'
Commenter 169

Author: Medopera Subject: Highlight Date: 4/6/2016 2:54:24 PM
Comment ID: 169a
Topic: Alternatives, Alternative: Wild Rice River Diversion - No Dam

I am against building a dam for the Fargo Moorhead Diversion project. Some of the Wild Rice River could be diverted to the Sheyenne River Diversion during flooding. If we could take half of the 14,500 cubic feet per second from the Wild Rice, through the sheyenne diversion, it would mean fargo would have about 23,000 ft per second of flow to be diverted through the channel and a new diversion only. (No Dam). This along with Fargo's protection of 24.5 feet should make Fargo safe. Thank you Wayne N. Ulven
Sent from my iPad

TO: Jill Townley Project Manager
DNR of Minn.

Commenter 170

Summary of Comments on
MikeBrakke_Commenter170a_Fax1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/2/2015 4:22:15 PM -06'00'
Commenter 170

FOR: COMMENT ON EIS - Fargo Project

From:

MIKE BRAKKE
16285 Co. Rd 2
WALCOTT N.D 58077

Mike Brakke
3 County Rd. 2
41, ND 58077-9984

TO: Jill Townley, Project Manager
ENVIRONMENTAL Policy & REVIEW Unit, Box 25
DNR.

Page: 2

Author: Medopera Subject: Sticky Note Date: 4/20/2016 10:50:12 AM
Comment ID: 170a
Topic: Proposed Project Description, OHB Ring Levee

FOR - COMMENT ON EIS - Fargo Project

WHAT ARE THE IMPACTS OF THE
Oxbow AND CORPS OF ENGINEERS MOVING
THE DIKE ON SOUTH EAST OF Oxbow
FARTHER TO THE EAST TO NARROW
RIVER CHANNEL?

MIKE BRAKKE
Mike Brakke

Mike Brakke
16285 County Rd. 2
Walcott, ND 58077-9504

From: hg@askhg1.mygbiz.com on behalf of [Harlan Goerger](#)
To: ["Review, Environmental \(DNR\)"](#)
Subject: Fargo-Moorhead Flood Risk Management Project DEIS
Date: Thursday, October 29, 2015 8:45:22 AM

Commenter 171

Summary of Comments on HarlanGoerger_Commenter171a_Email1.pdf

Page: 1

As former property owner in the proposed holding area south of Horace, ND, there are many questions about the validity of the proposed project.

Author: Medopera Subject: Text Box Date: 12/1/2015 3:03:04 PM -06'00'
Commenter 171

My concern from the very start of discussion on the FM Diversion project was, "What about the basin wide approach?". Flooding in the Red River basin is not new, nor will it ever go away. When one develops and builds in an ancient lake bottom, you will have flood waters. These flood waters do not attack only Fargo, but the entire basin from South Dakota to Canada. This simply does not seem to address anything other than a small singular location at the expense and huge cost to others outside of that location.

Author: Medopera Subject: Sticky Note Date: 12/1/2015 3:02:53 PM -06'00'
NOTE: Message was received on Oct. 22, 2015 and was quarantined until accessed by staff.

My understanding is a basin wide study was in progress and had completed phase 1. The phase 1 information seemed to support a more basin wide approach from South Dakota to Canada, and positively impacted many more people than the current plan. Question: Why were the next phased not completed and the FM Diversion became the only focus?

Author: Medopera Subject: Highlight Date: 4/6/2016 3:45:43 PM
Comment ID: 171a
Topic: Alternatives, Alternative: Basin-wide Approach

Having lived in the Red River Valley for 50 plus years, there has always been flooding of some form, but the continual development of Fargo into areas that formerly held flood waters has simple increased the flooding issues. There are, in my and many others opinion, viable alternatives, holding areas and potential water reservoirs for potable water, throughout the Red River Basin. Utilizing such addresses the basin wide solution, not a small spot at the cost of many outside that spot.

The building of a dike around Oxbow/Hickson seems to defy logic. Build dikes to protect one of the highest elevation areas because of someone else pushing their problem upstream.

I am not an engineer, but have dealt with flooding for years. I do not see this FM Diversion as a logical plan and am concerned about the actual costs and maintenance of such a project.

Harlan Goerger
PO Box 10266
Fargo, ND 58106

--
[AskHG.com - H. Goerger & Associates Inc.](#)

Harlan Goerger, President
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Osseo, MN Office, Erl Morrell-Stinson 612-321-8309 Erl@StellarImpact.com



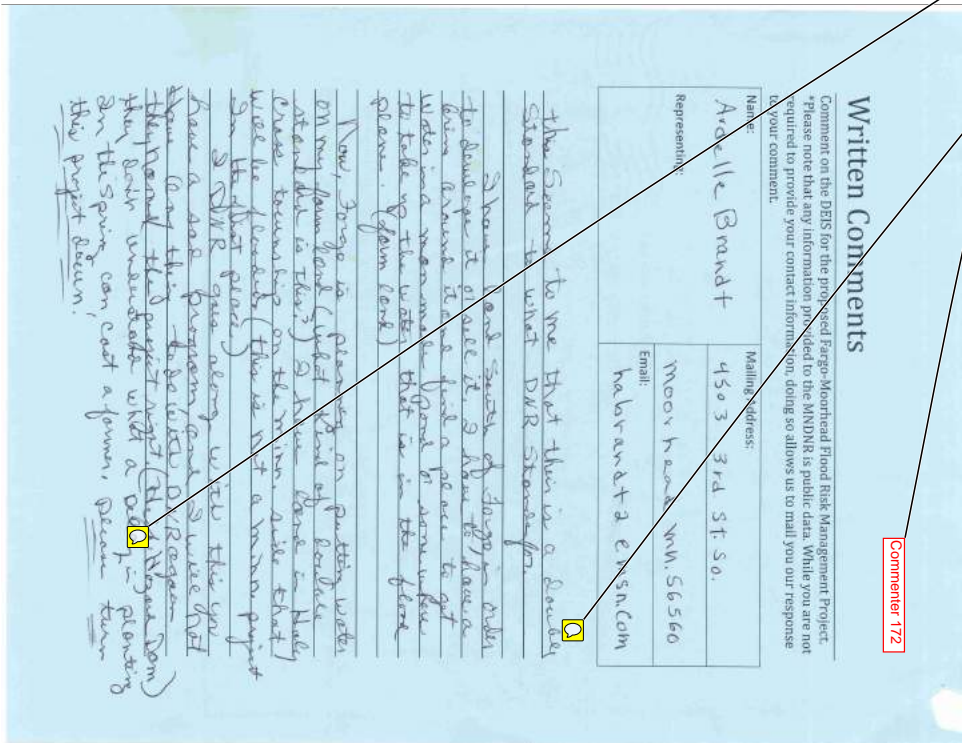
Summary of Comments on ArdelleBrandt_Commenter172a-b_Mail1.pdf

Page: 1

Author: Medopera Subject: Sticky Note Date: 4/6/2016 4:47:55 PM
 Comment ID: 172b
 Topic: Permitting Approval, Reject the Project
 Unsubstantive

Author: Medopera Subject: Text Box Date: 12/1/2015 4:20:25 PM -05'00'
 Commenter 172

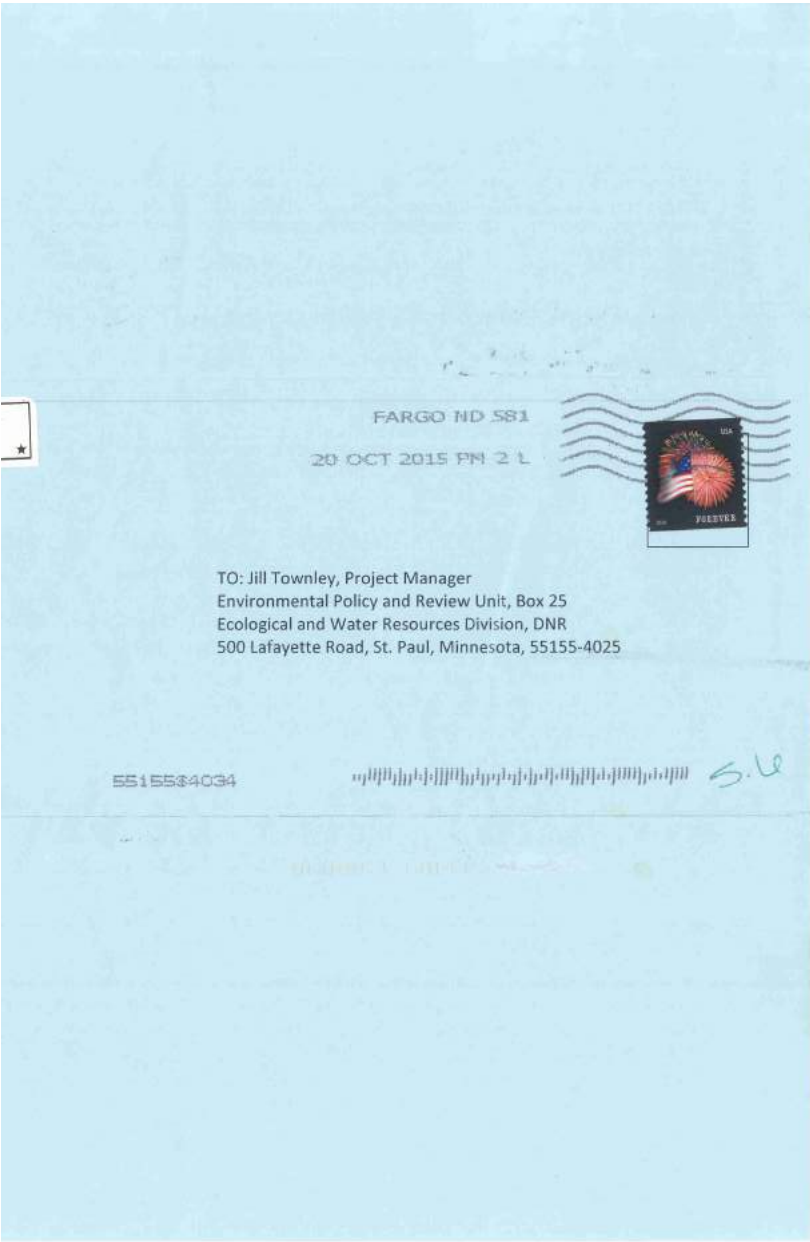
Author: Medopera Subject: Sticky Note Date: 4/6/2016 4:47:30 PM
 Comment ID: 172a
 Topic: Proposed Project, General Opposition
 Unsubstantive



This page contains no comments



This page contains no comments



OCT 29 2015

Commenter 173

October 23, 2015

Jill Townley
Environmental Policy and Review Unit
Box 25 Ecological and Water Resources Division, DNR
500 Lafayette Rd.
St. Paul, MN 55155-4025

Re: Fargo-Moorhead Flood Risk Management Project

Dear Ms. Townley,

Thank you and your team for the work you do in safeguarding Minnesota's environment and natural resources. This work has again been reflected in your evaluation of the Fargo-Moorhead Flood Risk Management Project. It's now time you follow up on your good work by approving the proposed project, just as the U.S. Army Corps of Engineers has.

It is important that this project be approved and initiated as soon as possible. The merits are many and significant. The project will already take around 8 years to complete. Further delay could push that date out even more, leaving the region without protection. It is also important to start the project so that the FEMA flood maps do not have to be updated. If they are, it is likely that the flood plain will rise and encompass a large number of new homes, decreasing their value and increasing the cost of insurance. This will bring severe financial hardships on many, many families and small business owners.

The U.S. Army Corps of Engineers has done a quality job of evaluating this proposed project and weighing its environmental risks against the benefits, to the projects favor. Your agency has done an equally fine job in your own analysis. Approval of the project is the logical next step.

I'd strongly and respectfully request your prompt approval.

Sincerely,



Bradley J. Swenson

Summary of Comments on BradleySwenson_Commenter173a-b_Mail1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/1/2015 3:23:29 PM -06'00'
Commenter 173

Author: Medopera Subject: Highlight Date: 4/6/2016 3:49:16 PM
Comment ID: 173a
Topic: Proposed Project, General Support
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/6/2016 3:49:50 PM
Comment ID: 173b
Topic: Permitting Approval, Approve the Project
Unsubstantive

Oct. 5, 2015

Jill Townley, Project Manager
Environmental Policy and Review Unit
Box 25, Ecological and Water Resources Division
Department of Natural Resources
500 Lafayette Rd,
St. Paul, MN 55155-4025

RE: Fargo-Moorhead Flood Risk Management Project Environmental Impact Statement

Dear Ms. Townley:

Please accept this letter supporting the above-referenced Flood Risk Management Project. This federally approved plan is the only one offered in the process that provides adequate, permanent flood protection for the Fargo/Moorhead region.

Both the DNR and the U.S. Army Corps of Engineers have done a fantastic job of analyzing this project, and the alternatives. Local people were engaged and used in evaluation the plans, and the result has been widespread recognition that the federally approved plan, utilizing diversion and upstream impoundment, is the best way available to control flooding and mitigate flood damage. Nearly everyone agrees that this is a critically important issue for this area, and one that cannot be ignored, or that can rely on temporary, band-aid measures.

As for the other alternatives, I believe that the federal agencies which examined them, and your department, have accurately concluded that they fall short of the goals which the proposed project attains. Specifically, the Northern alternative, which would require a whole new EIS from the Corps of Engineers, would shift the impoundment further north, a move that would not only add millions to the construction costs, but effect far more homes. The no-action alternatives are simply not acceptable – even the no action (with emergency measures) alternative assumes that emergency measures would continue to be taken as needed, but that does not account for several factors, including the fact that emergency measures are much less reliable than the permanent, engineered solution provided by the proposed project, and that massive sandbagging efforts create several logistical problems, both before and after a flood event. Clearly, a permanent solution is needed.

The proposed alternative offers such a solution. It is a well-engineered and designed system that includes ring levees to protect the towns of Oxbow, Hickson, Bakke, Comstock, levees and floodwalls in the Fargo-Moorhead urban area, and a Class 1 impound dam upstream that will meet USACE safety standards. This is a much needed project that has won approval at the federal level after much study and review, and which I am confident will earn the support of the State of Minnesota.

Sincerely,

Brad Wimmer
Wimmer's Diamonds + Past Fargo city
Commissioner.

OCT 21 2015
Commenter 174

Summary of Comments on BradWimmer_Commenter174a_Mail1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/1/2015 3:29:26 PM -06'00'
Commenter 174

Author: Medopera Subject: Highlight Date: 4/6/2016 3:51:14 PM
Comment ID: 174a
Topic: Proposed Project, General Support
Unsubstantive



10/19/15

Jill Townley, Project Mgr
Environmental Policy + Review
Box 25, Ecological + Water resources
DNR
500 Lafayette Rd
St Paul, Mn 55155-4025

Jill, I am a 3rd generation
business owner + my son is taking
over as the lead in the 4th generation of
a business serving our region since 1919.
I am also a past Fargo city comm-
issioner + on the Foundation board
currently @ Minnesota State Univ-Moorhead.
I can't tell you how crucial moving forward
with this current plan is to our region!

Barb Wimmer

602 Main Ave. Fargo, ND 58103 701-232-2008 fax: 701-235-9863 sales@wimmersdiamonds.com
3902 13th Ave. S., Fargo, ND 58103 701-282-2606 fax: 701-282-2213 saleswa@wimmersdiamonds.com
www.wimmersdiamonds.com

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Fargo, ND 58103

FARGO ND 581

19 OCT 2015 PM 2 L



Jill Toumey, Project Mgr
Box 25
Department of Natural Resources
500 LeSage Blvd
58103
Fargo, ND 58103

This page contains no comments



Board of County Commissioners

Chad M. Peterson
Fargo, North Dakota

Rick Steen
Fargo, North Dakota

Ken Pawluk
Fargo, North Dakota


Arland H. Rasmussen
West Fargo, North Dakota


Mary Scherling
Stanley Township, North Dakota

October 19, 2015

Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road
St. Paul, MN 55155-4025

Dear Ms. Townley:

I am writing to comment on the draft environmental impact statement (DEIS) for the proposed Fargo-Moorhead Flood Risk Management Project. I would like to thank the Minnesota Department of Natural Resources for your work on the DEIS.  Cass County Commission strongly supports the FM Diversion project as proposed.

The Richland Wilkin JPA is now arguing in court that the Minnesota alignment actually should have been selected, and has implied that the MDNR supports that position. What exactly is the MDNR's position on whether the Minnesota alignment should now be substituted for the North Dakota alignment of the channel? 

The option of a Minnesota alignment was reviewed early on in the project development and ruled out because it couldn't meet the project purpose and need. Specifically it didn't provide any flood risk reduction to the thousands of Cass County citizens who are regularly flooded from the Sheyenne, Maple, and Rush Rivers. We urge the DNR not to waste resources studying an option that has already been thoroughly studied and cannot meet the project purpose and need.

If you have any questions, please direct them to:

Keith Berndt
Cass County Administrator

Sincerely,


Chad Peterson, Chairman
Cass County Commission

Heather Worden
Commission Assistant

PO Box 2806
211 Ninth Street South
Fargo, North Dakota 58108

701-241-5609
Fax 701-241-5728
www.casscountynd.gov

Commenter 175



Summary of Comments on CassCountyCommission_ChadPeterson_Commenter175a- b_Mail1.pdf

Page: 1

- Author: Medopera Subject: Text Box Date: 12/1/2015 3:33:53 PM -06'00'
Commenter 175
- Author: Medopera Subject: Sticky Note Date: 4/7/2016 9:30:31 AM
Comment ID: 175a
Topic: Proposed Project, General Support
Unsubstantive
- Author: Medopera Subject: Sticky Note Date: 4/7/2016 9:24:18 AM
Comment ID: 175b
Topic: Alternatives, MNDNR Opinion

This page contains no comments



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Fargo, North Dakota 58102-2026

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OCT 20 2015

Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Rd
St. Paul, MN 55155-4025

2 WRCJNMP 55155





October 22, 2015

Committer 176

OCT 26 2015

Cass County Joint Water Resource District

Mark Brodshaug Chairman Fargo, North Dakota

Rodger Olson Manager Leonard, North Dakota

Dan Jacobson Manager West Fargo, North Dakota

Ken Loughheed Manager Gardner, North Dakota

Raymond Wolfer Manager Argusville, North Dakota

Carol Harbeke Lewis Secretary-Treasurer

1201 Main Avenue West West Fargo, ND 58078-1301

701-298-2381 FAX 701-298-2397 wrd@casscountynd.gov casscountygov.com

Jill Townley, Project Manager Environmental Policy and Review Unit, Box 25 Ecological and Water Resources Division, DNR 500 Lafayette Road St. Paul, MN 55155-4025

Dear Ms. Townley:

RE: Draft EIS Fargo-Moorhead Flood Risk Management Project

The Cass County Joint Water Resource District (CCJWRD) would like to provide comment on the Draft Environmental Impact Statement (DEIS) for the proposed Fargo-Moorhead Flood Risk Management Project. While we greatly appreciate the complete and thorough effort the DNR has put into our joint goal of flood protection, there are a few items we would like to specifically address.

CCJWRD is a joint entity made up of four Water Resource Districts (WRDs) in Cass County. North Dakota Century Code gives WRDs the responsibility to manage water resources and provide protection from flood damages within their districts. CCJWRD includes almost all of the project area in North Dakota.

With this charge from the State, we would like to voice our support of the project purpose within the DEIS. There are a number of tributaries to the Red River that often get overlooked when the issue of flooding is discussed, because they impact the more remote areas of the metro area. The project, as proposed, would protect from five additional rivers that currently create a great flood risk to thousands of people across much of our region. Without the Diversion Project in place, these areas have a very low chance of ever having flood protection from even relatively minor floods.

In addition, we concur with the goal set forward by the Red River Basin Commission in their Long Term Flood Solutions for the Red River Basin paper, which recommends 500-year flood protection for the Fargo-Moorhead metro area. Having the ability to fight floods over the 1% chance is critically important to the stability of our flood-prone region. We were happy to see this as part of the project purpose and need within the DEIS and would concur with the DNR on this.

Lastly, we concur with the DNR that the Distributed Storage Alternative is not a feasible or practical alternative to the proposed Diversion Project; but at the same time, we are also water managers and recognize that retention projects are an important flood risk reduction tool that offer localized benefits immediately downstream of the retention sites.

Thank you for the opportunity to comment.

Sincerely,

CASS COUNTY JOINT WATER RESOURCE DISTRICT

Mark Brodshaug Chairman

Summary of Comments on CassCountyJointWaterResourceDistrict_MarkBrodshaug_Committer176a-c_Mail1.pdf

Page: 1

- Author: Medopera Subject: Text Box Date: 12/1/2015 3:38:41 PM -06'00' Commenter 176
Author: Medopera Subject: Highlight Date: 4/6/2016 3:55:51 PM Comment ID: 176a Topic: Proposed Project, General Support Unsubstantive
Author: Medopera Subject: Highlight Date: 4/6/2016 3:56:40 PM Comment ID: 176b Topic: Alternatives, Alternative: Support for Greater than 100-year Protection Unsubstantive
Author: Medopera Subject: Highlight Date: 4/6/2016 3:57:07 PM Comment ID: 176c Topic: Purpose and Need, MNDNR Concurrence Unsubstantive

This page contains no comments



WATER RESOURCE DISTRICTS

1201 Main Avenue West
West Fargo, North Dakota 58078-1301



JILL TOWNLEY, PROJECT MANAGER
ENVIRONMENTAL POLICY AND REVIEW UNIT, BOX 25
ECOLOGICAL AND WATER RESOURCES DIVISION, DNR
500 LAFAYETTE ROAD
ST. PAUL, MN 55155-4025

55155\$4034



Dear Will Townley,
Date 10-3-15
Project Manager

In regards to the EIS Fargo Moorhead
Flood Risk Management Project
I believe there is a problem with numbers
of people that this project will help
The reason is to get the cost benefit
ratio to look better. They are including
West Fargo and surrounding area in these
numbers as well as Moorhead and Dilworth.
As you know Moorhead has already done
a lot to protect themselves.
I am sending you a copy of the Red River
Basin Commission's meeting in Grand
Forks N.D. in January 2013 showing
West Fargo N.D. is good for a 500 year
flood and Horace N.D. 100 year flood.
This project is just for Fargo to
develop in the flood plane

Thank you
Charles Christianson
16934 57th SE
Kindred N.D. 58051

Charles Christianson

Summary of Comments on CharlesChristianson_Commenter177a_Mail1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/1/2015 3:46:40 PM -06'00'
Commenter 177

Author: Medopera Subject: Sticky Note Date: 4/20/2016 11:44:57 AM
Comment ID: 177a
Topic: Proposed Project Purpose and Need, Questions Project Purpose



RED RIVER BASIN COMMISSION'S

LONG TERM FLOOD SOLUTIONS

For the Red River Basin



Report includes:

LTFS Executive Summary

Conclusions and
Recommendations for
Action

Funding Timeline for
Project Implementation
Costs: Along the Red
River of the North and
Tributaries



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Current Levels of Protection Versus Needs In the Basin

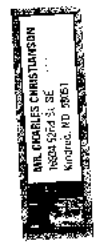
Although the strategy of local protection dates back many decades in the basin, the extent of existing site protection is still modest. The following table summarizes the levels of local site protection currently in place at basin communities and then compares that with RRBC's levels of protection goals to identify the gaps and the needs. The table reveals that flood protection for events exceeding the 100-year level is an exception and that almost a third of the communities, on the average, have no permanent protection. Of those communities having permanent protection, fewer than half are protected to a 100-year level or higher.

Comparison of Existing Flood Protection with Recommended Guidelines for Level of Protection

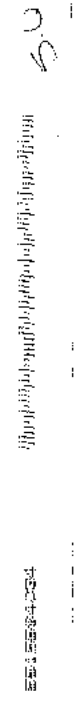
City/Location	RRBC Recommended Guideline for Level of Flood Protection	Existing Level of Protection				No Permanent Protection	Existing Protection meets RRBC Recommended Guideline for Level of Flood Protection?
		500 year	200 year	100 year	Less than 100 year		
Red River Main Stem							
Walpole, ND	200 year			X			No
Brookmidge, MN	200 year			X			No
Fargo, ND	500 year				X		No
Moorhead, MN	500 year				X		No
Ferliez, MN	200 year				X		No
Hendrum, MN	200 year				X		No
Halstad, MN	200 year		X				Yes
Nielsvale, MN	200 year					X	No
Grand Forks, ND	500 year		X				No
East Grand Forks, MN	500 year		X				No
Oato, MN	200 year	X					Yes
Orayton, ND	200 year				X		No
Pembina, ND	200 year			X			No
St. Vincent, MN	200 year				X		No
Noyes, MN	200 year			X			No
Emerson, MB	200 year			X			No
Morris, MB	200 year			X			No
Winnipeg, MB	500 year	X					Yes
Minnesota Tributaries							
Googletown	200 year				X		No
Ada	200 year				X		No
Shelby	200 year				X		No
Climax	200 year					X	No
Crookston	200 year				X		No
Warren	200 year			X			No
Alvarado	200 year			X			No
Arstyle	200 year			X			No
Hallock	200 year				X		No
Rosari	200 year				X		No
North Dakota Tributaries							
Abercrombie	200 year				X		No
Valley City	200 year				X		No
Lisbon	200 year				X		No
Horace	200 year			X			No
West Fargo	500 year	X					Yes
Enderlin	200 year			X			No
Casselton	200 year			X			No
Mapleton	200 year			X			No
Hersvold	200 year				X		No
Argueville	200 year			X			No
Devils Lake	200 year			X			No
Minnewaukan	200 year					X	No
Granton	200 year				X		No
Nechia	200 year				X		No



FARGO ND 581
07 OCT 2015 PM 2 T



Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road, St. Paul, Minnesota
65155-4025



This page contains no comments

Dear DNR of Minnesota

Commenter 178

I might just be a young adult that might not know much about a lot of things, but I do know when things

mean a lot to me and my family! I bet I can tell you no one in my generation has ever lived on their family

farm and in the house that their Great Great Grandfather built in 1896 and has been in our family for

120 years and I believe that this means more to me than the money they will use to buy us out!

I was raised to help our neighbors when ever they need a hand, to respect our elders and to grow up to

go after dreams that as kids we dream for. I don't understand why these 12 people on the board got to

decided how this project was going to happen. WHY SHOULD MY GENERATION HAVE TO SUFFER AND

PAY FOR THEIR MISTAKES AND BE IN DEBT FOR THE YEARS TO COME, WHEN WE HAD NO SAY ON IT! I

don't think that you as the people want to put this kind of mess and pressure on top of the upcoming

generation, it not fair to us. I know that Fargo needs Flood protection but they don't need this

PROJECT! I believe that Fargo has had way to much time and spent way to much of the government and

people's money for doing research and studies for the past 3-4 years Why is this Project not built yet, I

will tell you why because there is no money and if this is no federal money and there is no Project! Flood

walls and Permanent dikes will work why Fargo can't go with a simpler plan instead of spending all this

money that the government dose not have and they wouldn't have to make the people of Cass county

and Fargo everybody else pay for this project. IF Grand Forks and Whapton have them Fargo can to!

I want to leave you with this one last comment " I know that everybody has to give something up in this

situation but if I could have you put your feet in my shoes and think of what you would want to do you

if it was your family getting put down by Fargo leaderships and they don't care what happens to us. I can

tell you this I am a small town kid that cares a lot about her family and neighbors, If I could say this my

Family Farm means everything to me I would like to show my kids were I got to grow up, playing in the

Summary of Comments on CrystalJohnson_Commenter178a_Mail1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/1/2015 3:54:49 PM -06'00'
Commenter 178

Author: Medopera Subject: Highlight Date: 4/6/2016 3:59:31 PM
Comment ID: 178a
Topic: Proposed Project and Northern Alignment Alternative, General Opposition
Unsubstantive

front yard while my dogs were running around back in 1997 when the flood was going on, we never had water touch are property and if God cant flood us out in 1997,2009,2010,2011 and Fargo can tall all are land away and make a property a flood stage are there is something wrong with this picture. I would like to keep this Farm in are family for generation to to come, me and my brother are the 5th generation in are family to live there!

Thank you DNR of Minnesota for letting me tell you my side of the story

NO. 27, MONTH OF OCTOBER, 2015

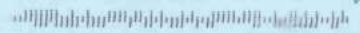
27 OCT 2015 PM 2 L



TO: Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road, St. Paul, Minnesota, 55155-4025



551554034



SL

This page contains no comments

Summary of Comments on DaveNess_Commenter179a-f_Mail1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/1/2015 4:00:40 PM -06'00'

Commenter 179

Commenter 179

OCT 26 2015

10/22/2015

Comments: Minnesota DNR draft EIS Fargo-Moorhead flood management project

To: Minnesota DNR

Thank you for allowing public comment regarding this document. Also, thank you for resisting pressure and for ensuring there is public discussion and input on issues such as this project. I am writing as a citizen who will be directly affected if the project is approved and I hope you will take my concerns seriously. First, let me explain who I am, and then I will briefly organize the comments I have.

I am the owner of a small farm located on the Minnesota bank of the Red River between Comstock and Wolverton, about 18 miles south of Moorhead. I am the 4th generation here. My great-grandparents bought a cabin at Fort Abercrombie after it closed in the late 1870's and disassembled it and floated it down the river to their land, where they reassembled it and lived and raised 10 kids until they could build a big house in 1902. My grandfather built his place 1/2 mile away in 1919. He remembered Indians riding along the river as a boy, and described the Red as a clear running gravel bottom river until the 1930's. Later, I came to own his farm. It consists now mostly of woods along the river for about 2 miles. My great grandparents and grandparents lived their whole lives along this river, and I have numerous relatives along the Minnesota side. My great-grandfather's brother started Concordia College in Moorhead. I grew up in south Moorhead a block and a half from the river and was down there almost every day as a kid. My paper route was on Rivershore Drive (now torn down for flood control and replaced with a dike). I graduated from Moorhead High and from Concordia College with a degree in biology. One summer I worked collecting and doing the microbiology testing on water samples from various USACE controlled sites in the area from Lake Traverse to Fergus Falls to Moorhead as part of a study for USACE. My point in all this is to tell you that I am very familiar with the Red River both in town and out in the area which will be "newly inundated". I am also familiar with both communities of people. Therefore, I hope you will give my comments some credence. Fargo- Moorhead, the farm, and the river have each always been a big part of

my life. I love the river and both communities.

General Criticism of DNR draft EIS:

This exhaustive document appears to be quite comprehensive, but in fact has numerous areas where it lacks detail and information about how various conclusions were arrived at, especially where judgments were made as to appropriateness of alternatives based on workability, engineering, cost data, etc. The reader is left to "trust us". It also lacks serious analysis of potential unanticipated adverse effects. The DNR states it was working closely with the USACE and the Diversion Authority throughout development of this document, and in many cases accepted their earlier work and incorporated their data rather than develop it independently on their own, and it shows. This, in my view, causes some problems, as both the USACE and the Diversion Authority are interested parties and are not just interested in flood control. They are interested in flood control that maximizes economic development for Fargo. Furthermore, neither group carries any substantial credibility in the area of environmental concern, and this bias not surprisingly shows through in the DNR's report. Being a Minnesota citizen, I would have expected much greater environmental scrutiny from the Minnesota DNR over this project, and a much closer look at alternatives, as well as a recognition that the best solution for the Fargo flooding problem may not have even been discovered yet. Fargo and the USACE have long been certain their plan is the only best one, that they are the "big town", and that they should get what they want. DNR has been cautious about a class one dam on a major river system. To their credit, DNR has at least considered some of the downside of this project in their report, but they could have said a lot more about why that is prudent. An ideal plan would control flooding without the environmental risk and social cost of the USACE plan, and has been achieved by other cities along this river without a dam.

Specific Comments re: Environmental Data

1. The DNR shows the federal/USACE environmental reports rating all the rivers in this project to be of only fair to poor quality, using a QHEI survey instrument. Thus, by inference, they imply these streams are not really worthy of a serious analysis as to how this habitat will be degraded by the project. This QHEI grading does not fairly describe these rivers, particularly the Red, which as the DNR knows and states in it's report is a "world class" fishing river, and home to 50 kinds of fish, and a wonderful population of wild creatures including things like snowy owls and otters and oysters. One then wonders how a "fair to poor" stream does this. The QHEI is meant to be used in the context of the region the waterway is in. While the Red is a prairie river and thus will never be like the Crow Wing, it never-the-less is a very healthy river outside of the urban area. The DNR's stream biologists all know this and the DNR should have pointed this out in it's report. It is not a resource that should be lightly regarded.

Author: Medopera Subject: Highlight Date: 4/6/2016 4:00:39 PM
Comment ID: 179a
Topic: General, General
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/6/2016 4:00:59 PM
Comment ID: 179b
Topic: Fish Passage and Biological Connectivity, QHEI

2. DNR EIS goes on to correctly note there are significant Potential Adverse Effects from this project to riverbank structure, flood plain woods, fish, invertebrates, birds, wetlands, wildlife, cultural resources, and socioeconomic. The individual discussions and proposed mitigations are invariably weak, dismissive, and short on detail. The overriding feeling one gets is that "we don't really expect anything too serious", even though as noted above, just about everything in this ecosystem is going to be adversely affected. The report needs to at least look at the worst case possibilities and list them, and discuss what happens if they start to snowball.

Author: Medopera Subject: Highlight Date: 4/6/2016 4:01:08 PM
Comment ID: 179c
Topic: Environmental Impacts, Worst Case Scenario

3. My greatest specific concern involves the Flood Plain Woods and transitional forest. Again, the federal/USACE report only lists 62 acres of woods at risk. (probably right where the dam will be built.) The reality is that the woods from the dam half way back to Breckenridge could be badly damaged by higher, deeper, or more prolonged flooding. These are lovely old woods: ash and basswood close to the river, and oaks further back. The oaks particularly are at risk with deep or prolonged flooding. In a worst case scenario where the diversion needed to be run for several weeks, or multiple times, or in warm weather, the entire flood plain forest could be wiped out, and all the creatures it shelters as well, driven out in a stressed condition onto the prairie. Over the course of the lifespan of this dam, it is almost inevitable that at some point such a scenario will arise. This should be considered by the DNR in this report. Evidence should be sought, if any exists, from other projects of this scale where the USACE has successfully implemented this kind of project to see what the upstream effects were on the Flood Plain Forest.

Author: Medopera Subject: Highlight Date: 4/6/2016 4:01:32 PM
Comment ID: 179d
Topic: Stream Stability, Flood Impacts to Trees

4. The human environment in the "unbenefited" area is also correctly identified by the DNR in this report as an area that will suffer significant damage. This will be cultural, economic, and social, as people are dispersed from the area they've lived in their whole lives, extended family ties are lost, school districts and churches are eliminated or altered, tax bases are destroyed, farming on thousands of acres of the best farmland in the country is disrupted, other businesses go under, and communities are expected to live behind ring dikes. The DNR also incorrectly surmises that people will move in to these ring diked villages. Many of those that I know that are uprooted will leave for a different state or location where this cannot happen again, and a check from the government will not particularly make them feel better about it. In my own case, I doubt I can find this kind of farmland along a river full of fish with 2 miles of beautiful woods that my great grandfather used to own 20 minutes from town and surrounded by friends and family for what the government would pay for it. That combination is not really replaceable. Many others are in the same situation. The DNR could certainly recognize this dilemma, and it's unique character better in it's report. These impacts are serious, and there's hundreds on Minnesota citizens who will be so treated. There are also likely to be impacts continuing upstream far out of the project area that go unmentioned. It is interesting that there is supposed to be protection for premier farmland from such projects, but it is simply bypassed by USACE because over 90% of the farmland in this area is premiere farmland. Disingenuous?

Author: Medopera Subject: Highlight Date: 4/6/2016 4:01:57 PM
Comment ID: 179e
Topic: Socioeconomics, Social Impacts

Other recommendations for the DNR before deciding to consider permitting this dam

1. Please consider the best interests of all the taxpayers in Minnesota who would have to pay the bill for part of this project with little benefit and significant environmental loss. They are unbenefitted.

2. Consider that other major cities (including Moorhead) have solved their flooding issues without dams. Fargo likely could as well with dikes and/or a diversion alone and in town mitigation.

3. Please consider that at least some of the pressure from the Fargo Diversion Authority comes as much for political and economic development reasons as for flood control. Fargo seems to care little for the river. It's a nuisance to them. Condos and strip malls in the flood plain generate \$. This project will give them flood control and lots of new ground to develop, and it will be paid for by others, with little or no suffering by anyone in town. OF COURSE THEY WANT THIS PROJECT!

4. A solution to Fargo's flooding problem that actually enhanced the Red River and the wild area it supports would be the best of all solutions for everyone, and if the will existed could be done!

No state action significantly affecting the quality of the environment shall be allowed, nor shall any permit for natural resources management and development be granted, where such action or permit has caused or is likely to cause pollution, impairment, or destruction of the air, water, land or other natural resources located within the state, so long as there is a feasible and prudent alternative consistent with the reasonable requirements of the public health, safety, and welfare and the state's paramount concern for the protection of its air, water, land and other natural resources from pollution, impairment, or destruction. Economic considerations alone shall not justify such conduct."

Lastly, please talk to your DNR river biologists who have been down on this river. It is a really pretty wonderful in its own unique way. Thanks.

Dave Ness



Author: Medopera Subject: Highlight Date: 4/6/2016 4:03:20 PM
Comment ID: 179f
Topic: Alternatives: Alternative: Wildlife Enhancement

Summary of Comments on David&MarilynTessier_Commenter180a_Mail1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/2/2015 12:58:24 PM -05'00'

Commenter 180

Author: Medopera Subject: Sticky Note Date: 4/6/2016 5:10:48 PM

Comment ID: 180a
Topic: Proposed Project and Northern Alignment Alternative, General Opposition
Unsubstantive

Written Comments

Comment on the DEIS for the proposed Fargo-Moorhead Flood Risk Management Project
*Please note that any information provided to the MNDNR is public data. While you are not required to provide your contact information, doing so allows us to mail you our response to your comment.

Name: <i>Marilyn & David Tessier</i>	Mailing Address: <i>4108 40th Ave S</i>
Representing: <i>Tessier's Home Road</i>	Email: <i>Marilyn_ND_58047</i>

*The Northern Alignment Alternative is unacceptable in that it destroys
affairs, more homes & businesses than the proposed alternative
with. Not only homes will be affected, small businesses, agricultural
facilities, historic sites, spreading the effects of the
Quadrant in this area. The village of St. Bern's homes across
the street from St. Ron's & the homes on the south side
of St. Bern's also will have to be displaced. Since 1987,
I have used a Reason to displace roughly in this
area. So they can develop this land for their Growth
Plan. Plans they have been in the works since the 1970s.
They will stop timing to get what they want.*

Map of Growth Plan for this area enclosed

Commenter 180

David Ness
c/o 2505 16th Ave S
Minneapolis, MN
55404

MINNEAPOLIS MN 553

29 OCT 2015 PM 2 L



Jill Townley, Project Manager
Environmental Policy & Review Unit
Box 25
Ecological & Water Resources Division, DNR
500 Lafayette Road
Minneapolis, MN 55412-4025

55155403499

516

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Required

TO: Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road, St. Paul, Minnesota, 55155-4025

F-M diversion backers are fudging the numbers

By Trana Rogne
Fargo city commissioners recently requested a new cost estimate be made for the proposed Fargo-Moorhead diversion project. It's anyone's guess what the new cost guess will be, since it's the Army Corps of Engineers' job to get the project done, and they are making the estimate. What is also a guess, is whether a different benefit/cost ratio will change the viability of the plan.

When the corps first calculated the cost-benefit ratio, it was too low. Without a higher level of damage (dollars) the cost of the project would outweigh the benefits. The push to raise the expected damage level began.

The accepted flood level under FEMA was so low that the cost-benefit ratio

did not allow the project to qualify for federal authorization. To raise the damage level, the corps assembled a panel of five experts to pronounce a new, higher flood level that would make the damage greater. The corps postulated that "normal" flood levels are higher than in the past. Getting the expected damage level (dollar cost) higher meant the flood level had to be higher. This was done by the panel selectively choosing their historic flood levels and using questionable assumptions to achieve the necessary outcome. The interesting thing is that annual precipitation has remained relatively stable. What has changed is that the amount of floodplain available for precipitation to accumulate has been drastically reduced south of Fargo.

Fargo and Cass County have allowed construction to occur in the area that used to protect them from major floods. As the storage of the floodplain is reduced, the flood level raises in the river during peak flows.

Weather history didn't solve the financial dilemma for justifying the project, so, voila!, the corps pulled a panel of experts out of their hat and made the cost-benefit ratio better.

Just how plausible is the new flood level? The pretext that a flood would occur that is twice as big as any of the four biggest floods in history is hard to accept. The underlying problem is that the unconstrained building south of Fargo is at the root of its flooding problem. Their solution is a costly project that encourages them to continue





FARGO
24 OCT 2015



To: Jill Townley, Project Manager
Environmental Policy & Review Unit, Box 35
Ecological & Water Resources Division, DNR
500 Lafayette Road, St Paul, Minnesota
55155-4005

5.0

This page contains no comments



Commenter 181

OCT 26 2015

Oct. 12, 2015

ATTN: Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road,
St. Paul, Minnesota 55155-4025

Email: environmentalrev.dnr@state.mn.us

Ref. Fargo-Moorhead Flood Risk Management Project

Dear Ms. Townley,

I support the Fargo/Moorhead Flood Risk Management Project, as proposed by the U.S. Army Corps of Engineers and the Fargo-Moorhead Flood Diversion Authority. This federally authorized project is the alternative that best provides permanent flood protection, the need for which is described by the Diversion Authority in the purpose and need statement developed for this EIS.

The project will reduce the flood risk potential on several local streams in the region, including the Red River and several smaller rivers, all of which pass through or near the Fargo-Moorhead metropolitan area. The flood risk from these rivers is substantial, and places many homes, businesses and lives at risk. Fargo-Moorhead is a major metro area that is extremely important to the region, not just as a commercial and transportation hub, but as a place where thousands of people live, work, and send their children to school. It is imperative that we put in place a permanent, engineered solution to protect this area from the risk of catastrophic flooding.

This project meets all of the requirements necessary for an endeavor of this scope. The proposal includes an impoundment dam that fits the definition of a Class 1 dam, and meets the safety standards for such a dam under both the USACE standards and those established by the Minnesota Gas Safety program rules. Further, the DNR review accurately recognizes that this project will have no impact on critical environmental resources, or issues such as water quality and supply, air emissions, erosion, or visual impacts. In addition, the project includes detailed mitigations to limit impacts on cropland, wetlands, aquatic species and birds, including site-specific environmental assessments on parcels identified for acquisition, reasonable compensation for landowners, and intensive monitoring.

The other alternatives presented in the EIS do not meet the need for permanent flood protection to the same degree or as efficiently as the proposed federal project. Clearly, the no-action alternatives rely on the status quo, which at best provides for temporary emergency measures. The Northern Alternative, which has not been reviewed and approved by the federal government, would impact far more homes and cost millions of dollars more. The proposed project is the only one that meets the needs of the region for flood mitigation, with the minimum amount of impact.

Thank you for your exceptional work on this issue, and please approve the proposed project without delay.

Cordially,

Thomas C. Dawson, President

Summary of Comments on DawsonInsurance_TomDawson_Commenter181a-c_Mail1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/2/2015 12:03:41 PM -06'00'
Commenter 181

Author: Medopera Subject: Highlight Date: 4/6/2016 4:12:00 PM
Comment ID: 181a
Topic: Proposed Project, General Support
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/6/2016 4:12:32 PM
Comment ID: 181b
Topic: Environmental Impacts, EIS Concludes

Author: Medopera Subject: Highlight Date: 12/2/2015 12:06:30 PM -06'00'
Comment ID: 181a cont.

Author: Medopera Subject: Highlight Date: 4/6/2016 4:12:56 PM
Comment ID: 181c
Topic: Permitting Approval, Approve the Project
Unsubstantive



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Jill Townley, EIS Project Manager
Environmental Review Unit
Division of Ecological and Water Resources
Minnesota DNR
500 Lafayette Road
Saint Paul, Minnesota 55155-4025

1BBD6HP 55155 A barcode with a handwritten number "6" to its right.

DENNIS MARY HANSON
4946 170TH AVE SE
HORACE ND 58047-9760

Commenter 182

OCT 15 2015

To: MNDNR Central Office.
Attn: Jill Townley, Project Manager
Date: October 13, 2015
Subject: Comment on Draft EIS Fargo-Mhd.
Flood Risk Management Project.

Summary of Comments on Dennis&MaryHanson_Commenter182a_Mail1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/2/2015 12:10:56 PM -06'00'
Commenter 182

Author: Medopera Subject: Sticky Note Date: 4/7/2016 10:38:53 AM
Comment ID: 182a
Topic: Alternatives, Alternative: Dredge the River

There is no way to "predict" the true and factual future impact of the proposed diversion plans on rural areas and rural communities. It is impossible to determine the REAL financial and economic outcome, and cost!
In the meantime, while waiting on the continuing surveys and continuous studies, why not do some dredging to recover and maintain the lost river bank debris on the river bottoms in order to widen and deepen the rivers themselves and allow more free, unobstructed flow of the additional waters to help prevent the over flowing and flooding. All the rivers could then contain, and channel, more water thus immediately making a positive impact for everyone concerned. And in a more timely and less expensive fashion!!!
A very simple answer is to just help the rivers better follow their own natural courses.

Dennis & Mary J. Hanson
Mary J. Hanson

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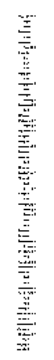
DENNIS MARY HANSON
4948 117TH AVE SE
HORAGE ND 58047-9760

74862 MD 5811
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Minnesota Department of Natural Resources
Central Office Attn: Jill Tounley
500 Lafayette Road
St. Paul, Minnesota 55155-40

5515584004



5515584004

Diane Johnson
1127 E. Mt. Faith Ave.
Fergus Falls, MN 56537
(218) 736-9001
dbjohnson1938@gmail.com

October 2, 2015

TO: Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road, St. Paul, MN 55155

RE: Fargo Moorhead flood Management Project DEIS

Dear Ms. Townley,

A massive and exorbitant plan has been hatched by the U.S. Corps of Engineers, a proposal which would have initially cost upwards of \$1.8 billion and now is rapidly escalating, in order to protect the land and population that has spread outwards from the greater Fargo/Moorhead communities which border the river along the North Dakota and Minnesota divide.

It isn't that I am quarreling with just any long-term, permanent flood relief for the Fargo/Moorhead metropolitan area. I see the need for a plan. I sympathize with the victims. But not at the expense of our down-stream farming communities. This area where the staging, storage and deliberately man-made flooding is proposed is in an area where long ago the pioneers wisely chose their land, carefully managed their acreage through hardship and hard work, and have not ever been troubled by deluge all these years, neither by man or God. Fargo/Moorhead, however, has built repeatedly into a long standing swampland and continued (as urban sprawl demanded) to build into the floodplain and built some more. And paid the consequences.

There have been other, less expensive proposals. I am not an engineer, but I know that it cannot be a good solution to flood out and send to oblivion whole communities, century farms, homesteads, historic sites, 13 cemeteries, schools and churches, which have never had an issue with flooding.

Commenter 183

OCT 13 2015

Summary of Comments on DianeJohnson_Commenter183a_Mail1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/2/2015 12:13:51 PM -06'00'
Commenter 183

Author: Medopera Subject: Highlight Date: 4/7/2016 11:34:25 AM
Comment ID: 183a
Topic: Proposed Project and Northern Alignment Alternative, General Opposition
Unsubstantive

When the Army Corps of Engineers visited our cemeteries over a year ago (three of which hold the remains of my ancestors), they admitted that the easiest method would be to remove the graves, but that would mean that old pine caskets and bodies would be destroyed in the process. And unmarked graves would be impossible to protect. The secondary suggestion was to put a rink dike around each. But the height (which they marked up in a tree), and the width required for family to drive up and over and down into a "hole" would mean that the danger of any "breaching" would be catastrophic, not to mention the peace and esthetics of these sacred spots.

At that meeting they were also surprised to learn from the local residents, that the Lower Wild Rice and Red River Cemetery outside of Hickson, North Dakota, included a deep natural spring that had never been able to be measured for depth. Local residents had historically used it for water. This in spite of the fact that the Corps stated they had done an extensive review of the area. If they "missed" this important historical natural resource, and were surprised by the significance of the revelation, what else might they have "missed?"

Work has already proceeded at great expense (and without proper authority), to ring dike the Oxbow subdivision, ignoring the riparian habitat and impacting prime Red River valley farmland. It is wrong for our region and wrong for our nation to move forward with an unproven and flawed flood protection plan while devastating farms, communities, school districts, churches and cemeteries while also ignoring the impact on our priceless natural environment.

Sincerely,



Diane Johnson

Mr. Diane Johnson
1127 E. Robert Park Ave
Portland, OR 97214

PAID 40.00
NOV 11 2008



Gift: Tuesday, Popcorn Manager
Environmental Agency & Renewal
BX35
500. Winter & Sewell/Johnson, DKP
500. Popcorn the Rd.
Dr. Popcorn
Portland, OR 97214

581 583 3402

This page contains no comments

Commenter 184

October 12, 2015

Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road,
St. Paul, Minnesota, 55155-4025

Email: environmentalrev.dnr@state.mn.us

Re: Fargo-Moorhead Flood Risk Management Project DEIS

Dear Ms. Townley,

On behalf of residents and staff of Eventide Senior Living Communities, I would like to offer support for the Fargo-Moorhead Flood Risk Management Project. This project will provide permanent flood protection for the area, and greatly reduce the risk to our region's people and property.

This is a very important issue for us, in that major flooding, which the Fargo-Moorhead metropolitan area is especially prone to, offers serious logistical and safety risks to us and our residents. It is very difficult, during times of flood emergency, to evacuate our residents – all of whom are seniors, some with quite limited mobility – to appropriate, alternative housing. Not only is it logistically difficult and expensive, but it is exceedingly dangerous as well.

A far better option for us and those in our care is to prevent the need for evacuation in the first place, by installing a permanent flood control system. The proposed action, which has received the full approval of the relevant federal government entities, would provide such protection through the use of an upstream impoundment, followed by controlled diversion around the metropolitan area. These engineered protections will keep flood waters from invading the populated and built up areas of our region and therefore obviate the need for expensive and dangerous last-minute evacuations of facilities such as ours.

This is a very well thought out proposal, and the Department of Natural Resources has done a terrific job of evaluating it. I urge you to not delay in granting your approval of this federally authorized project, so that construction may commence as soon as possible, and those permanent safeguards be in place to protect our communities before the next major flood event forces us into having to face another hazardous evacuation situation.

Sincerely,



Jon Riewer, President/CEO

OCT 26 2015

Summary of Comments on Eventide_Commenter184a-b_Mail1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/2/2015 12:34:45 PM -06'00'
Commenter 184

Author: Medopera Subject: Highlight Date: 4/7/2016 11:36:19 AM
Comment ID: 184a
Topic: Proposed Project, General Support
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/7/2016 11:36:46 AM
Comment ID: 184b
Topic: Permitting Approval, Approve the Project
Unsubstantive

This page contains no comments



2405 8th Street South, Suite A
Moorhead, MN 56560

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04111235493

Jill Townley, EIS Project Manager
Environmental Review Unit
Division of Ecological and Water Resources
Minnesota DNR
500 Lafayette Road
Saint Paul, Minnesota 55155-4025

18808HP 66156  4.0



Commenter 185

OCT 22 2015

Oct 20, 2015

Jill Townley
Environmental Policy and Review Unit
Box 25 Ecological and Water Resources Division
DNR
500 Lafayette Rd
St. Paul, MN 55155-4025
RE: Fargo-Moorhead Flood Risk Management Project

Dear Ms. Townley,

This letter is intended as my official comment on the above referenced Flood Risk Management Project. I support this project as proposed because it has already received all necessary approvals and reviews at the federal level, and because it will provide permanent 100-year flood protection for the Fargo-Moorhead metropolitan area.

I believe that the Department of Natural Resources has done a good job of accurately evaluating the project and the various alternatives. For instance, I feel the DNR was entirely correct in dismissing the /distributed Storage Alternative. The DSA did not adequately meet the project's purpose, which is well-defined by the Fargo-Moorhead Flood Diversion Authority as being to reduce flood risk, flood damages, and flood protection costs for the F-M metro area. The DSA was impractical, as it would require some 96 impoundments, rather than the one provided for in the proposed plan. The DSA also did not offer adequate protection for communities along the Red River, as the proposed federally authorized plan does.

Similarly, you were correct in identifying the shortfalls of the Northern Alternative, including the fact that it would be more expensive to implement, and that it would impact a greater number of people and structures than does the proposed project.

The proposed plan, which has received a Record of Decision from the U.S. Army Corps of Engineers following a lengthy and thorough environmental review, will provide 100 year flood protection for the F-M metro area, and protect upstream communities such as Oxbow, Hickson, Bakke, and Comstock with ring levees built to the highest standards. The project will impound flood waters upstream with a structure that meets the USACE standards for a Class 1 dam, and will divert the flow around the metro area with an equally well-engineered series of channels, levees, and flood walls.

It is important that we begin construction and implementation of this project as soon as possible. Delay not only means an increased risk of a flood before the protections are in place, but also could mean a new flood map being prepared by FEMA for the area. A new flood map would very likely raise the 100-year level to include more homes and businesses. These properties will then see their re-sale value plummet, at the same time as their insurance premiums go up. We can prevent this by implementing the Corps of Engineers approved proposal without further delay.

Respectfully,

Marti Kaiser, Executive Vice President
Fargo-Moorhead Area Association of REALTORS®
3211 11th Avenue South, Moorhead, MN 56560 (home)
813 North University Drive, Fargo, ND 58102 (business)

FARGO-MOORHEAD Area Association of REALTORS®

813 North University Drive, Fargo, ND 58102
(701) 235-6679 o fmaar@fmrrealtor.com

Summary of Comments on Fargo-MoorheadAreaAssociationofRealtors_MartiKaiser_Commenter185a_Mail1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/2/2015 12:46:57 PM -06'00'
Commenter 185

Author: Medopera Subject: Highlight Date: 4/7/2016 11:41:35 AM
Comment ID: 185a
Topic: Proposed Project, General Support
Unsubstantive

This page contains no comments



Jill Townley, Project Manager
Minnesota Department of Natural Resources
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division
500 Lafayette Rd.
St. Paul, MN 55155-4025

Email: environmentalrev.dnr@state.mn.us

REF: Fargo-Moorhead Flood Risk Management Project DEIS

Dear Ms. Townley and MNDNR staff,

I am writing to support the federally authorized alternative for the Fargo-Moorhead Flood Risk Management Project. There is no question that this is an important project in that it will provide real flood protection for the Fargo-Moorhead metro area.

This project will also have the least impact possible on the environment, agricultural land, and existing structures. Your department's FFREIS has determined that the project will have no impact at all on water use, air emissions, water quality, or erosion, and also not increase geological hazards, traffic odors, noise, dust or visual impacts. You have also determined that the project is not expected to have any significant impact on wildlife resources, cultural resources, cover types, fish passage and biological connectivity, or state listed species. In addition, you have determined, correctly, that potential environmental hazards due to past site use was not an expected risk, nor is dam safety.

Your department also did a good job of identifying measures that could be taken to otherwise reduce, eliminate or minimize environmental impacts, and evaluating the effectiveness of these proposed mitigation measures. The document lists in detail proposed mitigations for the few identified potential impacts, such as in regards to wetlands, inundation of cropland, impacts to fish habitat, potential fish stranding and bird nesting. The document outlines the extensive monitoring programs that will be implemented, and other mitigation measures to minimize the impacts on these resources.

This will also be a safe project in other regards. The impoundment dam is being constructed to USACE Class 1 standards. And while the project will be owned and operated by the local diversion authority, all features of it will be built to federal standards.

This is a safe and environmentally friendly project, as determined by both the MNDNR and the US Corps of Engineers. On this basis, and based on the fact that flood protection is a critical need for the region, I ask that the MNDNR approve this project.

Sincerely,



October 26, 2015

Commenter 186

Summary of Comments on GaryGonser_Commenter186a-c_Mail1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/2/2015 12:51:04 PM -06'00'
Commenter 186

Author: Medopera Subject: Highlight Date: 4/7/2016 11:49:03 AM
Comment ID: 186a
Topic: Proposed Project, General Support
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/7/2016 11:49:29 AM
Comment ID: 186b
Topic: Environmental Impacts, EIS Concludes

Author: Medopera Subject: Highlight Date: 4/7/2016 11:50:01 AM
Comment ID: 186c
Topic: Permitting Approval, Approve the Project
Unsubstantive

This page contains no comments


4342 15th Ave S Suite 105
Fargo, ND 58103

GARY GONSER

ATTN:

JILL TOWNLEY, PROJECT
MANAGER
MNDNR
ST. PAUL

TO: JILL TOWNLEY
MNDNR
ENVIRONMENTAL POLICY & REVIEW UNIT
BOX 25
ECOLOGICAL & RESOURCES DIVISION
500 LAFAYETTE RD.
ST. PAUL, MN 55155-4025

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Summary of Comments on HaroldBrandt_Commenter187a-b_Mail1.pdf

Page: 1

- Author: Medopera Subject: Text Box Date: 12/2/2015 2:39:34 PM -05'00'
Commenter 187
- Author: Medopera Subject: Sticky Note Date: 4/7/2016 12:51:28 PM
Comment ID: 187a
Topic: Proposed Project and Northern Alignment Alternative, General Opposition
Unsubstantive
- Author: Medopera Subject: Sticky Note Date: 4/7/2016 12:51:56 PM
Comment ID: 187b
Topic: Permitting Approval, Reject the Project
Unsubstantive

Written Comments

Comment on the DEIS for the proposed Fargo-Moorhead Flood Risk Management Project. *Please note that any information provided to the MNDNR is public data. While you are not required to provide your contact information, doing so allows us to mail you our response to your comment.

Name:	Harold Brandt	Mailing Address:	1503 3rd St. South Moorhead, Minn 58500
Representing:		Email:	HA.Brandt@gmail.com

just something they about flooding. I
have had in the spring of the year -
years back to the 1970-1980
period would get to the and about out
the drainage. Well that you not understand
in the flooding area that they have mapped
not in the 1950-1960 old maps & with
open to more areas and more - how to get
the water to over the side and down, this
was to get getting here only in the spring
for both gradually
then the judge and managers project don't
not stand it in fact a release of water that
to twenty feet per inch. That to per inch - I have
never told difference, been here 40-50 years.
(I a lot of people and lines (what are they talking
per water they talk know)
& that think so.

Please turn this project down!
Harold Brandt

Commenter 187



Ms A. Ness
10th Ave. S
Fargo, MN 56560-7804

FARGO ND 581

27 OCT 2015 PM 2 L

TO: Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road, St. Paul, Minnesota, 55155-4025

OCT 29 2015

551554034

56

This page contains no comments

OCT 29 2015

Commenter 189

Name:
Janith D Ness

Mailing Address:
184 180th Ave So
Moorhead, MN 56560-7804

Representing: Self

Email: rivergaard@nbinternet.com

As a landowner with my husband in the very southwest corner of Clay County who is projected to be impacted by up to 6" of water during years of flooding if the proposed dam is built, I would like to share my concerns and objections with you.

1. Our home has never been threatened by floodwaters, but a portion of our farmyard has sloughed in to the river because of instability of the river bank (the county assessor has removed 2 1/2 acres of our yard from the tax rolls because it no longer exists). Consequently, the land on which our house and outbuildings are built is not stable enough for a ring dike. I was told at the EIS meeting at the Courtyard on September 14th that one solution is to raise our house. As we have a basement that is part of our living quarters and contains our furnace, water heater, pressure tank, etc., separating the main floor of our house from the basement would make it unlivable. Both my husband and I are in our 70's and have health issues, so it seems a buyout would be our only alternative. At least two years ago we contacted Jon Evert, our County Commissioner at the time, to have someone from the Diversion Authority contact us. We got one or two phone calls but no follow up information at all. I am concerned that, if this diversion plan is approved, monies would be spent on constructing the dam and individualis, cemeteries and churches would get the leftovers—if there are any.
2. If we are forced to take a buyout, it is my understanding that the property cannot be used for anything else. What a blight on our neighborhood that would be! That is certainly an environmental concern.
3. How many wells will be contaminated if the dam is built?
4. According to my conversation with a rep from the Army Corps of Engineers at the Courtyard meeting, the annual cost of maintaining the dam, even if it wasn't used, would be \$3 million per year. That is a cost that would never disappear. In fact, it could even grow with inflation. I realize flooding in Fargo-Moorhead is costly, but I believe the cost per flood is between \$1 million and \$2 million—if a flood happens. Also, there is an end to the flood fight, it is a temporary thing. I don't minimize the difficulty of dealing with a flood, but please don't replace a temporary flood fight with a permanent dam that would cause permanent damage to those of us living south of it.
5. I do not believe the soil in the proposed area for the dam would support it. Even now there is repair work being done on the tri-level I94/I29 intersection at the south edge of Fargo because of the soil sloughing—and this land is not even near the river where the land is even more unstable.
6. I believe this dam project is due to development disguised as flood protection. What a horrific environmental blight the dam would be when less-costly measures are available for flood fighting.

*Sincerely,
Janith D. Ness*

Summary of Comments on JanithNess_Commenter189a-g_Mail1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/2/2015 1:53:19 PM -06'00'
Commenter 189

Author: Medopera Subject: Highlight Date: 4/22/2016 9:32:13 AM
Comment ID: 189a
Topic: Communication Concerns, Diversion Authority
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/7/2016 11:58:48 AM
Comment ID: 189b
Topic: Mitigation and Monitoring, Funding

Author: Medopera Subject: Highlight Date: 4/7/2016 11:59:02 AM
Comment ID: 189c
Topic: Potential Environmental Hazards, Buyout Structures

Author: Medopera Subject: Highlight Date: 4/21/2016 8:58:41 AM
Comment ID: 189d
Topic: Socioeconomics, Wells and Groundwater Quality

Author: Medopera Subject: Highlight Date: 4/7/2016 12:00:31 PM
Comment ID: 189e
Topic: Mitigation and Maintenance, Funding

Author: Medopera Subject: Highlight Date: 4/7/2016 12:00:42 PM
Comment ID: 189f
Topic: Dam Safety, Risk Concerns

Author: Medopera Subject: Highlight Date: 4/7/2016 12:01:30 PM
Comment ID: 189g
Topic: Proposed Project and Northern Alignment Alternative, General Opposition
Unsubstantive

Jan Ness
184 180th Ave S
Moorhead, MN 56560



FARGO ND 581
27 OCT 2015 PM 2 T

Jul Towmley, Project Manager
Environmental Policy & Permit Unit,
Box 25
Ecological & Water Resources Division, DNR
500 Lafayette Road
St. Paul, MN 55155-4025

551554002



50

This page contains no comments

October 25, 2015

Jill Townley
Environmental Policy and Review Unit
Box 25 Ecological and Water Resources Division, DNR
500 Lafayette Rd
St. Paul, MN 55155-4025

Ref: Fargo-Moorhead Flood Risk Management Project EIS

Dear Ms. Townley:

I believe that the proposed Flood risk Management Project for the Fargo-Moorhead area, is a solid plan to provide effective 100-year flood protection for the metro area.

Fargo-Moorhead is an important regional hub, and serves the financial, transportation, healthcare, shopping, and other needs of residents for hundreds of miles. A major flood event in the metro area would have severe economic consequences for not only the city, but for a large part of the state as well. The F-M metro area is home to three colleges, and several medical centers, all of which would be at great risk in the event of another flood.

This proposed project will greatly reduce the risk of such an event from occurring. The purpose of the project as spelled out by the F-M Diversion Authority is clear, and appropriate: to reduce the risk of floods, flood damage, and flood control costs. Moreover, the plan outlined in the proposed action is the best method to achieve this – an upstream staging area, where flood waters will be stored and released in a controlled manner into diversion canals around the metro area. Your agency was right to discard other proposed alternatives, such as the Distributed Storage Alternative, which was neither feasible nor practical in calling for 96 separate impoundments, and other alternatives that directed flows through the metro area. I would ask that you similarly disregard the Northern Alignment Alternative for much the same reason. The impoundment pool under the proposed alternative is in the best location possible to do the job with the least impact. The Northern Alternative would impact as many as 60 more homes than the proposed action would, and do so at a higher cost – \$81 million more, to be exact. The proposed action will also work to minimize its impact, by such measures as building ring levees around communities that would be within the staging area, places like Comstock, MN and Oxbow, Hickson, and Bakke (OHB) in ND.

I ask that you please do what the U.S. Army Corps of Engineers has already done, and approve the proposed project, for the good of the people who live and work in and around Fargo-Moorhead.

Cordially,



Commenter 190

Summary of Comments on JanPerry_Commenter190a-b_Mail1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/2/2015 2:06:40 PM -06'00'

Commenter 190

Author: Medopera Subject: Highlight Date: 4/7/2016 12:03:40 PM
Comment ID: 190a
Topic: Proposed Project, General Support
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/7/2016 12:03:24 PM
Comment ID: 190b
Topic: Permitting Approval, Approve the Project
Unsubstantive



FARGO ND 581

26 OCT 2015 PM 2 T



*See Thursday
Environmental Policy by Review Unit
Box 25 Cottage by with Rosemary Ann. BNL
500 Lafayette Rd
Mt. Paul
Mn*

55155-4035

551554034



5.14

This page contains no comments

Summary of Comments on Jerome&SandyNipstad_Commenter191a-b_Mail1.pdf

Page: 1

Author: Medopera Subject: Sticky Note Date: 4/7/2016 12:16:36 PM
Comment ID: 191a
Topic: Communication Concerns, Diversion Authority and USACE

Author: Medopera Subject: Sticky Note Date: 4/20/2016 10:59:55 AM
Comment ID: 191b
Topic: Proposed Project Operation, Flood Debris and Cleanup

Author: Medopera Subject: Text Box Date: 12/2/2015 2:10:39 PM -06'00'
Commenter 191

Written Comments

Comments on the DEIS for the proposed Fargo-Moorhead Flood Risk Management Project. Please make that any information provided to the MNDNR is public data. While you are not required to provide your contact information, doing so allows us to mail you our response to your comment.

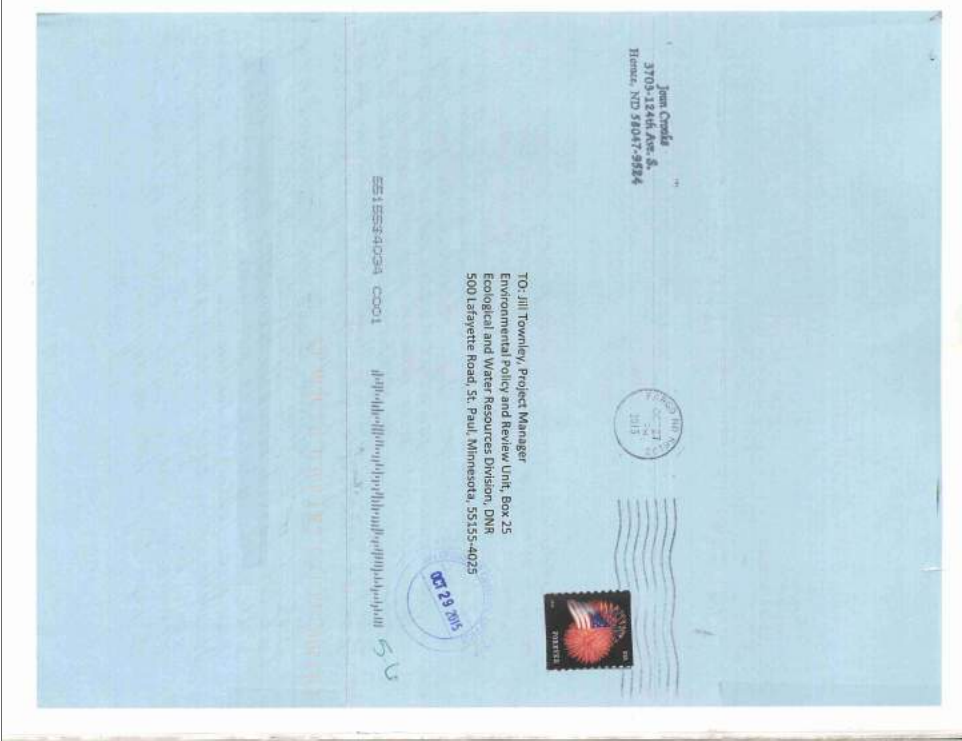
Name: Jerome & Sandy Nipstad	Mailing Address: 5281 17 th Ave SE Hibborn, MN 58047
Representing: Nipstad Foundation	Email: s.nipstad@gmail.com

I've lived along the Wild River since and our
garden into woods. In the summer of the
high beyond down gear in while the
D. A. our woods. The D. A. have a dip
now but I can not go even higher
bury your the camp. D. A. have even
stopped just on one side. In answer
and of that will give to a feel not
enough study on that. I have gone into
the pool down of ground glass and after
they had built the water park on
my land. I've found land on 5 other
the Wild River & Big River. I haven't
the number of land there is on D. A. word
then a other. I have that photo of
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up with the intention of 191. I have
of answer of Jerome & Sandy.

Commenter 191

Summary of Comments on
JoanCrooks_Commenter192a_Mail1.pdf

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FARMS INC.
2ND AVE SE
N, ND 58047

FARGO ND 581

24 OCT 2015 PM 4 7



TO: Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road, St. Paul, Minnesota, 55155-4025

S.U

This page contains no comments

SEP 23 2015

Commenter 193

Judy Willem
16587-3rd Street South
Moorhead, MN 56560

Jill Townley
Environmental Policy and Review Unit
Box 25
Ecological and Water Resources Division
DNR
500 Lafayette Road
St. Paul, MN 55155-4025

September 18, 2015

Subject: Fargo-Moorhead Risk Management Project DEIS

Dear Ms. Townley,

My husband and I live west of Comstock, MN, South of Oxbow, ND on the Minnesota side of the Red River inside the Staging Area. In all the years this farmstead has been here, four generations of our family and then some, the land has never flooded. However when a major flood does occur we end up with scores of deer on the property, sometimes 50 around our house at a single time. And if that's the case I am sure there is smaller wildlife that takes refuge here as well.

I am concerned at how flooding of this Staging Area will affect the wild animal population in the area.

Sincerely,
Judy Willem

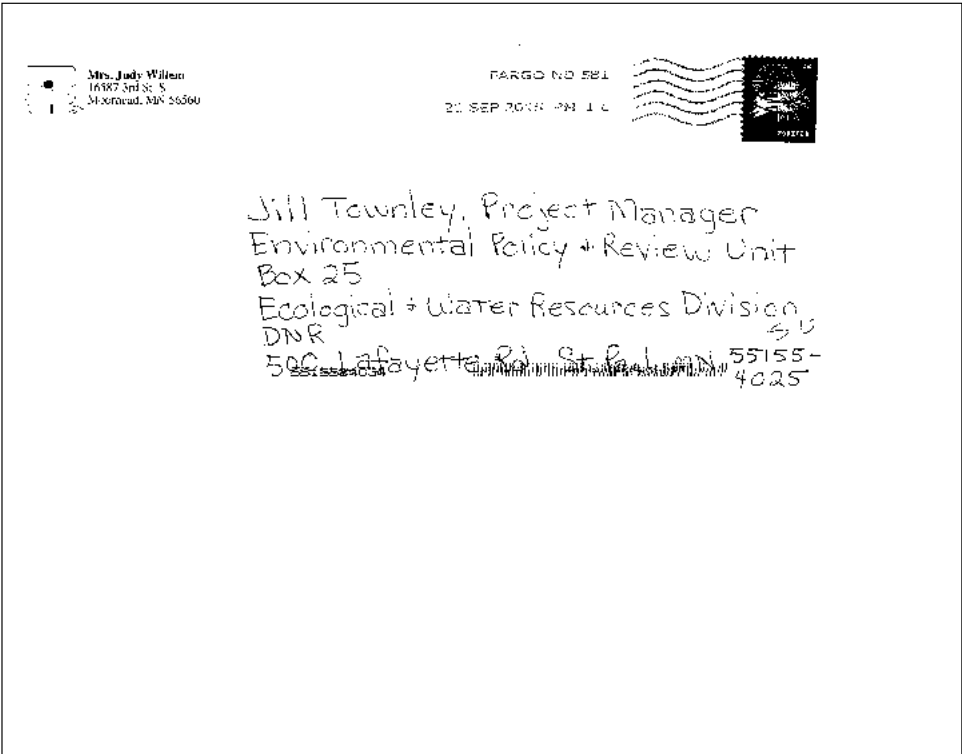
Summary of Comments on JudyWillem_Commenter193a_Mail1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/2/2015 2:20:00 PM -06'00'
Commenter 193

Author: Medopera Subject: Highlight Date: 4/7/2016 3:58:42 PM
Comment ID: 193a
Topic: Wildlife and Wildlife Habitat, Flood Impacts to Wildlife and Wildlife Habitat

This page contains no comments



Mrs. Judy Wilton
16887 5th St. S
Minnetonka, MN 55300

FARGO ND 581
20 SEP 2004 PM 1 L



Jill Townley, Project Manager
Environmental Policy + Review Unit
Box 25
Ecological + Water Resources Division
DNR
500 Lafayette Rd. St. Paul, MN 55155-
4025

007 5.30/5

Commenter 193 cont.

Judy Willem
16587-3rd Street South
Moorhead, MN 56560

Jill Townley
Environmental Policy and Review Unit
Box 25
Ecological and Water Resources Division
DNR
500 Lafayette Road
St. Paul, MN 55155-4025

October 1, 2015

Subject: Fargo-Moorhead Risk Management Project DEIS

Dear Ms. Townley,

I want to mention something about the Fargo diversion that really bothers my husband.

We live on the family farm. Richard's Dad sold us a piece of land on the farm for \$1 so we could put our house on it. The farm is west of Comstock, MN and south of Oxbow, ND. We are of course on the Minnesota side of the river inside what they call the Red Box or the Staging Area.

I designed our house and we had it build at Riverside Building Center in Lisbon, ND and had it moved to the farm. We have been here for a little less than 10 years now.

When we chose this spot we were told it was on a floodplain. My husband argued that we are on the high side of the river and in 4 generations the farm has never flooded. So they checked back in history looking at old photographs and determined that our land was not a floodplain. If it would have been we would have never put our house on it.

Summary of Comments on JudyWillem_Commenter193b-c_Mail2.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/2/2015 2:24:46 PM -06'00'
Commenter 193 cont.

Author: Medopera Subject: Highlight Date: 4/7/2016 4:01:45 PM
Comment ID: 193b
Topic: Proposed Project and Northern Alignment Alternative, General Opposition
Unsubstantive

Now we have a situation where the Diversion Authority is going to not only turn our land into a floodplain, but they are also going to flood it.

What we don't understand is how they can flood property that exists to protect future development on the floodplain south of Fargo that doesn't yet exist? Isn't flood protection supposed to protect existing property? Why take a problem and make it somebody else's problem? We are not against protecting Fargo, but not at our expense so Fargo can have more land for development.

Maybe the answer is for Fargo to accept the fact that they are going to run out of land for future development and the natural floodplain south of Fargo is where they should place their Staging Area. Have there been any studies on what it would cost as compared to the plan they have now?

The natural floodplain is a lower elevation and it would seem to me to be less expensive. Also that dam idea has to go because it is just too dangerous. And putting a dike around the towns or Oxbow, Hickson and Bakke was totally unnecessary. They are being protected from the diversion, not a natural flood.

Sincerely,



Judy Willem

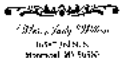
Page: 2

Author: Medopera Subject: Highlight Date: 12/2/2015 2:27:48 PM -06'00'
Comment ID: 193b cont.

Author: Medopera Subject: Highlight Date: 4/7/2016 4:02:13 PM
Comment ID: 193c
Topic: Alternatives, Alternative: Fargo Floodplain Staging Area

Author: Medopera Subject: Highlight Date: 12/2/2015 2:29:21 PM -06'00'
Comment ID: 193b cont.

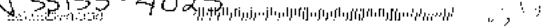
This page contains no comments



AIR MAIL PERMIT
ST. PAUL, MN 55102



Phil Townley
Environmental Policy & Review Unit, Box 25
Ecological & Water Resources Division, DNR
500 Lafayette Road
St. Paul, MN 55155-4025



Commenter 193 cont.

Judy Willem
16587-3rd Street South
Moorhead, MN 56560

Jill Townley
Environmental Policy and Review Unit
Box 25
Ecological and Water Resources Division
DNR
500 Lafayette Road
St. Paul, MN 55155-4025

September 20, 2015

Subject: Fargo-Moorhead Risk Management Project DEIS

Dear Ms. Townley,

I have neighboring farmers and friends who live outside the Red Box. During a major floor they could have as much as a foot of water on their property with no monetary compensation. A foot of water is 7 – 8 feet in their basements. Yet I understand the only way they can be compensated is to sue the Army Corps of Engineers. This is land that has never flooded. Fargo's solution to flooding should not be to push the problem on somebody else.

Sincerely,
Judy Willem

SEP 28 2015

Summary of Comments on JudyWillem_Commenter193d-e_Mail3.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/2/2015 2:31:31 PM -06'00'
Commenter 193 cont.

Author: Medopera Subject: Highlight Date: 4/19/2016 2:00:30 PM
Comment ID: 193d
Topic: Hydrology and Hydraulics, Flood Fringe Depths

Author: Medopera Subject: Highlight Date: 4/7/2016 4:10:25 PM
Comment ID: 193e
Topic: Socioeconomics, Mitigation

Jill Townley
Environmental Policy and Review Unit
Box 25
Ecological and Water Resources Division
DNR
500 Lafayette Road
St. Paul, MN 55155-4025

Judy Willem
16587-3rd Street South
Moorhead, MN 56560

Commenter 193 cont.

Summary of Comments on JudyWillem_Commenter193h_Mail4.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/2/2015 2:37:44 PM -06'00'
Commenter 193 cont.

Author: Medopera Subject: Highlight Date: 4/7/2016 4:12:19 PM
Commenter 193f
Topic: Dam Safety, Risk and Loss of Life Concerns

September 23, 2015

Subject: Fargo-Moorhead Risk Management Project DEIS

Dear Ms. Townley,

I have lived in areas where the ground is solid. My Father was a contractor in South St Paul. He built 40 homes which never developed cracks in the foundations.

Now I live in the Fargo-Moorhead area where the ground is always moving. Our house in Davenport ND had to have the basement walls reinforced with steel I-beams before we could sell it. No matter how old houses are in this area they never stop developing cracks in the walls. Large buildings have to have foundations built on stilts to reach bedrock. During major floods in our area even paved roads tend to wash-out.

The proposed high hazard dam is going to span many miles and will be made out of dirt. During a major flood will be the time the most pressure will be put on it. Fargo plans to develop the natural flood plain on the south end of town. These homes and possibly much of Fargo will be in the path of a horrific flash flood if this high hazard dam should fail. Even with a spillway the dam will not be safe.

Has there been a study on the amount of property and lives lost if the lowland is developed and the dam should fail?

Sincerely,
Judy Willem

SEP 30 2015

September 17, 2015

Jim Tounley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road,
St Paul, Minnesota 55155-2025

Commenter 194

Dear Sir,

I am a Clay County landowner. I am totally against the present Fargo-Moorhead diversion project. The possible flooding of Clay County makes no sense. The Minnesota side is higher than the North Dakota side. It has never been flooded in any past floods. The land here is highly productive and a flood could cause considerable damage.

The present plan seems to be more of a benefit to Fargo than Moorhead. I would not allow my land to be flooded.

Sincerely,

Leland Larson

21/11/15

Summary of Comments on LelandLarson_Commenter194a_Mail1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/2/2015 2:45:51 PM -06'00'
Commenter 194

Author: Medopera Subject: Sticky Note Date: 4/8/2016 9:01:08 AM
Comment ID: 194a
Topic: Proposed Project, General Opposition
Unsubstantive



FARGO ND 581
17 SEP 2015 PM 1 L

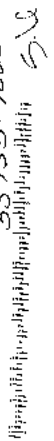


*Jon Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road
St. Paul, Minnesota*

SEP 17 2015

55155-4025

55155-4025



52

This page contains no comments

Commenter 195

OCT 7 2015

October 5, 2015

Jill Townley
Project Manager
Environmental Policy & Review Unit
Box 25
Ecological & Water Resources Div/DNR
500 Lafayette Rd
St. Paul MN 55155-4025

Re: FM Diversion

Dear Ms Townley:

Back in 2010 the Federal Government built a ring dike around our farmstead. If the dam is built on the Red River as part of the FM Diversion, the water will top our dike. Who is going to pay to raise our dike and how high are they going to have to make it so we will be safe. I was told it may have to be raised another 10 feet. How high is high enough? I will be living at the bottom of a bowl that will most certainly fill up with snow in the winter time. I will then be buried under. This is totally unacceptable. I want answers and I am not getting them from the FM Diversion Committee. And the farmers have been told that we cannot relocate our farmstead within the area that will be protected by the diversion.

Sincerely



Marjorie Cossette
17132 50th St. SE
Horace, ND 58047

Summary of Comments on MarjorieCossette_Commenter195a-b_Mail1.pdf

Page: 1


Author: Medopera Subject: Text Box Date: 12/2/2015 2:49:11 PM -06'00'
Commenter 195


Author: Medopera Subject: Highlight Date: 4/8/2016 9:02:17 AM
Comment ID: 195a
Topic: Socioeconomics, Mitigation

Author: Medopera Subject: Highlight Date: 4/22/2016 9:33:36 AM
Comment ID: 195b
Topic: Communication Concerns, Diversion Authority
Unsubstantive



Author: Medopera Subject: Highlight Date: 12/2/2015 2:51:30 PM -06'00'
Comment ID: 195a cont.

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 Mary A. Cosette
1732 5th St. S.E.
Barron, NJ 08647

55155-4025
NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES


Jill Townley
Project Manager
Environmental Policy & Review Unit
Box 25
Ecological & Water Resources Div/DNR
500 Lafayette Rd
St. Paul MN 55155-4025

55155-4025  

Summary of Comments on MarjorieCossette_Commenter195c_Mail2.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/2/2015 2:53:40 PM -06'00'

Commenter 195 cont.

Author: Medopera Subject: Highlight Date: 4/19/2016 3:40:24 PM

Comment ID: 195c
Topic: Infrastructure and Public Services, Flood Impacts to Roadways, Ditches and Culverts

Commenter 195 cont.

October 8, 2015

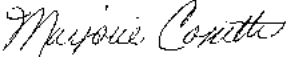
Jill Townley
Project Manager
Environmental Policy & Review Unit
Box 25
Ecological & Water Resources Div/DNR
500 Lafayette Rd
St. Paul MN 55155-4025

Re: FM Diversion

Dear Ms Townley:

I am concerned about the damage to the roads that the FM Diversion will cause. This has not been addressed at any of the meetings that the Diversion Committee has held.


Sincerely

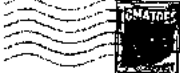


Marjorie Cossette
17132 50th St. SE
Horace, ND 58047


OCT 12 2015

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 Marg A. Cossette
1133 30th St. S.E.
Bismarck, ND 58057

PAID PER POST
08 OCT 2015 PM 1 L


Jill Townley
Project Manager
Environmental Policy & Review Unit
Box 25
Ecological & Water Resources Div/DNR
500 Lafayette Rd
St. Paul MN 55155-4025

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Commenter 195 cont.

October 12, 2015

Jill Townley
Project Manager
Environmental Policy & Review Unit
Box 25
Ecological & Water Resources Div/DNR
500 Lafayette Rd
St. Paul MN 55155-4025

Re: FM Diversion

Dear Ms Townley:

What happens to the crop land if the FM Diversion goes through as currently designed? If the crops are destroyed, Federal Crop Insurance will not pay for a flood that was man made. That is, if the gates on the dam that will be built on the Red River are closed and the water floods the crops, we will lose our income. Who is going to reimburse us for lost revenue?

Sincerely



Marjorie Cossette
17132 50th St. SE
Horace, ND 58047

OCT 14 2015

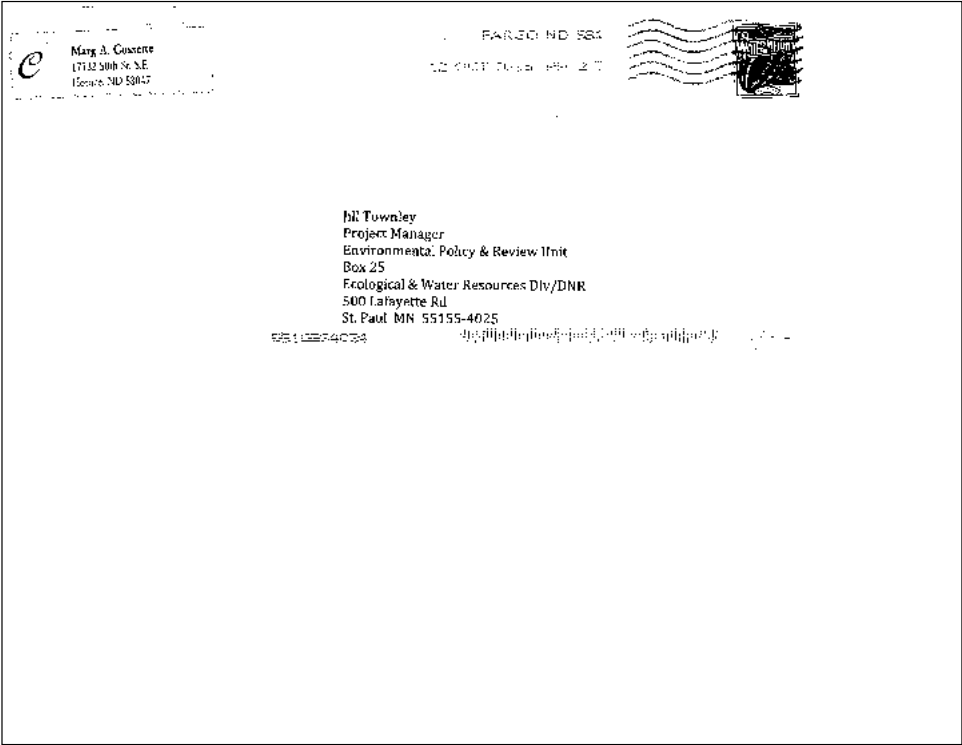
Summary of Comments on MarjorieCossette_Commenter195d_Mail3.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/2/2015 2:56:23 PM -06'00'
Commenter 195 cont.

Author: Medopera Subject: Highlight Date: 4/8/2016 9:07:10 AM
Comment ID: 195d
Topic: Socioeconomics, Agriculture Mitigation

This page contains no comments



Commenter 195 cont.

October 20, 2015

Jill Townley
Project Manager
Environmental Policy & Review Unit
Box 25
Ecological & Water Resources Div/DNR
500 Lafayette Rd
St. Paul MN 55155-4025

Re: FM Diversion

Dear Ms Townley:

The drinking water that is piped into my home comes from our well. It concerns me a great deal that water that will be allowed to cause overland flooding by the FM Diversion could contaminate our area wells. This has never been addressed by the FM Diversion.

Sincerely,



Marjorie Cossette
17132 50th St. SE
Horace, ND 58047



Summary of Comments on MarjorieCossette_Commenter195e_Mail4.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/2/2015 2:58:34 PM -06'00'
Commenter 195 cont.

Author: Medopera Subject: Highlight Date: 4/21/2016 8:55:27 AM
Comment ID: 195e
Topic: Socioeconomics, Wells and Groundwater Quality

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e- Marg A. Cossette
17132 504 St. S.E.
Horace, ND 58047

FARGO ND 581
19 OCT 2015 PM 2 L



Jill Townley
Project Manager
Environmental Policy & Review Unit
Box 25
Ecological & Water Resources Div/DNR
500 Lafayette Rd
St. Paul MN 55155-4025

55155+4034



5.6



Commenter 195 cont.

October 15, 2015

Jill Townley
Project Manager
Environmental Policy & Review Unit
Box 25
Ecological & Water Resources Div/DNR
500 Lafayette Rd
St. Paul MN 55155-4025

Re: FM Diversion

Dear Ms Townley:

There are cemeteries located within the holding area of the FM Diversion that will be completely under water. I am concerned about the damage that will be caused by the water that will certainly wash away any headstones and disturb the graves.

Sincerely

Marjorie Cossette
17132 50th St. SE
Horace, ND 58047

Summary of Comments on MarjorieCossette_Commenter195f_Mail5.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/2/2015 3:02:41 PM -06'00'
Commenter 195 cont.

Author: Medopera Subject: Highlight Date: 4/8/2016 9:09:28 AM
Comment ID: 195f
Topic: Cultural Resources, Cemetery Impacts

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e
Marg A. Cossette
17132 50th St. S.E.
Horace, ND 58047

FARGO ND 581
15 OCT 2015 PM 2 T



Jill Townley
Project Manager
Environmental Policy & Review Unit
Box 25
Ecological & Water Resources Div/DNR
500 Lafayette Rd
St. Paul MN 55155-4025

55155+4025 |||...||| 54



Minnesota Pollution Control Agency

520 Lafayette Road North | St. Paul, Minnesota 55155-4194 | 651-296-6300
800-657-3864 | 651-282-5332 TTY | www.pca.state.mn.us | Equal Opportunity Employer



Commenter 196

October 14, 2015

MnDNR
Ms. Jill Townley, Project Manager
500 Lafayette Road North
St. Paul, MN 55155

Re: Fargo-Moorhead Flood Risk Management Project – Draft Environmental Impact Statement

Dear Ms. Townley:

Thank you for the opportunity to review and comment on the Draft Environmental Impact Statement (DEIS) for the Fargo-Moorhead Flood Risk Management Project (Project) located in Fargo, North Dakota and Moorhead, Minnesota. Regarding matters for which the Minnesota Pollution Control Agency (MPCA) has regulatory responsibility and other interests, the MPCA staff has the following comments for your consideration.

- 1) To properly evaluate the wetlands impacted by the Fargo-Moorhead Flood Diversion project for the State of Minnesota 401 program, the specific impacted wetlands in each state [Minnesota and North Dakota] must be clearly identified on maps and in the various sections of the DEIS that reference wetlands.
- 2) These wetland identifications must clearly differentiate between permanent and temporary impacted wetlands.
- 3) In addition, the applicant must identify which wetlands are waters of the state and which wetlands are subject to Wetland Conservation Act (WCA).

We appreciate the opportunity to review this project. Please be aware that this letter does not constitute approval by the MPCA of any or all elements of the Project for the purpose of pending or future permit action(s) by the MPCA. Ultimately, it is the responsibility of the Project proposer to secure any required permits and to comply with any requisite permit conditions. If you have any questions concerning our review of this DEIS please contact me at 651-757-2482.

Sincerely,

Kevin Kain
Planner Principal
Environmental Review Unit
Resource Management and Assistance Division

KK:ld

cc: Dan Card, MPCA, St. Paul
William Wilde, MPCA, St. Paul

Summary of Comments on MinnesotaPollutionControlAgency_ KevinKain_Commenter196a_Mail1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/2/2015 3:06:23 PM -06'00'
Commenter 196

Author: Medopera Subject: Highlight Date: 4/21/2016 9:50:39 AM
Comment ID: 196a
Topic: Wetlands, Section 401 Permitting

This page contains no comments



Minnesota Pollution Control Agency
520 Lafayette Road North | St. Paul, MN 55155-4194 | www.pca.state.mn.us



Ms. Jill Townley, Project Manager
500 Lafayette Road North
St. Paul, MN 55155

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North Dakota Department of Transportation

Grant Levi, P.E.
Director

Jack Dalrymple
Governor

Commenter 197



October 16, 2015

Jill Townley
Project Manager
Environmental Policy & Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road
St. Paul, MN 55155-4025

DEIS FARGO-MOOREHEAD FLOOD RISK MANAGEMETN PROJECT, CASS COUNTY,
NORTH DAKOTA

We have reviewed your September 14, 2015, letter.

This project should have no adverse effect on the North Dakota Department of Transportation highways.

However, if because of this project any work needs to be done on highway right of way, appropriate permits and risk management documents will need to be obtained from the Department of Transportation District Engineer, Robert Walton at 701-239-8903.

ROBERT A. FODE, P.E., DIRECTOR – OFFICE OF PROJECT DEVELOPMENT

57/raf/js

c: Robert Walton, Fargo District Engineer

Summary of Comments on NorthDakotaDepartmentofTransportation_RobertFode_Co mmenter197a_Mail1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/2/2015 3:08:42 PM -06'00'
Commenter 197

Author: Medopera Subject: Highlight Date: 4/8/2016 9:12:16 AM
Comment ID: 197a
Topic: Permits and Approvals, Edit
Approved

This page contains no comments



Summary of Comments on PatriciaRedlin_Commenter198a-b_Mail1.pdf

Page: 1

Author: Medopera Subject: Sticky Note Date: 4/20/2016 12:43:42 PM
 Comment ID: 198b
 Topic: Proposed Project Purpose and Need, Questions Project Purpose

Author: Medopera Subject: Sticky Note Date: 4/19/2016 4:41:29 PM
 Comment ID: 198a
 Topic: Infrastructure and Public Services, Flood Impacts to Roadways, Ditches and Culverts

Author: Medopera Subject: Text Box Date: 12/2/2015 4:15:42 PM -05'00'
 Commenter 198

Written Comments

~~Commenter 198~~

Comment on the DEIS for the proposed Fargo-Moorhead Flood Risk Management Project.
 *Please note that any information provided to the MNDNR is public data. While you are not required to provide your contact information, doing so allows us to mail you our response to your comments.

Name: Patricia Redlin	Mailing Address: 5215 County Road 51 S, HICKSON, ND 58047-4740
Representing: myself	Email: gpremlin@yahoo.com

I don't believe a University Study was done on the Highway in secondary roads in and around the Staging Area. What the effects of spreading water should cause on wetlands etc. Whether the roads would be available for fire and maintenance services if needed.

The main reason Fargo is requesting the diversion in the Staging Area is so that can continue to build in the National Floodplain south of Fargo. They are asking people to give up their homes with have never flooded, so they can build in the flood plain.

If we have to lose our home it will be the second time my husband has lost his home due to the Army Corps of Engineers. (Commission 1st time)



Mrs. Pat Redlin
5273 County Road 81 S
Hickson, ND 58047-0790

FARGO ND SSI
26 OCT 2015 PM 2 T



To: Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road, St Paul, Minnesota 55155-4025

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Summary of Comments on PatriciaRedlin_Commenter198b-d_Mail2.pdf

Page: 1

Author: Medopera Subject: Sticky Note Date: 12/2/2015 4:22:47 PM -05'00'
Comment ID: 198b cont.

Author: Medopera Subject: Sticky Note Date: 4/19/2016 2:40:20 PM
Comment ID: 198c
Topic: Hydrology and Hydraulics, Expert Opinion Evaluation Panel

Author: Medopera Subject: Text Box Date: 12/2/2015 4:21:50 PM -05'00'
Commenter 198 cont.

Author: Medopera Subject: Sticky Note Date: 4/8/2016 10:16:55 AM
Comment ID: 198d
Topic: Alternatives, Alternative: Basin-Wide Approach

Written Comments

Comment on the DEIS for the proposed Fargo-Moorhead Flood Risk Management Project. *Please include that any information provided to the MNDNR is public data. While you are not required to provide your contact information, doing so allows us to mail you our response to your comment.

Name: Patricia Redlin
Representing: Myself
Mailing Address: 5275 County Road 81 S.
Hickson, ND 58047-9740
Email: prredlin@yahoo.com

I'm Concerned the Cornst elevation figures were not used consistently in the study. Also the time frame (years) used for flooding used in the study were not continuous years for a long period (i.e. 50yrs) they picked and used the years they wanted to be used to make the numbers higher.

They are wanting to flood out people who live not in the flood plain and never flood so they can continue to build in the natural flood plain south of town. That is the area that saved Fargo from flooding in 2000.

We need a flood protection plan for the whole Red River Valley, not just Fargo.

Commenter 198 cont.

This page contains no comments



Postage
Required

TO: Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road, St. Paul, Minnesota, 55155-4025

R Mrs. Pat Redlin
5273 County Road 81 S
Hickson, ND 58047-9740

FARGO ND 581
22 OCT 2015 PM 2 T



To: Sill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road, St. Paul, Minnesota 55155-4025

551554025



5/10

This page contains no comments

Jill Townley, Project Manager
Environmental Policy & Review Unit Box 25
Ecological & Water Resources Division, DNR
500 Lafayette Road
St Paul, MN 55155-4025

Commenter 199

OCT 26 2015

TO WHOM IT MAY CONCERN:

COMMENTS ON THE FM DAM

FARM LAND IN THE FUTURE IS GOING TO BE A COMMODITY & YOU ARE GOING TO DEMOLISH THAT VALUABLE ESSENTIAL ELEMENT/ENVIRONMENT. THE RED RIVER VALLEY IS ONE OF THE LARGEST AREAS FOR GROWING FOOD & YOU ARE GOING TO ELIMINATE A GOOD PORTION OF THAT.

IT IS NOT NECESSARY! THERE ARE OTHER SOLUTIONS WITHOUT GENERATING SUCH DESTRUCTION & WASTE. GRAND FORKS HAS TAKEN CARE OF THE PROBLEM WITHOUT RESULTING IN HARMFUL &/OR RUNIOUS ACTION.

HOW CAN YOU COMPENSATE FOR THE LOSE OF LAND & LIVELYHOOD? A ONE TIME PAYMENT TO A LIFE TIME OF INCOME PASSED ON TO GENERATIONS.

THERE HAS TO BE A LESS INVASIVE WAY OF FULFILLING THE PURPOSE OF THIS PROJECT!

P Capps

4601 Legends Lane

Elkton, Florida 32033

Summary of Comments on PauletteCapps_Commenter199a_Mail1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/2/2015 3:26:06 PM -06'00'
Commenter 199

Author: Medopera Subject: Highlight Date: 4/8/2016 9:18:18 AM
Comment ID: 199a
Topic: Proposed Project and Northern Alignment Alternative, General Opposition
Unsubstantive

Commenter 200

October 23, 2015

Environmental Policy and Review Unit
Box 25, Ecological and Water Resources Division
DNR
500 Lafayette Road
St. Paul, MN 55155-4025

Re: Fargo-Moorhead Flood Risk Management Project
ATTN: Jill Townley, Project Manager

Dear Ms. Townley:

The flood mitigation project for the Fargo-Moorhead region, which your office has prepared a draft Environmental Impact Statement for, is critical to the safety and economy of our area, and should be implemented by the DNR's acceptance of the proposed alternative.

This project will provide the region with 100-year flood protection through a system of impoundment and diversion supplemented by levees and flood walls. This is necessary for the Fargo-Moorhead metropolitan area, since several rivers that are prone to flooding pass through or near the cities, and our terrain does not include much in the way of high ground to provide natural protection. The Fargo-Moorhead metro area is a key regional hub, and serves the needs of thousands of Minnesotans, including a great many from outside the borders of the metro area. Major flooding would cause immense disruption in the economy and daily lives of these thousands of people. Permanent flood control is not a luxury here, but a necessity.

The proposed project will meet this need, and do so in a way that will have the least possible impact on the environment and local residents. Other alternatives in the EIS either do not offer any sort of permanent, or even moderate-term protection (the two "No-Action" alternatives), or are designed in such a manner that more land will be needed, and a greater number of homes impacted by the impoundment (the Northern Alignment Alternative.) The proposed option, which has received approval from the federal government through the U.S Army Corps of Engineers, locates the impoundment pool in the most efficient location to impact the least number of homes, and still serve the purpose of the project.

As both your DEIS and the federal EIS have noted, the project will not have any adverse impact on the environment. Extensive monitoring plans are in place to keep an eye on fish populations and nesting locations, and the document contains many pages of detailed mitigations that will be part of the project.

The proposed action is a safe, responsible and efficient approach to providing needed flood protection to the Fargo-Moorhead metro region. Please continue to do what is right for the people of western Minnesota and approve the project.

Best,



Summary of Comments on PauletteSpiker_Commenter200a-c_Mail1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/2/2015 3:28:30 PM -06'00'
Commenter 200

Author: Medopera Subject: Highlight Date: 4/8/2016 9:19:24 AM
Comment ID: 200a
Topic: Proposed Project, General Support
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/8/2016 9:19:52 AM
Comment ID: 200b
Topic: Environmental Impacts, EIS Concludes

Author: Medopera Subject: Highlight Date: 4/8/2016 9:20:16 AM
Comment ID: 200c
Topic: Permitting Approval, Approve the Project
Unsubstantive



FARGO ND 581

26 OCT 2015 PM 2 L



*Environmental Policy & Review Unit
DNR, Ecological and Water Resource Division
500 Delanyette Road
St. Paul, MN 55155-4025*

551554025



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This page contains no comments

October 14, 2015

Commenter 201

To: Jill Townley, Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division
Minnesota Department of Natural Resources
500 Lafayette Rd.
St. Paul, MN 55155-4025

Re: Comments on the Draft Environmental Review of the Fargo-Moorhead Flood
Diversion Project / Flood Risk Management Project
Minnesota Environmental Impact Statement and Monitoring Plan

From: People to Save the Sheyenne, Box 252, Valley City, ND 58072

What the Fargo-Moorhead Flood Diversion Project plans may not have considered in projecting its operating plans relevant to water quantity and water quality in the Red River is the amount and quality of water from a Devils Lake, N.D., water project that will impact water in the Sheyenne River.

The Tolna Coulee Control Structure project will, at some time in the future, allow water to flow down the Sheyenne River and into the Red River. What the result of the Tolna Coulee Control Structure, built by the U.S. Army Corps of Engineers along with the North Dakota State Water Commission, will do in its operation is to allow all of the water in Devils Lake above an elevation of 1446 feet msl. to flow into the Sheyenne. In other words, after the Tolna Coulee erodes, Devils Lake will have become part of the Sheyenne River watershed.

Devils Lake did not flood this year. The lake has a current elevation of 1450.6 feet msl. and will overflow at 1458 feet msl., flowing into the Sheyenne.

When Devils Lake overflows, water will come through the Tolna Coulee Control Structure (built 2012) at a rate of about 3,000 cubic feet per second, allowing the Tolna Coulee to erode.

If the Tolna Coulee erodes, it could drop the level of Devils Lake/Stump Lake from 1458 feet above mean sea level to 1446 feet msl, as logs are removed from the control structure to allow erosion. [See "Standing Instructions to the Project Manager for Water Control, U.S. Army Corps of Engineers;" See also savetheshyenne.org]

Once logs are removed, Corps' Standing Instructions forbid their replacement. The eroded Tolna Coulee will remain open, allowing ALL OF THE WATER IN DEVILS LAKE to flow through the structure without any control. Forever. Devils Lake will have become part of the Sheyenne River watershed. Flows out of Stump Lake/Devils Lake will be 3,000 cubic feet per second or more. And annual inflows/outflows will total 600,000 acre/feet or more (as was the case in 2009 and 2011). What will the impact of this amount of water be? The downstream effects have yet to be determined.

Summary of Comments on PeopletoSavetheSheyenne_WilliamMoore&RichardBetting_ Commenter201a_Mail1.pdf

Page: 1

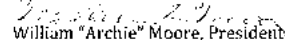
Author: Medopera Subject: Text Box Date: 12/2/2015 3:32:17 PM -06'00'
Commenter 201

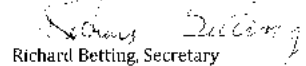
Author: Medopera Subject: Highlight Date: 4/8/2016 10:11:48 AM
Comment ID: 201a
Topic: Cumulative Effects, Tolna Coulee Project

The point is that the Devils Lake project could impact the Sheyenne River and thus the Red River with amounts that might not have been projected.

Can this be prevented? Yes. Change the Tolna Coulee Operating Plan. Don't take any logs out of the Tolna Coulee Control Structure in the first place.

Respectfully submitted,


William "Archie" Moore, President
People to Save the Sheyenne
Rogers, North Dakota 58479; 701-490-6280


Richard Betting, Secretary
People to Save the Sheyenne
Valley City, North Dakota 58072; 701-845-4905

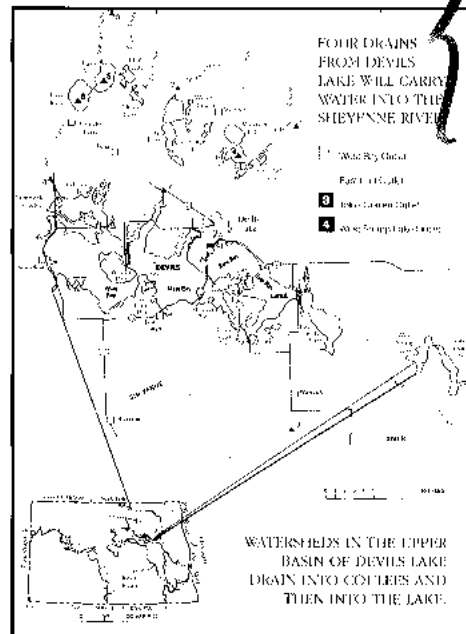
THE *Sheyenne*: A RIVER IN PERIL

SPRING 2012

THE PROBLEM: HIGH WATER on Devils Lake covers farmland, and the lake threatens to overflow. The US Army Corps of Engineers is in the process of building the Tolna Coulee "Control Structure" and installing sheet pile so the coulee can't erode disastrously. Once the Tolna Coulee sheet pile and "control structure" are built, there is no longer a threat of uncontrolled erosion or of a catastrophic overflow into the Sheyenne River.

There will be NO WALL OF WATER DOWNSTREAM.

Instead, if the Tolna Coulee erodes gradually – as the steel stop logs in the control structure are removed – to an elevation



Map from DEBGR 1/3/2009 CO June 2000

of 14-6 feet or so, and the stop logs are not replaced, downstream flooding will occur more often. The so-called "control structure" will allow all of the water in Devils Lake to flow through the Tolna Coulee and into the Sheyenne River without any control.

As a result, the 3800 square mile Devils Lake basin will be added to the Sheyenne River watershed, doubling the watershed drainage area above Baldhill Dam. And all of the water flowing into Devils Lake from the upper basin will flow out of Stump Lake at 3000 cubic feet per second or more to the Sheyenne River. In April 2011 the Sheyenne flowed at over 7500 cfs. Adding 3000 cfs of Devils Lake water to that flow would have been catastrophic for Valley City, Ft. Ransom, Lisbon, Kindred and others.

The Tolna Coulee Outlet Plan will make one imaginary catastrophe – the "fourteen foot wall of water" – for a real and repeated disaster-flooding along the Sheyenne River on a regular basis.

While Devils Lake will be protected by dikes to as high as the lake can rise – over 1458 feet above mean sea level – Valley City, Ft. Ransom, Lisbon, Kindred and others downstream on the Sheyenne will be subjected to periodic flooding worse than ever before. None of these towns has dikes high enough to protect them against regular flooding higher than occurred in 2009 or 2011.

"Fixing" Devils Lake water problems by draining the lake into the Sheyenne River is only passing problems along, not solving them. No uncontrolled Devils Lake outlets should be built or allowed to operate.

PUBLISHED BY
PEOPLE TO *Save* THE SHEYENNE

Box 252, Valley City, North Dakota 58072
www.savethesheyenne.org
 On Facebook: Ad Hoc Downstream Group

COMMENTS ON THE FOUR OUTLETS

The Keller steel, haphazard method used by the North Dakota State Water Commission to deal with Devils Lake water has been costly and will be devastating to downstream Snyeyenne River landowners and other users. The SWC plan: Move some houses, build a dike; move more houses, raise a dike higher; drain another slough, deeper a coulee; move more houses, raise more roads as dikes, build an outlet, add another outlet. And so on. Four outlets have been built or are being planned and still the problem of keeping water out of Devils Lake has not been addressed.

The West Bay Outlet and the East End Outlet will pump a total of 600 cfs from Devils Lake into the Snyeyenne River. The Tolna Coulee project will add 3,000 cfs or more. Then the West Stump Lake plan could add 600 cfs or more to the river. Even more if the unlined ditch is allowed to erode.



Also in 1985, a flash flood near Swanport city

The four outlets raise more questions:

- "Where is the long-term comprehensive plan for the entire basin?"
- "Will all of these outlets operate at the same time?"
- "What will happen downstream to the Snyeyenne and the people who live along the river?"
- "Where are the environmental studies that reveal the effects of these outlets on downstream river users?"
- "Where are the operating plans for these projects?"
- "If the Tolna Coulee plan functions and the coulee erodes, will the West Bay or East End outlets ever pump again?"
- "If the West Stump Lake Ditch operates and erodes, will any of the other outlets ever function again?"

"If the Tolna Coulee erodes, why can't the 'control structure' be rebuilt so that flows from Devils Lake can be controlled?"

- "How can the Snyeyenne River—with a 600 cfs capacity above Baldhill Dam—handle Devils Lake flows of 3,000 cfs and more? What are the impacts on the river?"

THE FOUR DEVILS LAKE OUTLETS BUILT

Numbers of pumps and
total flow in cfs

	WEST BAY Pumps	SWC EAST END Pumps
SPONSOR & COST	SWC 2005 outlet based on Corps West Bay plan. \$84 million	ND-SWC April 2011 \$60-80 million
STATUS	Operational in 2005; cratic op 2010, 2011. Operation cost: \$300,000/month.	Under construction fall/winter 2011 to begin operation spring 2012. Op cost \$220,000/month.
AMOUNT of water removed	250 cfs maximum. Max 3.5 inches of lake. Pump, pipe and ditch. Pump water of unml D. Lake elevation falls to 1446 feet msl.	350 cfs maximum. Max 3.6 inches of lake. Pump, pipe & ditch. Pump and D Lake elevation falls to 1446 ft. above mean sea level.
ELEVATION	Operate when Devils Lake is above 1446 ft above msl.	Operate whenever Devils Lake above elevation of 1446 feet above msl.
METHOD of TRANSFER	Four 75 cfs pumps operation	Five pumps @ 350 cfs dump water into lower Tolna Coulee, then into Snyeyenne River.
WATER QUALITY	600-700 mg/l sulfate (By comparison sulfate levels in Snyeyenne used to average less than 100 mg/l).	1200 mg/l sulfate plus high levels of many others, such as arsenic, chloride, selenium, mercury and so on.
TOTAL FLOWS	250 cfs	350 cfs



Canoeing on the Snyeyenne

This page contains no comments

BEING BUILT OR PLANNED

3

Corps/SWC Tolna Coulee Gravity Control Structure

U.S. Army Corps, Sept 2011. Issued Environmental Assessment: F0881 - Finding Of No Significant Impact. \$15 million

Under construction. Sheet pile installation control structure in process; operate summer 2012.

Will begin op when Stump Lake reaches 1458 ft elevation. Water will erode Tolna Coulee with 3,000 cfs flow down to elevation 1415 feet msd. Stop logs not to be replaced.

Start op. @ 1458 ft. msd, end when coulee reaches lowest erosion point - 1446 ft msd

Gravity flow from Stump L. into Tolna Coulee, then into Sycamore Gate structure uncontrolled. Once Tolna Coulee erodes.

2500-2700 mg/l sulfate plus high levels of many other many other contaminants, such as arsenic, chloride, selenium mercury, and others.

3000 cfs or more

4

SWC WEST STUMP LAKE Gravity Flow Ditch

DUBWRB /SWC August 2011 New Design planed. 17 million

Spring 2012: planning for 2013 construction? Plans incomplete as of March 1, 2012. If no control structure.

all of the D Lake water above 1452 ft. for 1446 ft msd if ditch erodes to an elevation in Devils Lake above the ditch elevation will flow into Sycamore River. Flow could be 500 cfs or more

Immediately after ditch is dug, will flow until Stump Lake falls to 1432 feet or lower - 1446 ft msd?

Gravity flow from SWC Stump L. through Tolna Coulee hills into Sycamore River. Ditch 1.25 miles long, 50' deep, 50' bottom, 450' top width. Uncontrolled?

2500 + mg/l sulfate, plus high levels of many other contaminants. No environmental (EIS) studies have been done on any outlets

500 - 3000 cfs +

Some Devils Lake facts:

Size of Devils Lake now = about 200,000 acres, and the lake now holds about 4 million acre-feet. In the 14 years since 1998 when Devils Lake reached 1447 ft msd, the lake rose less than 8 feet, or an average of half a foot per year.

Annual inflows into Devils Lake from upper basin 1993 to 2011 = 266,000 acre-feet.

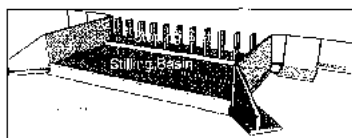
West Bay and East End Outlets will pump 600 cubic feet per second and remove total of about 200,000 acre feet annually, about a foot off the lake. [One acre-foot is an acre of water a foot deep.]

Evaporation will remove about 30 inches per year from the lake, a total of about 500,000 acre-feet.

So from both pumped outlets and evaporation, about 42 inches or 700,000 acre-feet will be removed without either Tolna Coulee or West Stump ditch operating.

OUTLET # 3: Tolna Coulee Operating Plan calls for the removal of "stop logs" 1' x 12' steel girders-in order to allow the coulee to erode when Stump Lake overflows. The Operating Plan declares that, once they have been removed, "stop logs will not be replaced." The entire 12' x 120' foot structure will be an open gate.

Once Tolna Coulee erodes and there is no control structure; all Devils Lake water above the eroded outlet elevation will flow uncontrolled into the Sycamore River.



Tolna Coulee Control Structure. This is built into the 800-foot structure that prevents the Tolna Coulee from emptying. Army Corps of Engineers Final Environmental Assessment.

The Barnes County Commission and the Valley City Commission both passed resolutions calling for the Corps Operating Plan to be revised to allow replacement of stop logs so that the control structure would actually function again.

OUTLET # 4: The West Stump Lake Ditch could start flowing at 1454 feet msd and erode the coulee even deeper. The ditch could also lower the elevation of Devils Lake and become a pass-through for water into the Sycamore.

No studies of downstream impacts from the four outlets have been done. How often, for example, will Valley City, Lisbon, Ft. Ransom and others suffer from spring and summer floods because of the added water from Devils Lake? How high will dikes in those two cities have to be to contain the extra water? How much will water treatment costs add to Valley City homeowners' bills? Will fish and mussels be able to reproduce in Stump Lake quality water? What will happen to Lake Ashitabala in terms of water quality, habitat and the fishery? How about real estate values in Valley City and around Lake Ashitabala? What will happen to the Sycamore National Grasslands? How will Devils Lake water affect the Fargo-Moorhead-Diversion?

HOW BAD IS STUMP LAKE WATER?

Stump Lake contains the worst quality water in the Devils Lake chain. When draining Stump Lake was first considered in 1999, here is what the ND Department of Health concluded: "This project is extremely complex from a water quality perspective. The water quality parameters that are of concern include total dissolved solids, sulfates, chlorides, copper, lead, arsenic, selenium, boron, ammonia and nutrients. . . Furthermore, designated beneficial uses of the Sycamore River would not be maintained. . ."

The North Dakota Department of Health has already indicated that water quality standards in the Sycamore River below Bakhill Dam will be "relaxed" to allow more than 750 mg/L of sulfate into the river.

This page contains no comments

WHERE THE WATER COMES FROM

THE CAUSES:

1. A **wet cycle** added about four more inches of precipitation than normal in the basin, going from about 17 inches per year to about 21 inches per year.
2. Presently, **runoff** from thousands of acres of "forced" sloughs in the upper basin of Devils Lake take thousands of acre-feet of water to Devils Lake annually.

Preliminary studies of drainage in the upper basin at Devils Lake indicate that as many as 569,000 acres of wetlands were intact at statehood. Estimates of remaining undrained wetland acres in 1999 indicate that only about 211,000 acres remained. As many as 358,000 acres of wetlands may have been drained. A comprehensive study—an Environmental Impact Statement—must be done, using the latest LIDAR technology, to determine the impact of upper basin drainage on the water level in Devils Lake.

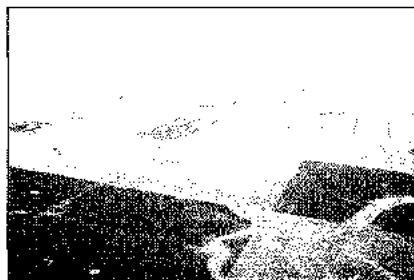
They say that all of the sloughs in the upper basin are full of water.



Before drainage



After drainage



Ditches and coulees carry water downstream

As you can see, **DRAINED WETLANDS DON'T HOLD WATER.** FORMER upper basin WETLANDS are being farmed. As a result, lower Devils Lake Basin farmland has been **FLOODED.** One main reason for wanting Devils Lake to be drained into the Shyenne River is to remove water from flooded land. Again, this would simply move the problem downstream into the Shyenne River where others would suffer more flooding, bank erosion, and all of the other damages from more and lower-quality water.

THE SOLUTIONS:

Only one logical way to deal with too much water in the tub: Turn off the Tap. Prevent water from entering the lake.

THE EFFECTS OF DRAINAGE:

Gravity outlets will add the entire 4810 square mile Devils Lake watershed to that of the Shyenne River above Bakdhill Dam, potentially doubling flows, adding to downstream flooding, even more bank erosion downstream, endangering roads, bridges, infrastructure, homes and farms. Poor quality water will destroy river ecology, and add to water treatment costs.

DOWNSTREAM COSTS:

"Overland flooding will increase as Devils Lake water is added to Shyenne River flows, especially between Kindred, Horace, and the Red River."

"Between 1972 and 1975, the lake rose six feet to 1435 feet, becoming a threat to low-lying roads and private property along the shore," an Aug. 18, 1981 A.P. story stated. "In the dry period, roads were built across narrow parts of the lake bed; farmers planted and harvested below the old high water mark, and the City of Devils Lake expanded into part of the old lake bed."

"Wetland drains are a 'ground robin' that profit farmers and businessmen," said Ramsey County Water Resources Board Chairman Robert Garske in the Feb. 26, 1985, Devils Lake Journal. "Farmers can raise wheat instead of ducks on drained wetlands, and businessmen profit from more customers drawn to the Devils Lake Esbary, which runoff water supports by keeping the lake from getting too salty and killing the fish. Rather than trying to hold [water] back, we need to figure out how to get more in."

"They have spent over a billion dollars and still haven't tackled the main cause of the problem—drainage."

"The Valley City Fish Hatchery may have to close because poor water quality won't allow fish to reproduce or survive in it."

"Lake Ashlandia may suffer from blue-green algae because of the added phosphorus in the water."

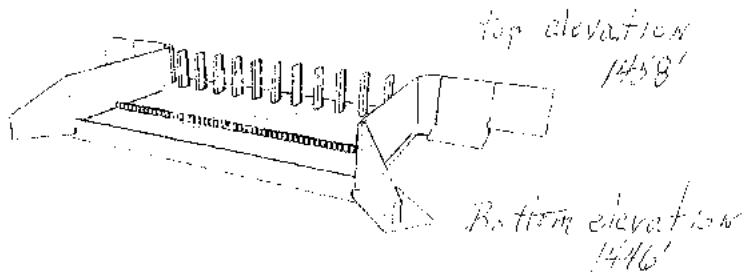
"The cost to dike around Devils Lake is in the hundreds of millions of dollars. Now they won't have enough money to dike properly through Valley City and Lisbon."

"If the John Coulee erodes, then the nether the West Bay, East End nor West Stump outlet will probably ever operate again." Why not? Because if the elevation of Devils Lake is lowered to 1446 feet, the lake will never rise to overflow elevation. All of the water above the lowered lake elevation will flood into the Shyenne River through the John Coulee."

Write: **Gov. Jack Dalrymple**
600 East Boulevard Ave.,
Bismarck, ND 58505-0100
Say, "Science first, then decide."

This page contains no comments

In this drawing the stop logs have been removed, as would be the case after the Toina Coulee eroded to its lowest level.



Toina Coulee Control Structure: This is built into the 800 foot sheet pile that prevents the Toina Coulee from eroding. (Army Corps of Engineers Final Environmental Assessment)

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People Save Skyeenne
Box 252
Valley City, ND 58072



Jill Townley, Environmental
Policy and Research Unit, Box 25
Ecological and Water Resources Div
Minnesota Dept. Nat. Resources
500 Lafayette Road
St. Paul MN 55165-4025

Summary of Comments on Renee&MichaelGrussins_Commenter202a_Mail1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/2/2015 4:39:26 PM -05'00'
Commenter 202

Author: Medopera Subject: Sticky Note Date: 4/8/2016 11:16:12 AM
Comment ID: 202a
Topic: Proposed Project and Northern Alignment Alternative, General Opposition
Unsubstantive

Written Comments

Comment on the DEIS for the proposed Fargo-Moorhead Flood Risk Management Project.
*Please note that any information provided to the MNDNR is public data. While you are not required, we provide your contact information, doing so allows us to mail you our response to your comment.

Name:	Renee and Michael Grussins	Mailing Address:	10741 18th St. S. Moorhead MN 56501
Representing:	Ourselves	Email:	rgussins@hotmail.com

We have lived at our current residence since Dec. 1998 and have never had any flooding issues. However, the diversion channel is placed in an effort to protect the surrounding and personal lives of many people and will negatively impact the wildlife in my region.

The Northern alignment will disrupt impact on and all residents of Rusted MN. Many of which have lived here for most of their lives. It will also ~~decrease~~ have potential to destroy a church.

We are not in favor of any of the current diversion proposals.

If the northern alignment proposal is selected our home will lose its value. A ring like of Rusted land also ~~lose~~ lose its value to our home and property.

Renee Grussins

Commenter 202

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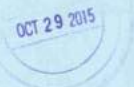
ing
St. S.
MN 56560-7707

FARGO ND 581

27 OCT 2015 PM 2 L



TO: Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road, St. Paul, Minnesota, 55155-4025



551554034 0001



God Had Better Idea

Commenter 203

Just read in paper the Red River water diversion project will cost in excess of \$1.5 billion. That is taxpayer dollars being spent to send a problem around Fargo and Morehead downriver to flood all the areas downstream to Winnipeg. Another idea our government has is to build another dam that will only back up the river and flood more land. Neither of these ideas addresses why we have the flooding problem there in first place.

Minnesota and N. Dakota have collectively created this problem on their own. The land on both sides of the river gently slopes toward the river. We have removed all of nature's ability to deal with the spring thaw which pretty much guarantees floods. We have tilled almost every square mile of land including virgin prairie, marginal farm lands, drained the swamps and wetlands, and refused to follow current legislation regarding buffer strips for ditches, creeks, streams, rivers, and lakes.

Here is a different idea. Invest the \$1.5 billion in effort to restore the damage we have inflicted on our environment and allow nature to once again perform its tasks as God intended. Enforce buffer strips laws on all bodies of water, restore wetlands, introduce legislation that is favorable to agriculture to want to comply similar to CRP. If agriculture sees fit not to comply take away their crop insurance which taxpayers pay for. Plant trees and shrubs along all water ways to restore riparian areas. How far would \$1.5 billion go to accomplish the above? It would fight the problem for everyone not just those that live in Fargo and Morehead. Stop treating the symptoms and eradicate the root cause. Special interest need to see big picture.

What is more important; milking every last dollar out of every acre for agriculture at expense of everyone or have positive long term impact on:

Reduced flooding full length of the river

Improved water quality for all

Reduced erosion

Prevent another unneeded dam

Improved ecology for cleaner air, pollinators, and wildlife in general

Long term improved soil quality for agriculture

It is no small surprise that our State was unable to pass a conservation bill for two years when it is willing to spend \$1.5 billion dollars on project that does nothing to address the core problem.

Rick Petrekovic

Summary of Comments on RickPetrekovic_Commenter203a_Mail1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/2/2015 3:42:05 PM -06'00'
Commenter 203

Author: Medopera Subject: Highlight Date: 4/8/2016 10:24:44 AM
Comment ID: 203a
Topic: Alternatives, Alternative: Restoration

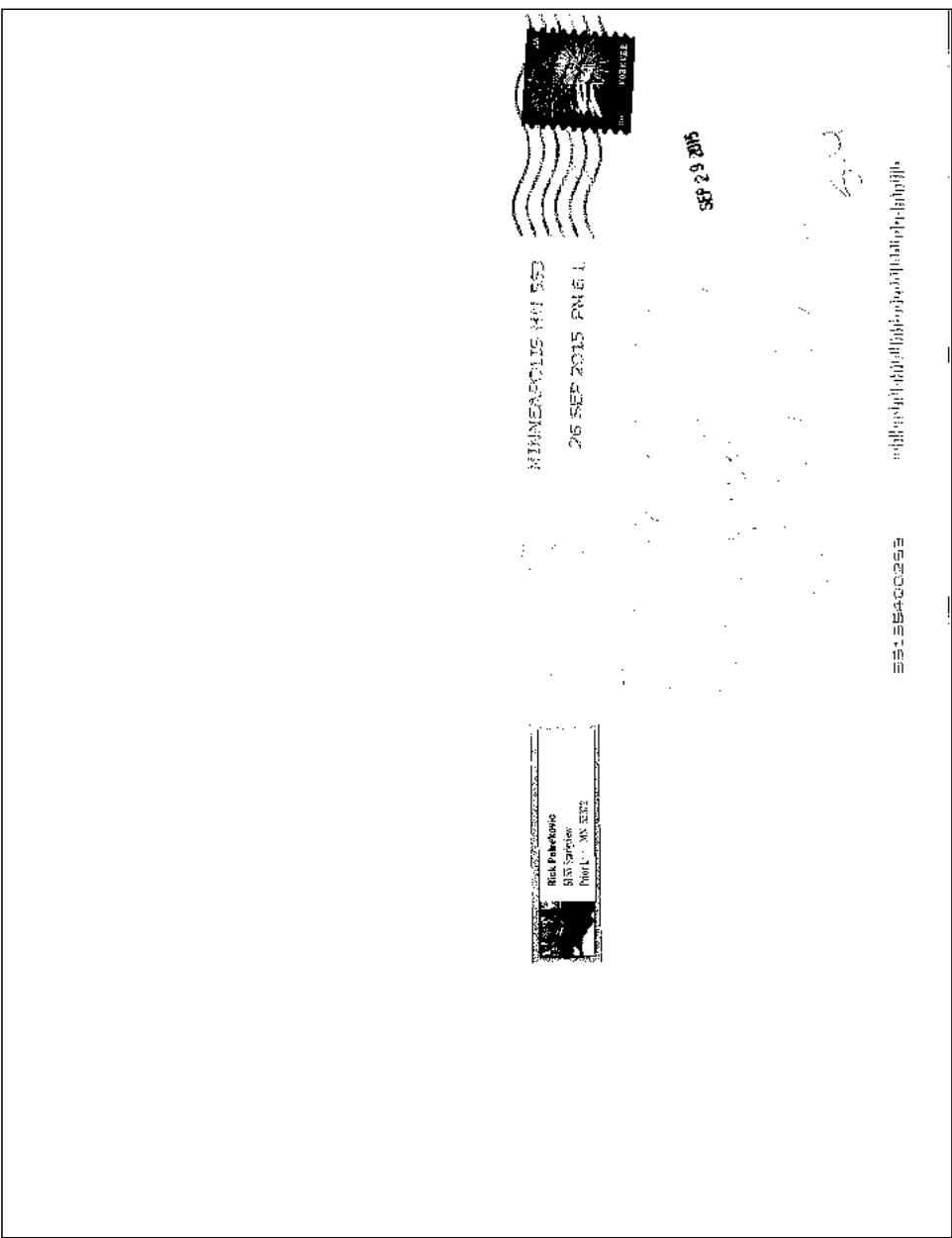
J:11

This is in response to
your request for input on proposed
PARLO (DIVERSION) project.

Thank

Kick Pettkovic
952-440-6759

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Summary of Comments on Steve&LenoreOlson_Commenter204a_Mail1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/2/2015 3:44:44 PM -06'00'
Commenter 204

Author: Medopera Subject: Sticky Note Date: 4/8/2016 10:41:08 AM
Comment ID: 204a
Topic: Socioeconomics, Mitigation

Box 3
Comstock, MN 56525
Sept. 28, 2015

Commenter 204

Dear Jill,

We live in the diversion staging area

1 1/2 miles north of Comstock. We have lived here going on 40 years. We have put our blood, sweat, and tears into this property. We do not want to move. We planned to die here. The thing is we are very low income people. Our place isn't worth a lot but it is the world to us. It is paid for and we are in our late 60's.

If we have to move someday because of the diversion will you give us enough to make us whole? We cannot get another place to live if we only get the appraised value. We cannot afford to live in Fargo. Will you make us whole or will you ruin our lives?

Also - would we be allowed to stay here and take a chance that the staging area is never needed?

We cannot attend the meeting on Oct. 14 and we do not own a computer. If you would mail us an answer to this letter it would be greatly appreciated.

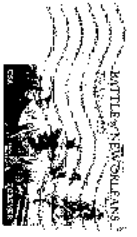
Sincerely yours,
Steve and Lenore Olson

SEP 30 2015

This page contains no comments

STEVE LEMORE OLSON
Box 3
Constock, MN 56525

FARGO ND 581
28 SEP 2015 PM 2:1



VILL TOWNLEY, Project Manager
ENVIRONMENTAL Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 LAFAYETTE ROAD ST PAUL MN 55155-4025

954 9984564

954 9984564

50

Summary of Comments on StevenWalker_Commenter205a_Mail1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/2/2015 4:48:43 PM -05'00'
Commenter 205

Author: Medopera Subject: Sticky Note Date: 4/8/2016 11:49:38 AM
Comment ID: 205a
Topic: Northern Alignment Alternative, General Opposition
Unsubstantive

Written Comments

Comment on the DEIS for the proposed Fargo-Moorhead Flood Risk Management Project. Please note that any information provided to the MNDNR is public data. While you are not required to provide your contact information, doing so allows us to mail you our response to your comment.

Name:

STEVEN WALKER

Mailing Address:

Steven A. & Karen Walker
10389 3rd St. S.
Moorhead, MN 56560

Representing:

Email:

Commenter 205

In Whom My Counsel

I disagree of the Northern Alignment Plan
In my opinion this is not going to work
there hasn't been any soil testing and the land has
not been surveyed. The embankment goes right
through the agricultural and the land that I own
my family and I would be homeless and no
insurance I am a fourth generation farmer on
this land, I will do anything to keep this farm.

This Northern Alignment needs to be studied
more than reviewed. We do not need to help the
Fargo Diversify, there is more I can say
but will end it for now.

& Karey Walker
- 3rd St. S.
ad, MN 56560

Postage
Required

TO: Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road, St. Paul, Minnesota, 55155-4025

This page contains no comments

STEVE D. SCHEEL
SCHEELS
4550 15th AVENUE SOUTH
FARGO, NORTH DAKOTA 58103

(701) 232-3665



October 26th, 2015

ATTN: Jill Townley, Project Manager
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Road
St. Paul, Minnesota 55155-4025
Email: environmentalrev.dnr@state.mn.us

Dear Ms. Townley:

I live in south Moorhead on the Red River and I have fought to save our home three times in the past 18 years. I know the danger the Red River poses first hand. This letter is intended to document my support for the Fargo-Moorhead Flood Risk Management Project, and specifically for the proposed, federally approved alternative.

This project will provide permanent flood protection for the Fargo-Moorhead Metro area, which is desperately needed considering the geography and abundance of rivers that make up the terrain. This project will do this, and do it better than any of the other options presented. Here's how:

1. It will impound and store flood waters upstream, in a staging area that is located in the best possible place to do the job, and also impact as few existing homes as possible;
2. It will protect smaller communities with well-constructed ring levees, just exactly as the Winnipeg diversion does today. I have toured the project in Winnipeg;
3. It will divert the water in a controlled manner around the Fargo-Moorhead metro area, just exactly as the Winnipeg diversion does today;
4. It will feature levees and flood walls to protect the metro area, all built to federal standards or better;
5. The impoundment dam will be built in accordance with USACE specifications for a Class 1 dam; and
6. It is the most cost effective option for permanent protection.

The No Action alternatives will not offer any kind of permanent protection, at best allowing for temporary emergency measures, such as sandbagging. This will not even provide 50 year protection, let alone 100 year. The Northern Alignment alternative will, as the DNR prepared EIS points out, impact far more homes (a net increase of 60% than the proposed alternative and cost \$81 million more.

This proposed action for the flood control project is a well designed and engineered system for providing long-term, comprehensive flood protection, and has already passed muster with the appropriate federal agencies. Please follow suit and approve the project without delay.

Most Sincerely,

Steve D. Scheel

3900 RIVER OAK CIRCLE
MOORHEAD MN 56560

"Our goal is to be the best retailer in the USA in the eyes and minds of our customers and our associates."

Summary of Comments on SteveScheel_Commenter206a-b_Mail1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/2/2015 3:51:18 PM -06'00'
Commenter 206

Author: Medopera Subject: Highlight Date: 4/8/2016 10:51:06 AM
Comment ID: 206a
Topic: Proposed Project, General Support
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/8/2016 10:51:37 AM
Comment ID: 206b
Topic: Permitting Approval, Approve the Project
Unsubstantive

This page contains no comments



SEP 30 2015

Commenter 207

September 27, 2015

Division of Planning Dept. of Natural Resources

Re: Gill Country Project Manager

I received a letter from the DNR regarding comments on its Draft Environmental Impact Statement (DEIS) concerning potential environmental effects of a flood abatement project proposed in the large Moorhead area.

I can understand the Division's authority's purpose for the project to reduce flood risk. The project would raise a dike spanning the West River Road (North Dabit) and the East River (North Dabit and Moorhead) separation water storage area around about a portion of existing flow frame infrastructure to eliminate any drainage.

This water storage area affects my farm and the surrounding area which includes a number of residential, including some.

Summary of Comments on SylviaStorvick_Commenter207a_Mail1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/2/2015 3:53:28 PM -06'00'

Commenter 207

Author: Medopera Subject: Sticky Note Date: 4/8/2016 10:52:31 AM

Comment ID: 207a
Topic: Land Use, Land Use Study

Abolition of the "border" solution?
 My father owned horses on his farm.
 His father came from Norway in the
 late 1800's at age 17. He farmed for most
 of his life and was passing down my family
 heritage and history. My parents' grandparents
 were also in the county cemetery
 near the farm.
 How easy to be lost forever by flooding
 over the cemetery?

My father was a great educator
 and administrator in the public school
 in Minnesota for 40 years.
 He was one of the organizers of the
 Minnesota High School League, and with
 a little part of his contribution
 in the Mpls. Sta. Union when he died.
 Was there a board or trust over the
 land? Or was it all under one title?
 As I understand it, the High School
 Board had Management Rights in being
 led by some self appointed members.
 I know that there is a way out
 for the Homeless (to have
 a piece of ground)?

This page contains no comments

The houses are in the 250,000 sq. ft. range and they are being bought for \$1 million, with pay-off this! The day just past

is thought published for 18 years. My husband was a mathematician professor. Do you think those jobs were abundant? Think again. It was hard work! Just as our parents learned them with hard work! Oh no, there are many great ideas as well as with our former country.

Why don't the large Microsoft community have a buy now. The deal when in, often best available.

My research in the ETS is a study of the impact of land use.

Thank you for considering my comments.

Sincerely,
Sylvia D. Torwick

This page contains no comments

This page contains no comments



Mrs. David A. Stovick
4812 12th Ave. S
Minneapolis, MN 55417

MINNEAPOLIS MN 554
28 SEP 2015 PM 11 L



*Wild Security, Project Manager
Environmental Policy and Review Unit*

*Ecological and Water Resources Division
DNR*

500 Fitzgerald Road

*St. Paul, MN 55112
55155-0000
33-4085-518*



Commenter 208

October 12, 2015

Jill Townley
Environmental Policy and Review Unit, Box 25
Ecological and Water Resources Division, DNR
500 Lafayette Rd
St. Paul, MN 55155-4025
RE: Fargo-Moorhead Flood Risk Management Project

Dear Ms. Townley,

I would like to thank you and the Minnesota Department of Natural Resources for extending this opportunity to comment on what will be a very important project for the Fargo-Moorhead area. This will finally provide some permanent flood mitigation and protection for the region, and I encourage you to follow in the steps of the U.S. Army Corps of Engineers and approve the proposal.

This federally authorized project will provide needed protections for many Minnesota residents. According to the state's Economic Development report, nearly 60% of Moorhead residents work in the Fargo, ND area, a figure exceeding even the 38% number stated in your department's socio economic analysis of the project. Either way, that represents a huge number of Minnesotans who work in Fargo; therefore this project will protect not only the Minnesotans living in Moorhead, which will directly benefit from the projects flood mitigations, but also those who do business and own property in Fargo.

This project consists of upstream impoundment and subsequent diversion around Fargo. This is the best way to control flooding in the region, and to mitigate flood damage. This is in line with the Fargo-Moorhead Flood Diversion Authority's purpose and need statement, drafted to meet the needs of the state's environmental review process, which states that the purpose is to "reduce flood risk, flood damages and flood protection costs related to flooding in the Fargo-Moorhead metropolitan area." This purpose and need statement is appropriate, and accurately reflects the need on the ground for permanent flood control.

Some have raised questions as to whether this project has been adequately studied, but I think the evidence is clear that it has been very well reviewed and analyzed. It has already undergone a comprehensive Environmental Review and Impact Statement from the U.S. Army Corps of Engineers, which released a Record of Decision approving the project. It has also earned Congressional approval, and this Draft Environmental Impact Statement by the DNR is equally as thorough. There comes a point when something can be overstudied.

This is an important and overdue public safety improvement for our part of Minnesota, and will result in far less damage caused by flooding. Please accept my support for the project.

Sincerely,

Craig Whitney
President and CEO
The Chamber

Promoting economic growth and prosperity for business and its members through advocacy, education and engagement.

202 First Avenue North, Moorhead MN ■ www.fmwfchamber.com ■ 218.233.1100 ■ P.O. Box 2443, Fargo ND 58108-2443

Summary of Comments on TheChamber_CraigWhitney_Commenter208a-b_Mail1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/2/2015 3:58:37 PM -06'00'
Commenter 208

Author: Medopera Subject: Highlight Date: 4/8/2016 10:53:45 AM
Comment ID: 208a
Topic: Permitting Approval, Approve the Project
Unsubstantive

Author: Medopera Subject: Highlight Date: 4/8/2016 10:54:09 AM
Comment ID: 208b
Topic: Proposed Project, General Support
Unsubstantive

This page contains no comments



THE CHAMBER

FARGO HEADQUARTERS WEST FARGO

P.O. Box 2443, Fargo, North Dakota 58108-2443

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FARGO ND
58108-2443
ZIP+4SM 58108-2443

Jill Townley, EIS Project Manager
Environmental Review Unit
Division of Ecological and Water Resources
Minnesota DNR
500 Lafayette Road
Saint Paul, Minnesota 55155-4025

1B6DSHF 55155 4025 56

Commenter 209



To: Jill Townley EIS Project Manager

The FM area needs the Diversion. That was said years ago. Flooding of the FM area costs millions of dollars up front money- but the hidden costs are a lot more. Buildings and home foundations break, streets break up from shifting and trucks hauling clay, and bridges move- things we really do not see until much later. One flood in Fargo takes years to repair.

All these studies we do still go back to the Diversion. IT IS NEEDED!

I have lived in the FM area for many years. Have been flooded out of my home, have seen the Fargo area grow and have seen what flooding does.

Most of the studies we do, I believe is a waste of a lot of money. The studies we do to try to prove that the Diversion is not needed is a real waste of money.

The Diversion controls flooding so we can still keep the area working and building, and the area can still keep business pretty much normal. Without the Diversion the FM area is everything but normal, and a big mess after a not controlled flood.

If the Diversion is not built- the people, groups, whoever is against the Diversion should pay the extra flood insurance premiums and whatever the cost of a flood. NOT Tax payer money.

I could go on and on about why the Diversion is needed. The FM Diversion engineering is great. It has been studied and studied every way and more for years, and is still the only way to control flooding in the FM area. Not only the FM area- the whole Red River Valley.

We have to quit talking and studying and get the Diversion done- it has been proven and proven time again to be NEEDED!

THANK YOU!

Vaughn Johnson

Summary of Comments on VaughnJohnson_Commenter209a_Mail1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/2/2015 4:01:37 PM -06'00'
Commenter 209

Author: Medopera Subject: Highlight Date: 4/8/2016 10:55:29 AM
Comment ID: 209a
Topic: Project and Northern Alignment Alternative, General Support
Unsubstantive

Shelley + Deegan Johnson
8351 73 Ave S.E.
Argonne, ND 58005



FARGO ND 581
21 OCT 2015 PM 2 L

Jill Hawley EIS project manager
Environmental Policy and Review Unit 25
Ecological and Water Resources Division DNR
500 Sycamore Road. St Paul MN

ES15584025

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October 22, 2015



3902 13th Ave S
Suite 3717
Fargo, ND 58103-7512
www.westacres.com

701.282.2222
Fax: 701.282.2229



Commenter 210

Jill Townley, Project Manager
Environmental Policy and Review Unit
Box 25, Ecological and Water Resources Division
Minnesota Department of Natural Resources
500 Lafayette Road
St. Paul Minnesota 55155-4025

Re: Fargo-Moorhead Flood Risk Management Project DEIS

Dear Ms. Townley,

It is without hesitation that I write to express my full support for the Fargo-Moorhead Flood Risk Management Project, as approved by the U.S. Army Corps of Engineers and the United States Congress.

The purpose of this project is to reduce flood risk, flood damages and flood protection costs with a permanent flood protection system. This is a purpose that I am positive everyone can support. This project will protect the lives, homes and businesses of residents in the Moorhead metro area, and other parts of western Minnesota, including hundreds of Minnesotans who work in Fargo, including many of our employees. Access to health care, including emergency treatment would be compromised in a major flood event, and the costs in loss of business, property and income would be devastating. This doesn't even cover the potential of loss of life.

This proposed project will provide permanent protection against such losses. It is a well-engineered system that will impound flood waters upstream and divert them in an orderly, controlled manner around the metro area. This is far preferable, and more effective, than temporary emergency measures like those we have relied on in the past. Community sandbagging efforts are heroic and have served us miraculously well, but do not offer permanent engineered protection, and are prone to failure. Sandbagging also presents its own serious logistical issues. My

Summary of Comments on WestAcresDevelopmentLLC_BradleySchlossman_Comment er210a-b_Mail1.pdf

Page: 1

Author: Medopera Subject: Text Box Date: 12/2/2015 4:04:16 PM -06'00'
Commenter 210


Author: Medopera Subject: Highlight Date: 4/8/2016 10:56:26 AM
Comment ID: 210a
Topic: Proposed Project, General Support
Unsubstantive

residence was on the front lines and was protected by sandbags for three consecutive years.

The bottom line is that the proposed, federally authorized project will provide a permanent solution to reduce flood risk, ~~damages and costs~~, and should receive the support of the State of Minnesota. I applaud you for your efforts on this to date, and urge you to continue to do the right thing for the people of Minnesota and approve the project.

Signed,

WEST ACRES DEVELOPMENT, LLP



By: Bradley Schlossman
CEO

Page: 2

Author: Medopera Subject: Highlight Date: 12/2/2015 4:05:31 PM -06'00'
Comment ID: 210a cont.

Author: Medopera Subject: Highlight Date: 4/8/2016 10:56:53 AM
Comment ID: 210b
Topic: Permitting Approval, Approve the Project
Unsubstantive

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3902 13th Ave S
Suite 3717
Fargo, ND 58103-7512

FARGO ND 581
22 OCT 2015 PM 2 L



Jill Townley, Project Manager
Environmental Policy and Review Unit
Box 25, Ecological and Water Resources Division
Minnesota Department of Natural Resources
500 Lafayette Road
St. Paul Minnesota 55155-4025

551554025



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Summary of Comments on WesternTrustCompany_GaryHoffman_Commenter211a_Mail1.pdf

Page: 1

Author: Medopera Subject: Sticky Note Date: 4/8/2016 11:58:08 AM
Comment ID: 211a
Topic: Socioeconomics, Northern Alignment Alternative Project Cost

Author: Medopera Subject: Text Box Date: 12/2/2015 5:07:30 PM -05'00'
Commenter 211

Written Comments

Comment on the DNS for the proposed Fargo-Moorhead Flood Risk Management Project. *Please note that any information provided to the MNDNR is public data. While you are not required to provide your contact information, doing so allows us to mail you our response to your comment.

Name: Gary G. Hoffman	Mailing Address: P.O. Box 1052 Mankato, MN 57201
Representing: Western Trust Company	Email:

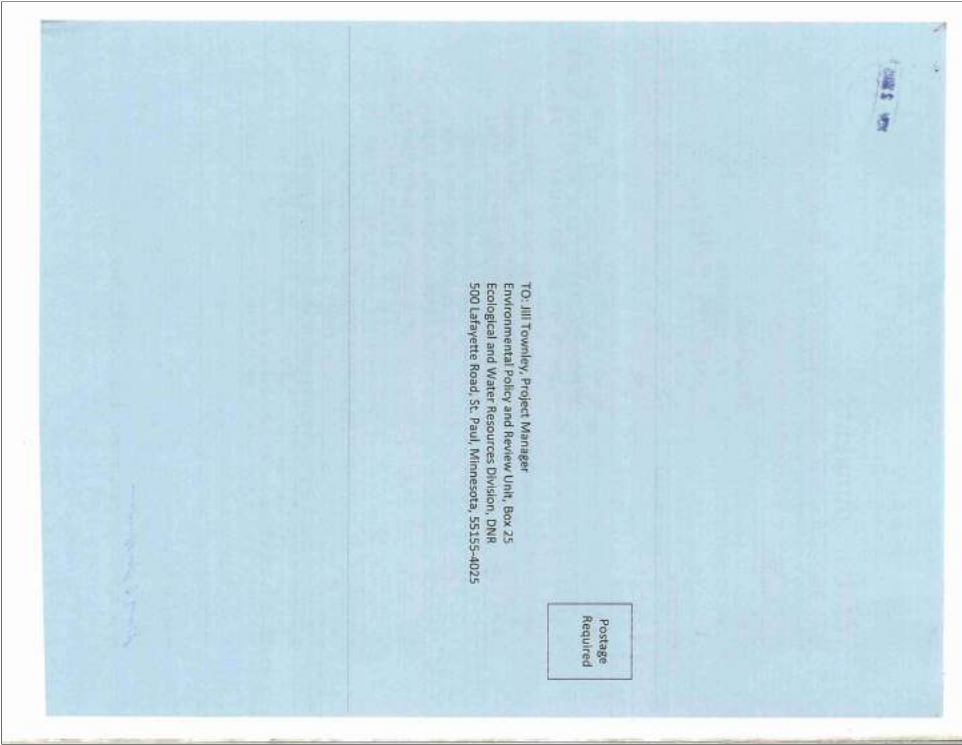
October 26, 2015

I totally disagree with those people who are now telling us land owners that the northern alignment is unacceptable as part of the solution to the F & M Flood Diversion project. This is not true. On July 8, 2013 I wrote a letter showing the U.S. Army Corp of Engineers by going straight north with the alignment it would save 14 miles of digging. At 33 million dollars a mile it would save 34 million 320 thousand dollars in expenses. I have enclosed a copy of the Western Alignment going straight north. This would save a lot of money for everyone. It was Terry Williams of the U.S. Army Corps of Engineers who gave me the figures of the savings of 34 million Three Hundred Twenty thousand dollars. The cost savings of the Western Alignment going straight north instead of going along the Sheyenne River Diversion Channel. The Army Corps of Engineers is telling us that the Northern & Western Alignment is unacceptable which is nonsense. Any questions you can call my cell # (480)746-1892. My address is listed above.

Sincerely,
Gary G. Hoffman
Western Trust Company
P.S. I never got an answer on my July 8, 2013 letter.

Commenter 211

This page contains no comments



This page contains no comments

Department of the Army
Attention: Terry Williams, Project Manager Gary Hoffman
31. Paul District, Corps of Engineers P.O. Box 1052
603 3rd St., R., Suite 300 Marietta, GA 30067
St. Paul, Minn. 55101-1678

July 8, 2013

Re: Fayo-Boorhead Flood Risk Management

Dear Terry Williams:

I talked to you at your meeting on June 25, 2013 in Fayo. I must say it was interesting to get your chance to ask the questions. First, I asked what advantage was there going to be for us farmers south of Interstate # 93. You told me unfortunately there wasn't going to be much of any kind of advantage for us farmers south of Interstate 94.

Second, I asked you what you were proposing the eastern route for the Diversion Channel Alignment putting the new Diversion Channel next to the Sheyenne River Diversion Channel. This adds more than 30 miles to the Diversion Channel and it would cost we haven't decided for sure where the New Alignment should go yet. You told me that you have only decided on 14% of the Alignment south of Interstate 94. However, everything that you said at the meeting on June 25, 2013 you said you had already decided where the Alignment is going - No questions asked !!

I also asked you, Terry where are extra 30 Million Dollars is really from? I also told me that the money will be appropriated by Congress and also that you should be responsible for the money from? You told me from the tax payers. I then told you that you are a tax payer too. I don't want to spend an extra 30 million Dollars when we can give the same job done and save 30 Million Dollars.

I asked you if I could speak at the meeting. At first you said yes. When I got up to the microphone you shut it off and told me to make any comments that I had in writing.

I am sending you maps of the New Proposed Diversion Channel Alignment to be a new proposed alignment on the west. The Western Alignment would save at least 30 Million Dollars.

I want you to draw up a New Alignment for the Diversion Channel using the Western Route and save us tax payers 30 million dollars. I will then be convinced that you did something for us tax payers even if nothing could be done to help us farmers.

I will be waiting to hear from you on the Diversion Channel Alignment.

Sincerely,


Gary C. Hoffman

This page contains no comments

SENDERS COMPLETE THIS SECTION

1. Complete items 1, 2, and 3. Also complete item 4 if you are returning the add to you. Fill in your name and address on the reverse of an air mail if space permits.

2. Name addressee to:

Dept of the Army
 St Paul Dist - Corps Engineers
 100 - 5th St East - St Paul
 St Paul, Minn. 55101-6178

3. Send to:

General Mail Special Mail
 Registered Return Receipt to Addressee
 Insured Signature Required
 Registered Return Receipt Insured Return Receipt

4. Sender's Name and Address:

Whitecap Airways
 7005 0270 0005 1728 2254
 7005 0270 0005 1728 2254
 7005 0270 0005 1728 2254

7005 0270 0005 1728 2254
 7005 0270 0005 1728 2254

TERRY WILLIAMS
 Civil Engineer
 Project Management

2000 Square Block Ave
 2000 Square Block Ave
 St Paul, MN 55117-1000
 Phone 651-223-5500
 Fax 651-200-8508
 E-mail: twilliams@whitecap.com

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DEPARTMENT OF THE ARMY
ENGINEERING CENTER
1607 15TH STREET, SUITE 700
ST. PAUL, MN 55101-1670

14 June 2013

Programs and Project Management Division
Project Management Branch (PMB-3)

SUBJECT: Foreign-Material Blood Risk Management Modeling for Impacted Property Owners
Gary Hoffman
BOX 1052
WATERLOO, SD 57201-1052

Dear Gary Hoffman,

The U.S. Army Corps of Engineers, in cooperation with the Division Authority, are completing a draft site-specific Environmental Assessment (EA) for the Diversion Channel and associated features. This EA addresses changes to the Diversion Channel alignment shown in the Environmental Impact Statement dated July 2011, including between the Maple River south to the Shevone River or "Western Alignment." We are contacting you because your location on our own property that may be directly affected by the Western Alignment, as shown on the attached map.

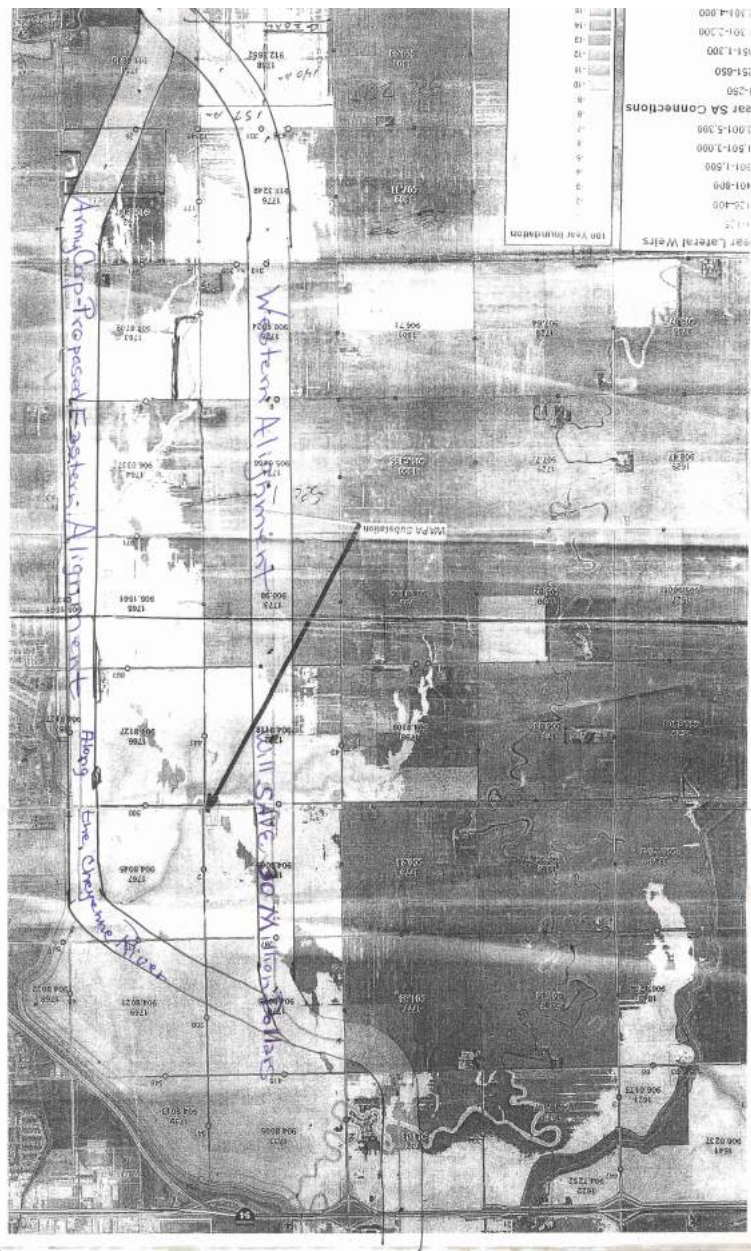
You are invited to attend a public meeting to learn about the potential impacts to your property at the Environmental Assessment meeting on the evening of Tuesday, June 25, 2013. The meeting will begin at 6 pm, with an open house followed by a formal presentation at 7 pm, and conclude with an open house from 8 pm to 10 pm, in the evening. The meeting will take place at the Large Creek Center, Commercial Bldg., 267 4th Street, South, Fargo.

Information to be presented will include the content of the Environmental Assessment and general information on the Western Alignment. This meeting is open to the general public.

We look forward to meeting with you on Tuesday, June 25, 2013. Please contact Katie Greshel at 651-709-3759 with any questions about the upcoming meetings.

Sincerely,

Terry Withams
Project Manager
Sahar Paul Dastgir, Corps of Engineer



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