

Permit Number
2018-0819

Dam Safety & Public Waters Work Permit

Expiration Date: 12/27/2023

Pursuant to Minnesota Statutes, Chapter 103G, and on the basis of statements and information contained in the permit application, letters, maps, and plans submitted by the applicant and other supporting data, all of which are made part hereof by reference, **PERMISSION IS HEREBY GRANTED** to the applicant to perform actions as authorized below.

<p>Project Name: Fargo-Moorhead Metropolitan Area Flood Risk Management Project</p>	<p>County: Clay</p>	<p>Watershed: Upper Red River of the North</p>	<p>Resource: Stream/River: Unnamed Creek (H-026-060); Stream/River: Red River (H-026); Stream/River: Red River</p>
<p>Purpose of Permit: Dam Safety - Construction, Culvert Construction/Modification/Replacement, Channelization/Realignment</p>		<p>Authorized Action: To construct, operate, and maintain the dam; to excavate and fill in Public Waters; to realign a portion of the Red River; and to construct the Red River Control Structure and the Wolverton Creek Structure; all associated with the Fargo-Moorhead Metropolitan Area Flood Risk Management Project, as described in the permit application and support references and according to the Permit Conditions. The first phase of the dam is shown on plans titled "FMM Diversion Inlet Structure" by the U.S. Army Corps of Engineers and signed by Michael Bart, P.E. in May of 2016. The maximum authorized height of the dam is elevation 928.5 feet (NAVD88). Specific written authorization will be required for each phase of dam construction. Specific written authorization (impoundment approval) will be required prior to project operation.</p>	
<p>Permittees (4):</p>		<p>Authorized Agents (3):</p>	

<p>CITY OF FARGO CONTACT: BOERBOOM, NATHAN, (701) 476-6743 200 N. 3RD STREET FARGO, ND 58102 (701) 241-1554</p> <p>METRO FLOOD DIVERSION AUTHORITY CONTACT: MICHAEL J. , REDLINGER, (701) 476-4135 211 NINTH STREET SOUTH BOX 2806 FARGO, ND 56078 (701) 282-4692</p> <p>U.S. ARMY CORPS OF ENGINEERS CONTACT: WILLIAMS, TERRY, (651) 590-5517 180 FIFTH STREET EAST, SUITE 700 ST. PAUL, MN 55101 (651) 290-5252</p> <p>CITY OF MOORHEAD CONTACT: ZIMMERMAN, ROBERT, (701) 299-5390 P.O.BOX 779 MOORHEAD, MN 56561-0779 (218) 299-5383</p>	<p>JACOBS CONTACT: GLATZMAIER, JOHN, (651) 253-5910 64 4TH STREET N SUITE 300 FARGO, ND 58102 (701) 566-5470</p> <p>HOUSTON-MOORE GROUP CONTACT: THIELMAN, C GREGG, (701) 237-5065 925 10TH AVENUE EAST WEST FARGO, ND 58078 (701) 282-4692</p> <p>HOUSTON ENGINEERING, INC. CONTACT: BASKERVILLE, EMMY 6901 EAST FISH LAKE ROAD SUITE 140 MAPLE GROVE, MN 55369 (763) 493-4522</p>
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Property Description (land owned or leased or where work will be conducted):

UTM zone 15N, 214952m east, 5171013m north (centroid),
SWSE of Section 34, T137N, R48W,
UTM zone 15N, 210773m east, 5179437m north,
Section 6, T137N, R48E
High Hazard Dam. NID MN01721

Issued Date: 12/27/2018	Effective Date: 12/27/2018	Expiration Date: 12/27/2023
Authorized Issuer: Tom Landwehr	Title: DNR Commissioner	Email Address: commissioner.dnr@state.mn.us
		Phone Number: 651-259-5555

This permit is granted **subject to** the following **CONDITIONS**:

APPLICABLE FEDERAL, STATE, OR LOCAL REGULATIONS: The permittee is not released from any rules, regulations, requirements, or standards of any applicable federal, state, or local agencies; including, but not limited to, the U.S. Army Corps of Engineers, Board of Water and Soil Resources, MN Pollution Control Agency, watershed districts, water management organizations, county, city and township zoning.

NOT ASSIGNABLE: This permit is not assignable by the permittee except with the written consent of the Commissioner of Natural Resources.

NO CHANGES: The permittee shall make no changes, without written permission or amendment previously obtained from the Commissioner of Natural Resources, in the dimensions, capacity or location of any items of work authorized hereunder.

SITE ACCESS: The permittee shall grant access to the site at all reasonable times during and after construction to authorized representatives of the Commissioner of Natural Resources for inspection of the work authorized hereunder.

TERMINATION: This permit may be terminated by the Commissioner of Natural Resources at any time deemed necessary for the conservation of water resources of the state, or in the interest of public health and welfare, or for violation of any of the conditions or applicable laws, unless otherwise provided in the permit.

COMPLETION DATE: Construction work authorized under this permit shall be completed on or before the date specified above. The permittee may request an extension of the time to complete the project by submitting a written request, stating the reason thereof, to the Commissioner of Natural Resources.

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WRITTEN CONSENT: In all cases where the permittee by performing the work authorized by this permit shall involve the taking, using, or damaging of any property rights or interests of any other person or persons, or of any publicly owned lands or improvements thereon or interests therein, the permittee, before proceeding, shall obtain the written consent of all persons, agencies, or authorities concerned, and shall acquire all property, rights, and interests needed for the work.

PERMISSIVE ONLY / NO LIABILITY: This permit is permissive only. No liability shall be imposed by the State of Minnesota or any of its officers, agents or employees, officially or personally, on account of the granting hereof or on account of any damage to any person or property resulting from any act or omission of the permittee or any of its agents, employees, or contractors. This permit shall not be construed as estopping or limiting any legal claims or right of action of any person other than the state against the permittee, its agents, employees, or contractors, for any damage or injury resulting from any such act or omission, or as estopping or limiting any legal claim or right of action of the state against the permittee, its agents, employees, or contractors for violation of or failure to comply with the permit or applicable conditions.

EXTENSION OF PUBLIC WATERS: Any extension of the surface of public waters from work authorized by this permit shall become public waters and left open and unobstructed for use by the public.

WETLAND CONSERVATION ACT: Where the work authorized by this permit involves the draining or filling of wetlands not subject to DNR regulations, the permittee shall not initiate any work under this permit until the permittee has obtained official approval from the responsible local government unit as required by the Minnesota Wetland Conservation Act.

CONTRACTOR RESPONSIBILITY: The permittee shall ensure the contractor has received and thoroughly understands all conditions of this permit. Contractors must obtain a signed statement from the property owner stating that permits required for work have been obtained or that a permit is not required, and mail a copy of the statement to the regional DNR Enforcement office where the proposed work is located. The Landowner Statement and Contractor Responsibility Form can be found at: <http://www.bwsr.state.mn.us/wetlands/wca/index.html#general>.

INVASIVE SPECIES - EQUIPMENT DECONTAMINATION: All equipment intended for use at a project site must be free of prohibited invasive species and aquatic plants prior to being transported into or within the state and placed into state waters. All equipment used in designated infested waters, shall be inspected by the Permittee or their authorized agent and adequately decontaminated prior to being transported from the worksite. The DNR is available to train inspectors and/or assist in these inspections. For more information refer to the "Best Practices for Preventing the Spread of Aquatic Invasive Species" at http://files.dnr.state.mn.us/publications/ewr/invasives/ais/best_practices_for_prevention_ais.pdf. Contact your regional Invasive Species Specialist for assistance at www.mndnr.gov/invasives/contacts.html. A list of designated infested waters is available at www.mndnr.gov/invasives/ais/infested.html. A list of prohibited invasive species is available at www.mndnr.gov/invasives/laws.html#prohibited.

13. LIMITATIONS: (a) Any violation of the terms and provisions of this permit shall constitute a violation of Minnesota Statute, Chapter 103G. (b) This permit is permissive only. No liability shall be imposed upon or incurred by the State of Minnesota or any of its employees, on account of the granting hereof or on account of any damage to any person or property resulting from any act or omission of the Permittee relating to any matter hereunder. This permit shall not be construed as estopping or limiting any legal claims or right of actions by any person other than the state against the Permittee, for any damage or injury resulting from any such act or omission, or as estopping or limiting any legal claim or right of action of the state against the Permittee, for violation of or failure to comply with the provisions of the permit or applicable provisions of law. The Permittee shall obtain the written consent of all persons, agencies, or authorities concerned, and shall acquire all property, rights, and interests necessary, before proceeding with any activity authorized by this permit involving the taking, using, or damaging of any property, rights or interests of any other person or persons, or of any publicly owned lands or improvements thereon or interests therein. (c) This permit shall not release the Permittee from any other permit requirements or liability or obligation imposed by Minnesota Statutes, Federal Law, or local ordinances relating thereto and shall remain in force subject to all conditions and limitations now or hereafter imposed by law. (d) Unless explicitly specified, this permit does not authorize any alterations of the beds or banks of any public (protected) waters or wetlands. A separate permit must be obtained from the Department of Natural Resources prior to any such alteration. (e) Unless explicitly specified herein, this permit does not authorize the appropriation of the state's water resources for either consumptive use or dewatering. Separate permit(s) must be obtained from the Department of Natural Resources prior to the appropriation of Minnesota waters that may be necessary for the construction, operation and maintenance of the project pursuant to this permit.

14. ADDITIONAL SITE ACCESS: The Commissioner may inspect any work authorized by this Permit. The Permittee shall supply such information concerning the design, construction, operation, and maintenance of the work authorized

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hereunder as the Commissioner may require.

15. ADDITIONAL WRITTEN CONSENT: Any permissions or extension of time made and granted by the DNR shall be made in writing.

16. CONSTRUCTION DEWATERING GENERAL: In Minnesota, all construction dewatering in excess of 10,000 gallons per day or one million gallons per year must be authorized by a separate water appropriation permit. All worksite discharge water must be treated for sediment reduction prior to return to any surface water. Water from designated infested waters shall not be diverted to other waters, transported on a public road, or transported or appropriated off property riparian to the infested waters without a DNR invasive species permit. All equipment in contact with infested waters must be decontaminated before leaving the site. In North Dakota, the Permittee shall obtain all dewatering permits that may be required by the state of North Dakota.

17. EXCAVATED MATERIALS RUNOFF: Excavated materials must be deposited or stored in an upland area. The Permittee shall prepare a spoil disposal plan for all spoils created by work authorized under this permit. Departure from any previously approved spoil disposal plans may be allowed only through permit amendment. Additionally the Permittee shall obtain and comply with the terms of any stormwater runoff permit that may be required by either federal or state law including any applicable National Pollutant Discharge Elimination System (NPDES) permit.

18. EROSION AND SEDIMENT CONTROL: Erosion control measures shall be adequately designed for the site characteristics. They may include staked hay bales, diversion channels, sediment ponds, or sediment fences. They shall be installed in accordance with the latest version of "The Minnesota Stormwater Manual" by the Minnesota Pollution Control Agency (MPCA), prior to commencement of construction and maintained throughout the project. All exposed soil shall be stabilized as soon as possible. Topsoil should be used to re dress disturbed soil areas and indigenous plant species should be used to revegetate disturbed areas whenever possible. Additionally, the Permittee shall obtain and comply with the terms of any stormwater runoff permit that may be required by either federal or state law, including any applicable NPDES permit.

19. FUTURE TRANSFER OF OWNERSHIP: Neither this permit, nor the ownership of the dam, may be transferred except with the written consent of the Commissioner as evidenced by the issuance of a dam safety permit to a new owner. A transfer of land ownership does not automatically transfer either the permit or dam ownership. As a prerequisite to the transfer of the dam permit, the existing owner/Permittee must inform any buyer of land underlying the dam of the dam's existence. This notice must be in writing and a copy must be sent to the DNR. The DNR will not approve a transfer of this permit unless the new dam owner can meet the requirements of Minnesota Rules regarding the transfer of dam ownership.

20. EMERGENCY REPAIRS: All repair work on the project authorized by this permit may only be undertaken with the prior written approval of the DNR. Where, however, conditions arise that require immediate action to protect the public health, safety and welfare, repairs may be started immediately, provided that the Permittee notifies the Commissioner and the State Duty Officer of the need to make emergency repairs immediately upon discovery of the need for an emergency repair. As soon as practicable thereafter, the Permittee shall apply for a permit amendment for the necessary emergency repairs.

21. OTHER PERMITS: Construction shall not commence until the Permittee has obtained all required federal, state, and local permits, authorizations, and permissions necessary to undertake the work authorized in this permit.

22. PROPERTY RIGHTS: Property rights shall be acquired for all property necessary for construction of the Project prior to the commencement of construction. Property rights shall include fee simple absolute acquisition of all property of the Project footprint. Temporary construction easements shall be acquired on all property that will be used for construction of the Project. In Minnesota, in accordance with the 5th Amendment Takings Requirement of the US Constitution and in accordance with the Minnesota Constitution Article XIII Section 4, prior to dam operation, property rights shall be acquired for all land and structures that will be impacted by the Project when the Project is operated at maximum capacity. All lands with structures that will be impacted will be acquired in fee simple absolute, unless the structure will be relocated, elevated or floodproofed. For all other property impacted when the dam is operated at maximum capacity that is not acquired in fee simple absolute, flowage easements are required. In Minnesota, these acquisitions must comport with the requirements of Minnesota Statutes Chapter 117.

23. FLOWAGE EASEMENTS: In Minnesota, each flowage easement obtained/required for the Project shall contain language prohibiting the storage of certain materials (such as recognized environmental contaminants) in the area subject to the easement to prevent the release of said materials during project operations. Permittee shall address damages to the underlying fee resulting from the storage of floodwater pursuant to the flowage easement, such as contamination of

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soils, removal of debris, presence of invasive species, etc. Permittee shall comply with the Post-Operation Debris Clean-Up Plan for both private and public lands as described in the Property Rights Acquisition and Mitigation Plan. Easements and land acquisition must comply with MN Statutes Chapter 117.

24. DAMAGES: In Minnesota, in accordance with the Minnesota Constitution Article XIII Section 4, nothing in this permit alleviates the responsibility of the Permittee to make whole any party damaged by the construction or operation of the Project.

25. CEMETERY IMPACTS: In Minnesota, prior to dam operation, the Permittee shall provide to the DNR written, mutually agreed upon mitigation for impacts to cemeteries in the storage area. No impoundment of water is allowed by this permit until all property rights are acquired and DNR receives and approves signed agreements executed by each affected cemetery and the Permittee. In Minnesota and North Dakota, any mitigation of historic properties must comply with the requirements of Section 106 of the National Historic Preservation Act and the Permittee shall comply with State Historic Preservation Office (SHPO) recommendations made by the SHPO in the applicable state.

26. ORGANIC FARMS: In Minnesota, Permittee shall comply with the Organic Farmland Acquisition Plan as detailed in the Property Rights Acquisition and Mitigation Plan. The Permittee shall comply with Minnesota Statutes Section 117.186 requiring compensation to a Minnesota business owner or land owner for business losses (loss of "going concern").

27. ENVIRONMENTAL MITIGATION: Within five (5) years of permit issuance and no later than the start of construction of the Red River Structure, the Permittee shall have a legally binding commitment to fund the Drayton Dam Project, and construction shall have commenced within this same time period. The Drayton Dam Project, which includes the removal of the existing dam and construction of a rock arch rapids, shall serve as partial mitigation for impacts of the Project on the ecology of the Red River, including impacts to connectivity, fish passage, and aquatic resources. The Permittee shall work with DNR on the design of the Drayton Dam Project to ensure that it satisfies the mitigation requirements of this permit. Within five (5) years of permit issuance, the Permittee shall have a legally binding commitment to fund a portion of the restoration work on the Lower Otter Tail River and construction shall have commenced within this same five-year period. The Permittee shall fund the Lower Otter Tail River Restoration Project to a dollar amount that would ensure replacement of all ecological resource values and functions of the public waters impacted by the Project. Ecological resource values will be calculated by the DNR using Habitat or Resource Equivalency Analysis. If the Lower Otter Tail River Restoration Project does not proceed, a similar project shall be funded as an alternative mitigation for the impacted public waters of the Red River and Wolverton Creek. The alternative restoration shall be selected by the DNR in consultation with the USACE. Both the Drayton Dam project and the Lower Otter Tail River project will require permits from the DNR. These required mitigation projects shall be completed one year prior to completion of construction of the project.

28. CONTINGENCY ACTION PLAN: Prior to construction of the last phase of dam construction (currently the Southern embankment in Minnesota), the Permittee shall obtain written approval from the DNR of a Contingency Action Plan (CAP). Construction of the last phase of the dam may not commence until such approval is obtained. The CAP shall contain all applicable elements of the Federal Guidelines for Emergency Action Planning for Dams (FEMA Publication No. P-64). Dam breach inundation maps shall be prepared using a 2-dimensional dam breach analysis. Breaches at several locations on the dam shall be modeled. Both the modeled breach locations and the overall modeling approach require DNR consultation and agreement. The breach models shall extend downstream to a point where water level increases due to a breach are less than one foot. If there is no feasible or practical means to provide for adequate evacuation warning in sufficient time, the Permittee shall notify all potentially affected property owners of that fact.

29. WATER CONTROL MANUAL: Prior to completion of dam construction, the Permittee shall submit a Water Control Manual to the DNR. No impoundment of water is allowed by this permit until written approval of the Water Control manual is obtained from the DNR.

30. OPERATION, MAINTENANCE, REPAIR, REPLACEMENT, AND REHABILITATION MANUAL: Prior to completion of dam construction, the Permittee shall submit a complete Operation, Maintenance, Repair, Replacement, and Rehabilitation (OMRR&R) manual to the DNR. No impoundment of water is allowed by this permit until written approval of the OMRR&R manual is obtained from the DNR.

31. OPERATION, MAINTENANCE, MONITORING, AND INSPECTION PLAN: Prior to completion of dam construction (currently the Southern embankment in Minnesota), the Permittee shall obtain written approval from the DNR of the Operation, Maintenance, Monitoring, and Inspection (OMMI) Plan. No impoundment of water is allowed by this permit until such approval is obtained. The OMMI Plan shall have content sufficient to instruct the operations engineer on how the dam (including control structures) is to be operated, maintained, monitored, and inspected; and shall include at a minimum the project operations plan (describing when and how gates will be operated); a maintenance plan (describing how the dam

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will be maintained); an instrumentation and monitoring plan (including all geotechnical and water related instrumentation to be installed, what the instrumentation would be measuring, the frequency of readings, who is responsible for reading, and who is responsible for analyzing against expected outcome); and an inspection plan (frequency of inspections, level of detail for each inspection, and requirements for special inspections such as pre- and post- operations inspections). Any changes to the Operation and Maintenance Plan require prior written permission from the DNR. The Permittee shall develop a Memorandum of Understanding (MOU) related to Project operation with DNR and state and local governments in Minnesota and North Dakota potentially affected by the Project. The MOU shall include criteria and methods for notifying the public prior to dam operations. The Permittee shall submit an annual financial statement to the DNR detailing the amount of funds currently available in the Operation and Maintenance Funding Program, as well as projected future expenses and revenue. The financial statement shall be due on or before January 31 of each year.

32. CONSTRUCTION PHASE APPROVAL: Written approval must be obtained from the DNR prior to construction of any phase of dam construction. The dam must act as a whole, with all parts being integral to its integrity and safety. At least 120 days prior to the anticipated start of a phase of construction of the dam, the Permittee shall submit to the DNR a design report, detailed plans and specifications, and documentation showing that land rights have been acquired for that phase of dam construction. The design report shall contain all items required in Minnesota Rules 6115.0410, subp. 6 and 6115.0240, subp. 3. Prior to the start of construction of a phase of the dam, the Permittee shall obtain written approval from the DNR of the design (design, plans, specifications, and rights acquisition, of that construction phase. Construction of that phase of the dam may not commence until such written approval is obtained. Permittee shall develop and maintain a worksheet to record, track, and show approval date of all changes made to the design, construction, and operations.

33. CONSTRUCTION PROGRESS REPORTS: The Permittee shall submit monthly reports to the DNR on construction observation and quality control to ensure conformity with approved designs, plans, and specifications, including but not limited to those items set forth in Minnesota Rules part 6115.0410, subpart 9.

34. INTERIM CONSTRUCTION REPORTS: Within 90 days following the completion of each phase of dam construction, the Permittee shall provide the DNR an Interim Construction Report, together with a statement by the designer or professional engineer in charge of the project that attests that the dam phase has been completed in accordance with the approved designs, plans and specifications and any approved revisions thereof. The Interim Construction Reports shall address the items set forth in Minnesota Rules part 6115.0410, subparts 9 through 11. The Interim Construction Reports shall also include record drawings, materials sampling and testing as performed, photographs of the phases of construction, and any other items that may be of permanent value on the adequacy and permanency of the dam. The Interim Construction Reports shall be signed or co signed by a qualified engineer.

35. ANNUAL CONSTRUCTION AND MONITORING REPORT: The Permittee shall submit an annual report to the DNR that describes the following: 1) proposed dam construction for the upcoming year; 2) any changes or variations in dam design, construction, or operations from previously approved plans; 3) a summary of the past year's construction activities and quality control tests; 4) a summary of the past year's operation, maintenance, inspection, and monitoring activities; 5) a discussion of any construction, operation, maintenance, inspection, or monitoring activities that were unscheduled, or out of the ordinary, or deviated from the approved plan; 6) photographs; 7) graphical presentations of all dam instrumentation data, including but not limited to data from water level gages, piezometers, inclinometers, extensimeters, and settlement plates; and 8) a brief discussion of any monitoring results that appear to be irregular or out of tolerance. Tabular instrumentation data shall be submitted with the report in an electronic format and submitted on a CD, DVD, or flash drive. The Annual Report shall be due on or before January 31 of each year.

36. FINAL CONSTRUCTION REPORT: Within 90 days following the completion of final construction, the Permittee shall provide the DNR a Final Construction Report, together with a statement by the designer or professional engineer in charge of the project that attests that the dam has been completed in accordance with the approved designs, plans and specifications and any approved revisions thereof. The Final Construction Report shall address the items set forth in Minnesota Rules part 6115.0410, subparts 9 through 11. The Final Construction Report shall also include record drawings, materials sampling and testing as performed, photographs of the phases of construction, and any other items that may be of permanent value on the adequacy and permanency of the dam. The Final Construction Report shall be signed or co signed by a qualified engineer.

37. IMPOUNDMENT APPROVAL: Written approval to impound water must be obtained from the DNR prior to project operation. No impoundment of water is allowed by this permit until written approval is obtained from the DNR, and such written approval shall not be granted until the Permittee has acquired all land rights necessary for project operation up to and including the maximum capacity of the dam.

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- 38. SAFETY INSPECTIONS:** The Permittee shall arrange for an annual dam safety inspection and a dam safety inspection report to be prepared by a qualified dam safety engineer registered in Minnesota. The annual dam safety inspection report shall be sent to the DNR on or before January 31 of each year.
- 39. OPERATION AND MAINTENANCE RESPONSIBILITY:** The Permittee shall operate the dam authorized by this permit in accordance with all dam safety standards. The Permittee shall maintain the dimensions and elevations of the dam as described herein and in accordance with the Operation, Maintenance, Monitoring, and Inspection Plan. A permit amendment is required for any construction or repair that would change the hydraulic capacity or structural character of the dam that is not authorized in this Permit or impoundment approval, such as conduit replacement or embankment excavation. Routine dam maintenance, such as mowing or debris removal, does not require prior DNR approval.
- 40. AFTER ACTION OPERATION REPORT:** The Permittee shall submit an after action operation report to the DNR within 90 days of Project operation. The report shall include details of conditions leading up to the operation and details of the operation.
- 41. PERPETUAL MAINTENANCE:** The Permittee shall perpetually maintain the dam and all of its components to ensure the integrity of all structures.
- 42. FREEBOARD REQUIREMENT:** The Permittee shall maintain enough available flood storage capacity to store the inflow maximum capacity event with at least 5 feet of freeboard remaining to the top of dam. Portions of the Western Tieback and Eastern Tieback may be constructed with less freeboard as designed to allow for planned overtopping of those sections in the event of misoperation, e.g. not operating the control structures, or extreme floods.
- 43. WOLVERTON CREEK CROSSING:** Permittee shall coordinate the final design of the Wolverton Creek Structure with the Buffalo Red River Watershed District (BRRWD) to ensure compatibility with the Wolverton Creek Restoration Project. No construction of the Wolverton Creek Structure is allowed by this permit until written approval of the final design is obtained from the DNR.
- 44. ADAPTIVE MANAGEMENT AND MONITORING PLAN:** Permittee shall submit an updated and revised Adaptive Management and Monitoring Plan (AMMP) to the DNR, including monitoring of geomorphological impacts, fish passage impacts, fish stranding, particularly identifying action triggers and the corresponding actions to mitigate the impacts. The Adaptive Management Team will meet within 30 days of the identification of a trigger and the corrective action identified within 30 days of the meeting. Construction in Minnesota shall not commence until DNR approval of the AMMP is granted.
- 45. LIMITATION OF UPSTREAM AND DOWNSTREAM DEVELOPMENT:** Impoundment of water upstream of the dam poses risk. DNR recommends that local governmental units adopt requirements that any new structure in the storage area be relocated, elevated or floodproofed, such that it is not impacted by Project operations at any flow event. A breach of the dam could create hazards downstream to human life, particularly in areas adjacent to the dam and along the river channels. DNR recommends that local governmental units adopt requirements that no development be allowed within one quarter mile of the dam or along river channels.
- 46. CROP LOSS:** No less than three years prior to completion of the Project, the Permittee shall provide a financial analysis that demonstrates that it has created the necessary reserve fund to compensate for crop loss.
- 47. ENVIRONMENTAL MITIGATION-COLD WEATHER IMPACTS:** The Permittee shall monitor aqueduct impacts to the riverine system, provide heating components in the aqueduct to reduce the potential for freezing or ice buildup, and install gages to ensure flow is not restricted by ice in the aqueduct.
- 48. ENVIRONMENTAL MITIGATION-INVASIVE SPECIES:** As described in the AMMP, the Permittee shall ensure that all construction equipment will be free of invasive species, shall develop an invasive species management plan prior to the start of construction, and shall control noxious weeds
- 49. ENVIRONMENTAL MITIGATION-COVER TYPE IMPACTS:** As described in the AMMP, the Permittee shall mitigate the loss of floodplain forests and to wooded/forested cover types by replacement at a 2:1 ratio and shall monitor the mitigation sites.
- 50. ENVIRONMENTAL MITIGATION-GEOMORPHOLOGICAL IMPACTS:** The Permittee shall identify potential areas of geomorphological impacts, erosion and sedimentation; undertake required monitoring; and set forth a commitment to mitigate geomorphological impacts, erosion and sedimentation predicted to result from Project operation.
- 51. CLEAN FILL:** The Permittee shall use fill material which is clean and free of all contaminants.

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52. LIST OF FLOWAGE EASEMENT HOLDERS: The Permittee shall submit a list of persons with substantial interest in the Project consistent with Minnesota Rule 6115.0201, subp. 7H. The Permittee shall maintain a public list of flowage easement holders and shall contact each flowage easement holder on a five-year basis. As recommended by the State FEIS, the Diversion Authority and each member of the Diversion Authority shall post on its respective website a list of the properties that it will acquire for the Project, the nature of the property interest it will acquire for each identified property, an acquisition timeline, a detailed description of the process the acquiring authority will undertake to acquire property within its jurisdiction, and a contact person(s) and contact information for contact person(s) available to answer further questions.

53. WORK EXCLUSION DATES FOR FISH SPAWNING AND MOVEMENT: Work within Public Waters may be restricted due to fish spawning, migration concerns, or the protection of fish habitat. Dates of fish spawning and migration vary by species and location throughout the state. Specific dates for each DNR Region may be found on page 3 of Chapter 1 of the manual: Best Practices for Meeting DNR General Waters Work Permit GP2004-0001. http://www.dnr.state.mn.us/waters/watermgmt_section/pwpermits/gp_2004_0001_manual.html. Work in the water is not allowed within these dates. The DNR Area Hydrologist shall be contacted about waiving work exclusion dates where work is essential and/or where Permittee demonstrates that a project will minimize impacts to fish habitat, spawning, and migration. All waivers require approval of the Area Fisheries Supervisor.

54. FUTURE ORDERS: The DNR reserves the right to review and revise this permit and the conditions attached hereto as additional hydrologic data becomes available. The DNR also reserves the right to issue any order it may deem necessary to protect the public interest, including but not limited to the public health, safety, and welfare. Should the dam be abandoned at a future date for any reason or fall into a state of disrepair, the Permittee shall be solely responsible for all debris removal and site restoration work and any associated damage to public or private property, including to the waters of the state.

ALL CONDITIONS: All conditions apply to activities in both states unless specified otherwise.

DAM: Refers to the Western Tieback, Southern Embankment, and Eastern Tieback, as well as the Diversion Inlet Structure, Wild Rice Structure, Red River Structure, and Wolverton Structure as described in the permit application.

DAM CONSTRUCTION: The act of changing, removing, or adding to the artificial barrier, along with appurtenant works, which does or may impound water and/or waste materials containing water.

DAM OPERATIONS: The act of lowering control gates with the intent to store water for project operations.

CONTINGENCY ACTION PLAN: Plan detailing initial response to potential emergency conditions. Same as Emergency Action Plan.

FREEBOARD: The difference in elevation between the water level due to the design inflow flood event and the lowest point of the top of the dam. Freeboard is a factor of safety above a predicted flood level to compensate for unknown factors that could contribute to flood heights that are greater than the height calculated.

OPERATION AND MAINTENANCE PLAN: Plan detailing how the dam will be operated, maintained, monitored, and inspected during all phases of the project.

PERMITEE: The Cities of Fargo, North Dakota and Moorhead, Minnesota together with the U.S. Army Corps of Engineers and the Flood Diversion Board Authority.

PHASE: A certain construction feature of the Project, as described in Attachment 5 of the permit application (Construction Placement Schedule date 2018-02-27).

STORAGE AREA: The area upstream of the dam where water levels due to the Project would be higher than they would have been without the Project during the design (maximum capacity) flood event.

cc: Rodger Hemphill, Area Hydrologist
Erik Anthonisen, EWR District Manager
Stan Thurlow- City Planner, Dillworth
Christina Volkers, Moorhead - City Manager
Pamela Guest, Comstock - Clerk-Treasurer
Janelle Krump, Wolverton - Clerk
Don Bajumpaa, Wilkin SWCD
Bruce Albright, Watershed District, BUFFALO-RED RIVER WD
Kevin Kassenborg, SWCD, Clay SWCD