



Darrell Vanyo, Published January 30 2012

## Levees, floodwalls not enough to protect metro from big flood

There has been recent discussion and confusion related to the decision to select a diversion channel rather than levees through town as the solution to permanent flood protection for Fargo and Moorhead. I appreciated Kristen Daum's explanation in the Jan. 8 "Diversion Discussion" column about why levees and floodwalls alone are not enough to protect the Fargo-Moorhead metro area. I'd like to offer more thoughts related to this issue.

- Levees and floodwalls could only be built to a 2 percent, or 50-year-flood protection level. The recent flood of record, the 2009 flood, was the equivalent of a 2 percent, or 50-year flood, according to the best hydrologic modeling. This level of protection is not adequate for the cities of Fargo and Moorhead, or other communities along the Red River.
- In addition to not providing an adequate level of protection, levees would require the removal of approximately 1,000 structures in Fargo and Moorhead combined, a larger number of road closures during floods, the removal of railroad lines and other infrastructure.
- To provide greater than 50-year levels of protection, a levee system would essentially require ring diking the entire metro area on both sides of the river. This would be far more expensive than the diversion as proposed and impractical for a number of reasons.
- Levees would result in both upstream and downstream impacts.
- The estimated cost of the diversion is \$1.8 billion for 100-year flood protection. However, levees for 50-year protection would still leave the Fargo-Moorhead metro area susceptible to residual damages averaging more than \$20 million per year and would also have a very high construction cost.
- The diversion will permanently reduce the risk of damages due to flooding and provide 100-year flood protection, as well as provide an opportunity for Fargo and Moorhead to successfully emergency protect against a 500-year flood.
- Levees are inherently at risk of breaches and overtopping by floodwaters, which could result in the loss of billions of dollars worth of properties, businesses and tax revenue.

These are some of the key reasons why I, and the other members of the Flood Diversion Authority, feel so strongly about supporting the diversion project. We have looked at many other options. The fact is these other

options don't measure up, and the diversion is the best solution for the Fargo-Moorhead metro area.

However, retention projects are supported by the Diversion Authority, and along with levees, should be pursued to complement the diversion project.

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