



# MOUSE RIVER PLAN

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# PROGRESS

Mouse River Plan PROGRESS was developed by the Souris River Joint Board and its' partners to keep project stakeholders, constituents, and the region updated on the progress of the Mouse River Enhanced Flood Protection Project (MREFPP). The MREFPP is a basin-wide endeavor focusing on flood risk reduction along the Mouse River. The estimated \$1 billion project was initiated following the devastating 2011 flood and is anticipated to be completed in 20 years.



THIS PUBLICATION IS A MONTHLY UPDATE PROVIDED BY THE SOURIS RIVER JOINT BOARD



## FEASIBILITY STUDY UPDATE

The Souris River Joint Board and the US Army Corps of Engineers have been working jointly on a feasibility study to determine the extent of federal interest in construction of a portion of the Mouse River Plan. Based on the most recent information coming out of the feasibility study, it appears that there will be a federal interest in the construction of the Maple Diversion and a western tieback within the city of Minot.

The project includes flood risk management and recreation features that are expected to cost approximately \$85 million. Most of the features contemplated are similar to what was envisioned in the Preliminary Engineering Report developed by the North Dakota State Water Commission and the Souris River Joint Board in February 2012. Minor differences include rerouting 2nd Avenue Southwest on the north (dry) side of the levee, permanently rerouting the Canadian Pacific Railroad line to the north of the existing tracks, establishing a wet channel configuration in lieu of a dry channel, and removing the levee from the south side of the diversion.

The schedule of the feasibility study originally called for the final report to be completed and submitted to Congress in April 2019. However, Congress is currently drafting legislation for the next Water Resources Development Act (WRDA). Due to this timing, the schedule for the feasibility study is being advanced to deliver the final report to Congress by December 2018 so that the project could be authorized by Congress in the next WRDA bill.



## PHASE MI-1 CONSTRUCTION UPDATE 4TH AVE/PUMP STATION

Construction on a key component of the first phase of flood protection in Minot began in earnest at the end of April. The Broadway Pump Station, the storm water pump station at the corner of Broadway and Fourth Avenue, makes up a substantial piece of the Phase MI-1 4th Avenue flood protection project, and when finished will be able to pump 180,000 gallons of water per minute. The Souris River Joint Board (SRJB) made sure this pump station was included in the first phase of the enhanced flood protection to give appropriate protection to north Minot when mother nature hits.

Once the Maple Diversion is complete, this pump station will collect the storm water runoff from 2,260 acres of Minot – almost all of north Minot. With the underground utility work being done over the next year, all the new piping and consequent water runoff will be directed to the pump station and not have to go through the base of the floodwalls. This makes the floodwalls, homes and businesses even more secure.

The expected closure of Fourth Avenue NE/NW started on April 30 and is scheduled to last the majority of 2018. The closure starts at Broadway and goes east until Fifth Street NE. A detour route is clearly marked that includes using Sixth Avenue NE/NW for through traffic. Local traffic access to Sammy's Pizza off Fourth Avenue will be open, as construction allows.

The Phase MI-1 4th Avenue urban flood control project includes levees, approximately 2,250 feet of floodwalls, a major pump station at the southwest corner of Broadway and Fourth Avenue NW, and realignment of 4th Avenue to provide ample setback from the river.

Residents and the driving public can anticipate roadway closures, traffic impact, and lots of overall activity in this area until the end of 2020.



## PHASE MI-2 & MI-3 CONSTRUCTION UPDATE NAPA VALLEY/FOREST ROAD

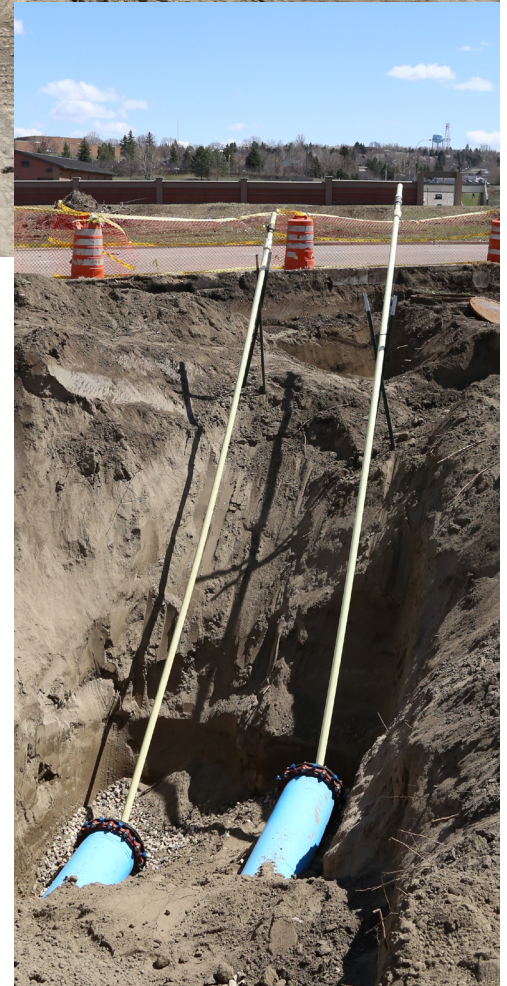
With spring finally arriving in late April, the Phase 2/3 contractor, Wagner Construction, has begun construction of several key project features. Construction of the levee has begun on the western portion of the project near the US Hwy 83 Bypass. Initial work includes removal of existing levee and installation of a seepage collection system that will protect the future levee from groundwater. Earthwork for the new levee will begin to take shape in the upcoming weeks. With the removal of sections of the existing levee, weather and flood forecasts will be closely monitored during this portion of construction. If the need arises, an emergency action plan can be implemented, and the project Contractor will take measures to ensure adequate flood protection is available, at all times.

Along with earthen levee construction, storm sewer installation has also begun. This project will modify existing storm sewer to the Perkett Ditch drainage area which includes a large portion of NW Minot. An existing 8'x6' concrete box culvert is being extended to direct storm water to the new Perkett Ditch Pump Station. Preparation and excavation for the new storm water pump station has also begun.

Installation of new water main is also included in the initial tasks the Contractor has been working on. Temporary watermains and relocating existing main are required to allow for construction of flood protection features. The watermain work includes installation of 14-inch and 16-inch watermain beneath the Mouse River as well as several areas where 8-inch watermain conflicts with proposed levee or storm sewer.

Public impacts include the relocation of the Bark Park to the temporary location on the north side of 7th Avenue SW. The path atop the existing levee has been closed and removed. Road closures include a temporary closure of Forest Road east of 16th Street as well as the intersection of 7th Avenue SW and 20th Street SW. Permanent road closures include 3rd Ave SW east of 15th Street SW and Forest Road west of 16th Street SW.

Upcoming activity includes continuing the levee embankment, watermain, and storm sewer work. Preconsolidation of the existing soils at the 16th Street closure structure will begin in mid-May along with the installation of wick drains. The preconsolidation and wick drains will help to stabilize the existing soils and reduce the risk of settlement once the levees and closure structures are constructed.



### **Left page: Phase MI-1**

Crews prepare for the construction of the Broadway Pump Station.

A portion of 4th Avenue being removed by a milling machine.

### **Right page: Phase MI-2 & MI-3**

Topsoil and asphalt were stripped from the walking path along the Souris Valley Golf Course and residential Napa Valley area to prepare for existing levee removal.

Temporary water lines along Forest Road near the water treatment plant were installed to accommodate the pre-consolidation piler near 16th Street Southwest.

## STATE OF ND FUNDING

The current design of the Maple Diversion calls for only a levee on the north side of the diversion channel, in addition to a tieback levee on the western edge of Minot on the east side of the US Highway 83 Bypass. The estimated cost of this project is \$85 million. If authorized by Congress and fully appropriated, 65% of the project cost would be paid by the federal government (\$55 million) with the balance being funded using state and local sources.

In 2017, the North Dakota Legislature passed House Bill 1020, which outlined the legislature's intent to fund portions of the project within the city limits of Minot through June 2025. In the bill, the legislature listed a commitment of \$193 million, which was intended to fund the state's portion of the initial milestone in Minot that will remove approximately 60% of Minot residents from the future regulatory floodplain.

With the costs of the initial phases of the project coming in substantially below the engineers' estimates and with additional value engineering cost savings that have been identified during the feasibility study, it is estimated that there will be between \$45 million and \$85 million in available state funds to complete work within the city of Minot outside of the initial milestone prior to July 2025. Without a federal appropriation, there would be \$45 million in state funds available. Assuming a full federal appropriation of \$55 million for the project, there would be \$85 million in state funds available.



# Maintaining Protection throughout the construction phases

As construction of the Mouse River Enhanced Flood Protection Project continues, portions of the existing levee will be removed prior to constructing the new levee. The existing levee protects properties from flows on the Mouse River up to 5,000 cfs. To ensure that the 5,000 cfs level of protection is maintained, there are several special requirements that the Contractors must follow during construction.

**With these requirements in place, the properties protected by the existing levees will continue to have the 5,000 cfs level of flood protection throughout the construction process.**



The Contractor and Engineers will monitor rain forecasts, monitor river gage data, and all other available information to track the potential for flooding.



The Contractor is required to reconstruct temporary levees within 24 hours if flooding is forecasted.



No more than 1,000 linear feet of the existing levee can be removed at any given time during the project until sections of the new levee are constructed.



The Contractor will store material for emergency construction of temporary levees.



The Contractor will provide the City of Minot the ability to activate the existing Perkett Ditch Pump Station or the Contractor will provide adequate pumping during construction to address interior drainage - snow melt or rain on the dry side of the levee.

\* Regarding the MI-2 Napa Valley Project