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.

SRJB SOURIS RIVER JOINT BOARD

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

DESIGN BEGINNING ON BRIDGES IN RENVILLE, WARD AND MCHENRY COUNTIES

The Souris River Joint Board authorized the design of improvements to bridges in multiple counties throughout the basin. In Renville County, the SRJB has indicated its intent to reconstruct the box culvert crossing near the west entrance to Mouse River Park. The intent of the design will be to make the road more resilient to overtopping, to improve conveyance through the structure, and to reduce the amount of deadfall that becomes lodged in the structure during times of high flow.

At Sawyer, located in Ward County, the SRJB intends to remove and replace the bridge on Ward County Road 23 with a structure of nearly double the span length. This will reduce upstream water surface elevations and make the entire community of Sawyer more resilient to flooding. In 2011, significant damage to the bridge was sustained, and the north abutment of the bridge was intentionally breached in an attempt to improve conveyance through the bottleneck created by the bridge crossing.

Similarly, in McHenry County at Velva, the SRJB intends to remove and replace the bridge on North Dakota Highway 41 with a structure of nearly double the span length. This will reduce upstream water surface elevations and make the entire Velva community less flood prone.

The design of these bridges is scheduled to begin in the summer of 2018 and be completed by the summer of 2019. Construction is expected to begin in spring 2020, depending on appropriation from the State of North Dakota.

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

Work on the Phase MI-1 Fourth Avenue flood protection is reaching out beyond the construction of the Broadway Pump Station. Park Construction and its subcontractors are focusing efforts in multiple areas, including in and around the Souris River, on both the east and west sides of the Broadway Bridge. In June the contractor started the placement of rip rap (large rocks that form shoreline protection) and bank stabilization. Remaining, early-season private utility company work is almost complete within the general project corridor. And a subcontractor for Park Construction is starting to form and pour the discharge chamber area on the south side of the Broadway Pump Station.

In order to maintain necessary public safety throughout the project, the contractor will be closing, to through traffic, the two pedestrian bridges located between Broadway and Third Street at the end of June or beginning of July. Please remember, the closure of Fourth Avenue NE/NW is scheduled to last the majority of 2018. The closure starts at Broadway and goes east until Second Street NE. A detour route is clearly marked that includes using Sixth Avenue NE/NW for through traffic.

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.

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

June has brought much needed rain to the area; however, despite the wet conditions Wagner Construction has been able to continue to make progress on Phases MI-2 and MI-3 of the Mouse River Enhanced Flood Protection Project. Work on levee fill in the western portion of the project has continued at a steady pace this month. The area between the US Hwy 83 and the Perkett Ditch Pump Station just off 20th Street SW is nearly half complete. The Contractor will continue to place fill in this area with the anticipation to be completed up to the Wee Links Golf Course within the next month or two.

Utility construction associated with the flood protection project has also been progressing in past weeks. Underground construction relating to storm sewer installation along 7th Ave has been completed. The contractor was able to complete this work in phases allowing for access along the entire stretch of 7th Avenue throughout construction. Although traffic was constricted at times, a detour was avoided which would have significantly impacted access to neighborhood residents and Minot Park District facilities.

Other notable activities completed this month include the construction of the three preconsolidation piles. Two piles were constructed at the future closure structure along 16th Street and a third pile was completed at the Perkett Ditch Pump Station where a new gate well structure will be constructed. After a significant and successful dewatering effort, the first concrete pour for the foundation of the Perkett Ditch Pump Station was completed. The base slab for the pump station is approximately 30 feet below existing ground and consists of nearly 250 cubic yards of concrete.

Anticipated construction work for the upcoming month includes continual progression of levee fill, storm sewer installation near 16th Street and 2nd Ave SW, foundation wall construction for the Perkett Ditch Pump Station as well as restoration of 7th Ave including curb and gutter, roadway construction, driveway installation, and restoration.

GENERAL KAISER TO VISIT MOUSE RIVER BASIN IN JULY

Major General Richard Kaiser is scheduled to visit the Mouse River basin on July 17th. Major General Kaiser is the commander of the Mississippi Valley Division of the US Army Corps of Engineers. The Souris River Joint Board is working closely with the St. Paul District of the USACE, which is one of six districts in the Mississippi Valley Division. In May 2016, the SRJB and the USACE began work on a three-year, $3 million feasibility study to determine if there is a potential federal interest in the construction of a flood risk management project in the Mouse River basin in North Dakota. Work on the feasibility study is substantially complete, and the study components are undergoing rigorous review at multiple levels of the USACE. The St. Paul District has endorsed the federal plan contained in the feasibility study, which includes construction of the Maple Diversion (Phase MI-4) in Minot. The plan must have concurrence from the Mississippi Valley Division (located in Vicksburg, Mississippi) and the USACE Headquarters (located in Washington, DC) prior to being advanced for Congressional authorization. Major General Kaiser's visit to the basin represents an opportunity for local stakeholders to communicate the importance of the project to our community, the region and the nation.

RESERVOIR OPERATIONS STUDY MAKING PROGRESS

The International Souris River Board and the Souris River Study Board met in Estevan, Saskatchewan, from June 25th through June 28th. The Souris River Study Board is compiling public comments and technical data as input to a comprehensive reservoir model that will simulate several hundred years of climate within the Souris River basin. The model is being developed to evaluate operational changes to the reservoir that are intended to reduce the basin's risk of flooding downstream of the reservoirs in Saskatchewan and the United States, as well as reducing the risk from long-term drought for water users.

The study will include developing revised operating plans for Rafferty and Grant Devine (formerly Alameda) reservoirs in Saskatchewan and Lake Darling in North Dakota. The primary purpose of the Canadian reservoirs is to provide cooling water supply for power generation facilities near Estevan Saskatchewan, while meeting the apportionment requirements of the 1909 Boundary Waters Treaty between the United States and Canada. Rafferty Reservoir provides the direct cooling water to the Shand Power Plant near Estevan, while the Grant Devine reservoir was constructed along Moose Mountain Creek, a tributary of the Souris River, to store water that could be released to meet the apportionment requirements in the event that water could not be conveyed directly from Rafferty Reservoir downstream. The primary purpose of the Lake Darling reservoir is to provide water supply for activities associated with the US Fish and Wildlife Service's mission, including preservation of wetland marshes on the J. Clark Salyer National Wildlife Refuge in McHenry and Bottineau counties in North Dakota. Flood control storage is incorporated into Rafferty, Grant Devine, and Lake Darling reservoirs in the upper section of the reservoirs between the water supply level and the top of the dam embankments.

A NOTE FROM OUR PROJECT ENGINEERS

What is a Stormwater PUMP STATION?

The Broadway Pump Station, a storm water pump station under construction 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 approximately 180,000 gallons of water per minute. (That's a lot of water!) This pump station, like many new or upsized ones that will be a part of flood protection, allows the rain water and snow melt to be moved properly away from homes and businesses without compromising floodwalls or levees.

So how does it all work? Rain water or snow melt is primarily collected by running into grates in the street and an underground pipeline system, which flows into larger pipes and ultimately connects to the pump station. Once water gets to the pump station it begins to fill the wet well, the deepest point of the structure, until the water reaches a level where the pumps are activated. These pumps, much like a sump pump in a residence or business, are connected to a pipe that moves the water up and out of the structure to an appropriate discharge location. In the case of the Broadway Pump Station, that discharge location will be another large concrete box to calm the erosive velocity before emptying out to the Souris River.

Without pump stations, there wouldn't be a way to collect storm water run-off from neighborhoods at common location and move it out to the Souris River without dozens of below ground holes in floodwalls and levees. In short, a pump station keeps the "dry side" of flood protection dry during a storm or snow melt runoff event that occurs during flood conditions.