

Lake Shamineau Lake Improvement District (LSLID)

High-Water Outlet Project

Background

Lake Shamineau is a 1434-acre lake located in Central Minnesota. It is home to approximately 100-year-round residents, 285 seasonal residents, and 4 commercial properties. Lake Shamineau water levels have been rising, causing shoreline erosion, loss of trees, wildlife habitat destruction, loss and/or changes of aquatic vegetation, reduced water clarity, flooding of properties, challenging water quality, and causing millions of dollars of property damage and loss.

The increased water level has resulted in flooded and uninhabitable homes and property. Recreational traffic has been affected by the imposition of a 300' No Wake Zone and due to the large number of trees that have fallen into the lake. The purpose of this project is to lower and maintain the water level in Lake Shamineau at an elevation that protects adjacent property.

Nature of Flooding

Lake Shamineau is in a closed watershed basin. The total contributing drainage area to Lake Shamineau is approximately 11.91 square miles. Lake Shamineau has had increasing lake levels during the last several years and even after one of the worst droughts in Minnesota history, is still over 1.3 feet above the Ordinary High-Water Level (OHWL). A natural outlet does not exist for Lake Shamineau, so the lake relies on groundwater movement and evaporation to maintain or lower the Water Surface Elevation (WSE).

A review of the historic and recent problems appear that the cause is a wet hydrologic cycle and the lake not having an outlet. Since 1962 the water has risen approximately 7 feet. During the more recent wet hydrologic cycle, inflows from runoff and groundwater have exceeded outflows and have caused the sustained WSE to rise. Beginning in the early 1990's, higher than normal precipitation in the region has occurred and the WSE has been rising above the OHWL (Ordinary High-Water Level) since early 2000's. The WSE has been consistently above the OHWL since 2013, and in the spring of 2021, it was 2.45 feet above the OHWL.

High-Water Project

The proposed project is located at and near Lake Shamineau in Morrison County in Central Minnesota. The purpose of this project is to establish a maximum operating level of Lake Shamineau for economic and natural resource benefits. The proposed project involves the construction of a permanent outlet for Lake Shamineau to manage the high-water levels of Lake Shamineau at an elevation that protects adjacent property owners and sustains healthy natural vegetation and wildlife habitat. The Lake Shamineau Lake Improvement District members voted overwhelmingly in August 2020 to plan, develop, and construct an outlet that will transfer water from Lake Shamineau to Fish Trap Creek. Recently, in August 2021 the Lake Improvement District members voted to approve funding to move the project into final design and construction.

The Lake Shamineau Lake Improvement District (LSLID) is the responsible Local Governmental Unit (LGU) and has contracted with Houston Engineering to manage and oversee the engineering, design, permitting and construction of the project. The project will be funded through charges to Lake Shamineau property owners. In addition, funding has been received through the MN DNR Flood Hazard Mitigation Grant funds to offset some of the planning costs.

The High-Water Outlet Project plan includes construction of a lake outlet structure and pumping station adjacent to the shoreline at the west end of the lake. From the pumping station the water will proceed westerly along the Aztec Road and continue along Highway 10 to the south side of County Road 203. Flowage will then continue through a recently cleaned drainage ditch that passes through US Highway 10 before flowing west into Todd County and eventually reaching Fish Trap Creek, which becomes part of Ditch 41 at the properties adjacent to the railroad bridge and continues to the Long Prairie River. This route was chosen to accommodate landowners.

Following are several project features:

- The project will include a maximum pumping rate of 10 cubic feet per second (cfs).
- The project will include pumping approximately 9 months per year.
- The project will lower the lake level down to the OHWL.
- The project includes a mechanical filter to prevent infiltration of Eurasian Water Milfoil (EWM) per MN-DNR guidelines and approval.
- With the above pumping rate and time periods, pumping will primarily occur for 2 to 3 years.
- Future pumping, after the initial period, would only be needed if the lake level increases.
- The LSLID have worked with property owners along the route for flowage easements and letters of support.
- As a permitting condition, an operating and maintenance plan has been developed to include guidelines to balance the need to lower the lake while minimizing the impact on downstream property owners.

Status

On October 13th, 2021, the Todd County Board of Commissioners, acting as the Drainage Authority, approved a petition authorizing the use of Ditch 41 in Todd County as an outlet for water discharge as part of the Lake Shamineau High Water Outlet Project. An Environmental Assessment Worksheet (EAW) was issued on November 23, 2021. The EAW received four comments from agencies and the public prior to the December 23, 2021, deadline, and detailed responses were developed. Based on the information contained within the EAW and the comments and responses to the EAW, the Lake Shamineau Lake Improvement District Board of Directors identified no un-mitigated environmental effects and approved an order on January 17, 2022, that an Environmental Impact Statement (EIS) is not required for the High-Water Outlet Project.

A permit application for the project with the DNR has been submitted and is in process. Houston Engineering continues to work on further route design and construction plans, and outreach with landowners and agencies. In addition, the LSLID and Houston continues to work closely with the DNR, Soil and Water Conservations Districts, MN-DOT, and other agencies for the High-Water Outlet Project.

High-Water Outlet Project Schedule:

Following is an estimated timeline for project completion:

	Project Task	Description	Est. Completion
1	Detailed Design to 60%	Further develop construction plans	Winter 2022
2	Permitting	Approval from key agencies, landowners	Winter 2022
3	429 Hearing	Hold 429 Hearing for Project Approval	Winter/Spring 2022
4	Detail Design, Right of Way	Plans, bid and contract documents	Winter/Spring 2022
5	Bidding	Issue bidding docs and select contractor	Summer 2022
6	Construction	Start construction of West Outlet	Summer/Fall 2022
7	Pumping Begins	Testing and Pumping	Fall 2022

The above dates are estimated and the final timeline for construction will depend on the timing of the approval of completion of agency permitting, legislative action, and lead times for construction materials.

For More Information

Lake Shamineau Lake Improvement District
PO Box 394
Motley MN 56466
Email: LSLIDBD@gmail.com
Website: <https://minnesotawaters.org/lakeshamineau/lid>

January 27, 2022

Pictures of Lake Shamineau Flooding:



Example of flooding at Augers Resort and destroyed cabin.



Cabin destroyed (and now removed). Many homes have water in their lower levels and basements.



Spring flooding makes roads impassable and getting to cabins can be difficult.

January 27, 2022