

Lake Shamineau Lake Improvement District (LSLID)

Lake Shamineau High Water Project

Frequently Asked Questions

August 25, 2018

Following are questions about the high water project with their respective answers. For additional project information visit the LID Website at <https://minnesotawaters.org/lakeshamineau>.

Background

1. How many properties are on the lake?

According to Morrison County, there are 391 assessed parcels on the lake.

2. What is the current lake level and how does it relate to the Ordinary High Water Mark (OHWM)?

The lake elevation recorded in July 2018 was 1276.46, which is 1.9 feet over the Ordinary High Water Level (OHW). From a historical perspective, the overall lake level has risen over 3 feet in the last 9 years.

3. What caused the high water level?

Lake Shamineau is a closed watershed basin and with the recent wet hydrologic cycle, the inflows from runoff and groundwater have exceeded the outflows and have caused rising water levels. There are inflows from the East and South of Co Road 203 flowing under Co 203 and into Shamineau. This is believed to have a partial impact on sustained high lake levels. The LSLID Board recently sent a memo to the Morrison County Board the Scandia Valley Board asking for their assistance to divert the water flowage from Lake Shamineau. It is also possible that past road work has reduced the ability for outflow from the lake.

4. What is the cost to the damage to the lake from flooding?

The higher lake level has caused shoreline erosion, loss of trees, wildlife habitat destruction, loss and/or changes of aquatic vegetation, reduced water clarity, flooding of properties, and challenging water quality. In a recent survey it was reported by lake owners in 2015, that an estimated \$1,230 million in expenses has been spent as a result of the high water level. Since lake owners have continued to make repairs to their property, the costs are much higher.

5. Does Crookneck Lake have a similar problem?

A chart of water levels for both lakes (available in the Houston Engineering report) shows that over time there seems to be a correlation between the lake levels. Currently, Crookneck is 2 feet over their Ordinary High Water Mark. Discussions have been held with the Crookneck Lake LID Board to keep them informed of the Lake Shamineau High Water project. In addition, Lake Shamineau Board members attended the Crookneck Lake Association Spring meeting to provide an update. Follow-up questions from Crookneck LID members were answered and a copy of the Q/A is available on the website. While the higher water level on Crookneck has caused flooding on some lake properties, there are other Crookneck lake owners that believe the high water has helped to increase water levels in the weedier bays. At this time, the Crookneck LID Board has taken no action with regard to the Lake Shamineau high water project.

6. What work has been completed related to this project?

- A Project Kickoff meeting was held in June 2017
- A Public Hearing was held on the high water project on August 26, 2017. The Public Hearing included an in-person LSLID member vote, providing a tally of 110 in favor of the project and 56 opposed.
- The LSLID Board hired Houston Engineering to complete a feasibility report. The report is available on the website (noted above), and advises that it is expedient and necessary to construct improvements in order to maintain a more consistent water level.
- In February 2018, the LSLID Board has applied for a State grant to assist with funding of the project.
- A Public Hearing was held on April 21, 2018 to provide an opportunity for comments on the high water project. There was attendance of approximately 160 at the meeting. When asked for an informal show of hands on the project only 12 raised their hands to oppose the project. At the end of the Public Hearing, the LSLID Board voted to proceed with the improvements.
- A meeting was held on May 22, 2018 with project stakeholders, including the DNR, Morrison County Board members and staff, a Todd County Board Member and staff, Scandia Valley Board members, Houston Engineering, and the LSLID Board to discuss the High Water project.

- The LSLID Board has attended many other meetings to update agencies on the project. These agencies have included the Crookneck Lake Association and Crookneck LID Board, the Morrison County and Todd County Board of Commissioners, the Scandia Valley and Fawn Lake Township Boards, downstream property owners, and others. In addition, the Board recently hosted a boat tour with DNR officials and an aide to Congressman Rick Nolan. To date, we have received letters of support from the Scandia Valley Township Board, the Fawn Lake Township Board, the Fish Trap Lake LID Board, plus 7 downstream property owners.

7. *We have heard a story that years ago dye was put in Stanchfield Lake and found in Shamineau. Could Stanchfield Lake be contributing to our water problem?*

Following is the response from Tim Crocker, DNR: “Stanchfield Lake outlets to the north via a small stream that flows into a large wetland area that eventually drains into the Crow Wing River/Lake Placid Reservoir. Although Shamineau Lake is considered landlocked, the topography falls within the same major drainage pattern that makes up the Long Prairie River system. Stanchfield Lake is in a different drainage pattern, and flows into the Crow Wing River system. Also, Shamineau Lake is at a higher elevation than Stanchfield Lake. Generally speaking, ground water movement in the surficial aquifer formation follows the same patterns and boundaries found on the surface. Therefore, it would not make sense that dye placed at a lower elevation in Stanchfield would gravitate up to a higher elevation (Shamineau). The lake levels on Stanchfield do not adversely affect levels on Shamineau due to their difference in elevation and the fact they fall within different watersheds.”

Engineering Study and Project Options

8. *What was Houston Engineering hired to do?*

Houston Engineering was hired to develop a plan, timeline and cost estimate to provide options to mitigate high water levels and potentially reduce the water level to below the OWHL. Houston has completed a feasibility report which is available on the Lake Shamineau website. Three options were considered by Houston Engineering: 1) Do Nothing; 2) Northeast Bound Outlet; and 3) Southwest Bound Outlet.

9. *What would be the impact if nothing is done?*

Houston Engineering has identified that the lake would need to rise approximately 6 feet before it would find a natural outlet. While there would be no ongoing cost assessment if no action is taken, there would be no formal plan to stabilize the lake level. No action can lead to continued damage to shoreline, homes, septic systems, loss of trees, wildlife habitat destruction, reduced water clarity, and challenging water quality. Individual property owners would need to mitigate their own property damage.

10. *Would reducing the inflows to the lake solve the problem?*

From the Houston Engineering Feasibility Report, “The unnatural runoff contribution to these lakes inflows has an impact on lake levels and should be addressed. The altered hydrology appears to be ditching, road/trail grades without culverts, existing culverts set at high grades, and blocked drainage ways due to historic standing water with limited flows. It is understood that addressing these altered hydrology issues will reduce the total volume of water required to be discharged from Shamineau Lake; however, will likely have a minor impact on sustained high lake levels. Interests regarding redirecting inflows to Shamineau Lake in the SE corner of the lake have been expressed to reduce inflows to the lake and reduce a contributing source of the high water levels on the lake. This issue will be addressed during the permitting process through state and federal wetland and waters interests, as well as Morrison County Planning. However, it is our experience that diverting the flow of natural watercourses is a difficult project type to process permitting. Therefore, the calculations used to estimate the outlet discharge includes the identified natural drainage area boundaries exhibited on current and available contour and planning maps.”

With regard to the water flowage, the LSLID Board has contacted the Morrison County Public Works Engineer. He came out and checked all of the culverts. Their analysis was that they are all where they are supposed to be and all at the proper elevations. During recent rainstorms continued flowage has been noted and it is believed that this additional flowage contributes to the high groundwater and lake water. The LSLID Board recently sent a memo to the Morrison County Board and the Scandia Valley Board asking for their assistance to divert the water flowage from Lake Shamineau.

11. *Could using water from the lake for farm irrigation or the golf course solve the problem?*

While using lake water for irrigation may assist, it would not be enough water to make a significant reduction to the water level. In addition, there would be costs incurred to build a system to have the water flow to farmland or the golf course. Also, during high wet periods, when the lake may be at the highest levels, land owners may not need nor want the water.

12. *How much would the lake level be reduced?*

The Houston Engineering report suggests lowering the lake to 1274.1 or 1 foot below the Ordinary High Water Mark of 1275.1.

13. What option is recommended in the feasibility report?

The recommended option by Houston is the Southwest Bound Outlet which includes construction of an outlet to the southwest of Shamineau Lake. The proposed project extends from a point near the shoreline of the SW part of Shamineau Lake and proceeds southwesterly. From there it flows west through US 10 into the Fawn Lake Township in Todd County and continues to flow to the southwest where it joins Fish Trap Creek, a tributary to the Long Prairie River. Fish Trap Creek is the outlet for Fish Trap Lake and has adequate flow capacity to accommodate design outflows from the proposed project. This alternative was determined by Houston to best serve the overall interests of the lake and best serve the natural resource interests with the drainage area.

14. What about the NE Bound Outlet option?

The NE option included in the feasibility report includes the construction of an outlet to the northeast of Shamineau Lake. This option would extend from a point near the shoreline of the NE part of Shamineau Lake and proceed northeasterly into Stanchfield Lake, and then flow north and then northeasterly before outletting into Lake Placid (Rosing Township).

15. Are there other alternatives under consideration?

The LSLID Board is open to review other alternatives that are feasible, cost-effective, and could be constructed in a reasonable timeframe. The NE route continues to be under review to determine if it is a viable alternative at a reduced cost. During the next project steps, continued preliminary design and analysis will be completed on establishing a route.

16. What are the benefits to pumping water?

The advantage of pumping water is that water can be expeditiously removed from the lake and can be operated to an optimum water level. Once that water level is met, the pump would be turned off and not used unless the lake rises again to a high level. Benefits also include increasing the capacity of an outlet for water to flow from the lake; reducing lake bounce; reduction of property damage; improvement to lake shore management and planning; and reduction of lake shore erosion.

17. What are the 2019 project costs?

For 2019, \$360,000 is proposed within the 2019 annual budget for pre-construction work, which includes the following steps:

1. Preliminary Design Tasks to include: Route analysis and hydrogeology, preliminary surveying, detailed hydrologic and hydraulic analysis, initial completion of operation and maintenance plan (est. 5 months) \$70,000
2. Surveying and Permitting Tasks to include: Permitting/Environmental Review and coordination, geotechnical evaluation, design of final alignment/corridor, Agreements with MnDOT, Counties, Township (est. 3 months) \$60,000
3. Final Design, Plans and Specification Tasks to include: right of way, finalization of plans and specifications, bidding process and creating a construction schedule. (est. 4 months) \$230,000.

Note: The actual schedule for completion will depend on County Board approval and the timeframe for funding availability.

18. Are Grants being considered for funding?

A grant request was submitted to the DNR in February 2018. Recently, DNR officials visited the lake for a boat tour and were moved by the amount of damage as a result of the high water. We recently received a verbal commitment from the DNR of a grant amount up to \$65,000 for 50% of the first two (numbers 1 and 2 in question #17 above) pre-construction steps, subject to the approval of the LSLID budget by the County Board. DNR grant funding for future project expenses could reduce costs up to 50%.

19. What is the total Project costs?

The total project maximum cost is \$2,750,000 which includes the proposed 2019 budget amount of \$360,000 for pre-construction work. The remaining \$2,390,000 is eligible for financing through bonds, which would enable payment of the assessment over time. Any grant funds received would reduce these amounts.

20. How will I be assessed?

The 2019 budget includes an estimated assessment rate of \$990-\$995 per parcel, based on the current number of parcels and assuming Morrison County board approval of a proposed change in association unit fee calculations. Without the proposed change to association unit fees, the estimated assessment rate is \$965-\$970.

For future project budgets beyond 2019, the Morrison County Board has requested that we assess based on parcel benefit. For example, in the future the assessment rate could include components such as:

- A portion for a flat rate (similar to current), and
- A portion based on property value and/or lake frontage, and
- A portion based on whether the property elevation is low, mid or high in relation to the lake.

21. Are there other similar projects that have been completed in MN?

Following is a list of fourteen similar lake outlet projects with both gravity and mechanical outlets. Further information regarding these projects can be found on the website.

- * Turtle Lake in Becker County
- * East/West LaBelle Lake, Boyer Lake, Felker/Canary Lake in Becker County
- * Devils Lake near Perham in Otter Tail County
- * DLD/MKP (Moore) near Perham in Otter Tail County
- * Sand Lake in Otter Tail County
- * Sewell Lake in Otter Tail County
- * Lake Iverson Lake near Parkdale in Otter Tail County
- * Big cormorant Lake Chain in Becker County
- * Grove Lake in Pope County
- * Union Lake/Sarah Lake (WSN) in Polk County
- * Lake Olaf, East/West Olaf Drawdown in Otter Tail county
- * Lake Christina in Douglas County
- * Crooked Lake in Otter Tail County
- * Clitheral Lake in Otter Tail County

22. What if we have several years of drought?

The advantage of pumping water is that we would operate the pump to an optimum water level. Once that water level is met, the pump would be turned off and not used unless the lake rises again to a high level. There is no plan for reversing the outflow. However, with the higher precipitation and wet hydrology causing high groundwater, there is no indication that the lake levels will be decreasing substantially. The lake has been going up gradually for over 50 years and exponentially for the last 9.

23. Will an operating plan be developed?

An operating plan will be developed which will include details of oversight of the operations. While the governing body has not yet been determined, the LSLID will continue to be involved and the Morrison County Board has oversight over the LSLID. We may also have a discussion with Scandia Valley Township, to see if this is something they may be interested in assisting with. Even after the project is completed, we will continue to follow DNR, Morrison County and Todd County regulations to ensure no significant negative impacts are created.

24. If the high water project budget is approved on August 25th, what would be the next steps?

1. Morrison County Board votes on High Water project budget. If approved, the High Water Project can proceed to the initial pre-construction steps.
2. Preliminary Design Tasks to include: Route analysis and hydrogeology, preliminary surveying, detailed hydrologic and hydraulic analysis, initial completion of operation and maintenance plan
3. Surveying and Permitting Tasks to include: Permitting/Environmental Review and coordination, geotechnical evaluation, design of final alignment/corridor, Agreements with MnDOT, Counties, Township
4. Final Design, Plans and Specification Tasks to include: right of way, finalization of plans and specifications, bidding process and construction schedule.

Other Questions/Comments

25. Survey by the Morrison Board of Commissioners regarding the High Water Project

The results of the recent survey sent by the Morrison County Board include the following results. Note that the full survey results can be found on the LID website.

- 334 surveys were mailed, with 266 responses received.
- Question 1 – Do you believe the current water level of Lake Shamineau is too high?
84.96% Yes; 13.91% No; 1.88% NA
- Question 2: Do you believe there should be something done to lower the level of Lake Shamineau?
73.68% Yes; 26.32% No; 1.13% NA
- Question 3: Do you agree that the solution should be installing a mechanical outlet to lower the current water level of Lake Shamineau?
58.65% Yes; 40.23% No; 3.01% NA
- Question 4: Are you willing to pay a share of an assessment (current estimate \$285,000) for engineering and permitting of a mechanical outlet to lower the current water level of Lake Shamineau?
59.40% Yes; 41.35% No; 3.01% NA
- Question 5: Are you willing to pay a share of an assessment for the cost for installing a mechanical outlet (current estimate \$2,310,000) to manage the lake level?
56.77% Yes; 42.11% No; 4.89% NA
- Question 6: Do you agree that the Lake Shamineau LID should be given the authority to administer a lake water level management program?
63.91% Yes; 35.34% No; 3.01% NA

26. No Wake Zone

The Morrison County Sheriff's office has established a 300 foot No Wake Zone on the lake. Until further notice or the lake level returns to normal, there is a "No Wake (idle speed) Zone" within 300' of the shoreline around the entire lake.

27. Would property values rise with water mitigation? In other words, would the cost for mitigation be an "investment in the future"?

Houston Engineering has stated that on one their projects the value of the property that was flooded was much less than the value proposed after mitigation. In addition, flooded property may not have much appeal to buyers.

The Morrison County Assessor's office is in the process of reviewing properties. For those properties that have structural damage and/or water in their basements they can contact the Morrison County Assessor, Jean Popp at 320-632-0103 for a redetermination of property value which may decrease your property tax.

28. Will the LSLID powers need to be amended?

If the high water project budget is approved by the LID membership and the County Board, the high water project will move forward. Depending on the type of construction and project characteristics, LSLID powers may need to be amended in the future to include additional powers such as allowing the LID to: acquire an existing dam or control works that affects the level of waters; construct and operate water control structures; undertake projects to change the course current or cross section of public waters; to acquire property, equipment or other facilities, and to receive financial assistance. Amending the Establishment Order to allow for additional powers will require a public hearing and approval by the County Board.