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Project 46 – Turtle Lake Outlet Modification Informational Meeting Minutes

Wednesday January 26, 2022

Managers Present: Peter Fjestad, Catherine Affield (remote), John Hanson, Gerald Van Amburg, Paul Krabbenhoft, Mark Hanson.

Managers Absent: Troy Larson.

Staff Present: Kristine Altrichter, Administrator; Lee Olson, Watershed Specialist; Matthew Schlauderauff, Watershed Specialist.

Consultants Present: Erik Jones, Engineer, Wade Opsahl, Technician Houston Engineering, Inc. (HEI).

Others Attending: Dennis Loock; Sandy Nipstad; Jerome Nipstad; Kristie Welle (remote); Greg Anderson (remote); Dean Guttormson (remote); Willis Frazee (remote); Kathy Grove (remote); Richard Kasper (remote); Rodger Hemphill, Department of Natural Resources (DNR) (remote); Marshal Albright (remote); Paul Reynolds (remote); Todd Ulschmid (remote); David Brenna (remote).

President Fjestad called meeting to order at 7:00 PM.

This meeting was held to discuss possible alterations to Long Lake siphon system to reduce yearly operation and maintenance costs. Turtle Lake and Long Lake siphon systems were installed in 1999. Since then, the average yearly maintenance cost is \$32,000.

Project was constructed in 1999 when landowners around Turtle Lake asked BRRWD for assistance with flooding concerns. BRRWD held hearing to install siphon system July 6, 1999. Series of siphon pipes were installed on the south end of Turtle Lake into north end of Long Lake and from west side of Long Lake and through wetland west of 295th St. Water then naturally flows west to Lake Fifteen and to Hay Creek. System was fully operational September 4, 1999.

BRRWD Board of Managers asked HEI to investigate options to reduce annual maintenance costs. Most of the annual costs are to maintain the system between Long Lake and the wetland because that siphon runs more often and has more maintenance requirements. HEI identified three alternatives for a gravity outlet for Long Lake.

Alternative A proposes to lower existing pipe along existing alignment. Of the 2,100 feet of existing pipe, 1,650 feet of trench would need to be lowered 20 to 30 feet. Proposed plan estimated to cost \$1,058,318.00.

Alternative B proposes to utilize wetland between Long Lake and 295th St. Proposed plan involves excavating between Long Lake and wetland and realigning existing pipe to the north for outlet out of wetland. Proposed plan estimated to cost \$767,951.00. Alternative B appears to be the lowest cost, however, there could be additional permitting requirements due to proposed excavation in wetland.

Alternative C is similar to Alternative A, with shifting alignment north and reducing excavation by following elevation contours. Alternative C was the most expensive option based on preliminary cost estimates (\$1,080,841.00).

Jones discussed that if project moves forward, a Project Team comprised of agency staff would need to meet to discuss permitting the proposed design.

If project moves forward, revised public waters permit will be required from DNR because it would be an alteration to original project. Alternative B will require additional permitting to account for work in wetland, with potential for required wetland mitigation if it is determined that project will drain existing wetland.

Jones and Opsahl have observed that when water levels on Long Lake are stable, Turtle Lake remains stable. They hypothesize that there is a groundwater connection between the lakes. They believe if Long Lake is maintained at a more constant level, Turtle Lake will also be stable. Turtle Lake siphon will still exist if it needs to be operated.

Zebra mussels were found in Turtle Lake in 2021. Zebra mussels have not been found in Long Lake yet. DNR has informed BRRWD that siphons may continue to be operated as permitted.

Jones mentioned there may need to be additional alterations to screens on pipes for Turtle Lake and Long Lake. Screens were required for original permit because Long Lake was used for walleye rearing.

There was additional discussion about using the bottom of the lake as a sand filter to manage zebra mussels. Jones said that this could be an option, however, to achieve adequate capacity, there would need to be a significant number of laterals. Jones stated that if project is permitted as currently proposed, he does not anticipate that Turtle Lake siphon system would need to be operated because the gravity system would maintain water levels at or near drawdown elevation.

Outlet structures may also need to be altered. Over the years, ice has damaged outlet structures. Prior to modifying structures, BRRWD would need to work with permitting agencies.

If project is constructed, this would be considered a repair, so cost would be responsibility of benefiting landowners. There may be an option to keep payments low over a longer period of time.

Jones anticipates the life of the pipe to be approximately 50 years. Future maintenance would likely involve rodent management. The mechanical repairs required by current system would be significantly reduced.

Jones recommended moving forward with Alternative B if project can be permitted.

Jones discussed possibility of directionally boring. This could be an option; however, it is dependent on water levels. This could be expensive option and will require additional soil information to determine if option is viable.

If project moves forward, it will likely take until fall 2022 to work with landowners to acquire easement and work through permitting process. Ideally, project would be constructed in fall when conditions are dry.

Opsahl will acquire additional spare parts so existing system can continue to operate.

Motion to authorize staff to hold Project Team meeting with agencies to determine permitting requirements with goal of providing information to Lake Association for their meeting in July 2022 by Van Amburg, **Seconded** by Krabbenhoft. **Approved.**

President Fjestad adjourned meeting at 8:10 PM.

/s/ John Hanson
Secretary