

2018 SUMMARY FOR CHISAGO LAKES LAKE LEVEL MONITORING ACTIVITIES

The goals for the Chisago Lakes Lake Improvement District lake level monitoring program for the 2018 monitoring season included:

- Monitor lake levels weekly during the open water season,
- Improve the safety and efficiency of the monitoring process whenever possible,
- Evaluate and upgrade worn out gauges and equipment, and
- Evaluate monitoring site locations and revise where appropriate.

The 2018 monitoring season began on May 3, 2018, as ice-out had occurred on area lakes.

1. **Little Lake:** The gauge is located at the Little Lake public boat access and is easily viewed from the dock.
2. **Pioneer Lake:** In 2015, the Minnesota Department of Natural Resources (DNR) established an Ordinary High Water (OHW) level of 906.2 for Pioneer Lake. The gauge is located in the southwest corner of the lake. The gauge is in a good location, although it can be difficult to see when tree vegetation is thick.

During the gauge run in 2017, the DNR crew had used the wrong benchmark elevation and transposed numbers. The error was not discovered by the DNR until the gauge run in April 2018. County staff have updated all spreadsheets from 2017 to reflect the new gauge zero elevation and lake level readings.

3. **North and South Center Lakes:** The gauge is located at the South Center Lake public access where it can easily be viewed from the docks.
4. **North Lindstrom Lake:** The gauge is located near the Lakeview Motel along Highway 8.
5. **South Lindstrom and Chisago Lakes:** The gauge is located at the Chisago Lake public access in the channel between South Lindstrom and Chisago Lakes. In May 2018, the Minnesota DNR set a new gauge, as the existing gauge could not be found.
6. **Wallmark Lake:** The gauge is located on private property and is read from the back yard. Readings were taken consistently without major issues.
7. **School Lake:** The gauge is located on private property and is read from the back yard. Readings were taken consistently without major issues.

8. **Swamp Lake:** There are 7 culverts located at Swamp Lake; the 2nd culvert from the east is used for lake level measurements. Water flowed through the culverts all season.
9. **Weir at Ivywood Trail:** The weir is used for measurements.
10. **Lofton Avenue Weir:** Located between Chisago and Green Lakes; the permanent gauge is attached to the side of the weir. The gauge can be difficult to read when algae from receding water levels sticks to the gauge.
11. **Little Green, Green, and Ellen Lakes:** The gauge is located on Little Green Lake near a private residence on West Street. Staff could not publish lake level readings from May to mid-September, as the previous benchmark elevation was destroyed. DNR staff set a new benchmark elevation on September 13, 2018. Staff updated all readings to reflect the new benchmark. Road construction and the closing of West Street also prevented two readings from taking place in June and July 2018.
12. **Kroon Lake:** The gauge is located at the Kroon Lake public access. At times the gauge had been difficult to read due to excessive vegetation growth.
13. **Spider Lake:** The gauge is located at the Spider Lake public access.
14. **Linn Lake:** The gauge is accessed by a dock on private property on Newberry Trail. Staff wore rubber boots to access this gauge most of the season due to high water levels.
15. **County Road 19:** The gauge is located in the wetland complex near County Road 19. Staff installed the gauge and began taking readings on July 21, 2017.

The 2018 monitoring season concluded on November 16, as cold temperatures had arrived and the lakes began to freeze.