

Cedar Lake 2025 Hydrology Report: Executive Summary (7-6-26)

The Cedar Lake 2025 Hydrology Report presents technical results of the Cedar Lake water level monitoring program, ongoing since 2004. The program helps determine critical management needs and influences toward supporting year-round desired in-lake water levels. Maintaining desirable summer-month water levels in Cedar Lake is a function of rainfall and targeted management strategies.

Management strategies to date focus on improving water retention and natural hydrological functions in the northwest cedar swamp. Efforts include railroad culvert cleanouts since 2014, wetland enhancement berm in 2017, Sherman Creek grade structures built in 2019, as well as the Lake Board's purchase of several critical wetland parcels encompassing large portions of Sherman Creek and Jones Ditch for protection and enhancement. The water level monitoring program continues to be vital for assessing, understanding, and cost-effectively pursuing appropriate phased water level augmentation options for Cedar Lake.

2025 Water Level Monitoring Program Results

Precipitation, spring snow melt, groundwater losses, and evaporation remain the dominant factors that influence the Cedar Lake elevation throughout the summer. Summer precipitation in 2025 was above the 11-inch threshold for avoiding a >1ft drop in lake level during the recreation period (Jun-Sep). Lake outflows occurred from late-March to early-September, providing ideal lake levels during the summer recreation season. The average and maximum lake level during the 2025 recreation period (Jun-Sep) were the highest recorded since the installation of the new lake outlet management structure in fall 2020.

Lake level data continue to show the expected correlation between summer lake levels and precipitation. The 2025 data also show how the new lake outlet structure responds to above-average spring and summer rainfall compared to the old structure prior to 2020. This is reflected in maximum lake levels maintained at about 0.5-ft on average above the legal level during the outflow period.

Intentional watershed enhancements in the Sherman Creek and Jones Ditch wetlands have continued to show value in terms of greater contributions to lake elevations throughout the summer. An analysis of trends shows that lake elevations prior to the construction of the wetland berm (in 2017) were more sensitive to spring and summer precipitation fluctuations, suggesting that watershed improvements have acted as a stabilizing force for summer lake elevations. The wetland berm has limited watershed losses via the King's Corner culvert, as well as redirected groundwater flow towards the lake. The 2017 Jones Ditch culvert replacement has increased wetland flows to the lake. Planning and coordination by the CLIB and K&A will continue to rely on monitored trends within the watershed to implement engineering designs as needed. As such, the continuation of the hydrology monitoring program is recommended in 2026, as detailed below.

Recommendations for the 2026 Monitoring Program

1. Identify hydraulic improvements in Jones Ditch including maintenance of railroad culverts for watershed flows, and identify improvements to contributing wetlands for ecological enhancements, fish passage, and flow management, in tandem with the pending MGLP award to CLIB.
2. Redeployment of groundwater piezometers in Sherman Creek to better assess flows for fish passage movement in the Creek, including potential new piezometers up- and down-stream of the railroad culverts, in conjunction with planned improvements for Jones Ditch and the pending MGLP grant.
3. Consider additional groundwater level evaluations for the southeastern portions of the Cedar Lake shoreline where County Drain Commission drainage improvements are being contemplated. Preliminary evaluation of possible implementation efforts would provide a backdrop for future approaches to protect and/or improve already impactful drain conditions on Cedar Lake levels.