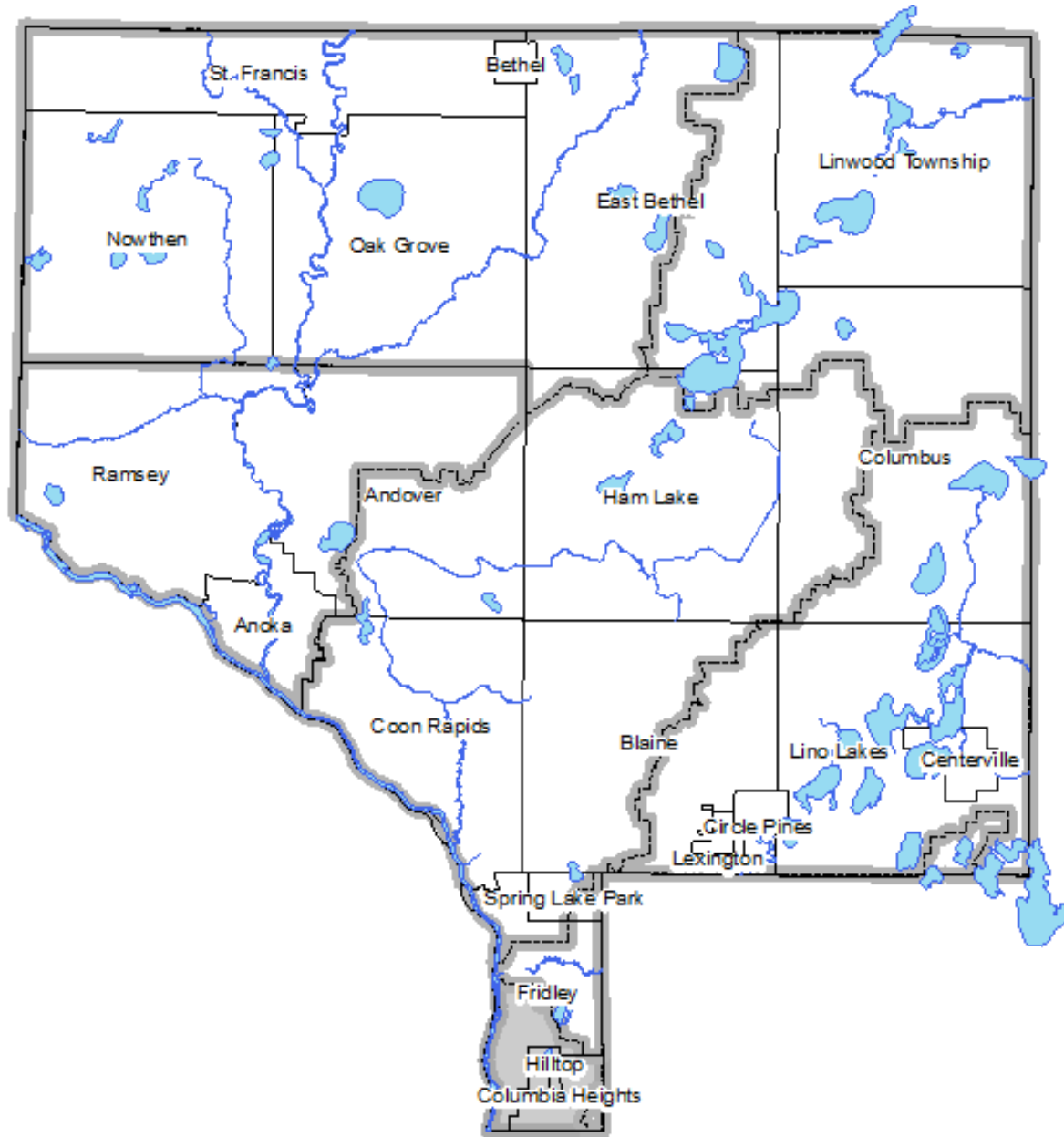


Excerpt from the 2021 Water Almanac

Chapter 7: Mississippi Watershed

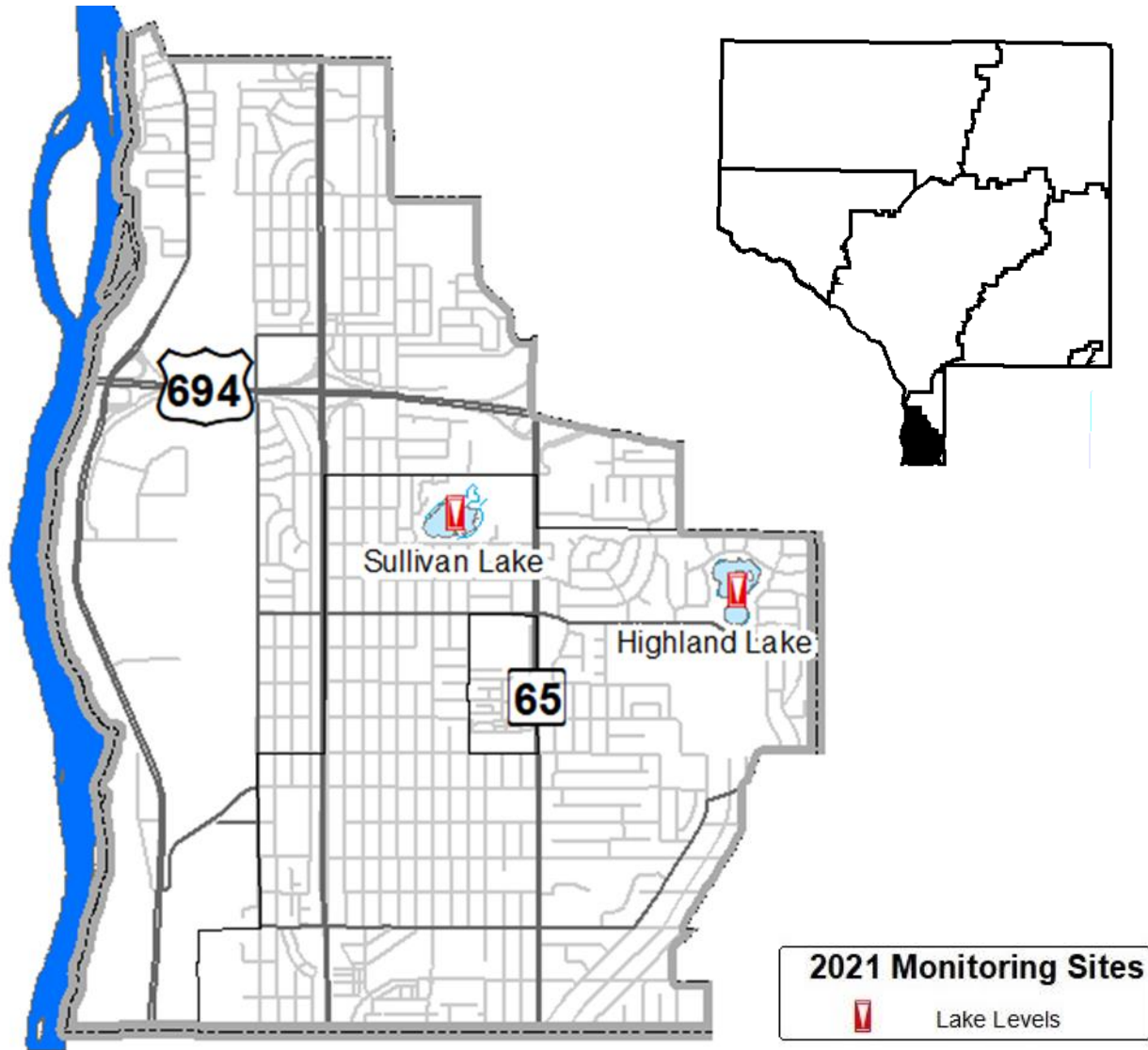


Prepared by the Anoka Conservation District

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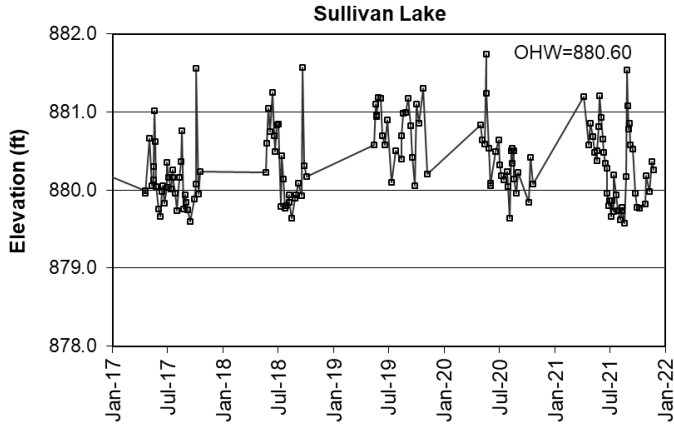
Chapter 7: Mississippi Watershed Management Organization



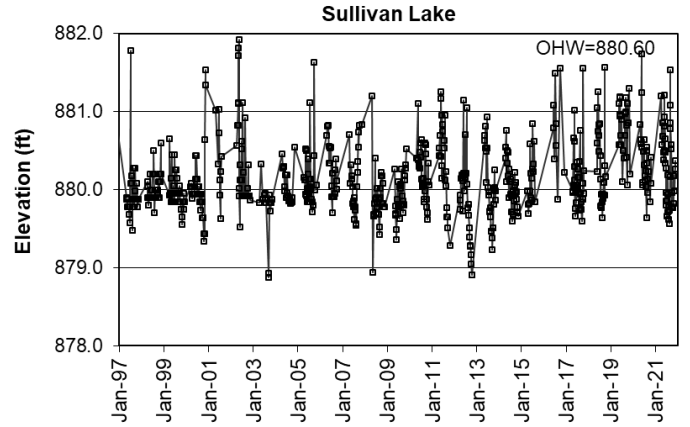
Lake Levels Monitoring

- Partners:** MWMO, ACD, MN DNR, City of Columbia Heights, Volunteers
- Description:** Weekly water level monitoring in lakes. The past five and twenty-five years of data for each lake are illustrated below, and all historical data are available on the Minnesota DNR website using the “LakeFinder” feature (www.dnr.mn.us.state/lakefind/index.html).
- Purpose:** To understand lake hydrology, including the impact of climate or other water budget changes. These data are useful for regulatory, building/development, and lake management decisions.
- Locations:** Sullivan (Sandy) Lake, Highland Lake
- Results:** Lake Levels were measured 41 times at Highland lake between April and November 2021. Sullivan (Sandy) was measured 42 times over the same period. Sullivan Lake water levels typically fluctuate rapidly, routinely bouncing by half a foot in response to single rainfall events. This is due to the volume of stormwater directed to the lake and its small basin size. In 2021, Sullivan levels fluctuated 1.97 feet, a slightly higher amount than the average 1.68 feet seen in the last decade. Our volunteer also recorded the lowest reading since 2013 (879.57 feet) in 2021.
- 2021 water levels on Highland Lake were lower than previous years on average, spending almost all year below the Ordinary High Water Level. The second lowest reading (995.76 ft.) was recorded in 2021 at Highland Lake, behind 2012 (995.59). Both of these lakes have controlled outlet structures, which help prevent flooding in high water years. The structures also keep these lakes much closer to their average levels in extremely dry years, compared to other lakes across the county, which were lower by several feet in some cases throughout 2021.
- All lake level data can be downloaded from the MN DNR website’s LakeFinder feature (<https://www.dnr.state.mn.us/lakefind/index.html>). Ordinary High Water Level (OHW), the elevation below which a DNR permit is needed to perform work, is listed for each lake on the corresponding graphs below.

Sullivan/Sandy Lake Levels – last 5 years

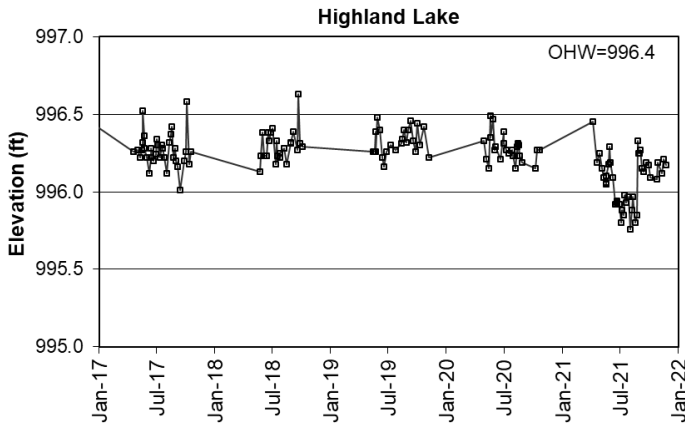


Sullivan/Sandy Lake Levels – last 25 years

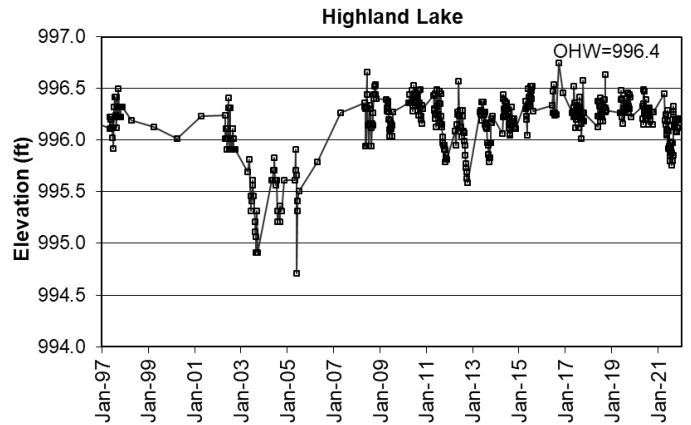


Lake	Year	Average	Min	Max
Sullivan	2017	880.13	879.60	881.56
	2018	880.33	879.64	881.57
	2019	880.77	880.06	881.30
	2020	880.38	879.64	881.74
	2021	880.30	879.57	881.54

Highland Lake Levels – last 5 years



Highland Lake Levels – last 25 years



Lake	Year	Average	Min	Max
Highland	2017	996.27	996.01	996.58
	2018	996.30	996.13	996.63
	2019	996.32	996.16	996.48
	2020	996.28	996.15	996.49
	2021	996.07	995.76	996.45

Recommendations

- Continue to monitor water levels on Highland and Sullivan Lakes.
- Implement practices identified in the Highland and Sullivan SRA report to benefit the water quality of these two lakes. Both lakes have very poor water quality, are impaired for nutrients and recreation, and both have popular parks adjacent to them that many visitors and occupants of the area frequent. These lakes could provide an even larger benefit to the community with improved water quality