Excerpt from the
2020 Anoka Water Almanac

Chapter 7: Mississippi Watershed

Prepared by the Anoka Conservation District

Mississippi Watershed Management Organization

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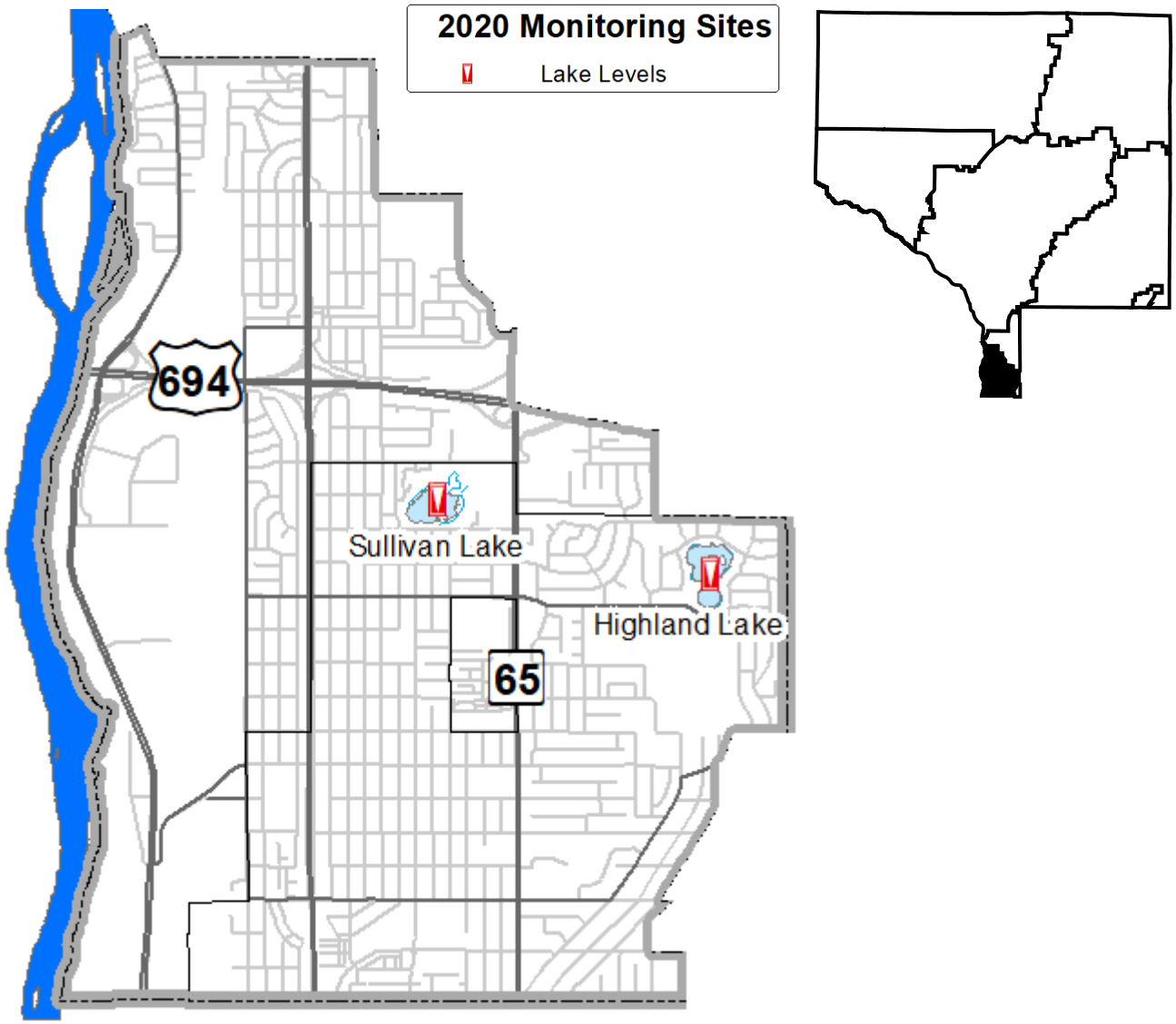


Lake Levels

Partners: MWMO, ACD, MN DNR, City of Columbia Heights, volunteers

Description: Weekly water level monitoring in lakes. These data, as well as all additional historical data are available on the Minnesota DNR website using the "LakeFinder" feature (www.dnr.mn.us.state\lakefind\index.html).

Purpose: To provide understanding of lake hydrology, including the impact of climate and water budget changes. These data are useful for regulatory, building/development, and lake hydrology manipulation decisions.

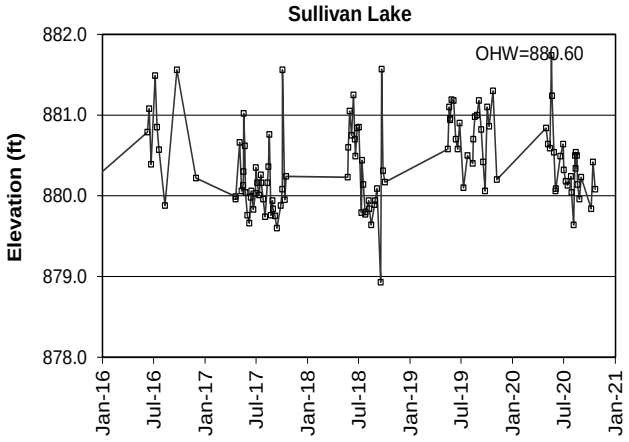
Locations: Sullivan/Sandy Lake, Highland Lake

Results: Lake levels were measured 25 times at Highland Lake and 26 times at Sullivan/Sandy, April through October of 2020. Sullivan Lake water levels typically fluctuate rapidly, routinely bouncing by half a foot in response to single rainfall events due to the volume of stormwater directed to the lake and its small basin size. In 2020, Sullivan levels fluctuated more than in previous years, 2.1 feet in total, and reached the highest elevation documented since 2002 (881.74). This elevation was recorded in May following a 2.93-inch rain event that ended the night before the reading was taken.

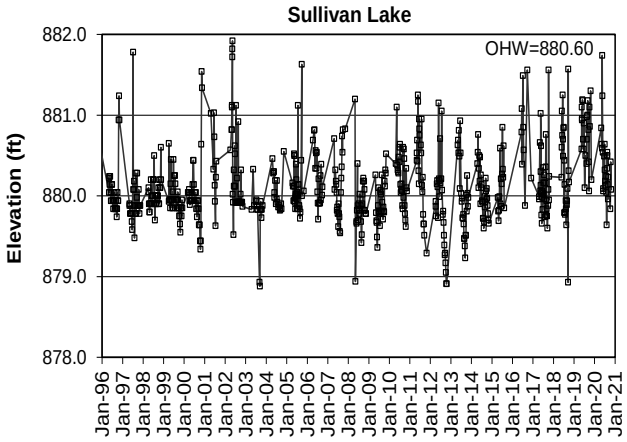
2020 water levels on Highland Lake were similar to previous years on average, and fluctuated only 0.38 feet throughout the season. Both of these lakes have controlled outlet structures which help prevent flooding.

Raw lake level data for all sites and all years can be downloaded from the Minnesota DNR website using the "LakeFinder" tool. Ordinary High Water Levels (OHW), the elevation below which a DNR permit is needed to perform work, are listed for each lake on the graph below.

Sullivan/Sandy Lake Levels last 5 years

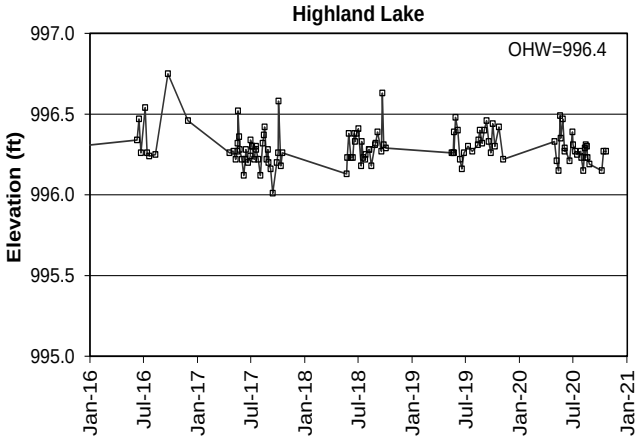


Sullivan/Sandy Lake Levels last 25 years



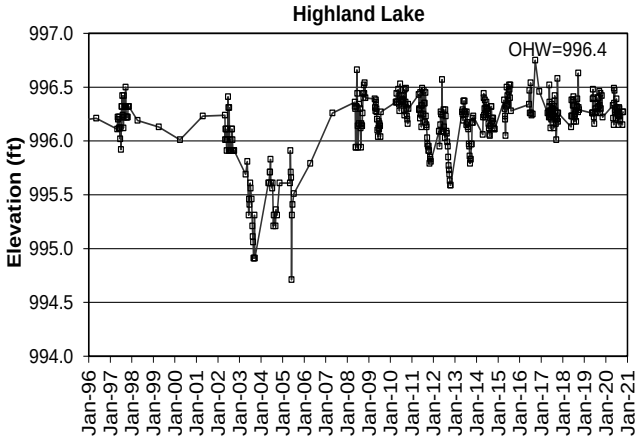
Year	Average	Min	Max
2016	880.76	879.88	881.56
2017	880.13	879.6	881.56
2018	880.29	878.93	881.57
2019	880.77	880.06	881.3
2020	880.38	879.64	881.74
5-year	880.39	878.93	881.74

Highland Lake Levels last 5 years



Year	Average	Min	Max
2016	996.40	996.24	996.75
2017	996.27	996.01	996.58
2018	996.30	996.13	996.63
2019	996.32	996.16	996.48
2020	996.3	996.15	996.49
5-year	996.31	996.01	996.75

Highland Lake Levels last 25 years



Financial Summary

ACD accounting is organized by program and not by customer. This allows us to track all of the labor, materials and overhead expenses for a program, such as our lake water quality monitoring program. We do not, however, know specifically which expenses are attributed to monitoring which lakes. To enable reporting of expenses for monitoring conducted in a specific watershed, we divide the total program cost by the number of sites monitored to determine an annual cost per site. We then multiply the cost per site by the number of sites monitored for a customer. The process also takes into account equipment that is purchased for monitoring in a specific area.

MWMO Financial Summary to be included here in final 2020 Anoka Water Almanac:

Recommendations

- Continue to monitor water quality and 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.