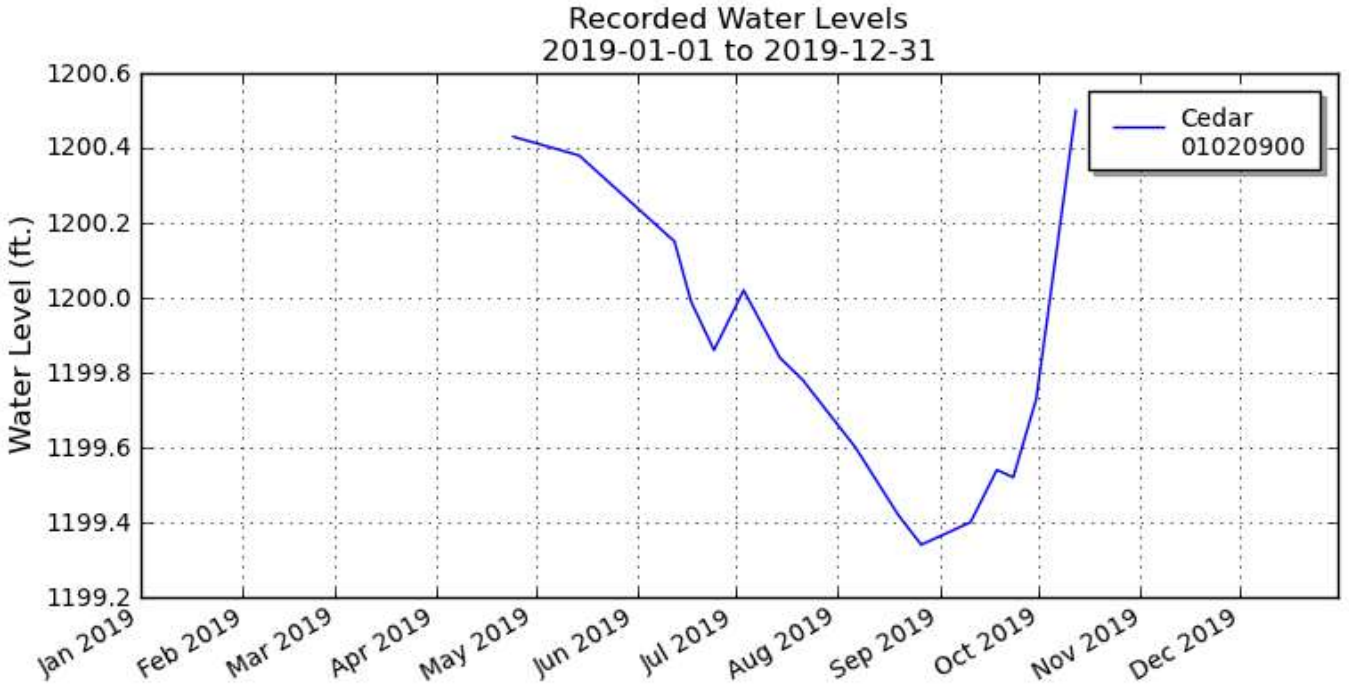
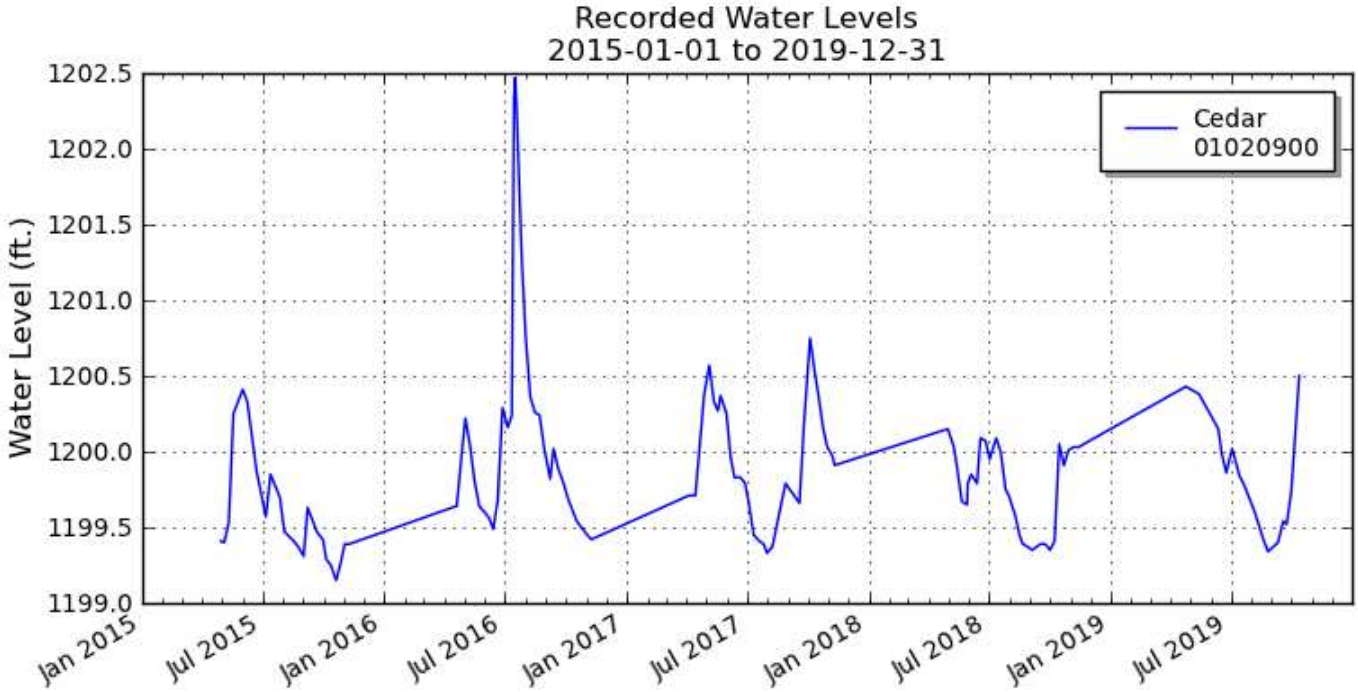
MN DNR Lake Level MN Monitoring Program

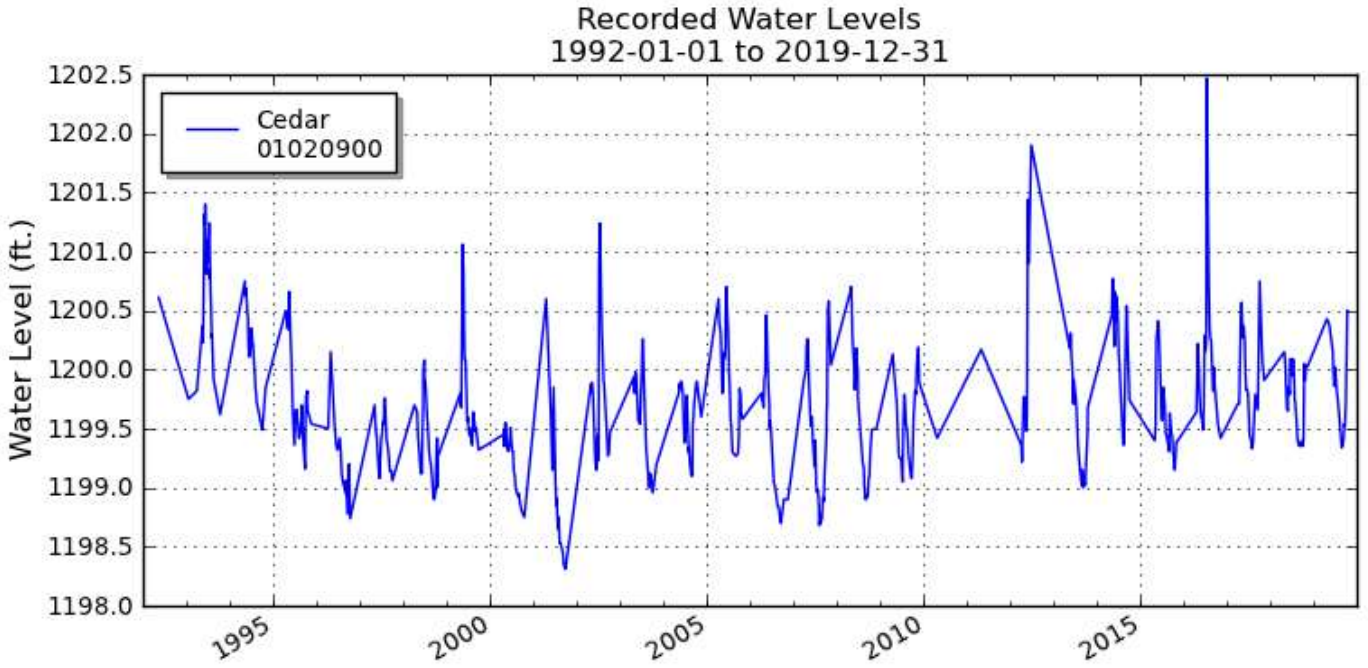
Cedar Lake hydrographs of various time periods:

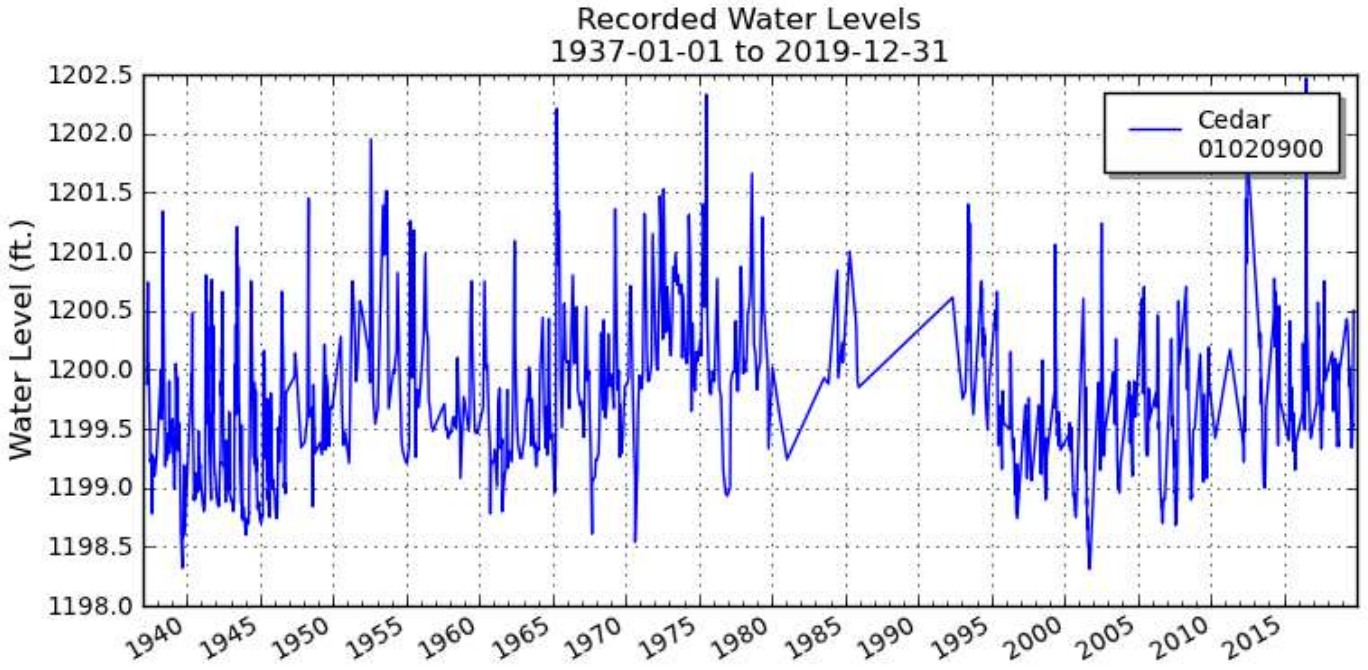




Cedar Lake 01-0109 Water Level Data Summary of reported lake levels (NGVD 1929 datum):

Beginning Elevation:	1199.88’ (1937-04-07)
Ending Elevation:	1200.50’ (2019-10-12)
Highest Reported:	1202.47’ (2016-07-16)
Lowest Reported:	1198.31’ (2001-09-29)
Average Reported:	1199.59’
Number of Readings:	2490
Reported Range:	4.16’





General analysis of **statewide** gaged lakes at the end of September 2019:

When comparing September 2019 lake levels to their entire historic record, 49% of the lakes with reported lake levels are in the Above Normal or High percentiles, 44% of the lakes are in the Normal percentile, and 7% Below Normal or Low. After increases in lake levels from rain events in the third and fourth weeks of September, 72% of gaged lakes showed lake elevations above their average lake level of the entire historic record. Over 64% of these "above average" lakes reported September lake elevations more than ½ foot higher than their average. Lakes in Morrison, Pine, St. Louis, Scott, and Washington Counties reached their highest reported lake level in September.

How can residents and users find lake level information?

a) **Finding and using lake level records of lakes that have lake level gages historically owned and maintained by the State of Minnesota Department of Natural Resources**

The DNR LakeFinder web site is the best means for the public to access available data on more than 4,500 Minnesota lakes relating to fisheries information, lake area and maximum depth, depth maps, lake water levels, air photos, and topographic maps. About 1,450 of the lakes have a historical record of more than 100 water level elevations. After searching by county, lakename, or 8-digit identification number for your lake, click on the lake in the Search Results. On the next page, click on Water Levels report in the left hand column. https://www.dnr.state.mn.us/lakefind/index.html

Besides looking at the 10-yr graph, **a LakeFinder website user can retrieve and view all the reported historic and current lake elevations for a specific lake** that has lake level elevations. For this action, you must use the main DNR LakeFinder website from your favorite browser on your phone, tablet, or computer https://www.dnr.state.mn.us/lakefind/index.html , NOT the **excerpted mobile website**. Like many mobile versions, the mobile website's excerpts do not include all of the millions of items of LakeFinder information.

On the LakeFinder website, go to the center of the Lake Water Level report page to the paragraph, Download lake level data as: [dBase] [ASCII]. Clicking on [dBase] may allow opening or saving the entire list to a computer spreadsheet. Clicking on [ASCII] is the most common method used to view all of the historical reported data, or copy it to a spreadsheet.
http://webapps5.dnr.state.mn.us/cgi-bin/lk_levels_dump.pl?format=csv&id=01020900

Check out how your lake's levels compare to other historic drought or wet years or other lakes. If the data are copied, we ask that a user not change the raw data numbers/dates, and that DNR EWR Lake Level Minnesota Monitoring Program is credited as the data source for any publications or reports.

The chronological water surface elevation data can then be viewed, or saved, or highlighted and copied [use Edit/Copy in your browser toolbar] into a computer software spreadsheet for sorting and graphing and comparing to summary information.

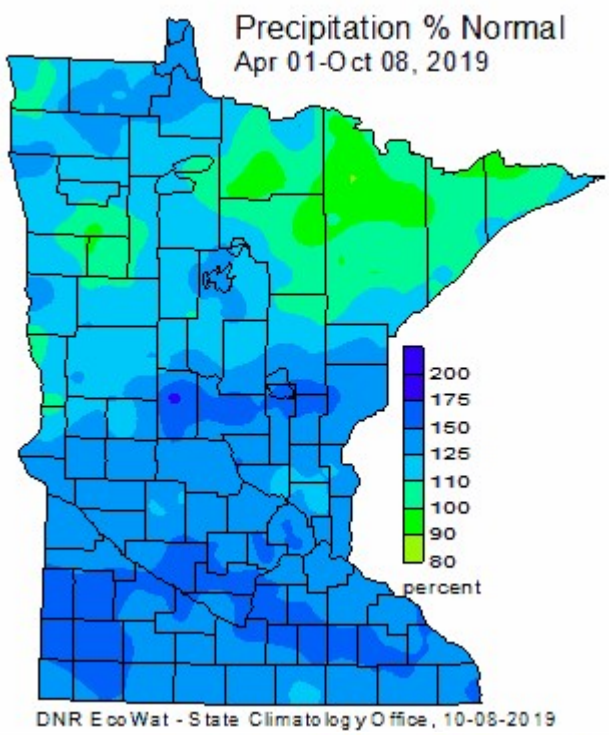
b) **What do those numbers tell you about vertical change or the ups and downs in the lake level?**

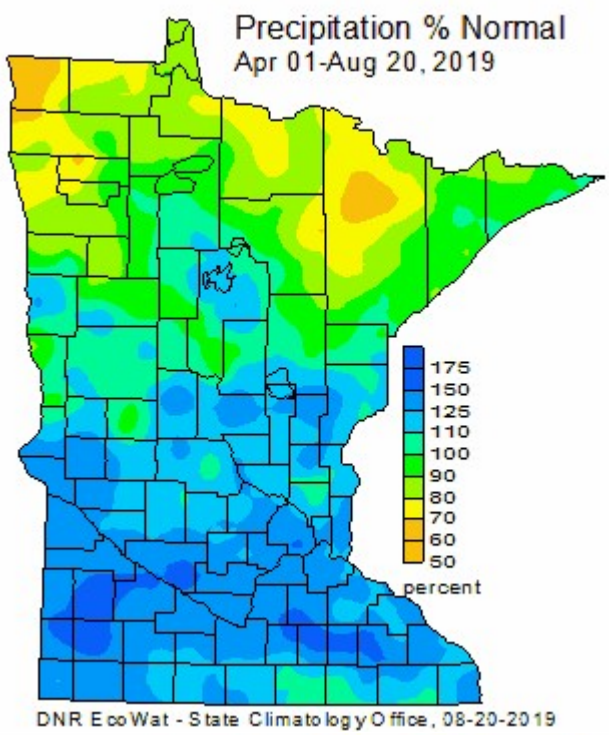
Want to check out the change in lake levels from one date to another from the LakeFinder download list, or the graph? The elevation numbers are in feet. Subtract one lake level from another. This gives you the difference or change in **vertical feet** -- generally feet above sea level in accordance with the datum. Multiply that difference by 12 to get the difference in lake levels in inches. {Dividing by 12 would be used in converting inches into feet.}

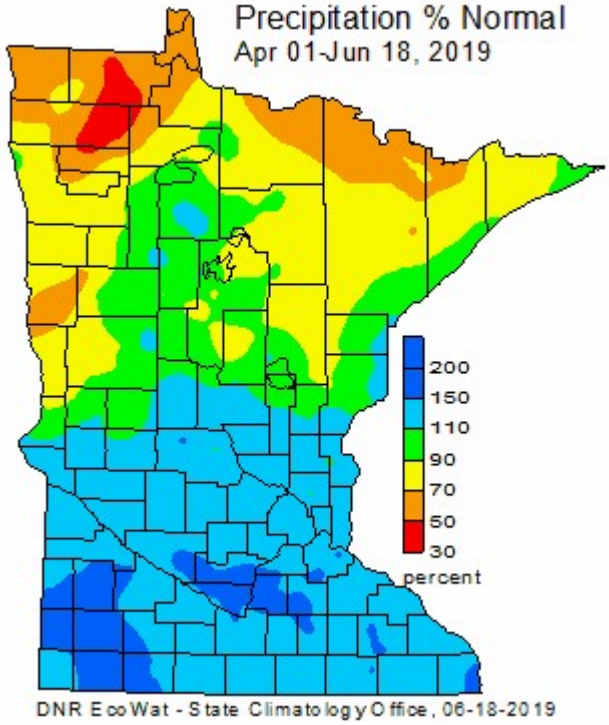
Information from MN DNR State Climatology Office:

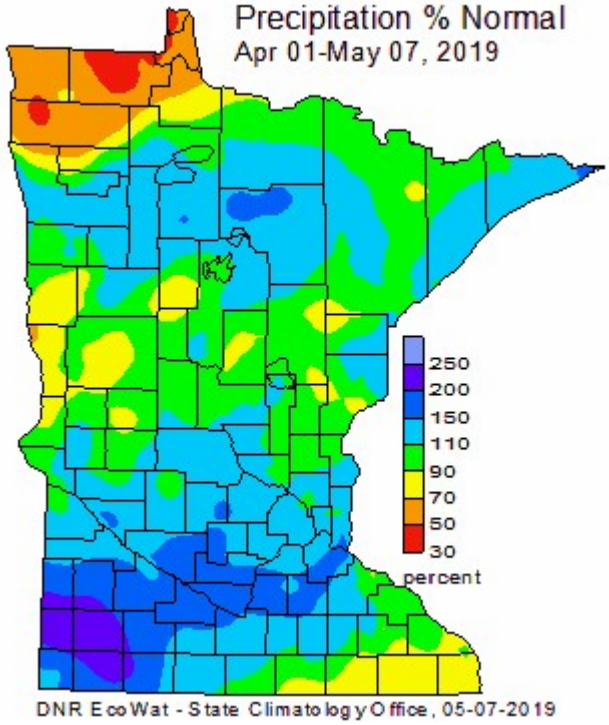
http://climateapps.dnr.state.mn.us/index.htm

https://www.dnr.state.mn.us/climate/weekmap/weekmap.html









From the past:

Historic precipitation event leading to highest reported Cedar Lake lake level - July 2016

https://www.dnr.state.mn.us/climate/journal/160711_12_flood.html