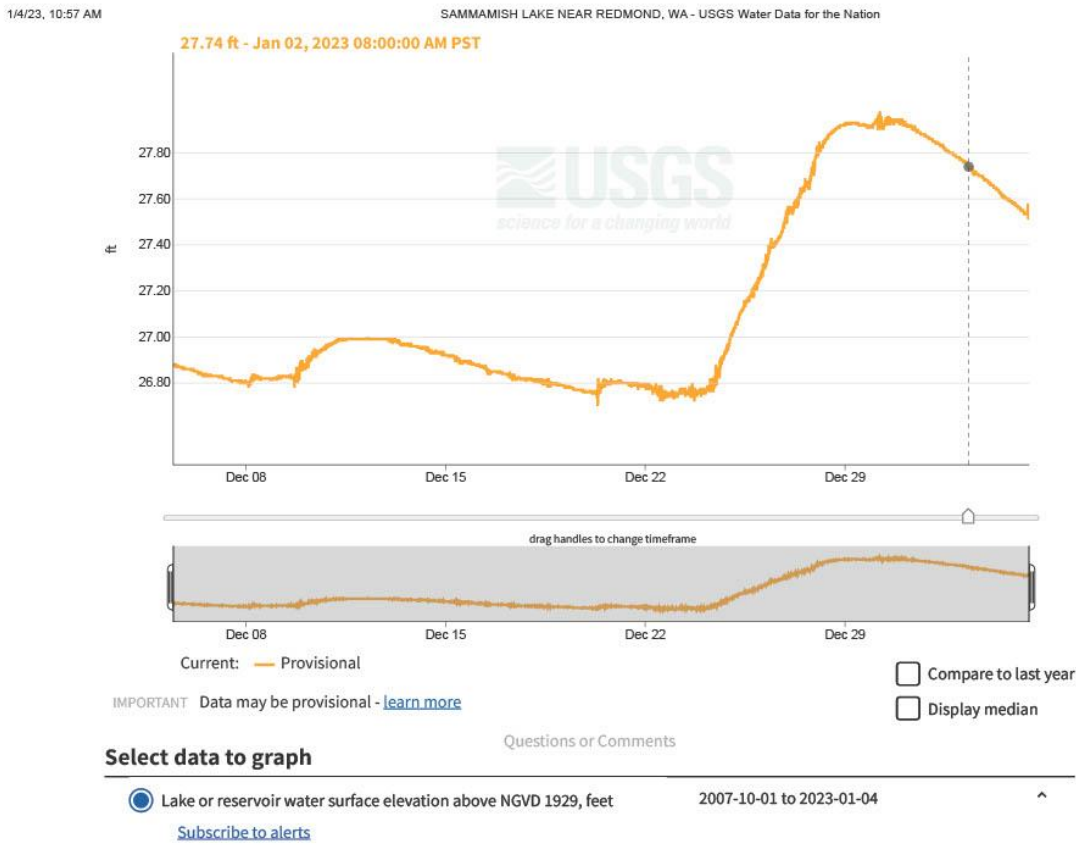


Current Water Data for Lake Sammamish December 2022

Currently we have benefitted from early December lower water levels (under 27'.) When the late December rains came, we were able to handle the timing of rainfall and snowmelt. Lake levels are slowly receding now, and hopefully weather patterns do not overwhelm us. Lower water levels in anticipation of Winter/Spring rains and snowmelt are exactly the goal of a Dynamic Wier. We continue to press King County to take the idea and implementation of a Dynamic Wier seriously.

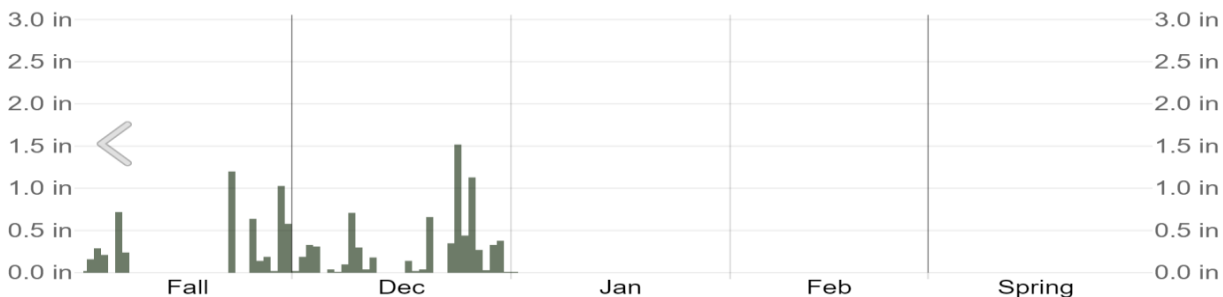
<https://waterdata.usgs.gov/monitoring-location/12122000/#parameterCode=62614&period=P30D>



<https://waterdata.usgs.gov/monitoring-location/12122000/#parameterCode=62614&period=P30D>

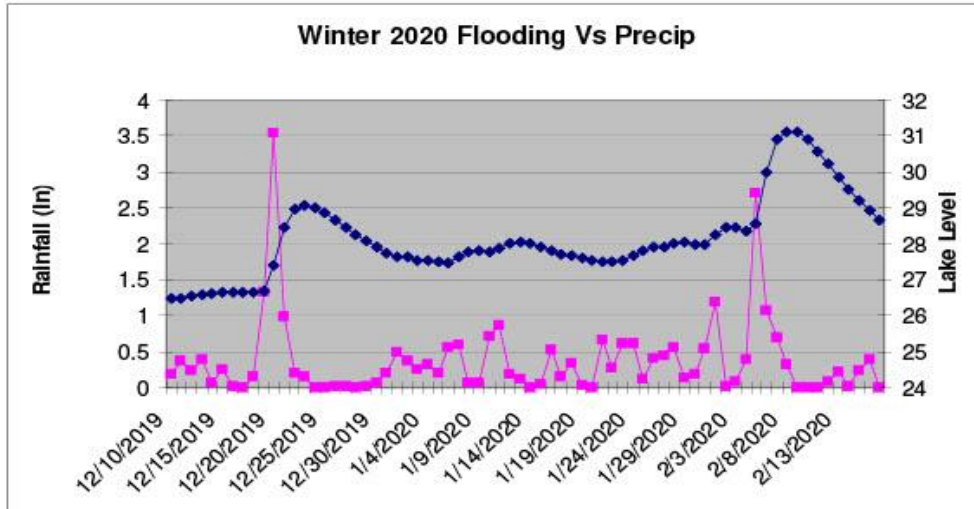
2/4

December 2022 Precipitation – Issaquah Late December rains caused Lake Sammamish to quickly raise by 1 foot.



Compare 2020 lake levels (in Blue) in the chart below, and precipitation (in Pink) to see how rainfall patterns effect Lake Sammamish levels. Continuous average rains of ½ in or more appear to prevent the lake from outflowing/draining quickly enough to prevent flooding at higher lake levels. Starting the Winter at a lower lake level, prior to Winter/Spring storms could aid in the prevention of property damage and flooding.

Analysis of Rainfall and Lake Level Patterns Lk Sammamish - Winter 2020



Lake Differentials:

Average Lake Level 12/10/2019 through 2/17/2020 =	28.2 ft. NGVD
Average Lake Level 12/10 through 2/17 - 2016-2019 =	27.4 " "
Difference =	9.4 inches

Observations:

- Prior to 12/20/19 the lake was at typical winter levels in the 27 ft range
- Following a 3 day series of rain starting 12/19, totalling 5.8 inches, the lake rose to 29 ft
- Subsequently rainfall patterns returned to typical values under 0.5 inches/day... however
- Periodic rains of 0.5 inches kept the lake at about 28 ft. NGVD into Feb.
- A 3 day total rain of 4.5 inches commencing 2/5/20 raised the lake over 3 ft.
- The average lake level between Dec. 10th and Feb. 17 was 9+ inches above recent averages

Other:

- Contact with USGS staff noted the following (based on 29 yrs of flow gage readings):
The recent flood is somewhere between a 10-yr and 25-yr flood and closer to the 10-yr flood than the 25-yr flood.

Conclusion:

- A storm in Dec. raised lake levels above recent average levels for this period
- Subsequently, periodic rains of 0.5 inch/day were a factor keeping the lake raised.
- With the lake some 9 inches above normal, though not an extraordinary event the early Feb. storm resulted in a rise of nearly 3 ft, with concurrent damage.

Limitations:

- The expected return frequency of the storm of close to a 10 year event is based on flow records, not rainfall records. Obtaining such info is recommended.

Prepared by M.Nizlek for WSSA, May 2020