



Lake St. Clair

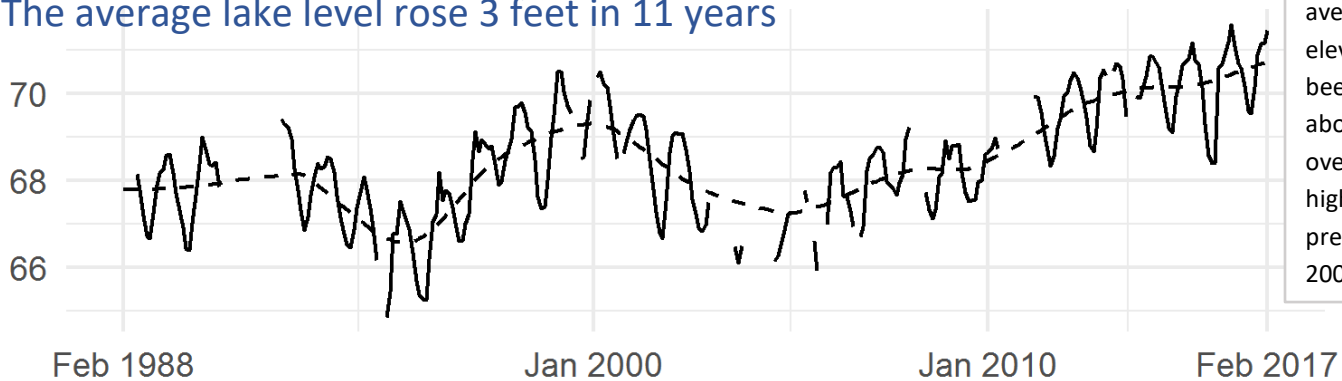


Lake Saint Clair is a deep lake of about 240 acres. Formed in the pit of a melting ice slab at the end of the last Ice Age, it lacks any outlet for natural surface drainage, and is fed by both groundwater and Eaton Creek from the south.

Records dating back to 1988 when monitoring began, show that the elevation of the lake varies both seasonally and long-term, with a notable increase starting in 2005. Since 2015, water elevation on the lake has set records multiple times. This appears to be caused by increases in total annual rainfall and average rainfall intensity.

The City of Olympia stopped pumping from McAllister Springs, but started pumping from the McAllister well field. Since that change didn't happen until 2014, it appears unrelated to the long-term trend which began in 2005.

The average lake level rose 3 feet in 11 years



Since 2005, average water elevations have been rising, from about 67 ft., to over 70 ft. That's higher than the previous peak, in 2000.

Elevations in this document are measured in mean sea level, or NGVD 29, as are county ordinances regarding boating restrictions. Flood maps issued by FEMA are in NAVD 88, and aren't directly comparable to NGVD elevations.

To better understand the trends in lake elevation, the County is investing in:

- A new water elevation sensor that collects data every 15 minutes at the Peninsula Drive gauge.
- Continued collection and analysis of rainfall data.
- A model of the geology and water dynamics of the area.

FREQUENTLY ASKED QUESTIONS ABOUT LAKE ST. CLAIR

1. What is Thurston County doing about the water level in Lake St. Clair?

Lake St. Clair is known as a “kettle lake”, and doesn’t have a natural outlet. Because the lake does not have a dam, spillway, or other type of surface water outlet, we can’t control the lake level. However, we measure the lake elevation on a regular basis, and post the information on our [Lake St. Clair webpage](#). These manual gage readings will now be supplemented by the installation of a new water elevation sensor that collects data every 15 minutes. We also measure the surface water flow in nearby Eaton Creek which is the main tributary to the lake, as well as numerous rainfall gages and groundwater monitoring wells located throughout the county. Our hydrogeologist is using the data to run a computer model to study Lake St. Clair and get a better understanding of the factors that affect the lake level.

2. What more can be done to control the water level in Lake St. Clair?

Thurston County does not manage lake levels anywhere in Thurston County, nor does it have the resources to explore, design or implement an engineered solution to control the level of Lake St. Clair. We recommend that Lake St. Clair area homeowners consider the creation of either a Lake Management District (LMD) or a Special Purpose District (SPD), like residents at other lakes have done, to explore options to manage lake issues such as water levels, boating activity, and drainage.

- State law, [Chapter 36.61 RCW](#), provides procedures for counties to create a lake or beach management district, where special assessments or rates may be imposed on properties within the district to finance improvement or maintenance activities including, but not limited to, controlling water levels.
- State law, [Chapter 85.38 RCW](#), provides uniform and simplified procedures for the creation, elections and operations of various special districts that provide diking, drainage, and flood control facilities and services. The [Black Lake Special District](#) provides a local example, where revenue raised under the district is used to protect and enhance Black Lake.

Thurston County maintains a [website](#) with information on how to form an LMD or SPD. For more information contact Thurston County’s Noxious Weed and Lake Management Manager, Tim Wilson at (360)786-5831 or wilsont@co.thurston.wa.us.

3. Who is currently responsible for debris, vegetation, or tree removal at the lake?

Thurston County is not responsible for the removal of debris, floating vegetation mats, or trees from Lake St. Clair. We are not aware of any other government agency responsible for that type of work. Debris/vegetation management is a function that could be managed by a Lake Management District or Special Purpose District, if the community chooses to form one at Lake St. Clair.

4. What is Thurston County's role with the boat speed restrictions on Lake St. Clair?

Thurston County's role with boating at Lake St. Clair is limited to three areas:

- 1) The [Board of County Commissioners](#) (BoCC) has the authority to adopt resolutions and establish ordinances. BoCC adopted a resolution (Ordinance 14975) following public concerns and testimony about boat wakes during times of high lake levels causing shoreline property damage. Read the [County Speed Limit Ordinance](#) for Lake St. Clair which established:
 - A "No Wake" zone within 200 feet of the shoreline.
 - A 5 mph speed limit to all areas of the lake, *when the water level is higher than 69.5 feet above sea level*. When the lake level drops to 69.5 feet or lower, the 5-mph speed limit does not apply to the large basin south of Peninsula Drive.
- 2) Facilitating the administration of Resolution 14975, Thurston County:
 - Maintains a sign at the boat launch and bridge advising boaters when the 5-mph speed limit is in effect.
 - Measures lake levels on a regular basis using a staff gage plate affixed to the bridge on Peninsula Drive SE. In February 2017, an additional water elevation sensor was installed that relays water elevation data to a county database every 15 minutes.
 - Maintains a graph of lake levels on its website, along with up-to-date information on when the 5-mph speed limit is in effect. Visit the water levels dashboard webpage at this address: <https://www.thurstoncountywa.gov/sw/Pages/monitoring-dashboard.aspx> and then click the down arrow from 'Site' at the top, and scroll to select '10b: Lake St. Clair' to see lake levels.
- 3) The [Thurston County Sheriff's Office](#) is responsible for enforcement of boating ordinances in Thurston County.

5. What are my options for installing bulkheads or other shoreline armoring?

Common shoreline protection techniques include "hard armoring" (e.g., bulkheads), and "soft armoring" (e.g., using primarily live vegetation, rock/log placement, etc.). In general, projects involving hard armoring/bulkheads and/or excavation involve more substantial permitting requirements compared to soft armoring projects that do not involve excavation. Contact the [Thurston County Building Development Center](#) for more information: 360-786-5490.

Note: Thurston County published a [document with community questions and County answers](#) about Lake St. Clair. It contains additional information about bulkheads, shoreline permit and related issues. In brief, residents discussed options and concluded that the construction of bulkheads or other armor is subject to County codes and permits.

6. Where can I find sandbags to help lessen potential flooding?

Thurston County Emergency Management puts sand and sandbags throughout the county for

residents to use. You can also find them at some stores. A complete list of County sandbag locations and inventories is maintained on the [Emergency Management website](#). In situations, where several homes within a neighborhood are affected, the County's Emergency Management department will work with the County's Public Works department to deliver sandbags to a central location where they can be easily accessed by all impacted residents. For more information, please call 360-867-2800 or email EMWEBMASTER@co.thurston.wa.us.