



CLFLWD

WATERSHED DISTRICT

The Comfort Lake–Forest Lake Watershed District (CLFLWD or District) is a special purpose unit of local government with a mission to protect and enhance local ecosystems and natural water resources. The District covers 49 square miles in northern Washington and southern Chisago counties.

Lake Phosphorus Load Reductions Achieved to Date

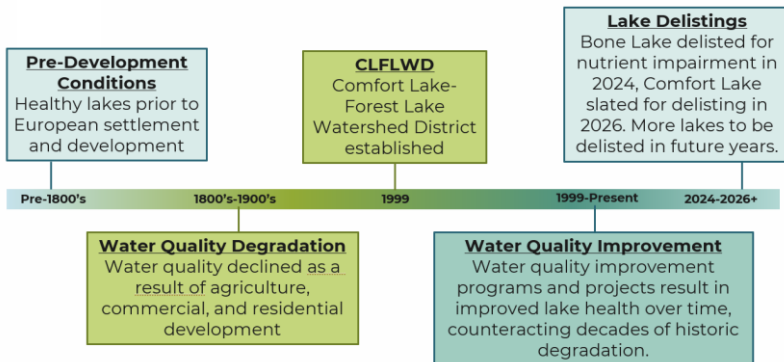


State Standard Reduction Goal: 3,245 lbs
District Sustainable Reduction Goal: 5,802 lbs

1 lb phosphorus ≈ 500 lbs algae growth

Excess phosphorus can degrade a lake's water quality. One pound of phosphorus can support up to 500 pounds of algae growth in a lake. Soil erosion and sediment transport can affect a lake's health as well.

Watershed History and Lake Health Over Time



Lakes were generally healthier prior to modern development. The CLFLWD aims to bring lakes back to their pre-development water quality condition.

Water Quality Projects & Milestones

2015

- Target Store Stormwater Retrofits
- Bone Lake Fish Barrier Upgrades
- Moody Lake Aerator

2016

- Bixby Park Water Quality Improvement Project

2017

- Hilo Lane Stormwater Retrofit
- Forest Lake Wetland Treatment Basin (aka 3rd Lake Pond)

2018

- Moody Lake Wetland Rehabilitation
- Moody Lake Alum Treatment Phase 1

2019

- Moody Lake Alum Treatment Phase 2
- Shields Lake Alum Treatment Phase 1
- Shields Lake Stormwater Harvest and Irrigation Reuse
- Shields Lake Fish Barrier Upgrade

2020

- Shields Lake Alum Treatment Phase 2
- Bone Lake Southeast Wetland Restorations

2021

- 10-Year Plan Update

2022

- Bone Lake Northeast Wetland Restoration

2023

- Sunrise River Hwy-61 Wetland Enhancement
- County Road 50 Iron Enhanced Sand Filter
- Forest Lake Alum Treatment Phase 1

2024 – Bone Lake Delisted!

- Moody Lake Capstone Projects
- Washington Judicial Ditch 6 Wetland Enhancement

2025

- Forest Lake Alum Treatment Phase 2

2026 – Comfort Lake to be Delisted!

- Heath Iron Enhanced Sand Filter

Other Notable Accomplishments

2015

Moved out of the old Forest Lake City Hall building and into a new office rental space at 44 Lake Street South, Suite A, Forest Lake.

2016

Collected paleolimnological sediment cores from Comfort Lake, Moody Lake and Shields Lake to determine pre-settlement lake conditions.

2017

Mapped lake depths and sediment hardness using sonar equipment for several lakes for which depths were previously unknown.

2018

Completed District rule revisions and a minor Watershed Management Plan amendment.

2019

Collected paleolimnological sediment cores from School Lake and Bone Lake to determine pre-settlement lake conditions.

2020

Continued to implement projects and essential programs while adhering to restrictions imposed because of the COVID-19 pandemic.

2021

Collected paleolimnological sediment cores from Little Comfort Lake and Forest Lake to determine pre-settlement lake conditions.

2022

Projects, programs, outreach, and education efforts resulted in meeting 92% of phosphorus reductions needed to achieve state water quality standards.

2023

Developed a comprehensive shoreline program with cost-share incentives, shoreline inventories, and public outreach.

2024

Celebrated 25th anniversary since establishment in 1999 and delisted Bone Lake for excess nutrients.

Water Quality Trends

Lake	Total Phosphorus Trend	Chlorophyll-a Trend	Secchi Disk Trend
Bone	Improving since 2015	Significantly Improving since 2001	Significantly Improving since 1984
Comfort	Improving since 1994	Improving since 1994	Improving since 1987
Forest – West	Significantly Improving since 1984	Significantly Improving since 2001	Improving since 1984
Forest – Middle	Improving since 2015	Improving since 2015	Declining since 2015
Forest – East	Improving since 2015	Improving since 2015	Declining since 2015
Keewahtin	Significantly Improving since 1993 Improving since 2015	Improving since 2001	Significantly Improving since 1974
Little Comfort	Improving since 2015	Significantly Improving since 2015	Improving since 2006 Significantly Improving since 2015
Moody	Significantly Improving since 2005	Significantly Improving since 2005	Significantly Improving since 2005
Shields	Significantly Improving since 1993	Significantly Improving since 2001	Significantly Improving since 1993

Short-term trends are noted for the most recent 10-years (since 2015)

Long-term trends are noted for the period of record for each lake, with the earliest year noted.

Red represents a declining trend that is not statistically significant

Green represents an improving trend that is not statistically significant way

Blue represents an improving trend that is statistically significant

Water quality is improving in almost all metrics for all lakes.

- Phosphorus is a major contributor to algae growth
- Chlorophyll-a is a way to measure the presence of algae
- Secchi Disk is a way to measure lake clarity and how deep you can see into the lake

The Forest Lake Secchi Disk (clarity) trend is expected to improve after the completion of the Forest Lake Alum Treatment, Phase 2, in fall 2025.

The District's water quality programs and projects have resulted in significant phosphorus load reductions. They have also resulted in other benefits including:

- Sediment load reduction
- Wetland habitat restored
- Floodplain volume storage added

For more information visit
cflwd.org/plans-reports-and-audits/.



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