

# Little Comfort Lake



**Phosphorus Reduction Goal: 839 lbs**  
**Progress Toward Goal: 60%**

## Little Comfort Lake Headline

Multiple projects still needed to achieve WQ goal. Several are in progress/planned. Could make a case for impairment delisting since we are so close. Projects result in multiple benefits (e.g., sediment).

### Phosphorus Load Reduction Goal and Progress Made

(multiple other benefits have been achieved and are being tracked as well such as sediment/nitrogen)

<b>Completed Total</b>				<b>503 lb/yr</b>
<b>In Progress Total</b>				<b>125 lb/yr</b>
<b>Planned Total</b>				<b>211 lb/yr</b>
<b>Total Load Reduction to Meet Goal</b>				<b>839 lb/yr</b>
Completed	Upstream Improvements	Upstream improvements have resulted in significant water quality improvements compared to baseline	Past	503 lb/yr
In Progress	School Lake Agricultural BMPs and Feedlot	Grant awarded. Will have larger improvement for School Lake (~65 lb/yr)	2025	~45 lb/yr
In Progress	Heath Ave IESF	Awarded WBIF grant for feasibility study and CWF grant for construction. Design in 2025, construction in 2026.	2025/2026	80 lb/yr
Ongoing	Shoreline Program	Comprehensive program will result in multiple benefits	Ongoing	TBD
Planned	July Ave Degraded Wetlands	Restore wetlands downstream of feedlot after feedlot project is complete	TBD	TBD
Planned	Ag BMPs/Livestock Mgmt	Various locations upstream in Little Comfort LMD; landowner outreach in progress	TBD	TBD
Planned	School Lake Inlet/Outlet Channels	Investigating further through monitoring program and Sunrise River Headwaters Project Development AIG grant.	TBD	TBD
Planned	Little Comfort Alum Treatment	Re-evaluate internal load after making more progress on external load	TBD	TBD

## Resources

### Implementation Plan

The Comfort and Little Comfort's Implementation Plan has three major objectives:

1. **Little Comfort Lake TP Reduction:** Improve the in-lake water quality of Little Comfort Lake through implementation of TP reduction practices in the Heath Avenue inlet drainage area, the Itasca Avenue inlet downstream of School Lake, and to reduce internal loads.
2. **Comfort Lake TP Reduction:** Improve the in-lake water quality of Comfort Lake through improvement of Little Comfort Lake water quality and implementation of TP reduction practices in the Sunrise River inlet drainage area.
3. **Stormwater Treatment:** Reduce sediment loading by increasing water storage in the Comfort LMD through regional stormwater treatment projects and enhancement of wetlands along the Sunrise River corridor.

**Table 2-33. Comparison of the Little Comfort and Comfort Lakes TP Reduction Scenarios**

Lake	Total Phosphorus (TP) Source	Scenario 1: Little Comfort at 30 µg TP/L		Scenario 2: Little Comfort at 33 µg TP/L		Scenario 3: Little Comfort at 40 µg TP/L	
		TP Reduction (lb./yr.)	% Total Reduction Needed	TP Reduction (lb./yr.)	% Total Reduction Needed	TP Reduction (lb./yr.)	% Total Reduction Needed
Little Comfort Lake	Direct drainage	1	0.3%	1	0.3%	0	--
	Itasca Avenue inlet	205	56%	159	50%	50	27%
	Heath Avenue inlet	102	28%	102	32%	75	41%
	Internal load	59	16%	59	18%	59	32%
	<b>TOTAL</b>	<b>366</b>		<b>320</b>		<b>183</b>	
Comfort Lake	Direct drainage	26	14%	27	14%	26	13%
	Sunrise River inlet at W. Comfort Dr.	31	16%	52	27%	104	54%
	Little Comfort Lake	136	70%	114	59%	64	33%
	<b>TOTAL</b>	<b>193</b>		<b>193</b>		<b>193</b>	

- [Diagnostic Study Implementation Plan](#)
- [Diagnostic Study TP Reduction Scenarios](#)
- [Sediment Loading Analysis Presentation](#)
- [Sunrise River Headwaters Project Development Scope of Work](#)

# Comfort Lake



## Comfort Lake Headline

Several projects completed, in progress, and planned. Water quality is good, and sediment loading levels are within range for a lake like this. Monitoring is ongoing to keep track of threats to Big Comfort and Little Comfort. Shoreline buffers needed to maintain WQ improvements. Good candidate for impairment delisting.

### Phosphorus Load Reduction Goal and Progress Made

(multiple other benefits have been achieved and are being tracked as well such as sediment/nitrogen)

<b>Completed Total</b>				697 lb/yr
<b>In Progress Total</b>				64-136 lb/yr
<b>Planned Total</b>				64+ lb/yr
<b>Total Load Reduction to Meet Goal</b>				<b>825 lb/yr</b>
Completed	Stormwater Permits	Permitting program has resulted in water quality improvements b/c of required stormwater BMPs	Past	28 lb/yr
Completed	Broadway IESF	Iron enhanced sand filter	Past	15 lb/yr 683 lb/yr TSS
Completed	Enhanced Street Sweeping	City of FL partner program	Past	37 lb/yr 683,407 lb/yr TSS
Completed	Bixby Park	Wetland enhancement	Past	93 lb/yr 5,546 lb/yr TSS
Completed	Target Retrofits	Iron enhanced sand filter, tree trenches	Past	5 lb/yr
Completed	Hwy 61/Sunrise River/Tax Forfeit	Wetland enhancement	Past	65 lb/yr 18,630 lb/yr TSS
Completed	Upstream Improvements	In addition to projects in this LMD, upstream improvements have resulted in significant water quality improvements compared to baseline	Past	460 lb/yr
In Progress	Little Comfort Lake Improvements	Diagnostic study provided scenarios ID'ing Little Comfort Lake as a high priority means to improving Comfort Lake. Varying load reductions based on varying improvements to Little Comfort	2025+	64-136 lb/yr
In Progress	Goodwin Ave Stormwater Wetland	Stormwater wetland project just upstream of Comfort Lake. Design in 2025, construction in 2026.	2025/ 2026	5 lb/yr
Ongoing	Shoreline Program	Comprehensive program will result in multiple benefits	Ongoing	TBD
Planning in Process	City of FL Regional Treatment Facility	Led by City of FL, supported by CLFLWD	TBD	TBD
Planning in Process	Flood Resiliency, Greenbelt & Open Space	Targeting in progress through Flood Resiliency Action Plan. Comfort LMD is a high priority implementation area.	TBD	TBD
Planning in Process	Shallow Pond and/or other Sunrise River Corridor projects	Coordinate Shallow Pond w/ City of Wyoming. Sunrise River Headwaters Project Development AIG grant in progress to ID other projects.	TBD (Long-range)	TBD

## Resources

(See also Little Comfort resources above)

**Table 2-33. Comparison of the Little Comfort and Comfort Lakes TP Reduction Scenarios**

Lake	Total Phosphorus (TP) Source	Scenario 1: Little Comfort at 30 µg TP/L		Scenario 2: Little Comfort at 33 µg TP/L		Scenario 3: Little Comfort at 40 µg TP/L	
		TP Reduction (lb./yr.)	% Total Reduction Needed	TP Reduction (lb./yr.)	% Total Reduction Needed	TP Reduction (lb./yr.)	% Total Reduction Needed
Little Comfort Lake	Direct drainage	1	0.3%	1	0.3%	0	--
	Itasca Avenue inlet	205	56%	159	50%	50	27%
	Heath Avenue inlet	102	28%	102	32%	75	41%
	Internal load	59	16%	59	18%	59	32%
	<b>TOTAL</b>	<b>366</b>		<b>320</b>		<b>183</b>	
Comfort Lake	Direct drainage	26	14%	27	14%	26	13%
	Sunrise River inlet at W. Comfort Dr.	31	16%	52	27%	104	54%
	Little Comfort Lake	136	70%	114	59%	64	33%
	<b>TOTAL</b>	<b>193</b>		<b>193</b>		<b>193</b>	

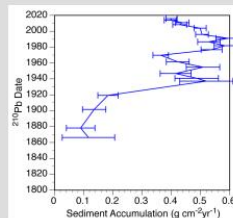
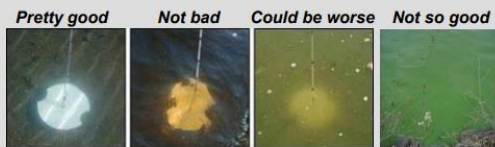
## 2022 Comfort Lake Sediment



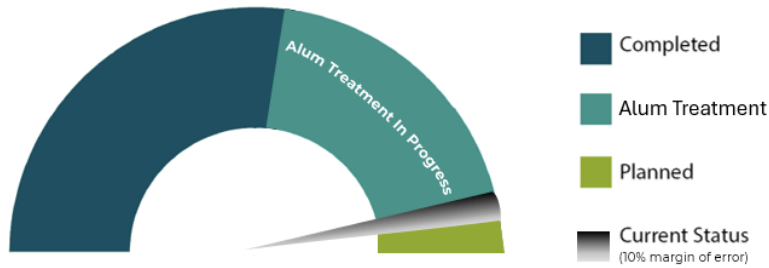
### Conclusions

- ❖ The input loads and accumulation rates of NVSS in Comfort Lake do not appear to be large.
  - Monitored values are larger than the reference value, but overall near or better than current water-quality standards.
- ❖ The accumulation rate from the sediment Pb-210 study appears to be anomalously large.
  - However, the trends in the lake-sediment core samples are self-consistent and thus reliable.
- ❖ Reductions in TSS may be possible for Little Comfort Lake inlet
  - Additional monitoring between School Lake and Little Comfort Lake
  - Preliminary stream condition walk through during Little Comfort Lake model survey

Minnesota designations:



# Forest Lake



**Phosphorus Reduction Goal: 1,450 lbs**  
**Progress Toward Goal: 56% before alum, 93% after alum**

## Forest Lake Headline

Forest Lake is very close to its goals, and the completion of the alum treatment in 2025 will all but cross the finish line toward the goals. Shoreline buffers and flood mitigation strategies in the watershed will serve to protect the water quality improvements that have been achieved.

### Phosphorus Load Reduction Goal and Progress Made

(multiple other benefits have been achieved and are being tracked as well such as sediment/nitrogen)

Completed Total				823 lb/yr
In Progress Total				527 lb/yr
Planned Total				100 lb/yr
<b>Total Load Reduction to Meet Goal</b>				<b>1,450 lb/yr</b>
Completed	Shields Lake Improvements	Carp barrier, aerator, stormwater reuse, alum treatment	Past	531 lb/yr
Completed	Smaller BMPs	Cumulative of multiple BMPs from permits, partners, and cost-share incentives	Past	35 lb/yr
Completed	Hilo Lane	Iron enhanced sand filter	Past	12 lb/yr
Completed	3 <sup>rd</sup> Lake Pond	Wetland restoration	Past	56 lb/yr 1,696 lb/yr TSS
Completed	Enhanced Street Sweeping	City of FL partner program	Past	72 lb/yr 190,824 lb/yr TSS
Completed	CR50 IESF	Iron enhanced sand filter	Past	97 lb/yr 3,000 lb/yr TSS
Completed	WJD-6 Wetland	Completed in 2024. Signage in 2025.	Past	20 lb/yr
In Progress	City of Forest Lake Projects	Coordinate w/ City on North Shore Trail BMPs and North Shore Circle Park Shoreline Resto.	2024	TBD
In Progress	Forest Lake Alum Treatment	First dose in 2023, monitoring in 2024, second dose in 2025	2025	527 lb/yr
Ongoing	Shoreline Program	Comprehensive program will result in multiple benefits. Forest Lake water quality is good and very close to goal – achieving additional 100 lb/yr (7%) will further ensure WQ is protected. Standard margin of error for TMDL load reductions is 10% (after the alum treatment, we will be within the 10% range)	Ongoing	TBD
Planning in Process	Flood Resiliency, Greenbelt & Open Space	Likely to benefit Forest Lake as well as Comfort Lake.	TBD	TBD

# Bone Lake



## Bone Lake Headline

Improvements made and Bone Lake de-listed for nutrient impairment as of April 2024! Ongoing programs and future efforts will serve to protect the water quality investments the District and local citizens have made. Shoreline buffers needed to maintain WQ improvements. Finish Moody Lake projects and continue monitoring WQ.

Phosphorus Load Reduction Goal and Progress Made (multiple other benefits have been achieved and are being tracked as well such as sediment/nitrogen)				
Completed Total				821 lb/yr
In Progress Total				0 lb/yr
Planned Total				TBD lb/yr
<b>Total Load Reduction to Meet Goal</b>				<b>786 lb/yr</b>
Completed	Upstream and Other Watershed Improvements	Upstream/watershed improvements over the years have resulted in significant water quality improvements compared to baseline. Moody Lake wetland rehabilitation, carp removal, carp barriers.	Past	651 lb/yr
Completed	Agricultural Best Management Practices	Cumulative of multiple BMPs from ag BMP incentives	Past/ Ongoing	117 lb/yr 204,893 lb/yr TSS
Completed	Melanie Trail BMPs	Partnership project w/ City of Scandia	Past	2 lb/yr
Completed	Southeast Drained Wetland Restorations	Wetland restorations ("DCB" properties)	Past	35 lb/yr 324,640 lb/yr TSS
Completed	Northeast Legacy Wetland Restoration	Wetland restoration (estimated 15-20 lb/yr reduction)	Past	15 lb/yr
In Progress	Moody Lake Capstone Projects	Finished majority of project in 2024, complete ag BMPs & signage in 2025.	2024/ 2025	60 lb/yr to Moody Lake
Planning in Process	Volume Control Facility, Flood Mitigation, Greenbelt & Open Space	One ongoing greenbelt/open space effort is the Bone Lake South Acquisition and potential future restoration and enhancement projects which will provide multiple benefits, further protecting Bone Lake's WQ improvements.	TBD	TBD
Planned/ Ongoing	Shoreline Program	Comprehensive program will result in multiple benefits.	Ongoing	TBD