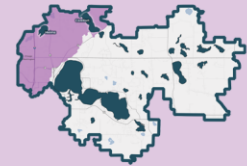




MEMORANDUM

Comfort Lake-Forest Lake Watershed District

Date: September 15, 2023
To: CLFLWD Board of Managers
From: Mike Kinney, District Administrator
Subject: Project Presentation to Lower St. Croix Policy Committee



Comfort Lake
Management District

Background/Discussion

The Comfort Lake-Forest Lake Watershed District has been asked to give a presentation to the Lower St. Croix (LSC) River Basin Watershed Partnership Policy Committee (PC) on the Sunrise River-Highway 61 Wetland Enhancement Project. The presentation is scheduled for the Policy Committee's October 23rd regular meeting. Manager Anderson asked staff to present the proposed presentation slides to the CLFLWD Board beforehand. The purpose of this agenda item is for staff to share the presentation.

Attached:

Presentation Slides



Sunrise River (Highway 61) Wetland Enhancement

A Chisago County Petition Project

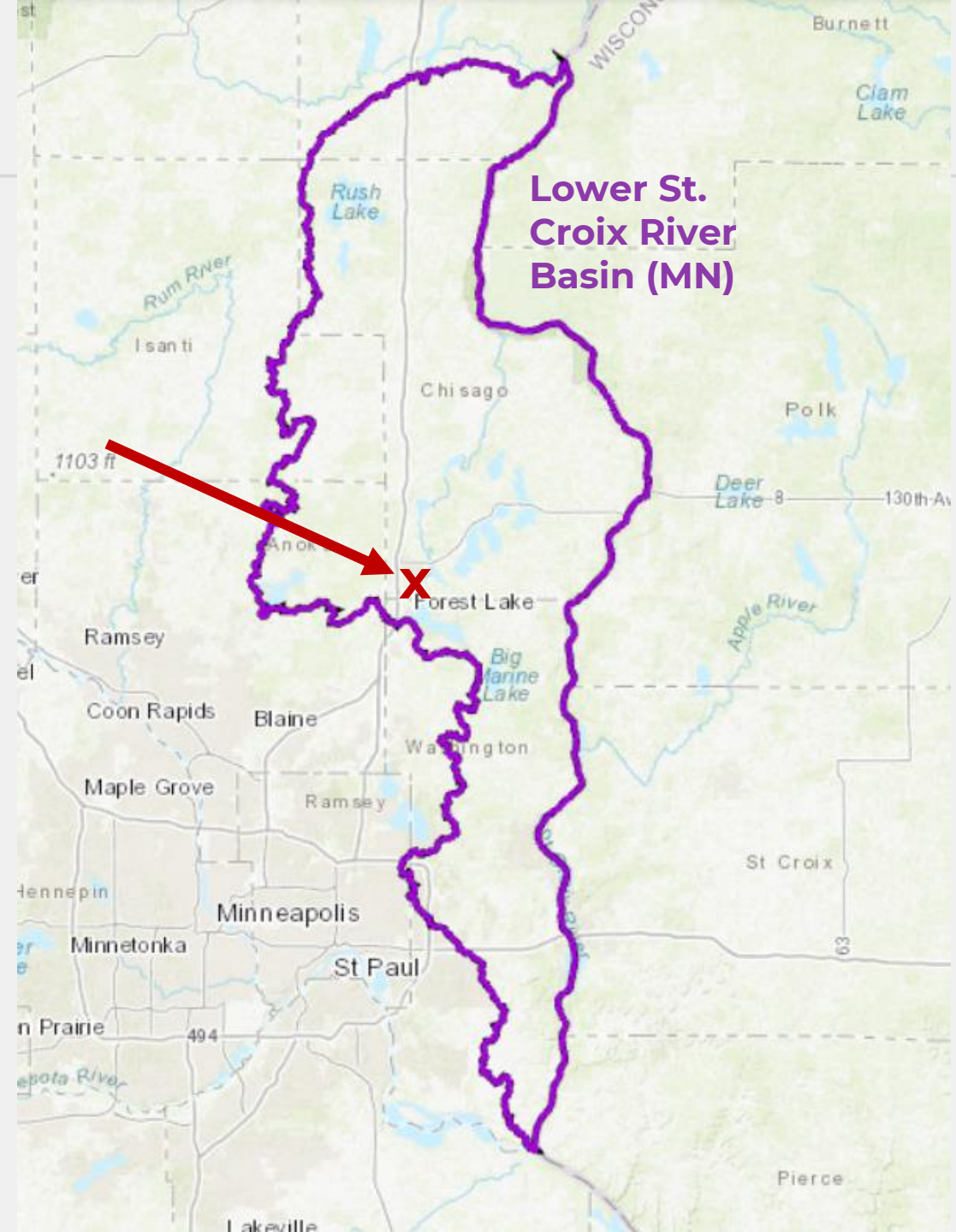
Comfort Lake-Forest Lake Watershed District





Project Location

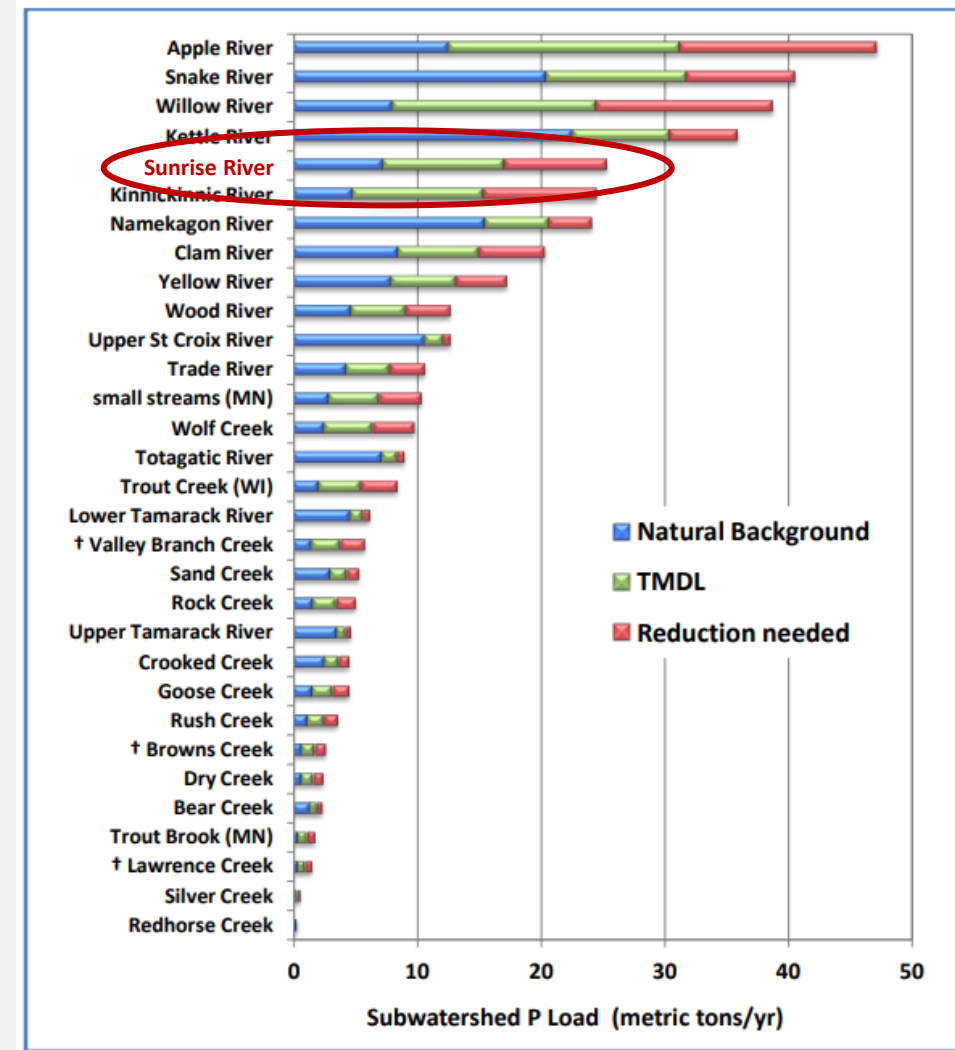
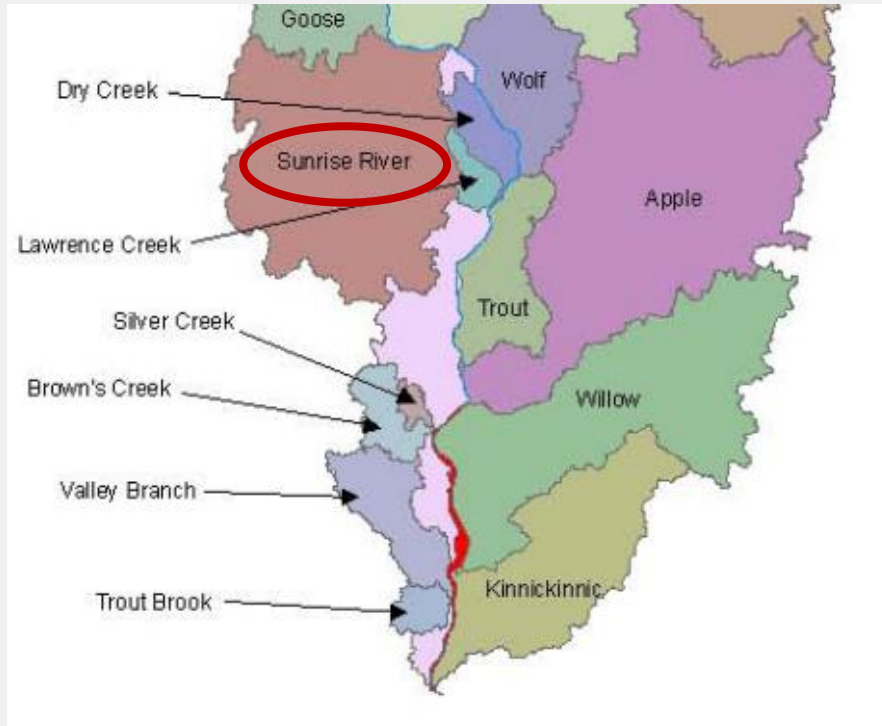
- Comfort Lake-Forest Lake Watershed District
- Southern Chisago County
- Adjacent to Sunrise River
- Downstream of Forest Lake, upstream of Comfort Lake
- Sunrise River ultimately flows to St. Croix River





Lake St. Croix TMDL

TMDL Phosphorus Load Reduction for Sunrise River = 8,303 lb/yr (33% reduction needed)





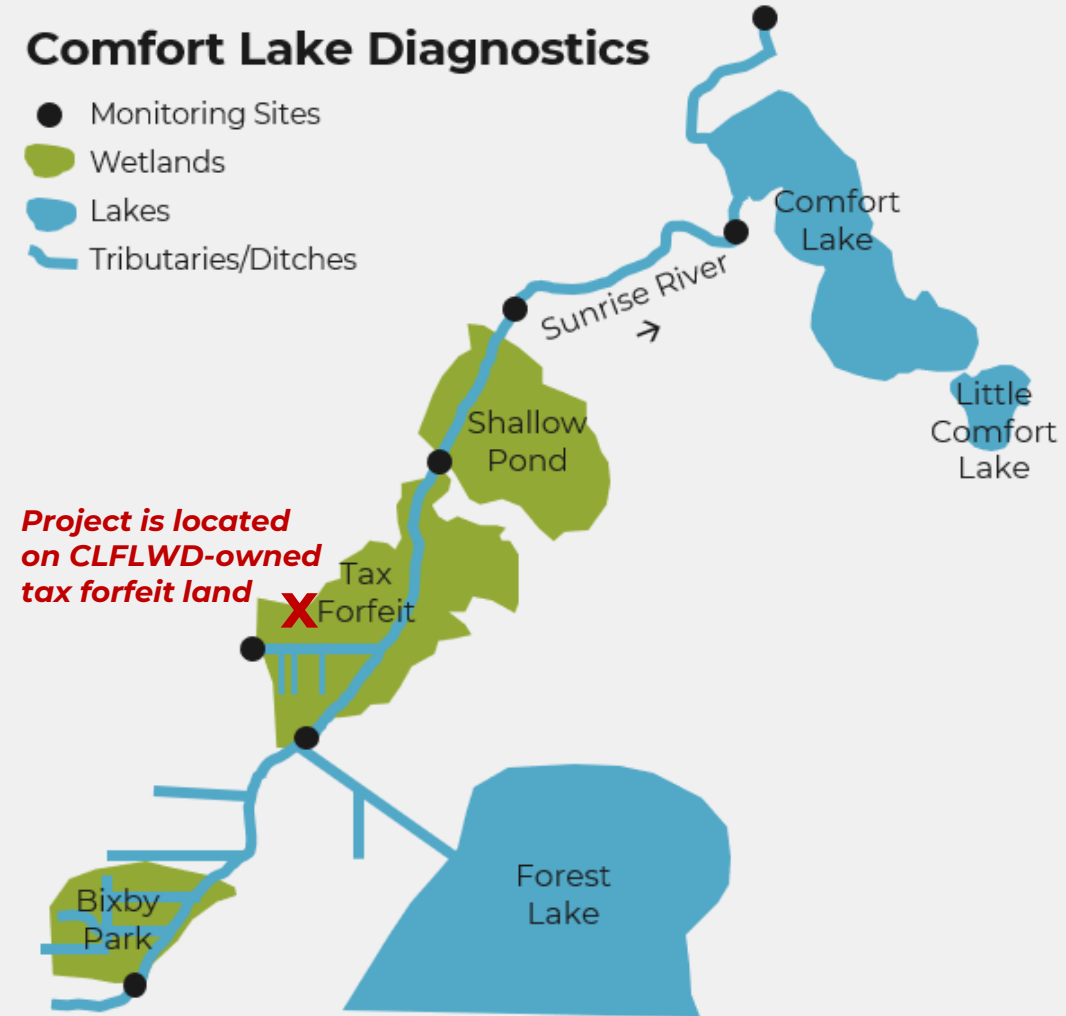
Comfort Lake Diagnostic Study

Complex Sunrise River corridor system

- Ditches
- Wetland complexes
 - Shallow Pond wetland complex is currently a major phosphorus sink, but not enough to fully protect downstream water resources
- Residential, commercial, and rural land uses

Comfort Lake Diagnostics

- Monitoring Sites
- Wetlands
- Lakes
- Tributaries/Ditches



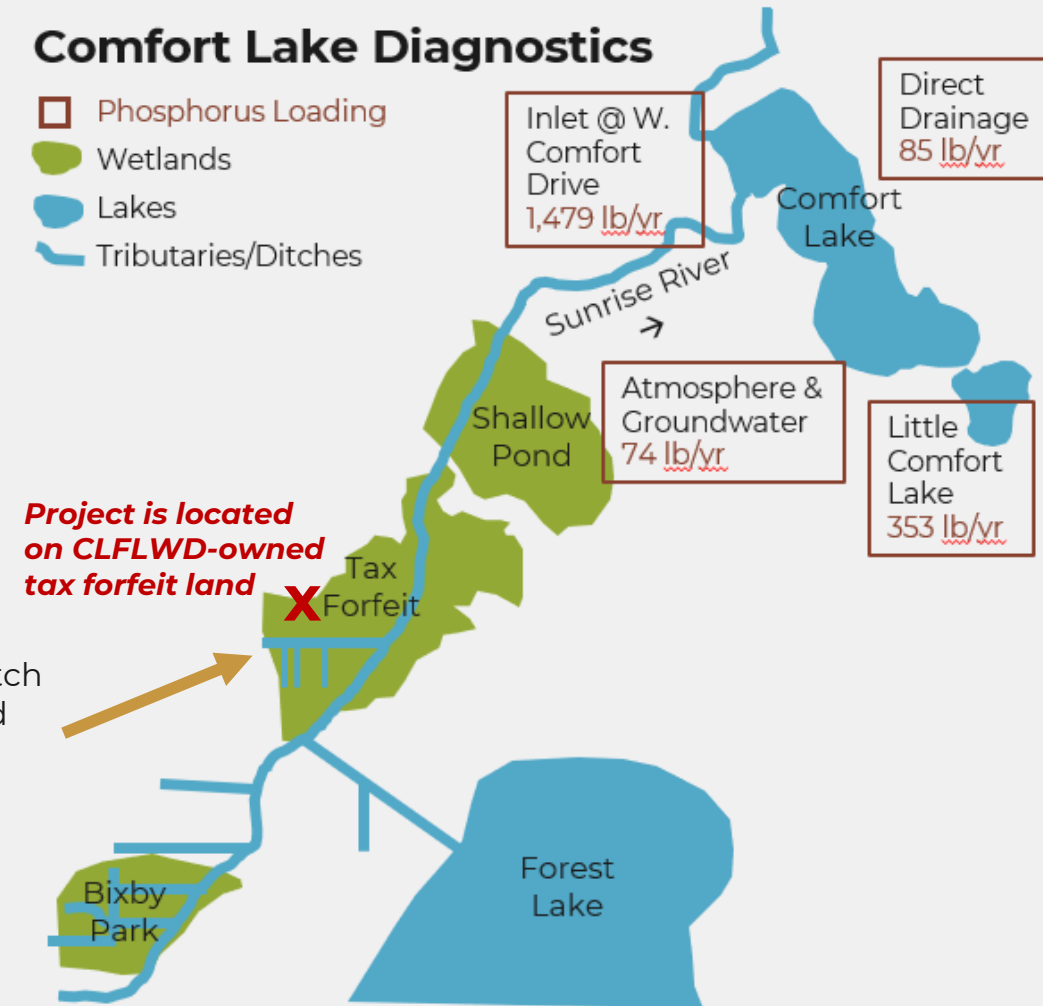


Comfort Lake Diagnostic Study

- Diagnostic Study identified phosphorus loading sources and targeted projects in the watershed
 - Bixby Park
 - Tax Forfeit Land
 - Shallow Pond

Comfort Lake Diagnostics

- ▣ Phosphorus Loading
- Wetlands
- Lakes
- Tributaries/Ditches





Why this project?



Phosphorus

- ID'd in multiple targeting studies
- Treat large P load from urbanized Forest Lake and Heims Lake drainage ditch
- 89 lb/yr P reduction for Sunrise River



Multiple Benefits

- 51,000 lb/yr sediment reduction (73% decrease)
- Nitrogen (30% decrease)
- Heavy metals (70% decrease)
- Flood storage (18 ac-ft increase)
- Habitat improvement



Other Factors

- District-owned, tax forfeited property
- Sequential w/ Bixby Park and other projects
- Good cost-benefit



Timeline Highlights

This project has evolved since its original conception in 2012, but remains true to the original spirit – address excess nutrient loading in this degraded system.



Sunrise River Flowage Study 2012

Chisago County petition. Study ID's pollution hot spots and projects.

Sequential Process 2012-2017

Implemented projects upstream (e.g., Bixby Park, Target Store).

Clean Water Fund Grant App 2019

Successful grant application. Estimated project cost: \$600,000.

Feasibility Complete 2022

Evaluated design options. Estimated project cost: \$1.1 million. Applied for WBIF.

Contract Bidding 2022

Low bid: \$1.3 million; total cost increased to \$1.5 million.

Project Construction 2022-2023

Winter construction. Closeout October 2023.



Financial Highlights

Several funding and financing avenues were sought. The project budget changed drastically over time, but the cost-benefit remained very good.



Clean Water Fund Projects & Practices

\$492,000
(30%)

Lower St. Croix Partnership WBIF

\$300,449
(19%)

Section 319 Small Watershed Focus

\$100,000
(6%)

CLFLWD Levy

\$727,551
(45%)

Clean Water Partnership Loan

Local share financed through loan and ultimately repaid w/ levy

Total Project Cost

\$1.62 million
Est. 30-yr lifetime cost: \$1.67 million
Lifetime cost-benefit: \$625/lb P



During and Post-Construction - Weir



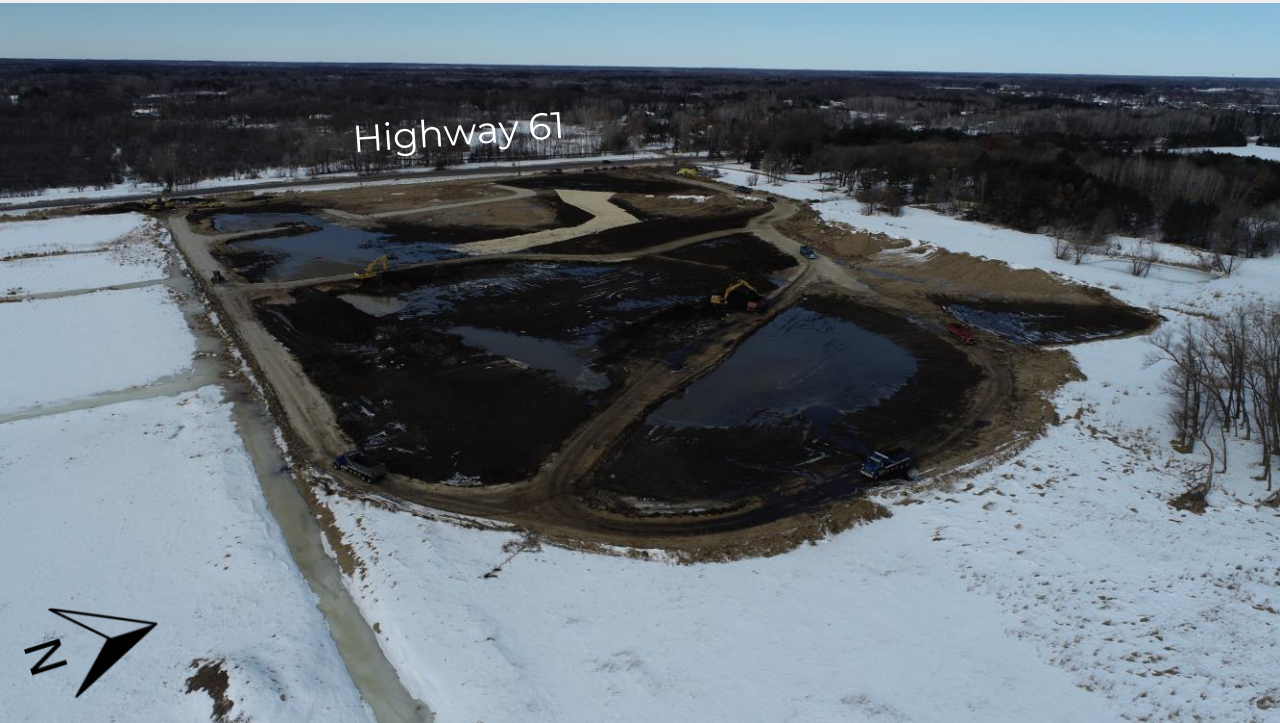
Construction – February 2023



Post-Construction – July 2023



During and Post-Construction - Aerial



Construction – February 2023



Post-Construction – September 2023



Aerial videos of construction (February 2023) and post-construction (September 2023) will be presented.