



**Prior Lake-
Spring Lake
Watershed
District**

Annual Report

2023



**PRIOR LAKE
SPRING LAKE
WATERSHED DISTRICT**

Mission: To manage & preserve the water resources of the Prior Lake-Spring Lake Watershed District to the best of our ability using input from our communities, sound engineering practices, and our ability to efficiently fund beneficial projects which transcend political jurisdictions.

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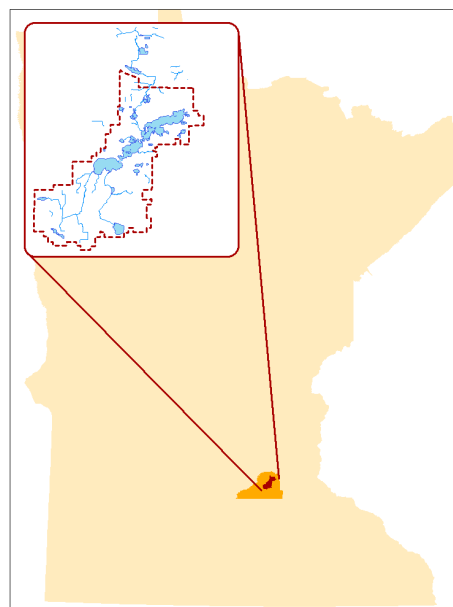
INTRODUCTION

This report has been prepared by the Prior Lake-Spring Lake Watershed District (PLSLWD, or District) and details the activities of the District through the calendar year 2023. The report will focus on the District’s program and project accomplishments relative to the approved Capital Improvement Plan established in the 2020 PLSLWD Water Resources Management Plan and annual work plan. Annual reporting requirements listed in Minnesota Rules Chapter 8410.0150, Subpart 3 will also be included in this report.

ABOUT THE DISTRICT

The Prior Lake-Spring Lake Watershed District was established on March 4, 1970, by order of the Minnesota Water Resources Board (MWRB) under the authority of the Minnesota Watershed Act (Minnesota Statutes, Chapter 112). The order was in response to a petition filed by resident landowners within the watershed on June 24, 1969. This citizen petition sought establishment of the District for the purposes of wisely managing and conserving the waters and natural resources of the watershed.

The PLSLWD is approximately 42 square miles in size and located in north central Scott County, Minnesota, encompassing parts of the cities of Prior Lake, Shakopee, and Savage and parts of Sand Creek and Spring Lake Townships. In addition, a portion of the Shakopee Mdewakanton Sioux Community (SMSC) tribal lands are located within the District.



Location of PLSWD

BOARD OF MANAGERS

PLSLWD is administered by a five-person Board of Managers (Board) appointed by the Scott County Commissioners. Current Board members, terms, and contact information is maintained on the District's website. All the District's policies, goals, and accomplishments are directed by the citizens who serve on the Board. The Board of Managers met the second Tuesday of each month in 2023 and will meet on the third Tuesday of each month in 2024. Meetings are at 6:00 PM at the Prior Lake City Hall, located at 4646 Dakota St. SE, Prior Lake, MN 55372. Meeting notices, agendas and approved minutes are available on the District website.

Board members who served during the calendar year 2023 are listed below.

Bruce Loney

President

Resides in Prior Lake

Term: 3/3/22-3/2/25

Frank Boyles

Vice President

Resides in Prior Lake

*Terms: 7/26/20-7/25/23
6/26/23-6/25/26*

Christian Morkeberg

Treasurer

Resides in Spring Lake Township

Term: 3/3/22-3/2/25

Ben Burnett

Secretary

Resides in Prior Lake

Term: 6/7/22 – 3/4/24

Matt Tofanelli

Manager

Resides in Prior Lake

Term: 6/12/22 – 6/11/25

CITIZEN ADVISORY COMMITTEE

The Prior Lake-Spring Lake Watershed District formalized its Citizen Advisory Committee (CAC) in 2011. The CAC consists of residents who provide input and recommendations to the Board on projects, reports, prioritization, and act as the primary interface for the Board to integrate the current issues of concern of the local citizens.

The CAC meets on the last Thursday of odd months (January-September) and the first Thursday of December at 6:00 PM at the Prior Lake City Hall, located at 4646 Dakota St. SE, Prior Lake, MN 55372.

Citizen Advisory Committee members that served during the calendar year 2023 are listed below.

Anna Alswager

Resides in Prior Lake

Term: 11/2023-09/2026

Ron Hoffmeyer

Resides in Prior Lake

Term: 05/2022 – 03/2025

Curtis Witt

Resides in Prior Lake

Term: 05/2022 – 03/2025

Woody Spitzmueller

Resides in Prior Lake

Term: 03/2022 – 12/2023

Maureen Reeder

Resides in Spring Lake Township

Term: 05/2021 – 03/2024

Loren Hanson

Resides in Spring Lake

Township
Term: 04/2021 – 03/2024

Christopher Crowhurst

Resides in Spring Lake Township

Term: 05/2020 – 03/2023

Matt Newman

Resides in Spring Lake Township

Term: 06/2020 – 03/2023

STAFF

Joni Giese
District Administrator
jgiese@plslwd.org

Emily Dick
Water Resources Project Manager
edick@plslwd.org

Jeff Anderson
Water Resources Coordinator
janderson@plslwd.org

Danielle Studer
Water Resources Specialist
(as of 06/12/2023)
dstuder@plslwd.org

Patty Dronen
Administrative Assistant
pdronen@plslwd.org

Zach Nagel
Water Resources Technician
(as of 9/27/2023)

Shauna Capron
Water Resources Technician
(until 8/21/2023)
scapron@plslwd.org

Elizabeth Frödén
Water Resources Specialist
(until 3/17/2023)
efroden@plslwd.org

Paul Nelson
Manager of Special Projects
(until 11/24/23)
pnelson@plslwd.org

Lindsay James
Summer Intern
(5/24/23 – 8/18/23)

Ashley Halverson
Summer Intern
(5/24/23 – 8/18/23)

Day-to-day operations of the Prior Lake-Spring Lake Watershed District are managed by a District Administrator and staff. All staff can be contacted through the main District phone number, 952-447-4166, or at the District Office, 4646 Dakota Street SE, Prior Lake, MN 55372.

CONSULTING SERVICES

The following are the consulting firms selected in 2023 for 2024/25 consulting services:

Abdo
Audit Services
Andrew Berg
Phone: 952-835-9090
www.abdosolutions.com

Smith Partners, PLLP
Legal Services
Charles Holtman
Phone: 612-344-1400
www.smithpartners.com

Emmons and Olivier Resources, Inc
Engineering Services
Carl Almer
Phone: 651-770-8448
www.eorinc.com

CliftonLarsonAllen LLP (CLA)
Accounting Services
Christopher Knopik
Phone: 612-376-4500
www.claconnect.com

WATER RESOURCES MANAGEMENT PLAN

The Minnesota Board of Water and Soil Resources (BWSR) approved the District’s fourth generation Water Resources Management Plan (WRMP) on June 24, 2020, and the District Board adopted the plan at its July 14, 2020 meeting. A copy of the WRMP is available on the District website or by request, or in hard copy format at the District office.

THREE PRIORITY CONCERN AREAS

During discussions and meetings for the WRMP, three recurring priority concerns were identified. PLSLWD used these three priority concerns to develop three guiding principles with nine underlying policies and 23 measurable goals.



WATER QUALITY

Maintaining or improving the water quality in the PLSLWD’s resources with most emphasis on lakes that have public access and are most widely used.



AQUATIC INVASIVE SPECIES

Continued monitoring and management of existing AIS (curly-leaf pondweed, Eurasian water milfoil, zebra mussels and common carp), as well as prevention of new AIS.



REDUCE FLOODING

Making strides toward flood reduction goals on Prior Lake (e.g. upstream storage) and reducing the impacts of flooding in other areas in the District.

PRIMARY ISSUES

Within the Priority Concern Areas above, the PLSLWD identified several associated issues:

WATER QUALITY ISSUES:

- External Loading
- Internal Loading
- Low Plant Diversity
- High Phosphorus Levels
- Insufficient Information Available
- Loss of Wetland Quality
- Loss of Wetland Quantity
- Streambank Erosion & Slumping
- Erosion along the Prior Lake Outlet Channel
- Groundwater Quality and/or Contamination

AQUATIC INVASIVE SPECIES ISSUES:

- New AIS Can Reduce Water Quality
- Common Carp Reduce Water Quality
- Overgrowth of Invasive Plants
- Recreational & Ecological Hazards

REDUCE FLOODING ISSUES:

- Current Flooding Risks on Prior Lake
- Historical Flooding on Prior Lake
- Future Increased Runoff
- Insufficient Information to Inform Projects
- Need to Assess Flood Reduction Goals

PRIORITY GOALS

Within the Priority Concerns above, there are a total of 23 goals. While all these goals are intended to be accomplished in this ten-year WRMP, there were four that were of highest priority. These include:

WATER QUALITY MAIN GOALS:

- **GOAL WQ2:** *Meet the state water quality standards for aquatic recreation on Spring Lake.*
- **GOAL WQ3:** *Meet the state water quality standards for aquatic recreation on Upper Prior Lake.*

AQUATIC INVASIVE SPECIES MAIN GOALS:

- **GOAL AIS1:** *Develop and implement an Aquatic Invasive Species (AIS) Response and Prevention Plan in coordination with Scott County to help prevent new AIS from entering Tier 1 lakes.*

REDUCE FLOODING MAIN GOALS:

- **GOAL RF1:** *Achieve the first-tier priority flood reduction goal to reduce the flood level on Prior Lake (from 905.62) to 905.5 feet for the 25-year return period.*

ASSESSMENT OF THE 2023 WORK PLAN

The following is a summary of the activities completed in 2023 organized by District's 2020 WRMP.

- | | |
|-------------------------------|------------------------------|
| 1. Capital Projects | 5. Regulation |
| 2. Operations and Maintenance | 6. Education and Outreach |
| 3. Planning | 7. Prior Lake Outlet Channel |
| 4. Monitoring and Research | 8. Administration |

CAPITAL PROJECTS

In 2023 the District did not have any capital projects.

OPERATIONS AND MAINTENANCE

CARP MANAGEMENT

In 2023 the District moved into its ninth year with its Carp Management Program, primarily focusing on Spring and Upper Prior Lakes. At the end of 2022, the District overhauled its Integrated Pest Management Plan (IPM) to align better with goals and to make the plan more comprehensive. The updated IPM plan has three primary components: baseline data collection, implementation, and maintenance. The previous plan highlighted tracking, blocking, and removing. Those activities remain key components of the plan but are better compartmentalized within the implementation section. Efforts were made to update the plan to capture how our program has grown over time and its application to individual lakes and whole systems. The updated plan aligns better with current grant opportunity requirements and discusses actions after goals have been met.

The management program aims to improve the water quality of Spring and Upper Prior Lakes by decreasing total phosphorus concentrations using the IPM Plan. The program has several components, including tracking the movement and population of carp, completing carp removals, installing carp barriers at strategic locations, using bluegill to predate on carp eggs, and engaging local community through outreach materials and volunteer programs.

In 2023 the District continued to actively track the movement of 23 carp in Spring Lake and Upper Prior Lake that were implanted with radio-tags using a Yagi antenna. 11 tags were installed in 2022 and 12 more in 2023. Radio-tags have a lifespan of around 18 to 24 months, and not all tags implanted in 2022 are still active. The District strives to keep up a manageable radio-tag count; the plan for 2024 is to add 10 to 12 new radio tags. Carp location maps were developed based on the tracking data, which were posted occasionally on the District's social media pages so that the public could view their locations.



The District also continued to track carp through Passive Integrate Transponder (PIT) tags that were implanted in the carp. By the end of 2023, approximately 500 PIT tagged carp remain in the waterbodies. PIT tags are used to track the movement of carp through specific channels where receivers are installed. This is a more economical way of tracking carp but has its limitations as the carp can only passively be tracked when they pass through a specific location.

In 2023 the District installed five receiver devices to study the movement of PIT tagged carp throughout different waterbodies, which helped document movement and determine the effectiveness of installed carp barriers. The receivers were installed at the Jeffers Daylight Pond outlet, Arctic Lake East channel, Tadpole Pond outlet, Spring-Prior connecting channel, and downstream of the ferric chloride weir.

Telemetry surveys were conducted on Spring Lake and Prior Lakes to determine aggregation areas and migration routes. These surveys guided the timing and location of carp removal events.

In 2023 the District continued to work towards its goals on reducing carp biomass with innovative equipment and techniques. Working with information and insights gained in prior years, a new backpack electrofishing device was purchased to target carp populations unable to be intercepted by boat. Working with WSB, the District tested remote trapping panels with corn to bait carp into an enclosure on Spring Lake. While the baited enclosure didn't trap carp in 2023, the work was seen as a proof of concept for using the trapping panels in locations more suitable for the equipment in 2024. The District also worked with its consultants to complete removal events utilizing a variety of methods, which resulted in the following:

Removal Method:	Spring Lake (2023)		Upper Prior Lake (2023)	
	Approx. # of Carp:	Weight (lbs.):	Approx. # of Carp:	Weight (lbs.):
Seines	1642	11500	n/a	n/a
Electrofishing	40	200	194	2262
Stream Removals (Connecting streams)	n/a	n/a	271	2388
Gill Netting	n/a	n/a	n/a	n/a
Push Trap	40	200	n/a	n/a
TOTAL:	1722	11900	465	4650

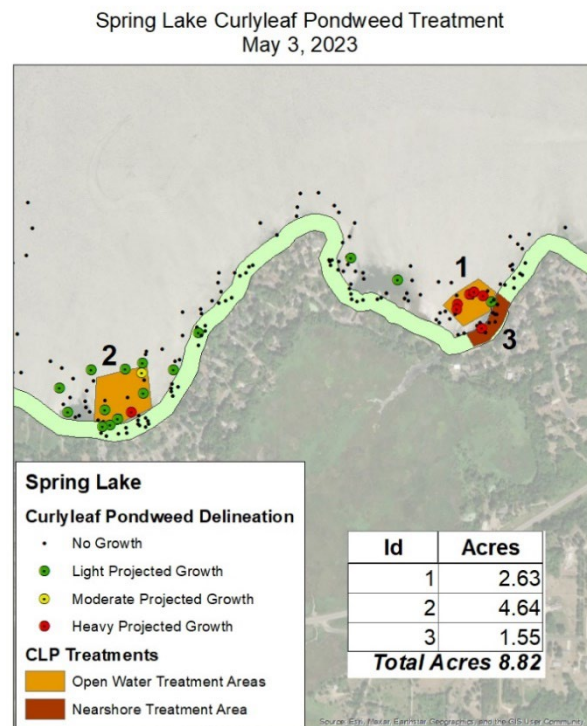
In 2023 Upper Prior Lake’s overall carp biomass decreased from approximately 190 kg/ha to 67 kg/ha, while Spring Lake’s overall carp biomass decreased from approximately 224 kg/ha to 126 kg/ha. The biomass goal to be below 100kg/ha has been met for Upper Prior Lake. Activities in 2024 will include conducting a mark and recapture study to confirm the Fall 2023 CPUE estimate.

In 2023 District staff maintained six carp barriers: 12/17 Wetland, Desilt Pond, FeCl Weir, Arctic Lake outlet, and Northwoods Pond. Carp migration spawning activity will be monitored to see if any additional barriers are needed moving forward.

The District’s goal in 2024 is to continue effective carp management by following the Integrated Pest Management Plan for Common Carp and incorporating techniques developed through the Accelerated Carp Management Strategies initiated in 2020.

AQUATIC VEGETATION MANAGEMENT

Aquatic vegetation management for curly-leaf pondweed (CLP) occurred on Spring Lake in 2023. 7.27 acres were treated by PLM Lake and Land Management Corporation with Diquat, an herbicide. Treatment on Spring Lake was funded by Scott County’s AIS Prevention funds from the Minnesota Legislature. The image on the right shows the delineation and treatment map for Spring Lake. Locations identified as 1 and 2 were treated. In addition to CLP treatments, the District supported Spring Lake Association actions to manage Eurasian Watermilfoil (EWM) found in Spring Lake through aquatic plant delineations.



Data Collected: May 3, 2023
Map Made: May 8, 2023

UTM NAD 1983
Blue Water Science

COST SHARE

The District has a cost share incentive program for residents and agricultural producers coordinated with the Scott Soil and Water Conservation District (Scott SWCD). Scott SWCD received requests and provided follow-up assistance to 71 landowners in the watershed, 54 of which were new requests for conservation assistance. There were 24 projects approved and 23 cost share projects completed. Cost share projects completed in 2023 include 3 well decommissions and several projects amounting to 720 sq ft of natural landscaping (native prairie, pollinator, raingardens, natural shoreline), and 20 feet of lined waterway.

FARMER-LED COUNCIL

The Farmer-Led Council (FLC) was created in 2013 to help the District reduce nutrient loading to Spring Lake to levels that meet or exceed state water quality standards. Agricultural lands make up most of the landscape in the Spring Lake and Upper Prior Lake watersheds. As such, farmers are the most important stewards of the land, and their active input and participation is critical to achieving water quality goals.



Represented by local leaders in the farming community, the role of the FLC is to develop and guide the implementation of strategies that PLSLWD will use to accomplish agriculture's share of the nutrient reduction goal. Specifically, the FLC aims to:

- Inform decision makers and the general public about practical issues and opportunities related to soil and water conservation on agricultural lands.
- Identify sustainable agriculture practices for both standard and site-specific applications.
- Define the approach for engaging with and assisting farmers to implement practices.
- Establish a schedule with reasonable milestones and timelines for progress.
- Identify potential barriers to implementation, along with tools and resources that are needed to overcome them.

The District held three FLC meetings in 2023 where a variety of agricultural topics related to water quality were discussed. One of the three meetings also served as an awards luncheon for the 2023 Lake Friendly Farm awardees. The Lake-Friendly Farm (LFF) program was first piloted by two FLC members in 2017. Since then, over a dozen farms have been certified into this program aimed at targeting phosphorus reduction in the upper watershed. In 2023, three new farms were certified. In total, 872 acres have been certified through the Lake Friendly Farm program. Approximately 15.2% of cropland in the District has been certified as "Lake-Friendly." The estimated phosphorus reduction benefit from the LFF program so far is 359.4 pounds a year.

Four hundred and two acres were enrolled in the cover crop program in 2023. The cover crop program is a top priority because cover crops are one of few conservation practices that provide significant and

quantifiable water quality benefits while being compatible with production agriculture. Cover crops in 2023 resulted in an estimated one-year phosphorus reduction of approximately 332 pounds. Since 2018, a total of 3,054 acres of cover crops have been planted resulting in estimated total phosphorus reductions of 1,677 pounds, or an average of 280 pounds per year.

Additionally, the FLC has recently promoted tillage practices that reduce erosion by leaving the previous year's crop on the ground. These practices are collectively referred to as "high residue management" and provide quantifiable water quality benefits. In 2023, the FLC supported 525 acres of high residue management practices. These acres yielded an estimated phosphorus reduction of 110 pounds per year.

FERRIC CHLORIDE TREATMENT FACILITY

A desiltation pond was built in 1978 to capture phosphorus before the stormwater from County Ditch 13 reaches Spring Lake. In 1998 a ferric chloride plant was constructed to use this chemical upstream of the desiltation pond to bind with phosphorus and prevent it from entering the lake.

In 2013, the system was redesigned to release the ferric chloride solution into a desiltation basin, rather than the stream, per an MPCA permit requirement. The initial targets for design parameters, with input and agreement by regulatory agencies, were to allow flows up to approximately 30 cubic feet per second (cfs) into the desiltation pond for normal operations. High flows were to overtop a high flow bypass weir east of the existing pond which flows directly to Spring Lake to prevent possible resuspension and flushing within the desiltation pond.

In September 2018, the pump was programmed to dose ferric chloride based on a relationship with stream height. The maximum treatment dose rate is 4 gallons per hour when the depth over the ferric chloride weir is 0.50 feet. Once the depth is greater than 0.50 feet, the pump will continue dosing at 4 gallons per hour based on the maximum flow calculations of the desilt pond diversion culvert.

In 2023, the desiltation pond treated water with ferric chloride from April 5 to June 27. The pump was shut off earlier than usual due to dry conditions and no water flow in the stream. Troubles with the electronics controlling the level sensor and auto dosing occurred early in the year, which meant the system was operated in the manual dosing mode. Samples were taken weekly during treatment to analyze efficiency of the treatment system. On average, the treated water decreased the concentration of total phosphorus by 14% and dissolved phosphorus by 66%.

The system is permitted by the MPCA, who require a report to be completed when the term of the permit ends. The report, which will include the results of the 2020-2025 sampling, will be completed and posted to the District website by the end of 2025.

In 2023, the District began a system assessment to review equipment wear, dosing, and operations, and to recommend improvements for performance and optimization. The system assessment is intended to be completed in 2024.

RESTORATION PROJECTS MAINTENANCE

The District contracted invasive vegetation maintenance on a Spring Lake shoreline restoration project that was previously installed.

PLANNING

2020 WATER RESOURCES MANAGEMENT PLAN

In 2020 the District completed its Water Resources Management Plan, meeting with stakeholders, conducting public meetings, and adding final revisions before its approval. The updated ten-year management plan, which lays out the District's goals and activities for 2020 – 2029, was successfully completed and approved in 2020. The plan served as a framework for District activities in 2023 and will continue to do so in 2024.

UPPER WATERSHED BLUEPRINT

The Upper Watershed is a 12,760-acre area that drains to Spring Lake, Upper Prior Lake, and Lower Prior Lake and represents approximately 67 percent of the total tributary to these lakes. In 2021, the District managers approved the Upper Watershed Blueprint study, which provides a stormwater management and implementation approach for PLSLWD and local partners to improve water quality conditions and reduce flooding in the Upper Watershed over the next ten years.

The Upper Watershed Blueprint resulted in the identification of 14 potential water quality projects and three potential flood reduction projects that could help the District meet its 10-year goals. These projects will help the District meet the annual phosphorus reduction goal of 2,959 pounds set in the Total Maximum Daily Load (TMDL) study for Spring and Upper Prior Lakes to improve water quality in the lakes.

The District has completed many feasibility studies for water quality projects identified in the Upper Watershed Blueprint: Buck Chemical Treatment System (2014), Spring West Iron Enhanced Sand Filter (IESF) (2022), and Sutton Lake IESF (2022). In 2023, the District finalized a feasibility study for the Buck Lake Wetland Enhancement, Swamp Lake IESF feasibility study and Fish Lake Management Plan. The District also completed the CD-13 Ditch Repair in 2023 through the cost share program. In 2023, the Board of Managers considered further project prioritization in relation to cost effectiveness, landowner willingness, availability of grant funding, and progress towards the TMDL reduction goal.

SUTTON LAKE MANAGEMENT PLAN

In 2021 the District completed the construction of the Sutton Lake Outlet Structure. Sutton Lake is at the headwaters of County Ditch 13 (CD13), which outlets into Spring Lake. The primary purpose of the outlet structure is to increase storage and slow the flow of water downstream. This will decrease the likelihood of flooding along CD 13.

The Sutton Lake Outlet Structure was originally identified in the Prior Lake Stormwater Management & Flood Mitigation Study as a possible project with high potential for flood damage reduction. In 2022 the District prepared a lake management plan for the purpose of enhancing wildlife habitat through operation of the outlet structure on Sutton Lake. The lake management plan was finalized upon receipt of DNR review comments and brought forward for acceptance by the Board of Managers in 2023. As a result of the lake management plan, the District conducted drone surveys to monitor the effects of natural drought on aquatic vegetation. The District plans to continue monitoring aquatic vegetation to assess the impacts of lake drawdown (in this case, drought) on native vegetation.



BUCK EAST WETLAND FEASIBILITY STUDY

The Upper Watershed Blueprint identified the Buck East Wetland as a potential water storage and water quality site. The Buck East Wetland Feasibility Study was selected through the convening process with local partners and funded with support through the 2021/2022 WBIF grant.

The feasibility study identified four alternative scenarios with increasing water quality and flood storage benefit. Soil testing was completed to understand phosphorus levels on the underlying ground. The estimated benefits of the scenarios range from 55-240 pounds of total phosphorus load reduction and up to 0.13 ft flood reduction on Upper Prior Lake. The District held two landowner meetings to solicit feedback and communicate project benefits. The feasibility study was reviewed by MNDNR and approved by the Board of Managers in 2023. The District conducted further follow up with key landowners following the approval.

SWAMP IRON-ENHANCED SAND FILTER FEASIBILITY STUDY

The Swamp Lake Phosphorus and Peak Flow Reduction feasibility study was selected by local convening partners as a 2022/2023 WBIF project and completed in 2023. The project area was identified in the Upper Watershed Blueprint as a potential site for a water quality improvement project such as an Iron Enhanced Sand Filter (IESF).

Consultant Stantec conducted field reconnaissance to assess the viability of developing an Iron Enhanced Sand Filter (IESF) or other best management practices in the study area. Topographical survey data and a wetland delineation was conducted to determine the extent and type of wetlands on the site. The District's PCSWMM model was used to understand the hydrology of Swamp Lake and how that may affect potential performance of an IESF. District monitoring data was used to approximate nutrient loads. A preferred IESF design was developed proposing a 71% total phosphorus removal. The proposed

alternative is predicted to achieve an 89.1 lb. reduction of total phosphorus to aid in meeting nutrient targets in the Spring Lake TMDL. Additional removal and peak flow attenuation was not found to be favorable due to the natural hydrology and permitting burden. The total cost of the project is estimated from \$589,200-\$654,800 with a cost per pound estimated between \$220 and \$228 over the approximate 15-year lifespan. Staff continued to coordinate with the landowner and reference the feasibility study through 2023 to prepare for implementation.

FISH LAKE MANAGEMENT PLAN

The Fish Lake Management Plan update was selected by local convening partners as a 2022/2023 WBIF project. The plan update was prioritized to reconcile conflicting conclusions on two lake assessment documents, the 2006 Fish Lake Management Plan and the 2012 TMDL. In order for the District to implement effective projects to address the primary nutrient source, an updated and comprehensive conclusion was needed via lake planning.

The Fish Lake Management Plan was completed after in-depth study and stakeholder coordination throughout 2023. The District held two landowner meetings to solicit feedback and report findings, as well as collecting feedback via a survey, phone and email. The plan was also informed by a Technical Advisory Committee, comprised of industry experts across state and local agencies, which met twice to review plan details and methodology. Consultant EOR collected historical monitoring data, conducted updated soil sampling, and utilized watershed loading models to inform recommendations. The plan includes conclusions on current lake health, as well as a recommended implementation plan to meet water quality goals. Results suggest that a holistic approach will be needed to address both internal and external phosphorus loads: 659 and 103 lbs./yr. respectively. The District compiled comments to the draft lake management plan from MNDNR, Technical Advisory Committee members, Board of Managers and landowners and finalized the plan December 2023. Staff continued to coordinate with the landowner and reference the lake management plan through 2023 to inform future implementation priorities.

MONITORING AND RESEARCH

Monitoring was conducted in accordance with the Prior Lake-Spring Lake Watershed District Long Term Monitoring Plan and included a mix of staff, volunteer, and contract work, which incorporated in-lake monitoring, stream water quality & flow measurements, precipitation, and aquatic vegetation monitoring. Partners included Metropolitan Council Environmental Services, Three Rivers Park District, Shakopee Mdewakanton Sioux Community (SMSC), Scott Soil and Water Conservation District (SWCD), Blue Water Science, and Emmons and Oliver Resources (EOR). District seasonal interns also assisted with monitoring activities.

IMPORTEDWISKI DATABASE

In 2022, the District initiated the transition from its access database to a WISKI database, which is a product of Kisters North America. The new database was set up and the importation of historical data began. This new database has capabilities and features that will enable staff to manage and analyze data more efficiently and consistently. Staff turnover in 2023 delayed progress on the importation of historical data into this new software. As issues arise and are addressed, new pathways, calibration procedures, and analysis methods will be put in place for future data.

STREAM MONITORING DATA

STREAM CHEMISTRY SAMPLING

Stream chemistry samples were collected at 12 locations around the watershed by PLSLWD staff. Samples were collected biweekly as long as there was sufficient flow. Water temperature, conductivity, pH, turbidity, and dissolved oxygen were also measured at these locations using a YSI EXO1 multi-parameter sonde:

- Three sites were sampled weekly to fulfill the MPCA permit requirements for the Ferric Chloride site (FC_CD1, FC_CD2, FC_CD3).
- The District Monitoring Program included eight sites (ST_11, ST_14, ST_19, ST_40, ST_5C, ST_5D, ST_5E, and DLO). These sites were monitored biweekly.
- One agricultural monitoring site was monitored biweekly for the Farmer-Led Council program (B3). B3 is a tributary of Fish Lake and located approximately 100 feet before entering Fish Lake.

STAGE AND FLOW MONITORING

Continuous stage and flow were monitored using level loggers in conjunction with the stream chemistry and lake monitoring. By combining chemistry and stage/flow monitoring results, loads can be calculated using the FLUX modeling software. All stream chemistry sampling locations in 2023 also had level loggers. In addition to those sites, stage and flow were monitored on the outlets of Fish, Sutton, Crystal, and Prior Lakes (sites ST_08, Sutton, CRY_OUT, and PL_OUT respectively). Stage and flow were also monitored at ST_26A, which is along the channel that flows into Pike Lake.

Flow measurements were collected by PLSLWD and Scott SWCD. The flow meter used was a Sontek Flowtracker2. Continuous stage was recorded using level loggers, including pressure transducers, an ultrasonic distance sensor, and an area velocity sensor.



Stream Monitoring

LAKE MONITORING DATA

LEVEL LOGGERS

Three telemetry level loggers were installed to monitor the lake levels on Spring, Prior, and Pike Lakes. The loggers were programmed to log the lake level every 15 minutes and then transmit the data to the PLSLWD website once per hour, which was accessible to the public. Additionally, two non-telemetry loggers were used in Fish and Buck Lakes, which required manual data download, similar to the loggers used for all stream sites.

DNR STAFF GAUGES

Five staff gauges were monitored for the DNR on Buck, Fish, Pike, Spring and Lower Prior Lakes. Staff gauges are surveyed every year by the DNR to tie the results to Mean Sea Elevation.

THREE RIVERS PARK DISTRICT

Three Rivers Park District monitored five lakes in 2022: Fish, Pike, Upper Prior, Lower Prior and Spring Lakes. These lakes are monitored 13 times per year, and where possible, profile samples are collected.

CAMP VOLUNTEER LAKE MONITORING

The Citizen Assisted Monitoring Program (CAMP) program was coordinated by the Metropolitan Council, and locally coordinated by PLSLWD. Volunteers collected samples on seven lakes through the CAMP program in 2023.

Lake	Volunteer(s)
Lower Prior (site 2)	Amy Card
Haas	Tom Chaklos
Buck Lake	Steve Beckey
Cates	Paula Thomsen
Little Prior	PLSLWD staff
Fish	Jon Haferman
Crystal	Scott Thulien

Samples are typically collected every other week during ice-free conditions. Sampling includes parameters such as Secchi depth, phosphorus, and chlorophyll-a.

AQUATIC VEGETATION SURVEYS

Using a point-intercept survey, Blue Water Science conducted summer aquatic vegetation surveys on three lakes: Sutton Lake, Spring Lake, and Upper Prior Lake. These surveys include the type and abundance of vegetation at predetermined sampling locations throughout the lakes during summer, which is the time most vegetation is present.

Curly-leaf pondweed (CLP) surveys were completed in the spring on Fish Lake, Upper Prior Lake, Lower Prior Lake, and Spring Lake to determine if treatment was needed. Aquatic vegetation management for curly-leaf pondweed occurred on Spring Lake in 2023, and aquatic vegetation management for Eurasian watermilfoil was managed by the Spring Lake Association on Spring Lake.

AQUATIC VEGETATION DENSITY MAPPING

The density of aquatic vegetation in District lakes was mapped using BioBase software. BioBase creates whole-lake maps of aquatic vegetation density, bathymetry, and bottom hardness. BioBase mapping is used to fill in the gaps and complement the work of aquatic vegetation surveys.

Staff and interns mapped all or parts of eleven lakes and ponds in the District in 2023. This includes Cates Lake, Crystal Lake, Desilt Pond, Fish Lake, Haas Lake, Jeffers Pond, Little Prior Lake, Lower Prior Lake, Pike Lake, Spring Lake, and Upper Prior Lake.

The benefits of this project include:

- More accurate bathymetric maps
- A better understanding of density of vegetation in lakes and plant area coverage (percentage of lake bottom growing plants)
- Lake bottom sediment composition maps
- Improved implementation and analysis of curly-leaf pondweed treatments
- Greater understanding of lake ecology and sediment deposition rates
- Better management of fisheries, both ecologically and for recreational fishing

Lake	2023 Plant Area Coverage %
Cates	85.1
Crystal	81.2
Desilt Pond	31.4
Fish	27.0
Haas Lake	100.0
Upper Jeffers Fish Pond	76.2
Little Prior	24.3
Lower Prior	50.1
Pike East	90.8
Spring	31.9
Upper Prior	60.2

PRECIPITATION

District staff recorded daily precipitation at the office precipitation station. The District also has a weather station at Spring Lake Town Hall, which logged and transmitted data to Weather Underground.

BOAT INSPECTIONS (AIS)

In-person boat inspections were conducted within the District by Waterfront Restoration at the launches of Upper Prior, Lower Prior, Spring, and Fish Lakes. Totalling 1,011 hours, inspectors completed 3,856 inspections between the four lakes from May 13 to October 27, 2023.

A total of 26 entering violations were identified with an equal amount split between plants which were removable by hand and boaters that arrived with their drain plug in. There were findings of significance on 306 exiting watercrafts, but because they were found and resolved before exiting the launch, they were not classified as violations.

REGULATION

EASEMENT INSPECTIONS

The District holds many conservation easements and development agreements over wetland and watercourse buffer strips that were acquired through permit activity or capital project construction. These buffer strips and associated easement and agreement restrictions provide water quality benefits by protecting District water resources. The District’s conservation easement program contains three components to ensure protection of its investments: monitoring inspections, effective communication with landowners, and an enforcement policy.

For 2023, PLSLWD retained the services of Scott Soil and Water Conservation District (Scott SWCD) to oversee easement inspections performed by District interns and to assist with permit and conservation easement origination, inspection, and compliance activities. In 2023, 51 conservation easements were inspected within the District, covering 166 individual parcels. Inspection found:

Violation	Number of Parcels	Percentage of Inspections
No violation	57	34%
Missing easement identification signs only	50	30%
Mowing in easement or mowing and missing signs	16	10%
Brush piles and/or other soft landscaping in easement	17	10%
Hard landscaping, fencing, structures in easement	17	10%
Other	9	6%
Totals	166	100%

Easement signposts were revised to reduce the incidence of missing signs. New easement signs were purchased by the District and the process of replacing easement signs by the District and Scott SWCD began in Fall 2023. Moving forward, replacement of missing easements signs will be the responsibility of the property owner.

Letters were sent thanking landowners who were found to be in compliance with easement requirements. Letters were also sent for mowing and missing sign violations. For other minor violations found,



Scott SWCD will reinspect in 2024 to confirm findings and then follow up with the landowners. For major violations on county and city properties, Scott SWCD will work with the party to amend easements, pursue BMP mitigation strategies, or pursue Encroachment Agreements. For major violations of private property, Scott SWCD will confirm violations on-site and then seek voluntary cooperation.

PERMIT ACTIVITY

The District inspected active permits to ensure that the conditions of the permit were being met. The District issued two new permits in 2023 (22.02 Spring Lake Regional Park and 23.01 Fish Point Phase 2) and conditionally approved a permit (23.02 Fish Point Phase 3).

No variances to District rules were applied for in 2023.

Inspections were performed on active construction projects for District open permits. The District continued to close out permits (20.02, 20.04, 23.01) as the projects met requirements.

The District worked with LGU partners to establish rules equivalency MOAs with partnering LGUs to reduce permitting burden on the District and permittees.

EDUCATION AND OUTREACH

CITIZEN ADVISORY COMMITTEE

PLSLWD staff support facilitation and attend Citizen Advisory Committee (CAC) meetings. The CAC met monthly until April 2023 and subsequently met during odd months. CAC meeting minutes were included in Board meeting packets. As the assigned Board of Managers liaison to the CAC, Manager Tofanelli helped develop CAC meeting agendas, attended the CAC meetings, and reported on Board Meetings to the CAC. On June 22, 2023, the District hosted a joint Board of Managers and CAC meeting and Ferric Chloride Facility Tour, which provided an opportunity for the managers and CAC members to share thoughts on District priorities and the opportunity to see a District project in person. CAC sub-committees were disbanded due to low membership.

The CAC researched and provided advisory recommendations to the Board of Managers on the impact of wake boats in 2023. As a result, the Board passed a resolution to support education efforts on the impact of wakes on lake health. CAC members also participated in various community outreach events including a table on chloride pollution at the Fall Community Fest and advertising for and raking at the Clean Water Clean-Up. One member researched conservation incentives for woodland and wetland conservation and discussed these incentives at a Farmer-Led Council Meeting; interns created one-pagers to share at the meeting as well. Recruitment was a major focus of the CAC in 2023; one new member was approved, and two applicants are pending board approval in January. A new orientation packet was created to provide clarity to new and old members alike. New members were recruited through tabling events, presentations, word of mouth, social media, and distribution of new flyers.

COMMUNITY INVOLVEMENT

The District partnered with the Scott SWCD through the Scott County Clean Water Education Program (SCWEP) to provide public outreach and education opportunities. SCWEP hosted a shoreline restoration workshop, a raingarden workshop, a shallow lakes seminar and annual Outdoor Education Days, a 4-day event for 5th graders throughout Scott County to learn about conservation and environmental topics. The District hosted a lesson on the water cycle and water pollution.

The District hosted a table on chloride pollution at the Fall Community Fest. Staff and CAC members shared information and materials on responsible winter maintenance and information about the District.

The District and the City of Prior Lake typically coordinate Clean Water Clean-Up events. In 2023, the District worked with Scott SWCD and the City of Prior Lake to bring back the leaf-raking Clean Water Clean-Up event at Sand Point Beach in October. The goal of this event was to teach citizens the importance of keeping excess leaves out of the lake and engage residents with the District, environment, and community. The District runs several volunteer programs that involve community members in efforts to improve local water resources including CAMP lake sampling, “Carp Espionage” carp sighting reports, ice in/out observations, and Starry Trek aquatic invasive species tracking.

In 2023, the District gave presentations at the annual meetings of Spring Lake Township, Prior Lake Association, Spring Lake Association, and to the Prior Lake Citizen Engagement Committee and Scott County Association for Leadership & Efficiency. The District also hosted a vegetation identification workshop with Spring Lake Association. Finally, the District led educational activities at the Reel Cool Fishing School day camp for children held by City of Prior Lake.

A full report of the Education and Outreach completed in 2023 can be found on the District website detailed in the 2024 Education and Outreach plan.

PRESS AND SOCIAL MEDIA

The District submitted four articles to be published in the Scott County SCENE, a quarterly government publication sent to all county residents. Several articles and updates were posted to the District’s website, including a request for CAC applications, notices for events, an article on the AIS Prevention & Rapid Response Plans and more. In addition, other media outlets and newsletters were used to publicize District programs, projects, and educational initiatives, including the Prior Lake American newspaper, and newsletters for the Prior Lake Association and Spring Lake Association.

Lake levels for Prior, Spring, Fish, and Pike Lakes were updated automatically on the website during the growing season. The District transitioned to a new water level website to resolve ongoing technical issues. Facebook and Instagram posts were made on a wide variety of topics, including event notices, holiday posts, informational posts, and updates on staff. Video recordings of the District’s 2023 Board of Managers meetings were published on the District’s YouTube channel. District Interns created a Prior Lake-Spring Lake Watershed District introduction and overview video, which was shown at presentations throughout the fall, posted to the District’s YouTube channel, and featured on the website.

PRIOR LAKE OUTLET CHANNEL

OUTLET STRUCTURE

The Prior Lake Outlet Structure was originally constructed in 1982 and has been operating since 1983. The original design of the structure required manual operation to open and close gates to regulate the flow. This design posed safety concerns for staff operating the structure during high water levels. Additionally, inefficiencies in the structure's design meant that the 36-inch outlet pipe connected to the structure did not reach its maximum flow of 65 cfs until lake levels had well surpassed the outlet elevation. Over the years, the structure had also developed wear and required minor maintenance. Given conditions, a replacement structure was pursued by the District and installed in 2010. The new design has increased the efficiency of discharging water by allowing the outlet pipe to reach capacity sooner. It also provides safer conditions for staff during inspections and maintenance and is self-operating, which reduces overall operations and maintenance costs.

PRIOR LAKE OUTLET CHANNEL (PLOC)

The Prior Lake Outlet Channel (PLOC) is utilized by the District and other partners in managing lake levels on Prior Lake as well as providing a 7-mile stormwater conveyance system for the surrounding communities. There is a Memorandum of Agreement between the Cities of Prior Lake, Shakopee, the Shakopee Mdewakanton Sioux Community, and the District that specifies operation and maintenance as well as cost-sharing.

The PLOC is considered an MS4 municipal stormwater conveyance system, and the District must secure permits and submit annual reports. The 2023 annual report is available on the PLSLWD website, which includes a summary of all activities that were completed along the channel.

Some of the recurring annual activities included channel inspections, flow and chemistry monitoring, and invasive terrestrial vegetation management.



PRIOR LAKE OUTLET PIPELINING

The first segment of the PLOC is a 0.4-mile pipe, which connects the outlet structure with the open channel leading to the Minnesota River. The outlet pipe has been televised routinely to monitor pipe conditions. After the 2022 televising, a Cast In Place Pipe (CIPP) lining was recommended to maintain the structural integrity of the pipe so it may continue to operate and offer flood relief. Additionally, the smoother surface of the pipe lining will increase the flow rate through the pipe and allow for additional flood relief.

The PLOC Cooperators approved contracting for pipelining design, soliciting and managing contractor bids, and management of construction in March 2023. The District submitted a capital funding request in June 2023 to support the costs and continues to evaluate funding mechanisms for the pipelining. The District presented to the House of Representatives and Senate bonding tours in relation to its capital funding request. Work has begun to advance the pipelining project in preparation for potential construction in Winter 2024/2025. The consultant has indicated that constructing Winter 2024/2025 under current drought conditions could offer up to 20-25% cost savings.

WETLAND BANKING PROGRAM

The Prior Lake-Spring Lake Watershed District does not have a locally adopted wetland banking program within its jurisdiction.

STATUS OF LOCAL PLAN ADOPTION AND IMPLEMENTATION

Minnesota Rules Chapter 8410 required that local units of government complete their Surface Water Management Plans and Comprehensive Plans by December 31, 2018. The District has previously reviewed and/or approved: the Scott WMO's Comprehensive Water Resources Management Plan; Lower MN River Watershed District's Watershed Management Plan; the City of Savage's Local Water Plan; the City of Shakopee's Surface Water Management Plan and Prior Lake's Local Surface Water Management Plan. In 2023, PLSLWD participated in an advisory committee during the development of the Lower Minnesota River East Comprehensive Watershed Plan. While the District participated on the advisory committee for the Lower Minnesota River East Comprehensive Watershed Plan, the District does not intend to adopt the plan and will continue to use the District's Water Resources Management Plan to direct the District's programs and projects.

EVALUATION OF PROGRESS

The District's 2020-2030 Water Resources Management Plan, adopted July 14, 2020, includes the Outcome and Measures Dashboards to serve as a tool for evaluating progress on watershed goals and to assess whether adjustments are needed. Outcomes and Measures Dashboards are attached as Appendix A. The Water Resources Management Plan states the dashboards will be updated every two years. The dashboards have been updated to reflect progress made by the District related to the Water Resources Management Plan's stated goals.

FINANCIAL REPORT

The 2023 PLSLWD audit was completed by Abdo and will include both the District's Annual Financial Report and an Executive Governance Summary for the year ended December 31, 2023. A copy of the 2023 Annual Audit will be available for review on the District website and at the District office after May 21, 2024, when it is scheduled to be approved by the Board of Managers.

2023 FINANCIAL SUMMARY

Values presented in the chart and graph below are unaudited.

Fund	Starting Balance #	Approved Budget	Tax Levy Revenue*	Additional Revenue **	Transfers To/(From)	Expenditures	Ending Balance ***
General	\$307,680	\$252,200	\$249,070	\$22,709	\$-	\$254,816	\$324,643
509 Implementation	2,041,635	1,858,600	1,660,913	154,618	(185,421)	1,082,727	2,589,018
MOA/JPA Funds	224,263	-	-	58,035	185,421	124,783	342,936
Bond Debt Services	-	-	-	-	-	-	-
Total	\$2,573,578	\$2,110,800	\$1,909,983	\$235,362	\$-	\$1,462,326	\$3,256,597

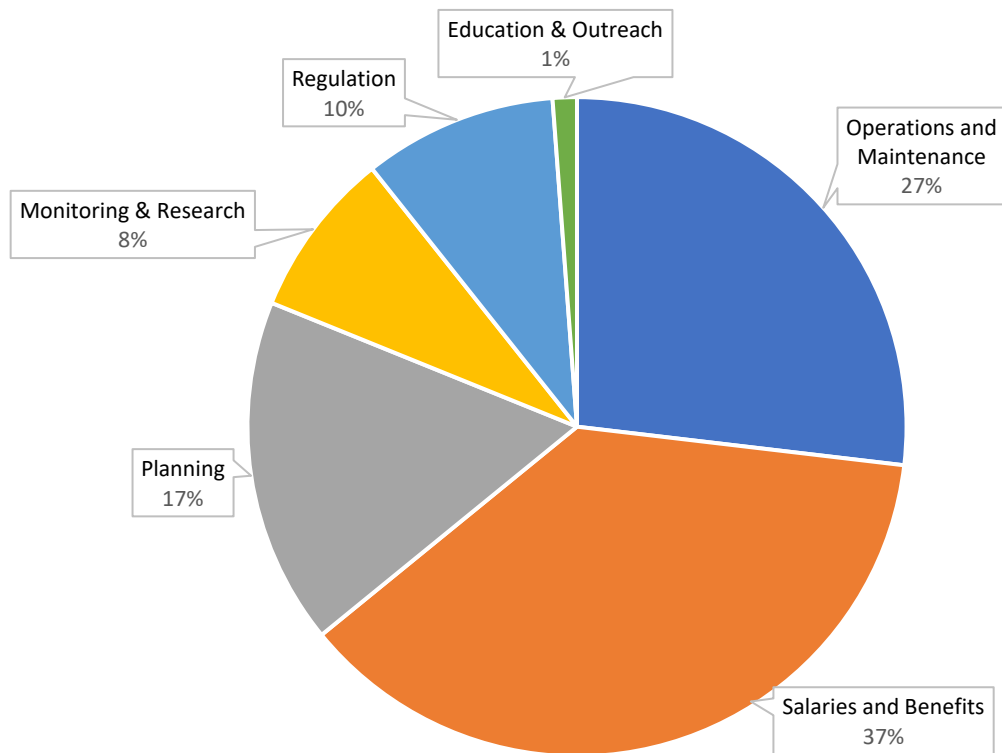
This column was adjusted to reflect the ending balance from the December 31, 2022, audit.

* Tax levy revenues shown are actual tax levy dollars collected. The 2023 tax levy was \$1,919,936.

** Additional revenue comprised of permit fees, investment income, and grant funding.

*** Ending balance is not audited, and subject to change with year-end adjustments and accruals.

509 Implementation Expenditures
(Unaudited)



GRANTS

Grants obtained by the District that were active in 2023 were as follows:

- *Metro Watershed Based Implementation Funding – Lower Minnesota River South Watershed Area*
Goal: Conduct two feasibility studies to determine suitability for possible future projects.
Funding Source: BWSR
Total Grant Amount: \$39,575
Effective: April 14, 2021, to December 31, 2023
- *Prior Lake Spring Lake Watershed Based Implementation Funding 22/23*
Goal: Conduct a feasibility study and a lake management plan to determine suitability for possible future projects.
Funding Source: BWSR
Total Grant Amount: \$82,806
Effective: February 22, 2023, to December 31, 2025
- *AIS Control Grant - Upper Prior in Scott TCG LGU*
Goal: Complete two years of herbicidal control of Curly-leaf pondweed in Upper Prior Lake and Lower Prior Lake.
Funding Source: MNDNR
Total Grant Amount: \$7,500
Effective: March 18, 2022, to May 31, 2023

2024 WORK PLAN

The following is a summary of implementation activities planned to be completed in 2024 and the amount budgeted for that activity.

Implementation Fund: \$2,260,500

General Fund: \$261,000

CAPITAL PROJECTS

The District is actively working to secure landowner support for several potential capital projects in 2024.

OPERATIONS AND MAINTENANCE

The Cost Share program and Farmer-Led Council will be continued. Operation and maintenance of the ferric chloride facility will continue. The District will be completing the system assessment to evaluate the lifespan of the existing ferric chloride system elements and recommendations. Some near-term system updates may occur in 2024, and/or designs to support larger updates in further years. Aquatic vegetation treatment may occur in Fish, Prior, and Spring Lakes, depending upon the survey reports. Aquatic point intercept vegetation surveys will be performed on three District lakes and ponds in 2024. Vegetation maintenance will continue at the District's Spring Lake parcel restoration site. The District will continue to perform AIS inspections at boat launches on Spring, Upper Prior, Lower Prior and Fish Lakes.

The Carp Management Program will continue with its three main components: baseline data collection, implementation, and maintenance. The carp will be tracked using PIT tags, radio tags, and visual observations. The District plans to stock bluegills in the FeCl desilt pond where carp continue to be observed. The District will continue remove efforts of carp from Spring Lake and shift efforts to conducting a mark and recapture study on Upper Prior Lake. The study on Upper Prior Lake if successful, will determine if removal efforts have reduced the population below the goal and mark a management transition into maintenance mode where efforts will be reduced.

PLANNING

The District will move forward with projects identified in the Upper Watershed, including conducting feasibility studies as needed (Buck Ferric Chloride System and MB CD-13 IESF), and two flood storage projects. Pending landowner agreement, three project concepts (Swamp IESF, Buck Stream Stabilization and Spring Lake West IESF) for water quality may be carried forward to design, permitting, and construction, as time allows. Additionally, actions identified in the Fish Lake Management Plan will be prioritized and acted upon as landowners are willing and funding allows. The District will participate in a convening process to establish projects to be funded by the 2024/2025 WBIF grant.

MONITORING AND RESEARCH

The District will continue its monitoring program in 2024, which includes stream chemistry monitoring, flow monitoring, lake water quality, lake level, plant surveys, and plant density monitoring. The District will also continue the migration of its water quality data to the new WISKI database. This new database has numerous benefits compared to the previous water quality database being used. WISKI can automate data import and quality control, which will improve workflow efficiencies. Having a central location for all our data will aid in our organizational structure and further improve productivity. Once the automation process is finalized, the time savings will quickly become realized.

WISKI also houses a couple other applications – BIBER and SKED – which are used for discharge calculations and rating curves, respectively, will be compounded with water quality data. Unifying these data allows for areas of concern to be identified and will advance project management to focus on these areas causing diminished water quality.

REGULATION

Conservation easement inspections will be performed. New conservation easements will be established through permitting activity. The District will track and compile MS4 data to include in the next scheduled MPCA Annual Report. Construction inspections for existing and new permits will continue to occur.

The District will continue its work towards the establishment of rules equivalency MOAs with partnering LGUs to reduce permitting burden on the District and permittees.

EDUCATION AND OUTREACH

The District will continue its education and outreach program to meet the requirements of its MS4 permit and improve understanding of local water resources and practices among all stakeholders in the District. The District will continue working with the Scott County Clean Water Education Program and will be participating in public outreach and education opportunities. Updating the website and writing articles for submittal to local newspapers will continue. The full 2024 Education and Outreach plan is available on the District website.

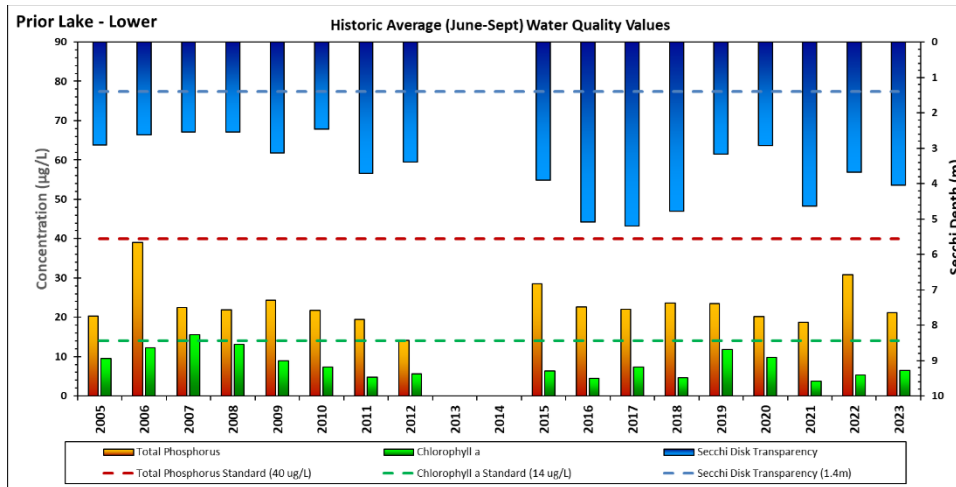
PRIOR LAKE OUTLET CHANNEL

Recurring annual operations such as inspections and vegetation management will continue in 2024. As funding is available, and with Cooperator approval, the District will proceed with soliciting bids for pipelining construction. Projects and other maintenance will be discussed and decided upon by the Technical Advisory Committee and the Cooperators (Memorandum of Agreement) members.

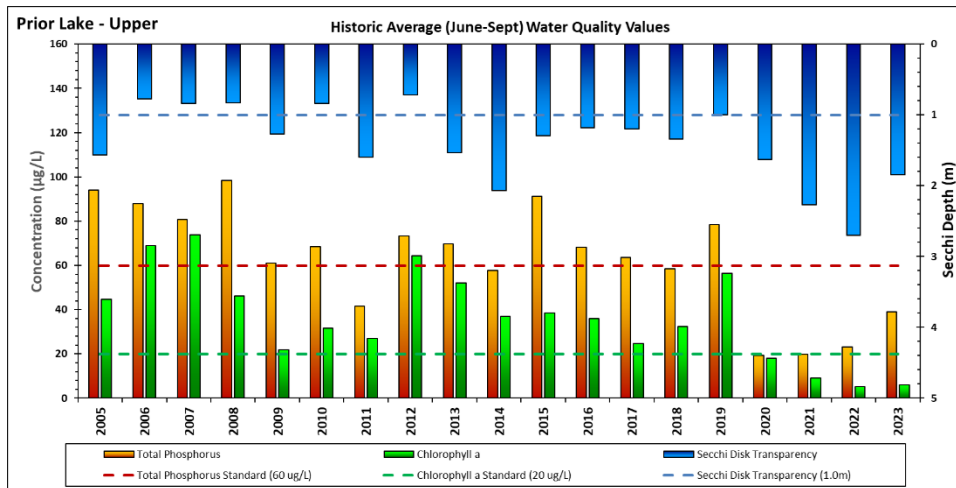
WATER QUALITY GRAPHS

The following graphs indicate the status of the District’s monitoring efforts on District lakes since 2004.

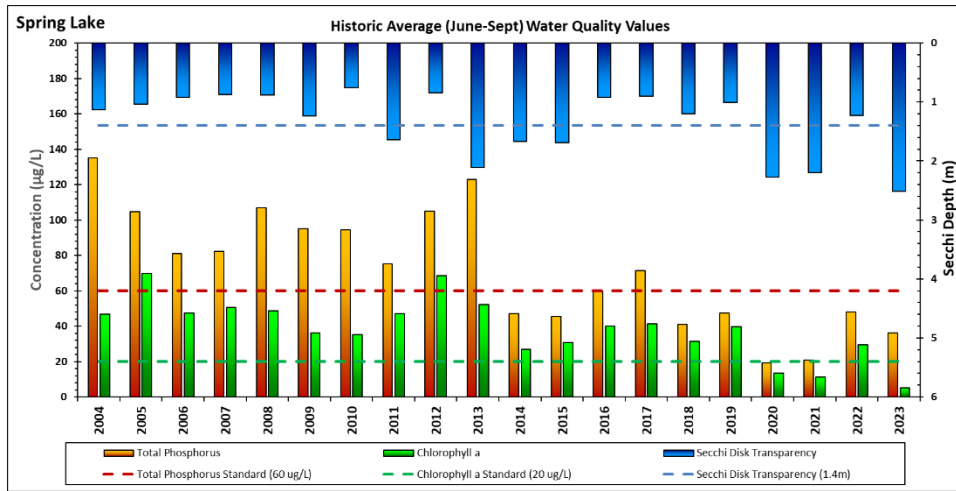
Lower Prior Lake



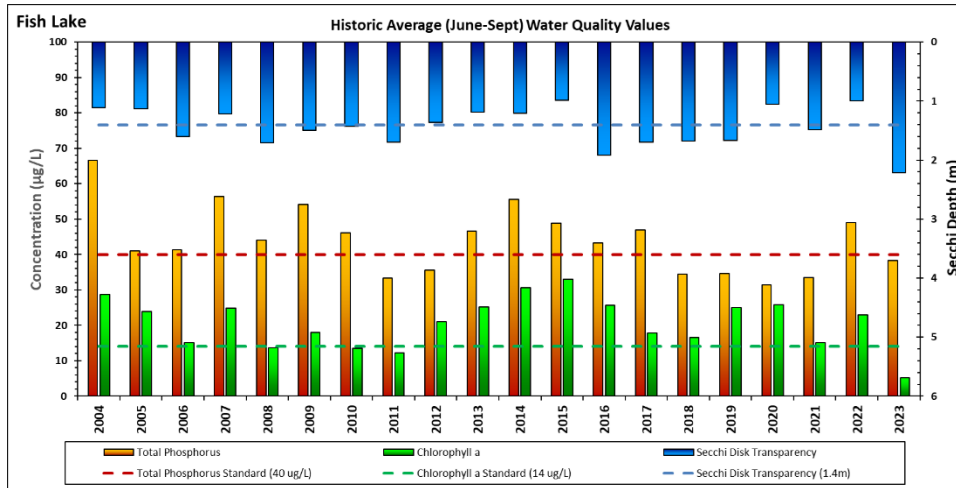
Upper Prior Lake



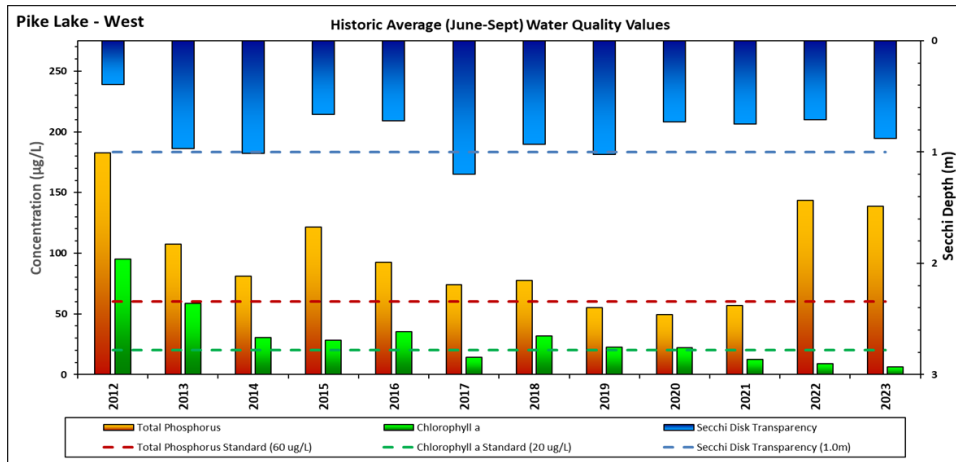
Spring Lake



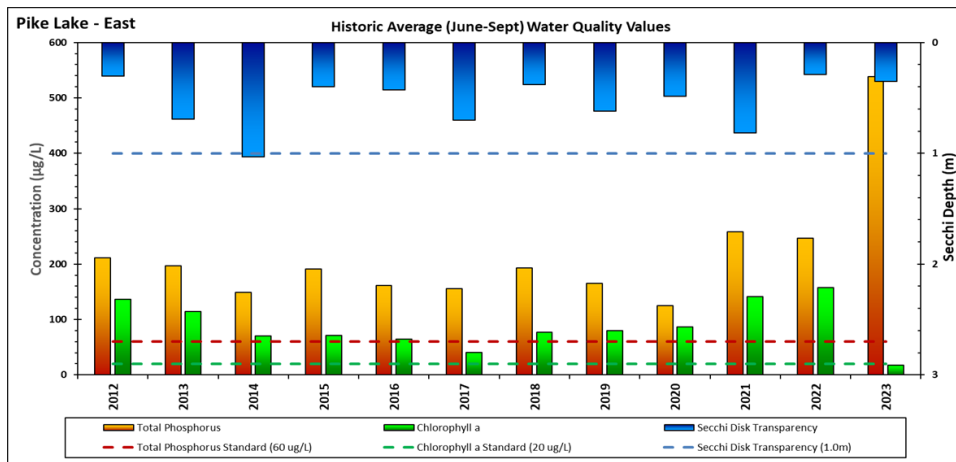
Fish Lake



Pike Lake - West



Pike Lake - East



APPENDIX A: EVALUATION OF PROGRESS DASHBOARD

Continue on to next page.

Goal WQ1

Maintain or improve 5-year average for TP, Chlorophyll-a and Secchi depth in Lower Prior Lake.

Performance Measures:	Every two years, evaluate water quality trends on a 5-year running average to ensure water quality is maintained or improved.
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Benchmark Measures:	
Total Phosphorus (TP)	24 µg/l
Chlorophyll-a (Chl-a)	6.9 µg/l
Secchi depth	4.43 m

5-Year Average Tracking:		
Total Phosphorus (TP)		
2021	21.61	
2023	22.86	
2025		
2027		
2029		
Chlorophyll-a (Chl-a)		
2021	7.45	
2023	7.42	
2025		
2027		
2029		
Secchi depth		
2021	4.15	
2023	3.7	
2025		
2027		
2029		

PROJECTS THAT WILL HELP ACHIEVE THE GOAL:

Capital Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Public Infrastructure Projects*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Lower Prior Lake Subwatershed Project*		✓									
Storage & Infiltration Projects*		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Streambank Restoration Program				✓	✓	✓		✓	✓	✓	

Operations & Maintenance Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
AIS Prevention & Management	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cost Share Program	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Project Maintenance	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Planning Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Feasibility Reports		✓		✓		✓		✓		✓	
Lower Prior Lake Diagnostic Study Update					✓						
Regional Stormwater Planning		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Monitoring Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Lake Monitoring	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Stream & Ditch Monitoring	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Effectiveness/BMP Monitoring	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Regulation Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Permit Program	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Conservation Easement Program	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
District Rules Updates	✓					✓					✓

** Projects in **bold** have the greatest potential to achieve water quality improvement results.*

<p>If one or more of the three water quality measures begins to show downward trends, the following should be explored:</p> <ol style="list-style-type: none"> 1) Have all scheduled projects above been completed according to the timeline? <i>If not, consider implementing them.</i> 2) Is there an unexpected, external factor affecting water quality? <i>If so, consider a feasibility study to explore solutions.</i> 3) Are there additional/enhanced opportunities in the projects listed in bold above? <i>Consider working with partners and exploring grants.</i>
--

Goal WQ2

Meet the state water quality standards for aquatic recreation on Spring Lake.

Performance Measures:	Use in-lake water quality monitoring results for TP, Chl-a and Secchi depth to assess progress every two years; request delisting to MPCA.
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Benchmark Measures:	
Total Phosphorus (TP)	60 µg/l
Chlorophyll-a (Chl-a)	20 µg/l
Secchi depth	1.4 m

Outcome: Request state delisting to MPCA by 2029

2-Year Average Tracking:	
Total Phosphorus (TP)	
2021	20.04
2023	42.09
2025	
2027	
2029	
Chlorophyll-a (Chl-a)	
2021	12.41
2023	17.37
2025	
2027	
2029	
Secchi depth	
2021	2.24
2023	1.87
2025	
2027	
2029	

PROJECTS THAT WILL HELP ACHIEVE THE GOAL:

Capital Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
In-Lake Alum Treatments*	✓										
County Ditch 13 Restoration*						✓	✓	✓	✓	✓	✓
Public Infrastructure Projects*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fish Lake Watershed Projects			✓								
Spring Lake Regional Park Project				✓	✓						
Spring Lake West Subwatershed Project*		✓	✓								
Storage & Infiltration Projects*		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Streambank Restoration Program*				✓	✓	✓		✓	✓	✓	✓
Wetland Restoration & Enhancement*		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Wetland Banking Program				✓	✓	✓	✓	✓	✓	✓	✓

Operations & Maintenance Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
AIS Prevention & Management	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Carp Management Program*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cost Share Program	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Farmer-Led Council Initiatives*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ferric Chloride Treatment System	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Highway 13 Wetland Restoration						✓	✓				
Project Maintenance	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Planning Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Feasibility Reports		✓		✓		✓		✓		✓	
Regional Stormwater Planning		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Upper Watershed Blueprint	✓	✓									

Monitoring Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Lake Monitoring	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Stream & Ditch Monitoring	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Effectiveness/BMP Monitoring	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Regulation Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Permit Program	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Conservation Easement Program	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
District Rules Updates	✓					✓					✓

** Projects in **bold** have the greatest potential to achieve water quality improvement results.*

If at least two of the water quality measures are not meeting benchmarks by 2025, the following should be explored:

- 1) Have all scheduled projects above been completed according to the timeline? *If not, consider implementing them.*
- 2) Is there an unexpected, external factor affecting water quality? *If so, consider a feasibility study to explore solutions.*
- 3) Are there additional/enhanced opportunities in the projects listed in bold above? *Consider working with partners and exploring grants.*

Goal WQ3

Meet the state water quality standards for aquatic recreation on Upper Prior Lake.

Performance Measures:	Use in-lake water quality monitoring results for TP, Chl-a and Secchi depth to assess progress every two years; request delisting to MPCA.
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Benchmark Measures:	
Total Phosphorus (TP)	40 µg/l
Chlorophyll-a (Chl-a)	14 µg/l
Secchi depth	1.4 m

Outcome: Request state delisting to MPCA by 2029

2-Year Average Tracking:	
Total Phosphorus (TP)	
2021	19.53
2023	31.12
2025	
2027	
2029	
Chlorophyll-a (Chl-a)	
2021	13.6
2023	5.61
2025	
2027	
2029	
Secchi depth	
2021	1.95
2023	2.27
2025	
2027	
2029	

PROJECTS THAT WILL HELP ACHIEVE THE GOAL:

Capital Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
In-Lake Alum Treatments*	✓	✓			✓	✓	✓				
Public Infrastructure Projects*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Arctic Lake BMP Projects				✓				✓			
Fish Lake Watershed Projects		✓	✓								
Spring Lake West Subwatershed Project		✓	✓								
Storage & Infiltration Projects*		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Streambank Restoration Program*	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓
Wetland Restoration & Enhancement*		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Wetland Banking Program		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Operations & Maintenance Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
AIS Prevention & Management	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Carp Management Program*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cost Share Program	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Farmer-Led Council Initiatives*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
FeCl Treatment System	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Highway 13 Restoration						✓	✓				
Project Maintenance	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Planning Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Feasibility Reports		✓		✓		✓		✓		✓	
Regional Stormwater Planning		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Upper Watershed Blueprint	✓	✓									

Monitoring Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Lake Monitoring	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Stream & Ditch Monitoring	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Effectiveness/BMP Monitoring	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Regulation Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Permit Program	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Conservation Easement Program	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
District Rules Updates	✓					✓					✓

** Projects in **bold** have the greatest potential to achieve water quality improvement results.*

If at least two of the water quality measures are not meeting benchmarks by 2025, the following should be explored:

- 1) Have all scheduled projects above been completed according to the timeline? *If not, consider implementing them.*
- 2) Is there an unexpected, external factor affecting water quality? *If so, consider a feasibility study to explore solutions.*
- 3) Are there additional/enhanced opportunities in the projects listed in bold above? *Consider working with partners and exploring grants.*

Goal WQ4

Improve water quality in Fish Lake by reducing annual phosphorus load by 40 lbs/year.

Performance Measures:	Every two years, assess water quality to measure improvements in TP, Chl-a and Secchi depth; reduce annual P load by 40 lbs/year by 2029.
-----------------------	---

Baseline Measures (2005-2014) :	
Total Phosphorus (TP)	42 µg/l
Chlorophyll-a (Chl-a)	20 µg/l
Secchi depth	1.3 m

Outcome: Implement projects to reduce annual P load by 40 lbs/yr, resulting in improved water quality in one or more measures by 2029.

2-Year Average Tracking:			
	TP	Chl-a	Secchi
2021	32	20.5	1.27
2023	44	14.11	1.61
2025			
2027			
2029			

Annual P Load Reductions:	
Projects Implemented (lbs/year)	
2021	None
2022	None

PROJECTS THAT WILL HELP ACHIEVE THE GOAL:

Capital Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Fish Lake Watershed Projects*		✓	✓								
Streambank Restoration Program*	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓
Wetland Restoration & Enhancement*		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Operations & Maintenance Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
AIS Prevention & Management	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Carp Management Program	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cost Share Program	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Farmer-Led Council Initiatives*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Planning Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Feasibility Reports		✓		✓		✓		✓		✓	

Monitoring Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Lake Monitoring	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Effectiveness/BMP Monitoring	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Regulation Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Permit Program	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Conservation Easement Program	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
District Rules Updates	✓					✓					✓

* Projects in **bold** have the greatest potential to achieve water quality improvement results.

If at least two of the water quality measures have not shown improvement by 2025, the following should be explored:

- 1) Have all scheduled projects above been completed according to the timeline? *If not, consider implementing them.*
- 2) Is there an unexpected, external factor affecting water quality? *If so, consider a feasibility study to explore solutions.*
- 3) Are there additional/enhanced opportunities in the projects listed in bold above? *Consider working with partners and exploring grants.*

Goal WQ5

Improve water quality in Arctic Lake by supporting SMSC's improvement efforts to reduce watershed phosphorus loading by 37 lbs/yr and by partnering with SMSC, the City of Prior Lake and the Three Rivers Park District on future projects as opportunities arise.

Performance Measures:	Every two years, assess water quality (TP, Chl-a and Secchi) to measure improvements; track load reductions associated with project implementation.
-----------------------	---

Baseline Measures (2008-2017) :	
Total Phosphorus (TP)	127.5 µg/l
Chlorophyll-a (Chl-a)	40 µg/l
Secchi depth	0.43 m

Outcome: Support & coordinate with SMSC on projects, resulting in improved water quality in one or more measures by 2029.

2-Year Average Tracking:			
	TP	Chl-a	Secchi
2021	94.11	33.74	0.42
2023**	83.9	38.9	0.74
2025			
2027			
2029			

**2022 data only

Load Reduction Tracking		
Project	Year	lb/year

PROJECTS THAT WILL HELP ACHIEVE THE GOAL:

Capital Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Arctic Lake BMP Projects*				✓					✓		

Operations & Maintenance Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Carp Management Program*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cost Share Program	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Planning Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Feasibility Reports		✓		✓		✓		✓		✓	

Monitoring Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Lake Monitoring	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Regulation Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Permit Program	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Conservation Easement Program	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
District Rules Updates	✓					✓					✓

* Projects in **bold** have the greatest potential to achieve water quality improvement results.

If at least two of the water quality measures have not shown improvement by 2025, the following should be explored:

- 1) Have all scheduled projects above been completed according to the timeline? *If not, consider implementing them.*
- 2) Is there an unexpected, external factor affecting water quality? *If so, consider a feasibility study to explore solutions.*

Goal WQ6

In partnership with SMSC and the City of Prior Lake, improve Pike Lake by achieving 10% percent improvement in TP concentrations to work toward the TMDL pollutant reduction requirements.

Performance Measures:	Every two years, assess TP concentrations to measure improvements; track load reductions associated with project implementation.
-----------------------	--

Baseline Measures (2012-2017):		
	West Side	East Side
Total Phosphorus (TP)	102 µg/l	170 µg/l

10% Improvement GOAL:		
	West Side	East Side
Total Phosphorus (TP)	92 µg/l	153 µg/l

2-Year Average Tracking:		
	West Side	East Side
Total Phosphorus (TP)		
2021	53.23	192
2023	141.17	392
2025		
2027		
2029		

Load Reduction Tracking		
Project	Year	lb/year

PROJECTS THAT WILL HELP ACHIEVE THE GOAL:

Operations & Maintenance Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Carp Management Program*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cost Share Program	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Farmer-Led Council Initiatives*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Planning Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Feasibility Reports		✓		✓		✓		✓		✓	

Monitoring Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Lake Monitoring	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Regulation Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Permit Program	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Conservation Easement Program	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
District Rules Updates	✓					✓					✓

* Projects in **bold** have the greatest potential to achieve water quality improvement results.

If there is not a documented decrease in TP concentrations by 2025, the following should be explored:

- 1) Have all scheduled projects above been completed according to the timeline? *If not, consider implementing them.*
- 2) Is there an unexpected, external factor affecting water quality? *If so, consider a feasibility study to explore solutions.*
- 3) Are there additional/enhanced opportunities in the projects listed in bold above? *Consider working with partners and exploring grants.*

Goal WQ7

Assess the quality of Sutton Lake and develop a Lake Management Plan.

Performance Measures:	Assessment of lake quality and development of management plan.
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Performance Tracking:	
Step	Status
Install Outlet (2020)	Completed 2021
Complete Lake Management Plan (2020)	In Progress
Manage Outlet (2021)	Complete
Manage Outlet (2022)	Complete
Manage Outlet (2023)	Complete
Manage Outlet (2024)	
Manage Outlet (2025)	
Manage Outlet (2026)	
Manage Outlet (2027)	
Manage Outlet (2028)	
Manage Outlet (2029)	
Manage Outlet (2030)	

PROJECTS THAT WILL HELP ACHIEVE THE GOAL:

Capital Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Sutton Lake Outlet Structure*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Monitoring Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Lake Monitoring	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

* Projects in **bold** have the greatest potential to achieve the goal.

Outcome: Lake Management Plan and effectively managed outlet structure.

If there is no progress by 2022, the following should be explored:

- 1) Have all scheduled projects above been completed according to the timeline? *If not, consider implementing them.*
- 2) Is there an unexpected, external factor slowing the progress? *If so, consider a study to explore solutions.*
- 3) Are there additional/enhanced opportunities in the projects listed in bold above? *Consider working with partners and exploring grants.*

Goal WQ8

Assign a District water quality standard for Buck Lake and set management goals for the next 10-year plan.

Performance Measures:	Conduct a lake diagnostic study to identify water quality standard; set management goals for next 10-year plan.
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Performance Tracking:	
Step	Status
Diagnostic Study (2026)	
Water Quality Standard (2026)	
Management Goals Set (2029)	

PROJECTS THAT WILL HELP ACHIEVE THE GOAL:

Monitoring Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Buck Lake Diagnostic Study						✓	✓				
Lake Monitoring	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

If there is no progress by 2026, the following should be explored:

- 1) Have all scheduled projects above been completed according to the timeline? *If not, consider implementing them.*
- 2) Is there an unexpected, external factor slowing the progress? *If so, consider a study to explore solutions.*

Goal WQ9

Assess the quality of Tier 3 Lakes and assign lake management classifications.

Performance Measures:	In-lake water quality monitoring; assign lake classifications.
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Performance Tracking:	
Lake	Management Classification
Haas Lake	Unclassified
Crystal Lake	Unclassified
Rice Lake	Unclassified
Cates Lake	Grade A for Chl-a, Secchi, and P
Jeffers Pond	Unclassified
Swamp Lake	Unclassified

PROJECTS THAT WILL HELP ACHIEVE THE GOAL:

Monitoring Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Lake Monitoring	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

If there is no progress by 2028, the following should be explored:

- 1) Have all scheduled projects above been completed according to the timeline? *If not, consider implementing them.*
- 2) Is there an unexpected, external factor slowing the progress? *If so, consider a study to explore solutions.*

Goal WQ10

Maintain no net loss of wetland in the District.

Performance Measures:	Every two years track and assess wetland impacts; fully establish wetland banking program.
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Outcome: Biennial wetland loss assessments and successful establishment of wetland banking program.

Performance Tracking:	
Biennial Permit / LGU Review	Status
2021	Incomplete
2023	Incomplete
2025	
2027	
2029	
Wetland Banking Program Steps	Status
Program Establishment (2021)	Incomplete
Reserve Fund Created (2022)	Incomplete
First Project Completed (2025)	

PROJECTS THAT WILL HELP ACHIEVE THE GOAL:

Capital Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Wetland Banking Program*		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Operations & Maintenance Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Cost Share Program	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Planning Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Feasibility Reports		✓		✓		✓		✓		✓	
Comprehensive Wetland Plan Update	✓				✓						

Monitoring Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Wetland Monitoring	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Regulation Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Permit Program*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Conservation Easement Program	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
District Rules Updates	✓					✓					✓

* Projects in **bold** have the greatest potential to achieve goals.

<p>If wetland loss is occurring and/or wetland banking program has not reached the above milestones, the following should be explored:</p> <ol style="list-style-type: none"> 1) Have all scheduled projects above been completed according to the timeline? <i>If not, consider implementing them.</i> 2) Is there an unexpected, external factor affecting wetland preservation? <i>If so, consider a feasibility study to explore solutions.</i> 3) Are there additional/enhanced opportunities in the projects listed in bold above? <i>Consider working with partners and exploring grants.</i>
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Goal WQ11

Restore or enhance 5% (24 of 482 acres) of the restoration/enhancement management class of wetlands (as identified in the Comprehensive Wetland Plan), focusing on those that work towards prioritized and/or multiple District goals.

Performance Measures:	Track progress towards restored/enhanced wetland acres every two years.
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Performance Tracking:	
Project Milestones	Status
CWP Plan Update 2020	Incomplete
Create Wetland Reserve Fund (2021)	Incomplete
CWP Plan Update 2024	
Restoration Milestones	Acres
Wetland Restoration 1 (by 2025)	
Wetland Restoration 2 (by 2027)	
Wetland Restoration 3 (by 2029)	
Wetland Restoration 4	
Wetland Restoration 5	

PROJECTS THAT WILL HELP ACHIEVE THE GOAL:

Capital Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Wetland Restoration & Enhancement*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Operations & Maintenance Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Cost Share Program	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Highway 13 Wetland Restoration		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Planning Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Feasibility Reports		✓		✓		✓		✓		✓	
Comprehensive Wetland Plan Update	✓				✓						

Monitoring Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Wetland Monitoring	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

* Projects in **bold** have the greatest potential to achieve goals.

<p>If there is no progress in meeting wetland restoration acreage goals by 2025, the following should be explored:</p> <ol style="list-style-type: none"> 1) Have all scheduled projects above been completed according to the timeline? <i>If not, consider implementing them.</i> 2) Is there an unexpected, external factor affecting wetland preservation? <i>If so, consider a feasibility study to explore solutions.</i> 3) Are there additional/enhanced opportunities in the projects listed in bold above? <i>Consider working with partners and exploring grants.</i>
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Goal WQ12

Stabilize a minimum of ten bank erosion/slumping sites, prioritizing those that impact Tier 1 or Tier 2 Lakes and/or meet multiple District goals.

Performance Measures:	Track progress on bank stabilization projects implemented every two years, 10 completed by 2029.
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Performance Tracking:	
Project Milestones	Status
Conduct Field Assessment (2021)	Incomplete
Strategic Outreach (2022)	Ongoing
Stabilization Milestones	Status
Streambank Restoration 1 (by 2023)	Smith Lined Waterway Complete 2020
Streambank Restoration 2 (by 2025)	Moen Lined Waterway Completed 2022
Streambank Restoration 3 (by 2025)	Dubbe Lined Waterway Completed 2023
Streambank Restoration 4 (by 2025)	
Streambank Restoration 5 (by 2027)	
Streambank Restoration 6 (by 2027)	
Streambank Restoration 7 (by 2027)	
Streambank Restoration 8 (by 2029)	
Streambank Restoration 9 (by 2029)	
Streambank Restoration 10 (by 2029)	

PROJECTS THAT WILL HELP ACHIEVE THE GOAL:

Capital Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
County Ditch 13 Restoration*		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Streambank Restoration Program*	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓

Operations & Maintenance Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Cost Share Program	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Planning Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Feasibility Reports		✓		✓		✓		✓		✓	

Monitoring Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Stream & Ditch Monitoring	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

* Projects in **bold** have the greatest potential to achieve goals.

<p>If no streambank stabilization projects have been completed by 2025, the following should be explored:</p> <ol style="list-style-type: none"> 1) Have all scheduled projects above been completed according to the timeline? <i>If not, consider implementing them.</i> 2) Is there an unexpected, external factor affecting completion of projects? <i>If so, consider a feasibility study to explore solutions.</i> 3) Are there additional/enhanced opportunities in the projects listed in bold above? <i>Consider working with partners and exploring grants.</i>

Goal WQ13

Improve the stability of the Prior Lake Outlet Channel through annual maintenance and 10,000 linear feet of bank repair work.

Performance Measures:	Track progress towards 10,000 linear feet of bank repair work every two years.
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Performance Tracking:	
Project Milestones	Status
Develop Bank Repair Plan (2021)	Complete
Complete Bank Repairs (2023)	
Inspection + Maintenance Review	Status
2021	Complete
2023	Complete
2025	
2027	
2029	

PROJECTS THAT WILL HELP ACHIEVE THE GOAL:

Operations & Maintenance Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
PLOC Bank Restoration	✓	✓	✓	✓							
PLOC Management	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Planning Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Feasibility Reports		✓		✓		✓		✓		✓	

If 10,000 linear feet of bank repair work has not been completed by 2025, the following should be explored:

- 1) Have all scheduled projects above been completed according to the timeline? *If not, consider implementing them.*
- 2) Is there an unexpected, external factor affecting completion of projects? *If so, consider a feasibility study to explore solutions.*
- 3) Are there additional/enhanced opportunities in the projects listed above? *Consider working with partners and exploring grants.*

Goal AIS1

Develop and implement an Aquatic Invasive Species (AIS) Response and Prevention Plan in coordination with Scott County to help prevent new AIS from entering Tier 1 lakes (lakes with public access).

Performance Measures:	Completed AIS Plan; regular monitoring for AIS and implementation according to plan.
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Performance Tracking:	
Project Milestones	Status
Create AIS Response Plan (2021)	Complete
Biennially review implementation of:	
- CLP assessment & treatment	
- AIS Reponse Plan implementation	
2021	Complete
2023	Complete
2025	
2027	
2029	

PROJECTS THAT WILL HELP ACHIEVE THE GOAL:

Operations & Maintenance Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
AIS Prevention & Management*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Planning Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Feasibility Reports		✓		✓		✓		✓		✓	
AIS Rapid Response Plan		✓		✓		✓		✓		✓	
Monitoring Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Lake Monitoring	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

* Projects in **bold** have the greatest potential to achieve goals.

<p>If new AIS is discovered in the District or an existing AIS has rebounded, the following should be explored:</p> <ol style="list-style-type: none"> 1) Have all scheduled projects above been completed according to the timeline? <i>If not, consider implementing them.</i> 2) Is there an unexpected, external factor affecting AIS introduction/management? <i>If so, consider a feasibility study to explore solutions.</i> 3) Are there additional/enhanced opportunities in the projects listed in bold above? <i>Consider working with partners and exploring grants.</i>
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Goal AIS2

Effectively manage common carp in Tier 1 Lakes to 30 kg/ha or below.

Performance Measures:	Annually update IPM Plan for Carp; implement activities in the Plan to achieve carp populations of 30 kg/ha or below in Tier 1 Lakes.
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Performance Tracking:						
	2019	2021	2023*	2025	2027	2029
Lake	Carp (kg/ha)	Carp (kg/ha)	Carp (kg/ha)	Carp (kg/ha)	Carp (kg/ha)	Carp (kg/ha)
Lower Prior	9.4	Incomplete	n/a			
Upper Prior	304.8	211	175;67			
Spring	266.2	226.9	199;125			
Fish	85.7	Incomplete	57			

PROJECTS THAT WILL HELP ACHIEVE THE GOAL:

O & M Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Carp Management	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Planning Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Feasibility Reports		✓		✓		✓		✓		✓	

*Where two numbers are given, the first represents calculations based on the 2018 population estimate. The second is based on 2023 CPUE surveys.

If carp populations are not making significant progress towards meeting goals by 2025, the following should be explored:

- 1) Have all scheduled projects above been completed according to the timeline? *If not, consider implementing them.*
- 2) Is there an unexpected, external factor affecting carp management? *If so, consider a feasibility study to explore solutions.*
- 3) Are there additional/enhanced opportunities in the District? *Consider working with partners and exploring grants.*

Goal AIS4

Implement new management techniques for zebra mussels as innovative, cost-effective methods are developed.

Performance Measures:	Monitor advances in management techniques; implement control methods as available.
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Performance Measures:	
Research Review	Status
2021	Complete
2023	Complete
2025	
2027	
2029	

PROJECTS THAT WILL HELP ACHIEVE THE GOAL:

Operations & Maintenance Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
AIS Prevention & Management*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Planning Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Feasibility Reports		✓		✓		✓		✓		✓	

Outcome: Regular coordination with UMN and other research labs; feasibility study for new methods of zebra mussel management, if developed.

Goal RF1

Achieve the first-tier priority flood reduction goal to reduce the flood level on Prior Lake from 905.62 to 905.5 feet for the 25-year return period.

Performance Measures:	Track storage created towards goal of 176 acre-feet on Prior Lake.
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Flood Levels (25-Year Return Period)	
Existing	905.62 ft
GOAL	905.50 ft

Upstream Storage	
GOAL:	176 ac-ft

Performance Tracking:	
Project	Status
Sutton Lake Outlet (2021)	Complete
Upstream Storage Status	
Acre-feet	
2023	0
2025	
2027	
2029	
Flood Level Status	
feet	
2025	
2027	
2029	

PROJECTS THAT WILL HELP ACHIEVE THE GOAL:

Capital Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
County Ditch 13 Restoration		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Storage & Infiltration Projects*		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sutton Lake Outlet Structure*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Wetland Restoration & Enhancement		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Wetland Banking Program		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Operations & Maintenance Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Cost Share Program	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Planning Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Comprehensive Wetland Plan Update	✓				✓						
Feasibility Reports		✓		✓		✓		✓			✓
Regional Stormwater Planning		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Upper Watershed Storage Strategy	✓	✓									

Monitoring Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Precipitation & Weather	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
PCSWMM Model Update & Maintenance	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

* Projects in **bold** have the greatest potential to make progress towards achieving the goal.

<p>If the goal has not been achieved by 2027, the following should be explored:</p> <ol style="list-style-type: none"> 1) Have all scheduled projects above been completed according to the timeline? <i>If not, consider implementing them.</i> 2) Is there an unexpected, external factor affecting the achievement of the goal? <i>If so, consider a feasibility study to explore solutions.</i> 3) Are there additional/enhanced opportunities in the projects listed in bold above? <i>Consider working with partners and exploring grants.</i>
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Goal RF3

Eliminate/reduce the impact of new development and redevelopment on flooding.

Performance Measures:	Revised rules are adopted; District Rules effectively enforced
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Biennial Performance Tracking:	
Assess Permit Program	Status
2021	Complete
2023	Complete
2025	
2027	
2029	
Projects	Status
Revised Rules Adopted	Adopted 2022

PROJECTS THAT WILL HELP ACHIEVE THE GOAL:

Regulation Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Permit Program*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Conservation Easement Program	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
District Rules Updates	✓					✓					✓
District Boundary Revisions	✓	✓									

* Projects in **bold** have the greatest potential to make progress towards achieving the goal.

Goal RF4

In partnership with the City of Prior Lake, complete updates to the PCSWMM Model to refine and improve understanding of flooding in the watershed.

Performance Measures:	Updated PCSWMM model.
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Biennial Performance Tracking:	
PCSWMM Updates	Status
2021	Complete
2023	None Needed
2025	
2027	
2029	

PROJECTS THAT WILL HELP ACHIEVE THE GOAL:

Monitoring Projects	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Precipitation & Weather	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
PCSWMM Model Update & Maintenance*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

* Projects in **bold** have the greatest potential to make progress towards achieving the goal.

