



**Prior Lake-  
Spring Lake  
Watershed  
District**

Annual Report

**2020**



**PRIOR LAKE  
SPRING LAKE  
WATERSHED DISTRICT**

**50  
YEARS**

*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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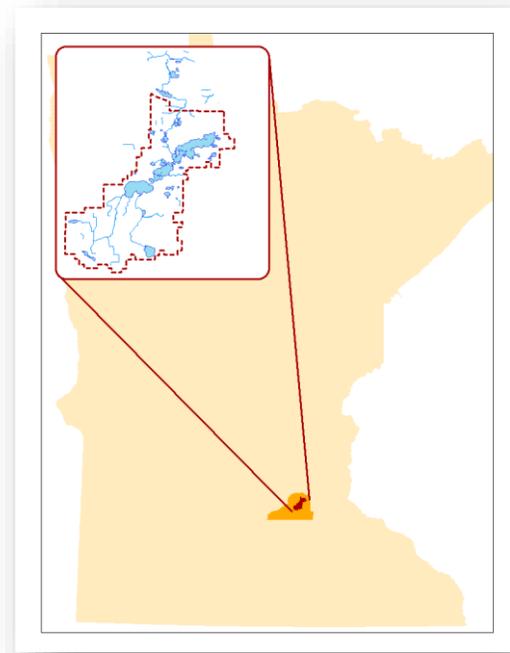
## INTRODUCTION

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 2020. 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. All the District's policies, goals, and accomplishments are directed by the citizens who serve on the Board. The Board of Managers meets the second Tuesday of the month at 6:00 PM at the Prior Lake City Hall, located at 4646 Dakota St. SE, Prior Lake, MN 55372. As result of the Covid-19 pandemic, some of the 2020 Board meetings were held virtually and a meeting link was posted to allow the public to attend. Meeting notices, agendas and approved minutes are available on the District website at [www.pslwd.org/meetings](http://www.pslwd.org/meetings).

**Board members serving during the calendar year 2020 are listed below.**

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<p><u>Fred J. Corrigan*</u>                  Manager                  Term: 3/3/19-2/11/20                  Resided in Prior Lake                   8075 E. Martindale Dr.                  Prior Lake, MN 55372                   952-445-9681                  fcorrigan@armofmn.com</p>	<p><u>Curt Hennes</u>                  Vice President                  Term: 6/12/19-6/11/22                  Resides in Prior Lake                   17286 Sunset Trail SW                  Prior Lake, MN 55372                   952-440-7443                  clphennes@gmail.com</p>	<p><u>Charlie Howley</u>                  Treasurer                  Term: 7/26/17-7/25/20                  Resides in Prior Lake                   4291 Coachman Lane NE                  Prior Lake, MN 55372                   952-440-5800                  howleyctccn@gmail.com</p>
<p><u>Bruce Loney</u>                  Secretary (1/1/20 – 7/14/20)                  Treasurer (7/14/20 – present)                  Term: 3/3/19-3/2/22                  Resides in Prior Lake                   5870 Shannon Circle SE                  Prior Lake, MN 55372                   952-769-7408                  bruceloney1972@gmail.com</p>	<p><u>Mike Myser</u>                  President                  Term: 3/12/18-3/13/21                  Resides in Prior Lake                   3857 Island View Cir NW                  Prior Lake, MN 55372                   651-341-5932                  m.myser@mchsi.com</p>	<p><u>Steve Pany*</u>                  Secretary (7/14/20 – present)                  Term: 7/14/20-3/2/22                  Resides in Prior Lake                   5561 Cedarwood Street NE                  Prior Lake, MN 55372                   952-496-1138                  C22steve@gmail.com</p>
<p><u>Frank Boyles</u>                  Manager                  Term: 7/26/20 - 7/25/23                  Resides in Prior Lake                   5153 Hope Street                  Prior Lake, MN 55372                   952-292-0400                  Frank10350@mchsi.com</p>	<p><i>*Fred Corrigan vacated his term early because he moved out of the District. Steve Pany was appointed to complete the remainder of the term.</i></p>	

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## 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 monthly on the last Thursday of the month at 6:30 PM at the Prior Lake City Hall, located at 4646 Dakota St. SE, Prior Lake, MN 55372. As a result of the coronavirus pandemic, many of the 2020 CAC meetings were conducted virtually via video conferencing.

Citizen Advisory Committee members that served during the calendar year 2020 are listed below.

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Jerry Mealman  
Resides in Spring Lake  
Township

Christian Morkeberg  
Resides in Spring Lake Township

Woody Spitzmueller  
Resides in Prior Lake

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Kim Silvernagel  
Resides in Prior Lake

Christopher Crowhurst  
Resides in Prior Lake

Ben Burnett  
Resides in Prior Lake

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Marianne Breitbach  
Resides in Prior Lake

Jim Weninger  
Resides in Spring Lake Township

Matt Newman  
Resides in Spring Lake Township

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Jodi See  
Resides in Prior Lake

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## STAFF

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.

Diane Lynch  
(Retired Nov 2020)  
District Administrator  
dlynch@plslwd.org

Amy Tucci  
Administrative Assistant  
atucci@plslwd.org

Jaime Rockney  
Water Resources Specialist  
jrockney@plslwd.org

Kathryn Keller-Miller  
Outreach Specialist  
kkeller-miller@plslwd.org

Maggie Karschnia  
Water Resources Project  
Manager, Interim District  
Administrator  
mkarschnia@plslwd.org

Jeff Anderson  
Water Resources Technician  
janderson@plslwd.org

Shauna Capron  
Water Resources Assistant  
scapron@plslwd.org

## CONSULTING SERVICES

The following are the consulting firms selected in 2019 for 2020/21 consulting services:

Abdo, Eick and Meyers, LLP  
Audit Services  
Andy Berg  
Phone: 952-835-9090  
[www.aemcpas.com](http://www.aemcpas.com)

HG & K, Ltd  
Accounting Services  
Chris Schadow  
Phone: 952-927-8350  
[www.hgkcpa.com](http://www.hgkcpa.com)

Emmons and Olivier Resources, Inc  
Engineering Services  
Carl Almer  
Phone: 651-770-8448  
[www.eorinc.com](http://www.eorinc.com)

Smith Partners, PLLP  
Legal Services  
Charles Holtman  
Phone: 612-344-1400  
[www.smithpartners.com](http://www.smithpartners.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 of 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 2020 WORK PLAN

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

### CARP MANAGEMENT PROJECT

In 2020, the District moved into its fifth year with its Carp Management Program in Spring and Prior Lakes and received the 2020 Minnesota Association of Watershed District's Program of the Year award for the program. The District's carp management work was partially funded through a 319 grant from the Minnesota Pollution Control Agency (MPCA) and a Watershed-based Implementation Funding grant from BWSR.

The project aims to improve the water quality of Spring and Upper Prior Lakes by decreasing total phosphorus concentrations using an Integrated Pest Management Plan (IPM). The project has several different components, including: track movement and population of carp, remove seine obstructions, complete carp removals, install carp barriers at strategic locations, and engage local community through outreach materials and events.

In 2020, the District continued to actively track the movement of 18 carp that were implanted with radio-tags in Spring Lake and Upper Prior Lake systems with a Yagi antenna. An additional 10 radio-tags were implanted late in the 2020 season. Radio-tags have a 2-4 year lifespan. The District is trying to keep up a manageable radio-tag count with older radio-tags becoming unresponsive. The carp location maps were documented on the District’s website so that the public could see their locations.



The District also continued to track carp through Passive Integrate Transponder (PIT) tags that are implanted into the carp. By the end of 2020, approximately 520 PIT tagged carp remain in the waterbodies. PIT tags are used to track movement of carp through a specific channel where a receiver is 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 2019, the District installed eight receiver devices to study the movement of PIT tagged carp throughout different waterbodies which helped document movement and determined the effectiveness of installed carp barriers. Two of the PIT stations were in partnership with SMSC. The receivers were installed at the Arctic Lake Outlet, Artic Lake Channel, Brandt Property midway up County Ditch 13, Pike Lake Inlet, Pike Lake outlet, Northwoods Pond outlet, Buck Lake channel inlet on Spring Lake, 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 timing and location of seine (carp removal) events and identified carp barrier locations.

The District worked with its consultants and three commercial fishermen to complete under ice and open water seines on Upper Prior Lake and Spring Lake. Additional removal efforts including those supported under an Accelerated Carp Management Strategies (ACMS) plan resulted the following:

**Upper Prior Lake**

<b>REMOVAL METHOD:</b>	<b># INDIVIDUAL CARP:</b>	<b>TOTAL WEIGHT (lbs):</b>
Seines	827	10,450
Electrofishing	658	4,296
Newman Trap	184	1,116
Gill Netting Pilot Project	157	2,293
Micro-hauls	71	438
Baited Box Trap	15	114
<b>TOTAL:</b>	<b>1,912</b>	<b>18,707</b>

**Spring Lake**

<b>REMOVAL METHOD:</b>	<b># INDIVIDUAL CARP:</b>	<b>TOTAL WEIGHT (lbs):</b>
Seines	349	3,078
Electrofishing	656	4,075
Push Trap	154	892
Micro-hauls	33	152
Baited Box Traps	764	3,775
<b>TOTAL:</b>	<b>1,956</b>	<b>11,972</b>

In 2020, Upper Prior Lake’s overall carp biomass decreased from 274.1 kg/ha to 250.8 kg/ha while Spring Lake’s overall carp biomass decreased from 266.2 kg/ha to 240.5 kg/ha.

Carp barrier locations were identified which were determined by the radio-tag monitoring, site visits, anecdotal information and staff knowledge. Staff explored different carp barrier designs and conducted site visits to determine the barrier suitability for the sites during 2019 and 2020. Carp were discovered in a wetland to the west of Upper Prior Lake in 2019, including a radio-tagged carp which solidified the reasoning for additional barrier locations. Barrier designs developed in 2018 and 2019 in partnership with the City of Prior Lake, in coordination with the Minnesota Department of Natural Resources (MnDNR), resulted in a horizontal bar barrier installed at the outlet of the Northwoods Pond in Prior Lake.

Additionally, the existing carp barrier located at the ferric chloride facility had not been functioning for several years. The District’s carp consultant and staff worked together to re-design this weir to include a different, functional carp barrier, as well as some safety updates. The replacement and updates were completed in 2020.

In 2021, the District will continue with its carp management efforts under its current, approved version of the IPM Plan and complete its third and final year of the grant funding provided through a federal 319 grant and a Watershed-based Implementation Funding grant through BWSR to help accelerate management efforts moving forward. The goal in 2021 is to achieve grant deliverables of installing barriers and removing carp to meet the water quality goals.

**PUBLIC INFRASTRUCTURE PARTNERSHIP PROJECTS**

**Fish Lake Shoreline & Prairie Restoration Project**

Fish Lake Park is located on the northwest corner of Fish Lake at Spring Lake Town Hall and is owned by Spring Lake Township. The project enhanced a section of shoreline along Fish Lake behind the town hall and created a prairie restoration on the north side of the property.



The restorations will improve habitat for wildlife and pollinators and act as a demonstration site for landowners interested in completing restorations on their own

properties, giving them an opportunity to view an example of a rain garden (existing project), prairie and shoreline restoration all in one, easily accessible location. This project is a frequent site for events and is home to Spring Lake Township's main park. This project is a partnership between Spring Lake Township and the Prior Lake-Spring Lake Watershed District.

The initial site restoration was completed in 2019. Invasive species, including reed canary grass and buckthorn, along shoreline were controlled; existing turf grass in the prairie restoration area was terminated and the prairie and shoreline areas were seeded with native plant species in fall 2019. Additional vegetation maintenance occurred at the site in 2020 and design began on interpretative signs explaining the restoration project.

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## ALUM TREATMENTS

Spring Lake was treated with aluminum sulfate (alum) to help control release of nutrients contained in the lake bed. The 2020 treatment marked the third of three treatments, following the initial dose in 2013 and the second dose in 2018. The original plan was to treat half of the total alum dose in 2013 (292,000 gallons), followed by two more treatments that were a quarter of the total dose. The second treatment dose was a quarter of the total dose (146,000 gallons). However, the second dose was not as effective as hoped and the third dose was increased to 249,000 gallons. Barr Engineering conducted the feasibility study and HAB Aquatic Solutions conducted the alum treatment.

The first of two alum treatments on Upper Prior Lake were conducted in 2020. A total of 132,337 gallons of alum was applied along with 66,169 gallons of sodium aluminate (S.A.). Since Upper Prior is a shallow lake, a buffer of S.A. was added to the treatment to prevent wide pH swings. Grant money and favorable contractor quotes allowed for 60% of the total dose to be treated, rather than 50% of the dose as was originally planned. The shallower areas (zone 1) were originally set to receive a slightly lower dose than the deeper areas (zone 2) but that was reversed to compensate for the potential of carp to stir up the bottom in the shallow areas and increase the alum sediment treatment depth.

The full treatment is still expected to last 10 years and reduce excess internal loading by 571 lbs of phosphorus per year. A grant from BWSR paid for 80% of this project and PLSLWD paid for the remainder. Unless another grant is awarded, the District may need to pay for the entire next treatment with levy dollars. EOR conducted the feasibility study and engineering while HAB Aquatic Solutions conducted the alum treatment.

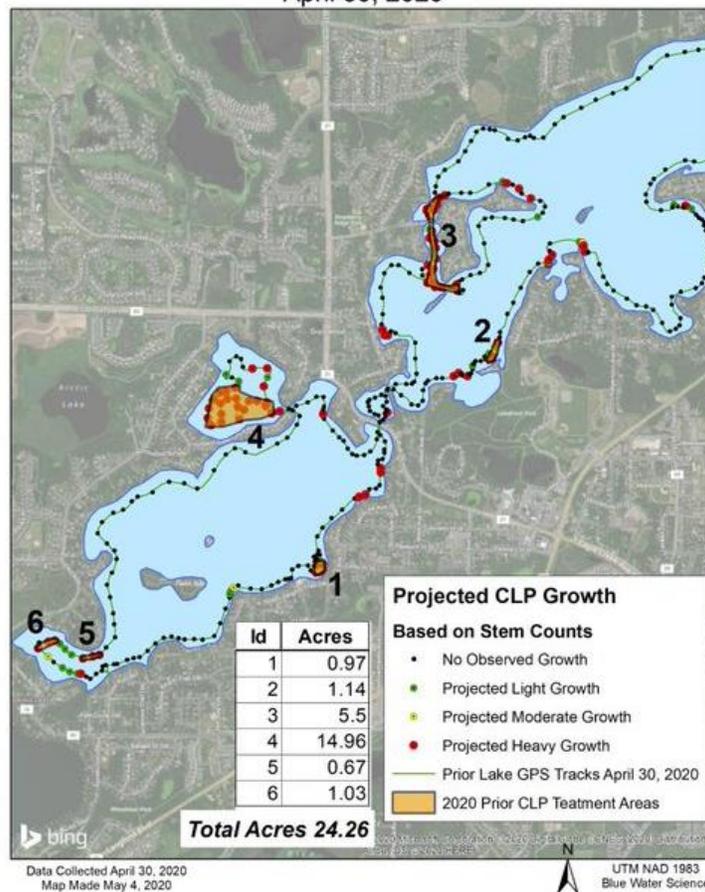
Sampling on Spring and Upper Prior in 2020 showed the best water quality results either lake has had in recorded history. All three parameters (Secchi depth, phosphorus, and chlorophyll-a) met the state water quality standards for the first time on both lakes in 2020.

OPERATIONS AND MAINTENANCE

AQUATIC VEGETATION MANAGEMENT

Aquatic vegetation management for curly-leaf pondweed (CLP) occurred on Spring, Upper Prior, and Lower Prior Lakes in 2020. Seven acres on Lower Prior, 18 acres on Upper Prior, and 15 acres on Spring Lake were treated by PLM Lake and Land Management Corporation with the chemical, Diquat.

Prior Lakes Curlyleaf Pondweed Delineation and Treatment  
April 30, 2020



COST SHARE

The District has a cost share incentive program for residents and agricultural producers coordinated with the Scott Soil and Water Conservation District (SWCD). Cost share projects installed in 2020 included 70 linear feet of lined waterway, two raingardens, 70 feet of shoreline protection, 24 acres of conservation cover, 67 acres of residue management/no-till, 291 acres of nutrient management and seven well decommissions. Whole farm planning assistance was provided for two farms encompassing 425 acres of land.

The Scott SWCD received requests and provided follow-up assistance to 65 landowners in the watershed. There were 28 projects approved and 22 cost share projects completed. Seven landowners rented equipment (such as no-till drills) from the SWCD and one received facility planning and design assistance.



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## 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 the majority of the landscape in the Spring Lake & 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 base-level and site-tailored practices that are available and needed.
- 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 two FLC meetings in 2020 where a variety of agricultural topics related to water quality were discussed. The FLC also provides recommendations for innovative cost share programs and incentives that are not included in the PLSLWD's current cost share programming. In 2020, the

FLC continued with its inlet protection program which included offering free Agri-Drain water quality inlets to farmers.

The Lake-Friendly Farm 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 2020, five additional farms were certified through the Lake-Friendly Farm program.

In 2018, the FLC developed a new Cover Crop Initiative Program that targeted critical water quality fields in the watershed, identifying tiered priority areas. Nearly 600 acres were enrolled in the program in 2020. Scott SWCD helped to coordinate the aerial seeding on most of the fields, with a couple of farmers opting to interseed the mixes directly on their fields. In addition to no-cost seeding, the program also offered free rental of the no-till & interseeder equipment to aid in implementation. The program is anticipated to continue on a slightly larger scale in 2021 with the hopes of getting more new farmers working with cover crops in the upper watershed.

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#### FERRIC CHLORIDE TREATMENT FACILITY

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

In 2013, the system was redesigned to release the ferric chloride ( $\text{FeCl}_3$ ) solution into a desiltation basin, rather than the stream, per a MPCA permit requirement. The initial targets for design parameters, with input and agreement by regulatory agencies, was 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 2020, the desiltation pond treated water with ferric chloride from March 10 to August 24, and again from September 30 to November 4. The gap in treatment was due to dry conditions and no water flow in the stream. 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 25% and dissolved phosphorus by 58%.

A new carp barrier and deck over the ferric chloride weir was built in 2020. The old barrier was missing tines and ineffective at carp blockage. The deck was also becoming unsafe for staff and needed replacement. During the time of replacement, the flow was unable to be measured because

the temporary barrier interfered with the stream level, making PLSLWD's rating curve unusable. Normally PLSLWD would be able to calculate the volume of water that was treated, but that was not possible in 2020.

Results of the 2020 sampling can be found in the Annual Ferric Chloride Report available on the District [website](#).

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## ROUGH FISH MANAGEMENT



In 2020, the District implemented a plan for a new initiative for carp management: Accelerated Carp Management Strategies. These strategies were created to accelerate the removals of carp in Spring and Upper Prior Lakes by allowing staff to implement new techniques and to promote innovation.

A major component in the Accelerated Carp Management Strategies (ACMS) is to increase carp removal efforts and methods. One of the new removal strategies involved the alteration of a baited box net with throated hoop net entrance to trap migrating carp heading toward Arctic Lake call the "Newman Trap." Another migration trap was designed and installed near the outlet of the desilt pond call the "Push Trap." This trap allows carp to push through one-way fingers where carp are trapped in a cage upstream of the fingers.

The District also used strategies such as underwater speakers to train and move carp, purchasing block nets to direct carp to removal areas during seines, making informational signs for the seines, adding additional funding for multiple seine efforts and finding a broader network to sell or dispose of the harvested carp.

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## RAYMOND PARK

The District restored shoreline and habitat to create a demonstration site for four different habitat types at Raymond Park: beach restoration, oak savanna restoration, shoreline restoration and low maintenance turf grass at the City of Prior Lake's park. A walking trail was added at the park which winds through the oak savanna restoration allowing residents to explore the park and view the restoration. The initial restoration work was completed in 2017 with partial funding received from a Conservation Partners Legacy grant and Great River Greening.

In 2020, vegetation maintenance work was done at the park and volunteers removed additional buckthorn at the park adjacent to the original restoration area. Maintenance responsibilities were transferred to the City of Prior Lake in 2020. Interpretive signs explaining the restoration project were designed for the park.

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## RESTORATION PROJECTS MAINTAINENCE

The District conducted vegetation maintenance on restoration projects that were installed in previous years. These projects include the District-owned shoreline parcel on Spring Lake, the Indian Ridge biofiltration basin project, the Fairlawn Shores biofiltration project and the 12/17 wetland restoration project.

## PLANNING

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### 2020 WATER RESOURCES MANAGEMENT PLAN

In 2020, the District continued updating its Water Resources Management Plan, meeting with stakeholders, conducting public meetings and continuing plan revisions. The updated ten-year management plan laying out the District's goals and activities for the next ten years was successfully completed and approved in 2020.

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### UPPER WATERSHED BLUEPRINT

In 2020, the District developed an Upper Watershed Blueprint study in order to comprehensively approach stormwater management in the Upper Watershed over the next ten years. This analysis is intended to be used as a prioritized implementation roadmap for PLSLWD and local partners to improve water quality conditions and reduce flooding in the watershed through a series of projects.

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 four top recommended projects with the highest phosphorous reduction potential in the study and their estimated load reductions are:

- Sutton Lake Iron Enhanced Sand Filter (IESF) - 735 pounds per year
- Ferric Chloride System Improvements Alternative 2 which includes upgrades to the system, assuming that the entire system can be optimized to remove 70% of the total phosphorous from half of the total flow – 911 pounds per year
- County Ditch 13 Chemical Treatment System – 1,062 pounds per year
- Buck Lake Chemical Treatment System – 793 pounds per year

The amount of phosphorus reduction may be different if multiple projects are completed in series because an upstream capture of phosphorus will mean less phosphorus is available to be captured downstream. If all four projects listed above were completed, the total annual phosphorous reduction would be 2,621 pounds.

The two top recommended projects evaluated that can make the most significant positive impact on the flooding are:

- **Upper Watershed Lakes Controlled Outlet Storage:**  
Install outlet controls on lakes in the Upper Watershed (Swamp, Sutton, Fish and Buck Lakes) to limit discharge when targeted water levels are reached on Upper and Lower Prior Lakes.
- **Prior Lake Outlet Channel Modifications:**  
Modify the culvert and discharge allowance for the Prior Lake outlet channel to have a higher discharge rate during period when the capacity is available in downstream channels and basins.

The District will start moving forward with feasibility studies for two of the water quality projects identified in the Upper Watershed Blueprint in 2021.

## MONITORING AND RESEARCH

Monitoring was conducted in accordance with the 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 (SWCD), Scott Soil and Water Conservation District (SWCD), Blue Water Science, and Emmons and Oliver Resources (EOR). The District also hired interns.

## STREAM MONITORING DATA

### STREAM CHEMISTRY SAMPLING

Stream chemistry samples were collected at 11 locations around the watershed by PLSLWD staff. 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 six sites (ST\_40, ST\_19, DLO, ST\_14, ST\_24, and ST\_26A). These sites were monitored biweekly.
- Two agricultural monitoring sites were monitored biweekly for the Farmer-Led Council program (T3 and B3). T3 was sampled where it flows out of the tile and B3 was located in a channel downstream of T3. B3 is a tributary of Fish Lake and located approximately 100 feet before entering Fish Lake.

## STAGE AND FLOW MONITORING

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Continuous stage and flow monitoring occurred in conjunction with the stream chemistry and lake monitoring. Stage and flow monitoring consisted of level loggers that continuously recorded stage and flow measurements. By combining chemistry and stage/flow monitoring results, loads can be calculated using the FLUX modeling software. The sites mentioned in the stream chemistry section above (except T3) all had level loggers. In addition to those sites, stage and flow were monitored on the outlets of Fish, Spring, Sutton, Crystal, Prior Lakes (sites ST\_08, ST\_21, ST\_5D, Crystal\_OUT, PL\_OUT respectively).



Stream Monitoring

Flow measurements were collected by PLSLWD and Scott SWCD. Flow meters used include FloMate 2000 and a Sontek Flowtracker. Continuous stage was recorded using level loggers, such as pressure transducers, an ultrasonic distance sensor and an area velocity meter.

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## LAKE MONITORING DATA

### TELEMETRY LEVEL LOGGERS

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Four telemetry level loggers were installed to monitor the lake levels on Spring, Prior, Fish, 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.

### DNR STAFF GAGES

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

### THREE RIVERS PARK DISTRICT

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Three Rivers Park District monitored five lakes in 2020: 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

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The Citizen Assisted Monitoring Program (CAMP) program was coordinated by Metropolitan Council, and locally coordinated by PLSLWD. Volunteers collected samples on eight lakes through the CAMP program in 2020. Four new lakes were sampled in 2020 and five new volunteers joined the program.

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
Sutton	Ashley & Laura Murr

Samples are normally collected every other week during ice-free conditions; however the start of the sampling season was delayed until June as a result of Covid-19. Sampling includes parameters such as Secchi depth, phosphorus, and chlorophyll-a.

### AQUATIC VEGETATION SURVEYS

Using a point-intercept survey (evenly-spaced sampling locations around the lake), Blue Water Science conducted summer aquatic vegetation surveys on four lakes – Fish Lake, Upper Prior Lake, Lower Prior Lake and Spring 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 springtime on Spring, Fish, Upper Prior, and Lower Prior Lakes to determine if treatment was needed. Aquatic vegetation management for curly-leaf pondweed occurred on Spring, Lower Prior and Upper Prior Lakes in 2020.

### AQUATIC VEGETATION DENSITY MAPPING

Using a fish finder, 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, connecting the points collected in the aquatic vegetation surveys. BioBase mapping is used to fill in the gaps and compliment the work of the vegetation surveys.

Volunteers and staff mapped all or parts of Crystal Lake, Lower Prior Lake, Upper Prior Lake, Spring Lake, Fish Lake and Jeffers Fish Pond in 2020.

The benefits of this project include:

- A better understanding of density of vegetation in lakes
- A better understanding of plant area coverage in lakes (% of lake bottom growing plants)
- More accurate bathymetric maps
- 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 including for sports fishing

**Table 1 Percent of Lake Bottom Growing Aquatic Vegetation**

Lake	Plant Area Coverage %	Year
Arctic	6	2019
Buck	47	2016
Cates	99	2018
Crystal	31	2020
Fish	24	2020
Jeffers Fish Pond	83	2020
Little Prior	50	2016
Lower Prior	32	2020
Spring	21	2020
Upper Prior	23	2020

## PRECIPITATION

One volunteer, Richard Schultz, collected rain and snowfall data daily in 2020. PLSLWD forwarded the data to the State Climatologist. District staff also recorded daily precipitation at the office location. The District also has a weather station at Spring Lake Town Hall which logged and transmitted data to Weather Underground.

## REGULATION

### EASEMENT INSPECTIONS

The District holds many conservation easements and development agreements that were acquired while permits were being actively issued. These easement and agreement restrictions provide water quality benefits by protecting water resources with buffers and water quality features. The District's conservation easement program contains three components to ensure protection of its investments: yearly monitoring inspections, effective communication with landowners and a strong enforcement policy.

In 2020, staff inspected the District's 37 conservation easements. The District's conservation easements are on property owned by 172 landowners and the number of properties in compliance with the easement terms has grown since consistent inspections began in 2015. In 2020, 76% of properties were in compliance. Of the remainder, most of the easements have only minor violations of the easement terms. Staff are working with landowners that have larger violations to resolve the violations and bring their easement area into compliance. Many landowners with violations have made improvements, correcting some, if not yet all, of the easement violations on their property.



Staff wrote letters to landowners advising them of the violations and offering to provide them further assistance to ensure the violations would not continue. The most common easement violations were mowing, yard waste, storage (wood etc.), dumping/trash, landscaping, and planting non-natives. During the 2021 inspections, staff will concentrate on monitoring the violating properties and working with landowners to resolve issues.

## PERMIT ACTIVITY

The District inspected active permits to ensure that conditions of the permit were being met. The District issued four new permits in 2020:

- 20.01 Pickleball Court
- 20.02 Pike Lake Culvert
- 20.03 Hwy 282
- 20.04 Strauss Driveway Removal

Weekly permit inspections began in April and went through November 2020. Inspections also continued from previous years' open permits: 17.01, 17.03, 18.01, 18.02, 18.03, 18.04, 18.05, 18.06, 19.01, 19.02 and 19.03.

In addition, the District continued to close out permits as the projects met all necessary requirements.

## EDUCATION AND OUTREACH

### CITIZEN ADVISORY COMMITTEE

PLSLWD staff continued to conduct and attend monthly Citizen Advisory Committee (CAC) meetings. CAC meeting minutes and monthly updates were included in every Board meeting package and a Board member was assigned to attend CAC meetings. The committee experienced a revitalization in 2020, as a number of inactive members left the committee, and several new people joined the CAC.

The CAC researched and provided recommendations to the Board of Managers on several topics including fish stocking and the Internet Landing Installed Device System (I-LIDS), a tool for reminding boaters to inspect their boats to prevent the spread of aquatic invasive species (AIS). The CAC normally does community outreach at Lakefront Days in August; however, Lakefront Days was canceled in 2020.

### 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.

The District and the Scott SWCD hosted a native prairie workshop, a shoreline workshop, a “Lawns to Legumes” workshop, and a smart salting workshop for homeowners. For the first time, the workshops were conducted via a webinar format; this allowed the workshops to be recorded and posted on YouTube and the District’s website to allow on-demand viewing.

The District conducted a tour of the District’s Upper Watershed highlighting potential project areas from the draft Upper Watershed Blueprint report. The District did not participate in Prior Lake’s Lakefront Days this year because of the pandemic.

The District and the City of Prior Lake typically coordinate Clean Water Clean-Ups, where volunteers participate in removing buckthorn and preventing organic material in local parks from being deposited in local waterbodies through stormwater runoff. The spring event was canceled as a result of the pandemic. In the fall, the District tried a new format and did a remote clean up event, allowing people to come anytime over the course of a weekend. The new format was successful with over 50 volunteers participating.

The District provided an annual presentation to the Cities of Prior Lake, Savage, Shakopee, Scott WMO, Sand Creek and Spring Lake Townships. In addition, the District gave presentations at the annual meetings of the Prior Lake and Spring Lake Associations. The District gave several presentations to local classrooms on various topics including carp management, watershed management and water quality, including presentations over a videoconferencing platform.

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## PLSLWD 50<sup>TH</sup> ANNIVERSARY



In 2020, the Prior Lake-Spring Lake Watershed District celebrated its 50<sup>th</sup> Anniversary. To highlight some of the District’s work over the last 50 years, a 50<sup>th</sup> Anniversary brochure was created, outlining District history and projects in the watershed. The brochure was well received and distributed to partners and shared with local residents. A 50<sup>th</sup> celebration and trivia night at a local brewery was planned but was canceled due to the pandemic.

The Hike the Watershed challenge was developed to get local residents involved and help them explore some of the lesser-known waterbodies in the District. The challenge highlighted 11 different hikes and turned out to be an activity very well suited for the pandemic. The challenge was publicized with an article in the local newspaper, on our website and social media. Flyers with maps of the hikes were placed at parks around the District and periodically rotated around to other parks.



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## PRESS AND SOCIAL MEDIA

The District submitted 11 articles to be published in the Prior Lake American. The District also provided articles for the Prior Lake and Spring Lake Association newsletters. Staff submitted 10 articles to be published in the bi-monthly Scott County SCENE. In addition, other media outlets and newsletters were used to publicize District events and initiatives.

The District's carp management program won the MAWD Program of the Year award in 2020 and PLSLWD Project Manager, Maggie Karschnia, was recognized as the 2020 Outstanding Watershed Employee by the Minnesota Board of Soil & Watershed Resources (BSWR).

Lake levels for Prior and Spring Lakes were updated automatically on the website year-round and for Fish and Pike Lakes during the growing season. Numerous Facebook and Twitter posts were made on a wide variety of topics. Nine videos were published on the District's YouTube channel, in addition to the video recordings of the District's 2020 Board of Managers meetings.

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## PRIOR LAKE OUTLET CHANNEL

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### OUTLET STRUCTURE

The Prior Lake Outlet Structure was constructed in 1983 to address high lake level issues on Prior Lake, which does not have a natural outlet. The structure received a major update in 2010 to incorporate an improved design.

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### 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 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. Projects specific to 2020 included installation of a security camera at the outlet structure and televising the outlet pipe to check conditions and need for replacement or repair.



## FLOOD DAMAGE REPAIR

The District sustained over \$1 million in damages in the Prior Lake Outlet Channel due to the 2014 flooding events. The District was approved for federal funding for repairs from the Federal Emergency Management Administration (FEMA) for Emergency Protective Measures (temporary Spring Lake Dam); Culverts and Crossings; Downed Trees and Sediment Delta and Bank Erosion.

By the end of 2020, all of the projects were completed including extensive bank erosion repair work along the channel.

## 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 Rule 8410 required that local units of government complete their Surface Water Management Plans and Comprehensive Plans by December 31, 2018. In 2020, the PLSLWD approved the City of Savage's Local Water Plan in March and the City of Shakopee's Surface Water Management Plan in April. The District had previously reviewed and/or approved: the Scott WMO's Comprehensive Water Resources Management Plan; Lower MN River Watershed District's Watershed Management Plan and Prior Lake's Local Surface Water Management Plan.

## EVALUATION OF PROGRESS

The following are major projects and programs completed since 2016 PRAP Level II Report:

- The Prior Lake Stormwater Management and Flood Mitigation Study (2016 Flood Study) was completed. Two of the three recommendations of the Flood Study were also completed:
  - The City of Prior Lake completed a Flood Response Policy to coordinate temporary protection measures during flood events.
  - The District updated its Management Policy and Operating Procedure and received approval by the Minnesota Department of Natural Resources (MnDNR) to open the low-flow gate at its own discretion, by following the Procedure.
  - The third recommendation was to meet the first-tier, high priority Prior Lake protection level of 905.5 for the 25-year return period. In 2020, the District completed design work and contract bidding for its first flood storage project, the Sutton Lake Outlet Modification Project.

- FEMA-funded projects resulting from the 2014 flood are now complete. Nearly \$1 million in damages to the Prior Lake Outlet Channel included stream bank erosion, downed trees, sediment delta and culvert replacements.
- Four Lower Prior Lake Retrofit Implementation Projects were completed which will reduce phosphorus by 33 lb. or 10% of the total drainage area phosphorus load to Lower Prior Lake. In addition, the Fish Point Park Water Quality Improvements Project was completed and was expected to reduce phosphorus from entering Lower Prior Lake by 34 pounds per year.
- The Farmer-Led Council (FLC) was created in 2013 to develop and guide the implementation of strategies the District will use to accomplish agriculture's share of the nutrient reduction goal. The FLC has expanded to include more area farmers who participate in regular meetings, attend workshops, participate in new incentive programs like the Lake Friendly Farm and Cover Crop Incentive Program.
- Carp management has grown from sponsoring carp tournaments and occasional seines to implementing a comprehensive Integrated Pest Management Plan (IPM Plan) that includes population estimates, installing carp barriers, large open and closed water seines and an Accelerated Carp Management Plan that focuses upon innovative techniques to reduce the carp population in Spring and Upper Prior Lakes.
- Two demonstration shoreline restoration projects were completed on Spring Lake—on the District's property and at the City of Prior Lake's property, Raymond Park. Restoration work occurred on a shoreline enhancement and prairie restoration project in 2019 on Fish Lake.
- Conservation easements were not a high priority of the District prior to 2015. All 37 conservation easements, which represent 155 landowners, have been inspected annually and most have responded to easement violations by correcting problems or making improvements.
- The Citizen Advisory Committee met monthly and participated in Lakefront Days and Clean Water Clean-ups. In 2019, they initiated a new action plan for CAC-sponsored activities and work for 2020 and beyond, such as fish stocking, AIS/Signage, shoreline restoration and the District's 50<sup>th</sup> Anniversary.

## FINANCIAL REPORT

The 2020 PLSLWD Audit was completed by Abdo, Eick and Meyers LLP, and will include both the District's Annual Financial Report and the Independent Auditor's Report on Compliance with Minnesota Legal Compliance Guide for Local Governments for the year ended December 31, 2020. A copy of the 2020 Annual Audit will be available for review on the District website and at the District office after June 8, 2021, when it is scheduled to be approved by the Board of Managers.

### 2020 FINANCIAL SUMMARY

Values presented in the chart and graph below are unaudited. Please refer to the 2020 Annual Audit for more details, which can be found at [www.plslwd.org](http://www.plslwd.org)

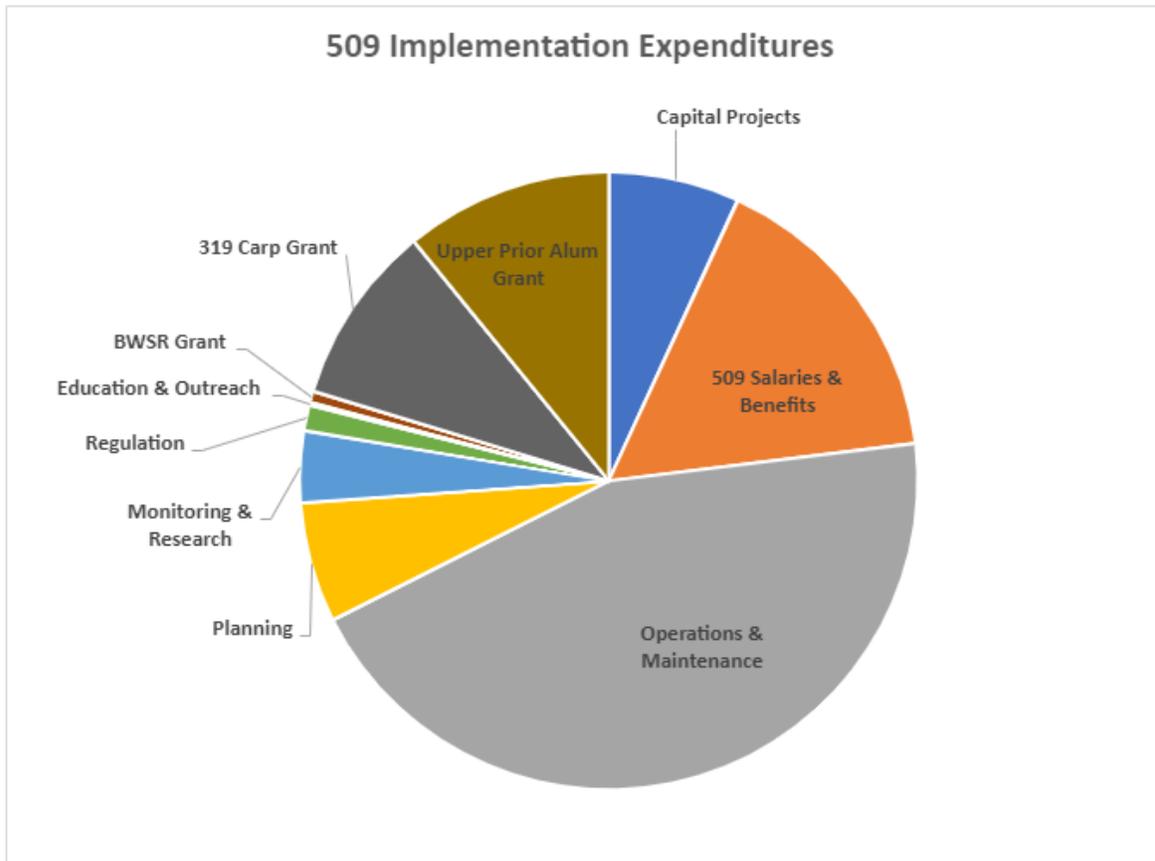
## 2020 Project Expenditures

### 2020 FINANCIAL SUMMARY

Fund	Starting Balance	Approved Budget	Tax Levy Revenue *	Additional Revenue **	Transfers to/(from)	Expenditures	Ending Balance
General	\$305,958	\$225,739	\$225,946	\$1,968	\$0	\$192,788	\$341,084
509 Implementation	\$1,240,098	\$2,879,440	\$1,388,782	\$584,223	\$(242,863)	\$2,320,210	\$650,030
MOA/JPA Funds	\$400,758		\$0	\$103,119	\$90,220	\$131,650	\$462,447
Bond Debt Service	\$21,984	\$177,175	\$176,167	\$123	\$152,643	\$350,917	\$0
<b>Total</b>	<b>\$1,968,798</b>	<b>\$3,282,354</b>	<b>\$1,790,895</b>	<b>\$689,433</b>	<b>\$0</b>	<b>\$2,995,565</b>	<b>\$1,453,561</b>

\*Tax levy revenues shown are actual tax levy dollars collected. The 2020 tax levy was \$1,794,632.

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



**GRANTS**

Grants obtained by the District that were active in 2020 were as follows:

- Internal Loading BMPs in Spring and Prior Lakes grant*  
**Goal:** Utilize integrated pest management principles to effectively manage the common carp population and manage aquatic vegetation to reduce the levels of phosphorus in Spring and Prior Lakes.  
**Funding Source:** 319 Grant through the MPCA  
**Total Grant Amount:** \$80,300  
**Effective:** February 14, 2019 to December 31, 2021
- Watershed-based Implementation Funding grant*  
**Goal:** Utilize integrated pest management principles to effectively manage the common carp population and aquatic vegetation to reduce the levels of phosphorus in several District lakes and wetlands including Spring Lake, Prior Lake, Pike Lake, the Geis wetland and the Northwoods wetland. The District’s Farmer-Led Council will hold three meetings for the District’s agricultural community to discuss new and innovative conservation practices within

Scott County. Two feasibility studies will be conducted to determine suitability for possible future projects.

**Funding Source:** BWSR

**Total Grant Amount:** \$185,000

**Effective:** May 15, 2019 to December 31, 2021

- Raymond Park Restoration Project grant  
**Goal:** Restore the shoreline and oak savanna of Raymond Park (located on the south side of Spring Lake) and convert the existing turfgrass to a low-maintenance grass mix.  
**Funding Source:** Conservation Legacy Partners through the DNR  
**Total Grant Amount:** \$24,000  
**Effective:** February 8, 2017 to June 30, 2020
- Fish Lake Shoreline & Prairie Restoration Project grant  
**Goal:** Enhance the shoreline and reconstruct a prairie on Fish Lake at Spring Lake Town Hall.  
**Funding Source:** Conservation Legacy Partners through the DNR  
**Total Grant Amount:** \$13,800  
**Effective:** April 4, 2019 to June 30, 2022
- Upper Prior Alum Treatment grant  
**Goal:** Treat Upper Prior Lake with alum to improve water quality in the lake by reducing internal phosphorus loading.  
**Funding Source:** BWSR – Clean Water Funds grant  
**Total Grant Amount:** \$449,500  
**Effective:** February 2020 to December 31, 2022
- Sutton Lake Outlet Structure Project grant  
**Goal:** Install outlet structure on Sutton Lake to control high flows and reduce downstream flooding.  
**Funding Source:** DNR – Flood Damage Reduction grant  
**Total Grant Amount:** \$207,000  
**Effective:** July 1, 2020 to December 30, 2021

## 2021 WORK PLAN

The following is a summary of implementation activities planned to be completed in 2021 and the amount budgeted for that activity.

Implementation Fund	\$2,133,416
General Fund	\$166,126

### CAPITAL PROJECTS

In 2020, the District will partner with Spring Lake and Sand Creek Townships and the City of Prior Lake on Public Infrastructure Partnership Projects. In addition, the District will finish construction on the Sutton Lake Flood Mitigation Project in early 2021.

The Carp Management Program will continue with its three main components: track, block and remove. The carp will be tracked using PIT tags, radio tags, and visual observations. The Tadpole Pond carp barrier will be installed in 2021 to block carp from spawning areas. The District plans to stock bluegills in several wetlands where carp are known to spawn to reduce carp reproductive success. The District will attempt to remove a significant population of carp from Spring and Upper Prior Lakes in 2021.

### OPERATIONS AND MAINTENANCE

The Cost Share and Residential Incentives programs and Farmer-Led Council will be continued. Operation and maintenance of the ferric chloride facility will continue. The District will also complete an updated NPDES/SDS Permit for the Ferric Chloride Plant. Aquatic vegetation treatment may occur in Prior and Spring Lakes, depending upon the survey reports. Vegetation maintenance will continue on restoration projects like the District’s Spring Lake parcel and the Fish Lake restoration project at Spring Lake Town Hall.

### PLANNING

The District will finalize the Upper Watershed Blueprint study in 2021. The District will move forward with projects identified in the Upper Watershed Blueprint, including feasibility studies for two water quality projects identified.

### MONITORING AND RESEARCH

The District will continue its monitoring program in 2020, which includes stream monitoring, flow monitoring, lake quality, lake level, plankton surveys, plant surveys, and plant density monitoring. The District will begin a wetland quality and macroinvertebrate monitoring program in 2021.

## REGULATION

The District will complete an MS4 Annual Report and apply for a new MS4 permit. The District's rules were last substantially revised in 2003. A decade later, planning was undertaken by the District and its municipal partners to advance rule revisions, but ultimately, the District decided not to move forward with finalization and adoption of a new set of rules. The new rule for Illicit Discharge, Rule P, was adopted by the District on December 10, 2013. Four rules were revised and adopted to meet MS4 requirements on October 13, 2015 in order to meet MS4 permit requirements: A (Definitions), D (Stormwater Management), E (Erosion & Sediment Control) and P (Illicit Discharge). The District convened a Rules TAC in August of 2017 and rule revisions are expected to be completed in 2021. The District will continue enforcing its Rules, inspecting permit sites and monitoring conservation easements.

## 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 innovative public outreach and education opportunities. Updating the website and writing articles for submittal to local newspapers will continue. Two tours are planned in 2020 to highlight the Sutton Lake outlet project and the Prior Lake outlet channel.

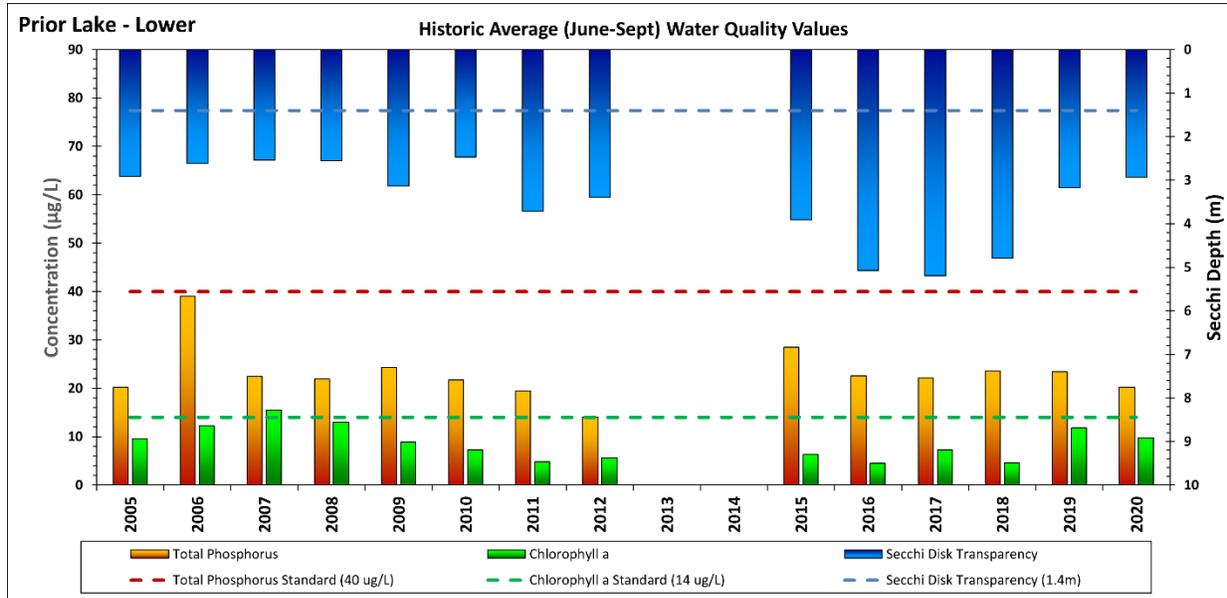
## PRIOR LAKE OUTLET CHANNEL

Recurring annual operations such as inspections and vegetation management will continue in 2021. Repair work to fix major damage to the channel from 2014 flooding was completed in 2020 with funding from FEMA and the State of Minnesota, however other bank erosion issues remain that were not caused by the flood. Repair for these bank erosion projects will be engineered in 2021, with construction planned for 2022. The Ridge Creek development and channel restoration in Shakopee will re-meander a section of the channel and be completed in fall of 2021. Projects and other maintenance will be discussed and decided upon by the Technical Advisory Committee and the Cooperators (Memorandum of Agreement) members.

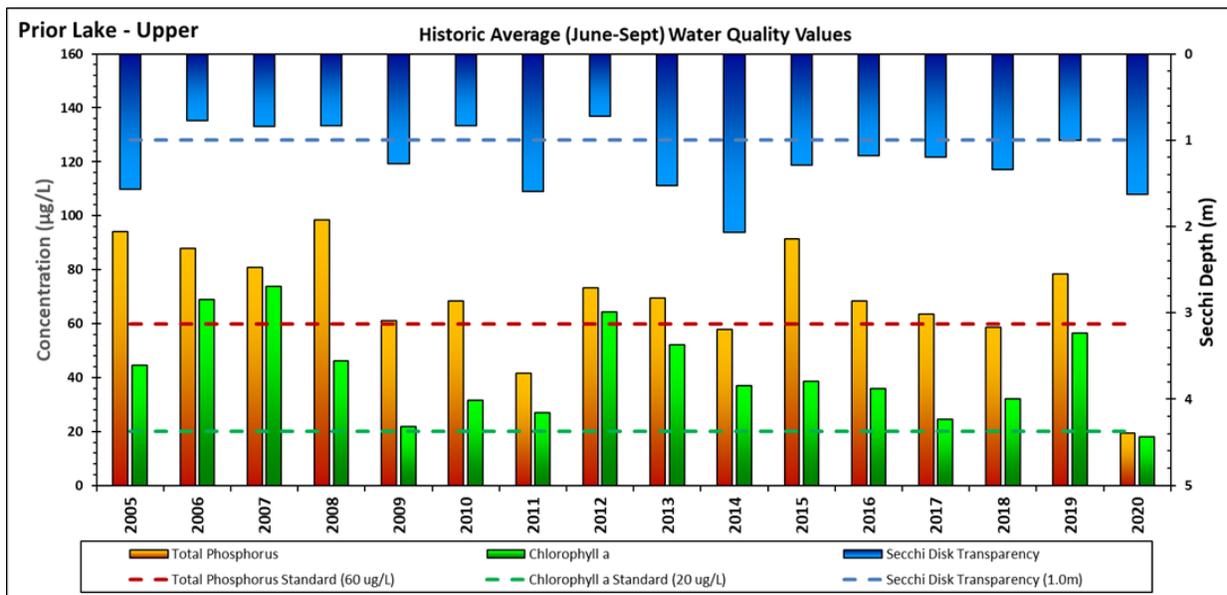
## WATER QUALITY GRAPHS

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

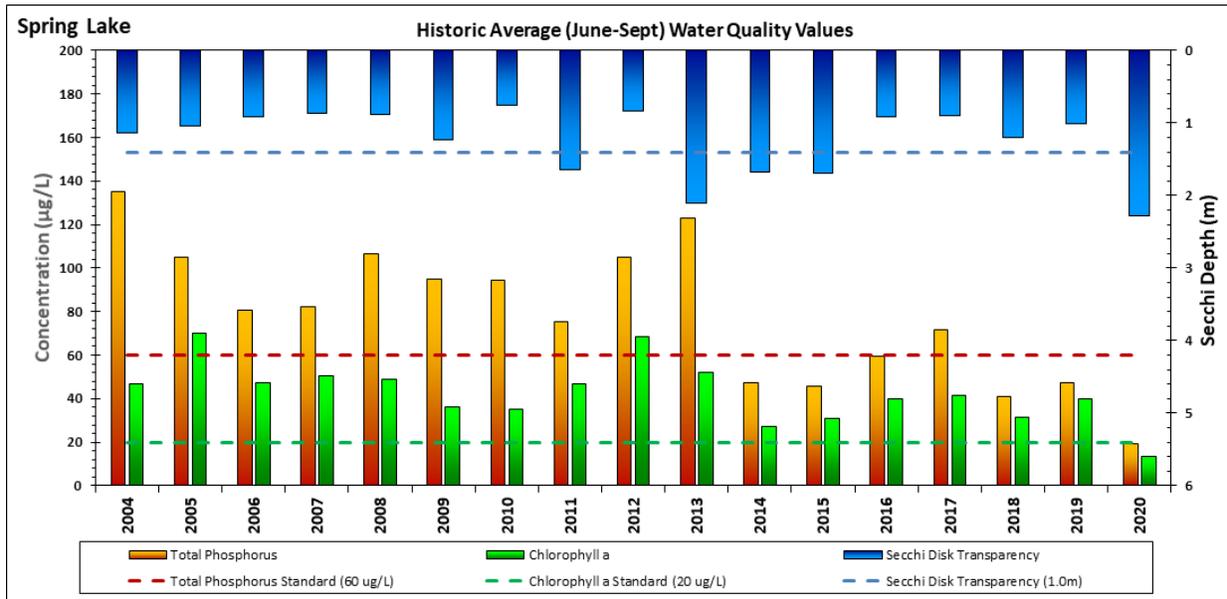
## Lower Prior Lake



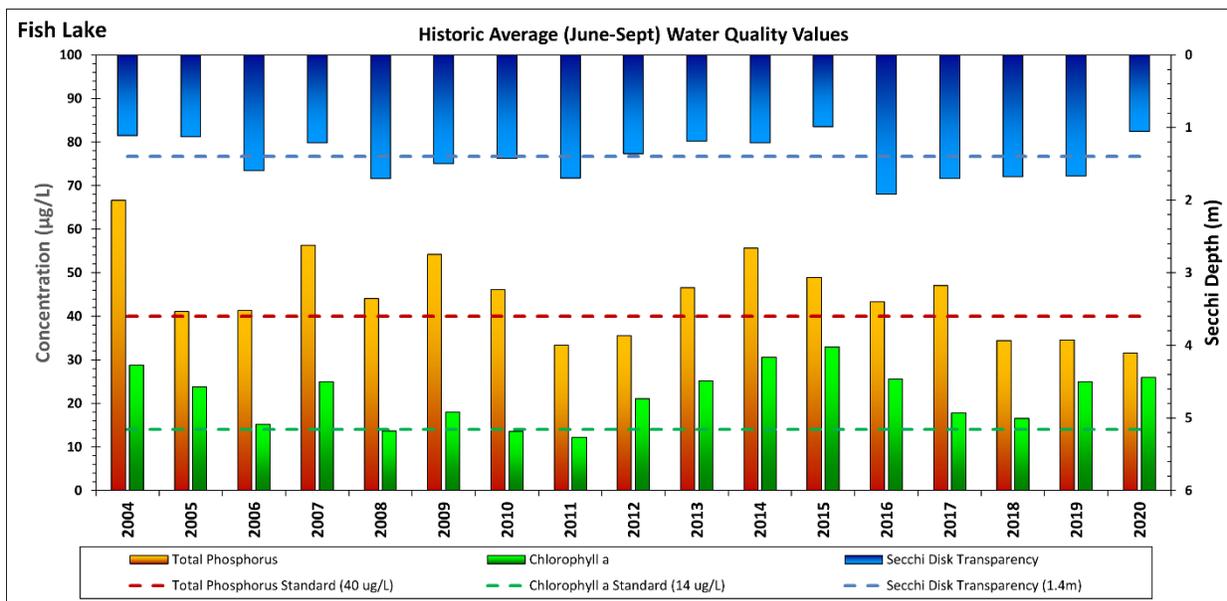
## Upper Prior Lake



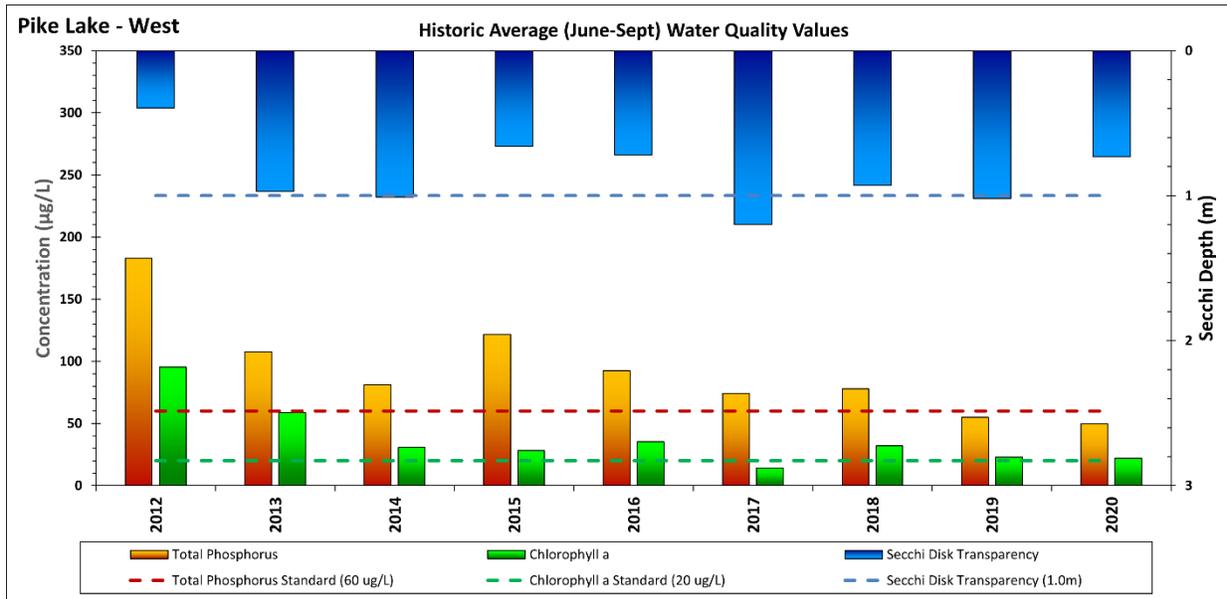
# Spring Lake



# Fish Lake



## Pike Lake - West



## Pike Lake - East

