



# PRIOR LAKE SPRING LAKE WATERSHED DISTRICT

## AGENDA

Tuesday, September 14, 2021

**6:00 PM**

Council Chambers  
Prior Lake City Hall

### BOARD OF MANAGERS:

**Mike Myser, President; Curt Hennes, Vice President; Bruce Loney, Treasurer;  
Steve Pany, Secretary; and Frank Boyles, Manager**

Note: Individuals with items on the agenda or who wish to speak to the Board are encouraged to be in attendance when the meeting is called to order.

### Board Workshop 4:00 PM – Parkview Conference Room

- Upper Watershed Blueprint Analysis Update (Joni Giese)
- 2022 Budget Draft (Joni Giese)
- Debt Issuance Time Frame (Joni Giese)
- PLSLWD Committees Appreciation (Mike Myser)
- Staffing Update and Staff Organization Chart (Joni Giese)
- Carp Program: Consultants vs. Staff Efforts (Curt Hennes)
- District Records: Inventory and Management (Steve Pany)
- Fish Lake Impaired Water Delisting (Curt Hennes)
- Lake Vegetation Policy and AIS Rapid Response Plan Status (Joni Giese)

6:00 – 6:05 PM 1.0 **BOARD MEETING CALL TO ORDER & PLEDGE OF ALLEGIANCE**

6:05 – 6:10 PM 2.0 **PUBLIC COMMENT**

If anyone wishes to address the Board of Managers on an item not on the agenda or on the consent agenda, please come forward at this time. Go up to the podium, turn on the microphone and state your name and address. (The Chair may limit your time for commenting.)

6:10 - 6:20 PM **PUBLIC HEARING – 2022 Preliminary Proposed Budget and Levy**

- 2022 Proposed Levy—Resolution 21-348

6:20 - 6:25 PM 3.0 **APPROVAL OF AGENDA** (Additions/Corrections/Deletions)

6:25 - 7:25 PM 4.0 **OTHER OLD/NEW BUSINESS**

- 4.1 2021 Intern Update Presentation: Camille Will & Janae Carlson (Discussion Only)
- 4.2 Programs & Projects Update (Discussion Only)
- 4.3 2021 - 2022 Integrated Pest Management Plan (Vote)
- 4.4 Wise Addition Development Agreement (Vote)
- 4.5 Mesenbrink Parcel Development Agreement (Vote)
- 4.6 Manager Presentations & Liaison Updates (Discussion Only)
  - Manager Loney – Blue Water Science (Steve McComas) CAC Presentation

- 7:25 - 7:30 PM    5.0    **CONSENT AGENDA**  
 The consent agenda is considered as one item of business. It consists of routine administrative items or items not requiring discussion. Items can be removed from the consent agenda at the request of the Board member, staff member, or a member of the audience. Please state which item or items you wish to remove for separate discussion.
- 5.1    Meeting Minutes—August 10 Board Workshop
  - 5.2    Meeting Minutes—August 10 Board Meeting
  - 5.3    Meeting Minutes—August 26 CAC Meeting
  - 5.4    Claims List & Visa Expenditures Summary
  - 5.5    Sutton Lake Outlet Access Improvement: EOR Work Order
  - 5.6    City of Prior Lake Office Lease Agreement
- 7:30 - 7:50 PM    6.0    **TREASURER’S REPORT**  
 6.1    Monthly Financial Reports (Discussion Only)
- Fund Performance Analysis
  - Cash and Investments Summary
  - Cash Flow Projections
- 7:50 - 7:55 PM    7.0    **UPCOMING MEETING/EVENT SCHEDULE:**
- Clean Water Clean Up Event, Saturday, September 25, 9:45 am – 12:00 pm  
 (Meet at Lakefront Park)  
<https://www.signupgenius.com/go/10C0F4FA9AF28A1F4C61-clean>
  - CAC Meeting, Thursday, September 30, 6:00 – 8:00 pm (Parkview Conference Room)



## Resolution 21-348

Certifying the Preliminary 2022

Administrative and Metropolitan Water Management Tax Levy

WHEREAS the Prior Lake-Spring Lake Watershed District (PLSLWD) is a watershed management organization and political subdivision of the State of Minnesota established under and operating with powers and purposes set forth at Minnesota Statutes Chapters 103B and 103D;

WHEREAS the PLSLWD has an approved watershed management plan under Minnesota Statutes Section 103B.231;

WHEREAS Minnesota Statute Section 103D.905, subdivision 3, authorizes the PLSLWD to levy an *ad valorem* tax on real property within the PLSLWD for the administrative expenses of the District not to exceed \$250,000.00;

WHEREAS Minnesota Statutes Section 103B.241, subdivision 1, authorizes the PLSLWD to levy an *ad valorem* tax on real property within the PLSLWD sufficient to pay the increased costs to the PLSLWD to prepare and implement its watershed management plan;

THEREFORE, BE IT RESOLVED that in accordance with Minnesota Statutes Section 103D.915, the Board hereby approves and certifies to the Scott County Auditor an *ad valorem* levy in the total amount of \$1,848,935 to be levied on all taxable property within the PLSLWD, composed of the following:

- \$ 246,200 for the General Fund under authority of Minnesota Statutes Section 103D.905, subdivision 3;
- \$ 1,602,735 to implement the watershed management plan under Minnesota Statutes Section 103B.241, subdivision 1, for the general projects and programs of the PLSLWD.

The question was on the adoption of the Resolution and there were \_\_\_ yeas and \_\_\_ nays as follows:

Yea    Nay    Absent

MYSER  
BOYLES  
HENNES  
PANY  
LONEY

Upon vote, the chair declared the resolution adopted.

\_\_\_\_\_  
Steve Pany, Secretary

Dated: \_\_\_\_\_, 2021

Res. 21-348  
September 2021

**PLSLWD Board Staff Report**  
September 9, 2021



**Subject |** 2021 Interns Presentation

**Board Meeting Date |** September 14, 2021

**Item: 4.1**

**Prepared By |** Joni Giese, District Administrator

**Attachment |** None

**Action |** No motion required. Discussion only.

**Background**

Jenae Carlson and Camille Will are the District's 2021 interns. Annually, the District hires two summer interns. The intern program provides additional staff support during the summer months when staff workloads are high. It also provides the interns experience working on water resource projects. Jenae and Camille primarily supported the District's carp management, lake monitoring, and conservation easement activities.

**Discussion**

Camille and Janae will make a brief presentation to the Board of Managers highlighting their work and what they learned.





### SEPTEMBER 2021 PROGRAMS AND PROJECTS UPDATE

PROGRAM OR PROJECT	LAST MONTH'S STAFF ACTIVITIES	NEXT STEPS
<b>Storage &amp; Infiltration Projects (Sutton Lake)</b> <i>Project Lead: Joni/Jaime</i>	<ul style="list-style-type: none"> <li>Worked with EOR to develop a Scope of Services to design a new access drive to the outlet.</li> </ul>	<ul style="list-style-type: none"> <li>Continue to monitor for erosion &amp; sediment control until site is fully established with vegetation.</li> <li>Complete design work for installing culvert by county road to improve access to site.</li> <li>Execute change order with contractor for access drive work.</li> </ul>
<b>Carp Management</b> <i>Rough Fish Management (Class 611)</i> <i>Carp Management Project (Class 750 &amp; 751)</i> <i>Project Lead: Jeff</i>	<ul style="list-style-type: none"> <li><b>Tracking:</b> Continued to track radio-tagged carp across Spring and Prior Lakes. Two radio tagged carp are still found in Lower Prior Lake. Begun installing new radio-tags in Spring and Lower Prior Lakes. There will be 10 new Radio-tags installed this fall as 2018/2019 radio-tag battery lifespans diminish. Concurrent CPUE efforts will be recorded while efforts to collect carp for radio-tagging continue.</li> <li><b>Removals:</b> Baited Box nets were uninstalled. Spring Lake crib uninstalled.</li> <li><b>Other:</b> Update 2021 IPM Plan.</li> </ul>	<ul style="list-style-type: none"> <li>PLSLWD and WSB staff will continue to track the tagged carp.</li> <li>Work with WSB and fabricator to build Tadpole barrier. PLSLWD and WSB will install barrier.</li> <li>Begin planning for 2022 carp management program.</li> <li>Continue Implanting radio-tags in Spring and Upper Prior Lake carp.</li> </ul>
<b>Ferric Chloride System Operations</b> <i>Project Lead: Jeff</i>	<ul style="list-style-type: none"> <li>Intermittent flow and sampling.</li> </ul>	<ul style="list-style-type: none"> <li>Continue 1x/week sampling, 3x/week inspections, and flow measurements as stream flow allows.</li> </ul>
<b>Farmer-Led Council</b> <i>Project Lead: Jaime</i>	<ul style="list-style-type: none"> <li>Hosted Lake Friendly Farm event held at VFW and attended FLC meeting after.</li> <li>Continued planning efforts for the Growing Healthy Soils Event with SWCD.</li> <li>Outreach to farmers to get additional farmers enrolled in cover crop program.</li> </ul>	<ul style="list-style-type: none"> <li>Promote &amp; advertise the Cover Crop Initiative for this fall round.</li> <li>Explore expansion of FLC initiatives County-wide with local partners.</li> <li>Healthy Soils event planning.</li> </ul>

## SEPTEMBER 2021 PROGRAMS AND PROJECTS UPDATE

PROGRAM OR PROJECT	LAST MONTH'S STAFF ACTIVITIES	NEXT STEPS
<b>Cost Share Incentives</b> <i>Project Lead: Jaime</i>	<ul style="list-style-type: none"> <li>N/A</li> </ul>	<ul style="list-style-type: none"> <li>Review third round of potential cost share projects in October.</li> </ul>
<b>Spring Lake Parcel Restoration Project</b> <i>Project Lead: Shauna</i>	<ul style="list-style-type: none"> <li>Monitored the invasive species and restoration progress on the parcel.</li> </ul>	<ul style="list-style-type: none"> <li>AES will visit in September for buckthorn treatment.</li> <li>Monitor restoration and control invasive species during growing season.</li> <li>Install plant identification signs.</li> </ul>
<b>Fish Lake Shoreline &amp; Prairie Restoration Project</b> <i>Project Lead: Shauna</i>	<ul style="list-style-type: none"> <li>Monitored the invasive species and restoration progress at project site.</li> </ul>	<ul style="list-style-type: none"> <li>MN Native Landscapes restoration maintenance &amp; buckthorn treatment and removal visit in late Sept.</li> <li>Finish interpretive panel design, order &amp; install interpretative signs for project.</li> </ul>
<b>Lower Prior Lake Retrofit Projects</b> <i>Project Lead: Jaime</i>	<ul style="list-style-type: none"> <li>Corresponded with City on closing out project and transferring maintenance responsibilities.</li> </ul>	<ul style="list-style-type: none"> <li>Finalize maintenance acceptance materials with the City of Prior Lake.</li> <li>Install interpretive signs for projects.</li> </ul>
<b>Feasibility Reports</b> <i>Project Lead: Jaime</i>	<ul style="list-style-type: none"> <li>Reviewed Sutton Lake IESF initial concept design.</li> <li>Conducted landowner outreach &amp; field work for Buck Lake East Wetland Enhancement study.</li> <li>Continued to explore relocating the iron sand filter to the west of CR-17 for the Spring Lake West project.</li> </ul>	<ul style="list-style-type: none"> <li>Explore options at the Buck Lake East Wetland Enhancement site. Schedule meeting with landowners to gauge interest and explore mutual goals for a future project.</li> <li>Refine concept plan for Sutton Lake IESF and work with landowner on design options.</li> <li>Update Spring Lake West Feasibility Study with new project location.</li> </ul>
<b>Website and Media</b> <i>Project Lead: Shauna</i>	<ul style="list-style-type: none"> <li><b>Website articles posted:</b> none</li> <li><b>Prior Lake Am and SCENE:</b> none</li> <li><b>Facebook &amp; Twitter</b> – Baited box trap volunteers, Chamber Fest, Wetland monitoring, Hike the Watershed event, EWM on Spring Lake, Lake Friendly Farm event, historic water levels</li> </ul>	<ul style="list-style-type: none"> <li>Continue writing posts and updates about projects.</li> <li>Continue tweeting and updating Facebook and LinkedIn about projects &amp; news.</li> </ul>
<b>Citizen Advisory Committee</b> <i>Project Lead: Joni</i>	<ul style="list-style-type: none"> <li>August 26 CAC Meeting planning and attendance.</li> <li>Conference call with Manager Loney and Steve McComas (Blue Water Science) to discuss presentation to CAC in September.</li> </ul>	<ul style="list-style-type: none"> <li>Plan &amp; coordinate September 30 CAC meeting.</li> <li>Work with CAC subcommittee as needed to support development of new CAC member orientation packet.</li> </ul>

## SEPTEMBER 2021 PROGRAMS AND PROJECTS UPDATE

PROGRAM OR PROJECT	LAST MONTH'S STAFF ACTIVITIES	NEXT STEPS
<b>MS4 Education Program</b>  <i>Project Lead: Jaime</i>	<ul style="list-style-type: none"> <li>Hike the Watershed at Spring Lake Regional Park</li> <li>PLOC Tour Planning</li> </ul>	<ul style="list-style-type: none"> <li>Clean Water- Clean up event (storm stenciling)</li> <li>PLOC Tour</li> </ul>
<b>Monitoring Program</b>  <i>Project Lead: Jeff</i>	<ul style="list-style-type: none"> <li>Data management</li> <li>Streams sampling intermittent with flow. Completed storm event sampling</li> <li>Lake sampling continues</li> <li>Wetland bug and plant indexing and overall score evaluations</li> <li>Water quality database update/maintenance</li> <li>Lake vegetation mapping completed</li> </ul>	<ul style="list-style-type: none"> <li>Data management</li> <li>Continue lake and stream chemistry sampling when flowing</li> <li>Flow measurements when flowing</li> </ul>
<b>Aquatic Vegetation Management and Surveys</b> <i>(Class 626 and 637)</i> <i>Project Lead: Jaime/ Jeff</i>	<ul style="list-style-type: none"> <li>Summer vegetation surveys</li> <li>EWM on Spring Lake</li> </ul>	<ul style="list-style-type: none"> <li>Create vegetation management policy</li> <li>Create Rapid Response plan</li> </ul>
<b>AIS</b> <i>Project Lead: Shauna</i>	<ul style="list-style-type: none"> <li>Met with ESC to adjust I-LIDS sensors on 8/4.</li> <li>Rapid Response meeting on 8/12.</li> </ul>	<ul style="list-style-type: none"> <li>Continue to monitor I-LIDS video and reports for violations.</li> <li>Continue boat inspections</li> <li>Maintain I-LIDS system</li> <li>Continue drafting AIS Rapid Response Plan</li> </ul>
<b>Rules Revisions</b>  <i>Project Lead: Joni</i>	<ul style="list-style-type: none"> <li>None</li> </ul>	<ul style="list-style-type: none"> <li>Resolve outstanding issues working with equivalency partners.</li> <li>Board review and approval of rule revisions.</li> </ul>
<b>BMPs &amp; Easements</b>  <i>Project Lead: Joni/Shana</i>	<ul style="list-style-type: none"> <li>Continued to work with landowners to resolve existing violation issues on their properties.</li> <li>Met with landowners to discuss easement violations.</li> </ul>	<ul style="list-style-type: none"> <li>Work with landowners to resolve easement violations.</li> </ul>
<b>Permitting</b>  <i>Project Lead: Joni/ Shauna</i>	<ul style="list-style-type: none"> <li>Completed inspections on permit sites and followed up with permittees.</li> <li>Reviewed upcoming development projects: Timbercrest Trail, Eagle View, MnDOT Hwy 13, etc.)</li> <li>Worked with developers/landowners on upcoming new conservation easements and easement amendments.</li> </ul>	<ul style="list-style-type: none"> <li>Continue to inspect, follow-up on and close remaining open permits.</li> <li>Review upcoming development projects as received.</li> <li>Work with developers on Development Agreements and Conservation Easements.</li> </ul>

## SEPTEMBER 2021 PROGRAMS AND PROJECTS UPDATE

PROGRAM OR PROJECT	LAST MONTH'S STAFF ACTIVITIES	NEXT STEPS
<b><i>Outlet Channel O&amp;M</i></b> Project Lead: Jaime/Jeff	<ul style="list-style-type: none"> <li>• Routine channel/culvert inspections</li> <li>• Removed terrestrial invasive species along the channel corridor</li> </ul>	<ul style="list-style-type: none"> <li>• Culvert inspections</li> <li>• Vegetation management all summer</li> </ul>
<b><i>Outlet Channel Admin</i></b> Project Lead: Jaime	<ul style="list-style-type: none"> <li>• Finish workplan and 2022 budget</li> <li>• TAC Meeting</li> </ul>	<ul style="list-style-type: none"> <li>• Fall cooperator meeting to finalize workplan and budget for 2022</li> </ul>
<b><i>General Administration</i></b> Project Lead: Joni	<ul style="list-style-type: none"> <li>• Complete office lease contract negotiations</li> <li>• Watershed Management Study: PMT coordination regarding existing conditions materials</li> <li>• Modified job description and posted job opening for two positions</li> </ul>	<ul style="list-style-type: none"> <li>• BWSR Alum Grant reconciliation</li> <li>• Review job applications and schedule interviews.</li> <li>• Watershed Management Study               <ul style="list-style-type: none"> <li>○ PMT coordination</li> <li>○ Prepare existing conditions materials</li> </ul> </li> </ul>

### Regulations Review Summary

#### *New Easements*

- Parkhaven (City of Prior Lake)
- Vergus Estates (Scott County)
- 4B Estates (Scott County)
- Schieffer Property 195<sup>th</sup> St (Scott County)
- Schieffer Property Hwy 13 parcel (Scott County)
- Yorkshire Ave (Scott County)
- Villas at Crest Woods (City of Prior Lake)
- Vierling Property (City of Prior Lake)
- Eagleview 2nd Addition (Savage)

#### *Easement Amendments*

- Living Hope Church (Shakopee)
- Timber Crest (City of Prior Lake)
- Tyler Chambers (City of Prior Lake)
- Didi & Kit Tran, and Vladimir Dudin (Savage)

#### *Permit Inspections*

- Living Hope Church (Shakopee)
- TH-13 (City of Prior Lake)
- TH-13 CSAH 12 (City of Prior Lake)
- County Public Works Building (City of Prior Lake)
- Pickleball Facility (City of Prior Lake)
- Pike Lake Culvert (City of Prior Lake)
- Hwy 282 (City of Prior Lake)
- Strauss Driveway (City of Prior Lake)
- Fish Point Road (City of Prior Lake)

#### *Equivalency Agreements: Development Reviews*

- Applewood Pointe PUD (Prior Lake)
- Eagle Creek (Prior Lake)
- Milner Parcel Subdivision (Scott County)
- Springview Meadows (Prior Lake)

#### *PLOC Development Reviews*

- Whispering Waters (Shakopee)
- Quarry Lake (Shakopee)
- Shakopee AUAR

#### *District Permit Application*

- MnDOT Hwy 13 (City of Prior Lake)

**PLSLWD Board Staff Report**  
September 9, 2021



**Subject |** 2021-2022 IPM Plan for Common Carp

**Board Meeting Date |** September 14, 2021

**Item: 4.3**

**Prepared By |** Jeff Anderson, Water Resources Coordinator

**Attachment |** 2021-2022 Integrated Pest Management Plan for Common Carp

**Action |** Staff recommends that the Board vote to approve the 2021-2022 Integrated Pest Management Plan for Common Carp.

### **Background**

With the understanding that common carp play a role in the decline of water quality within the Prior Lake-Spring Lake Watershed, the Board first approved the District's Integrated Pest Management (IPM) Plan for Common Carp 2017 and has been updated annually since. The IPM Plan supports the District's water quality goals established for individual waterbodies throughout the watershed, as well as the goals of the 2012 Spring and Upper Prior Lake TMDL Implementation Plan.

The IPM Plan is intended to be a living document, using adaptive management that may develop new management strategies and plan goals through data collection and analysis. As new information and techniques are acquired, current approaches, data collection efforts, and prioritization may change. The IPM plan should be reviewed annually to provide updates to identified goals and action items and potentially add or modify goals as data collection may dictate.

### **Requested Board Action**

Staff recommends that the Board vote to approve the 2021-2022 Integrated Pest Management Plan for Common Carp.





# 2021-2022 Integrated Pest Management Plan (IPM Plan) FOR COMMON CARP

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PREPARED BY:

Tony Havranek, Senior Environmental Scientist, WSB

Mary Newman, Environmental Scientist, WSB

Maggie Karschnia, Project Manager, PLSLWD

Jeff Anderson, Water Resources Coordinator, PLSLWD





## **Integrated Pest Management Plan (IPM) For Common Carp**

Updated and approved by the PLSLWD Board of Managers on:

          , 2021

## TABLE OF CONTENTS

<b>PART 1 - EXECUTIVE SUMMARY .....</b>	<b>2</b>
1.1 BACKGROUND.....	2
1.2 PRIORITY CARP MANAGEMENT LAKES.....	2
1.3 INTEGRATED PEST MANAGEMENT APPROACH .....	3
1.4 REMOVAL METHOD SELECTION.....	4
1.5 2020-2021 STRATEGIES & TIMELINE .....	4
<b>PART 2 - BACKGROUND .....</b>	<b>7</b>
2.1 WATERSHED OVERVIEW.....	7
2.2 COMMON CARP SPECIES .....	9
A. LIFE CYCLE .....	9
A. DIET .....	9
B. HABITAT & BEHAVIOR .....	9
B. EFFECTS .....	10
2.3 CARP MANAGEMENT FUNDING SOURCES.....	10
<b>PART 3 - CARP MANAGEMENT WATERBODIES .....</b>	<b>11</b>
3.1 CARP MANAGEMENT LAKES .....	11
3.2 FISH LAKE.....	13
3.3 BUCK LAKE.....	14
3.4 SPRING LAKE .....	15
3.5 ARCTIC LAKE.....	17
3.6 UPPER PRIOR LAKE.....	19
3.7 LOWER PRIOR LAKE.....	21
3.8 JEFFERS POND .....	22
3.9 PIKE LAKE .....	23
<b>PART 4 - CARP MANAGEMENT GOALS .....</b>	<b>25</b>
4.1 PRIORITY LAKES.....	25
4.2 COST-BENEFIT ANALYSIS .....	26
4.3 CARP MANAGEMENT STRATEGIES & GOALS .....	27
<b>PART 5 - IPM STRATEGIES .....</b>	<b>28</b>
5.1 TRACK .....	29
A. DATA COLLECTION TOOLS & TECHNIQUES .....	29



B. CARP ABUNDANCE ESTIMATES .....	32
C. CARP SPATIAL USAGE .....	33
5.2 BLOCK .....	37
A. BIOLOGICAL CONTROLS .....	37
B. CARP BARRIERS .....	39
5.3 REDUCE .....	41
A. CARP REMOVAL METHODS.....	42
B. ACCELERATED STRATEGIES .....	45
PART 6 - CARP MANAGEMENT SCHEDULE .....	47
PART 7 - SUMMARY .....	49
<b>APPENDICES .....</b>	<b>42</b>

**APPENDIX A** – 2018 CLEAN WATER PARTNERSHIP GRANT FINAL REPORT

**APPENDIX B** – ARCTIC LAKE FISHERIES ASSESSMENT 2017

**APPENDIX C** – CARP MANAGEMENT COST-BENEFIT SUMMARY 2020

**APPENDIX D** – CARP REMOVAL DATA 2016 – 2020

**APPENDIX E** – PIKE LAKE FISHERY ASSESSMENT 2020

## PART 1 - EXECUTIVE SUMMARY

### 1.1 BACKGROUND

Common carp (*Cyprinus carpio*), a non-native fish originating in the Caspian region of Eurasia, are the most widely distributed nuisance fish in the United States (Nico et al., 2012). Carp can have direct and indirect negative effects on water quality by uprooting submergent and emergent aquatic vegetation and by releasing phosphorous sequestered in lake sediments. The phosphorus is then available to free floating algae and can lead to an increase in total phosphorous and Chlorophyll-a concentrations in the lake and to a decrease in water clarity. By removing the carp from the system, both the phosphorus within the carp carcass and the amount that would typically be excreted will be completely removed, while also abating the release of phosphorus created by foraging behavior.

### 1.2 PRIORITY CARP MANAGEMENT LAKES

Spring Lake, Upper Prior Lake, and Pike Lake are listed on the MPCA's impaired waters list due to excess nutrients, and the TMDLs identify internal loading from rough, benthic fish, such as common carp, as one of its main contributors. These impairments limit recreational opportunities as well as waterfowl habitat, native aquatic vegetation abundance, and native game fish populations. As most of the waterbodies within the PLSLWD are connected, improvements to the impaired waters will also have benefits downstream.

As they are listed as Tier 1 Lakes in the PLSLWD's 2020-2030 Water Resources Management Plan, receive the highest public use, and are currently on the *state's impaired waters list*, the District has established the following two lakes as its **top carp management priority**:

**Table 1. Summary of Top Carp Management Priority Lakes.**

	2021 CARP BIOMASS ESTIMATE (KG/HA)	2021 PHOSPHORUS LOADING RATE (LBS/YEAR)	2021 ESTIMATED TOTAL WEIGHT (LBS)	REDUCTION NEEDED TO ACHIEVE 100 KG/HA (LBS)	REDUCTION NEEDED TO ACHIEVE 30 KG/HA (LBS)
<i>Upper Prior Lake</i>	211.7 ± 66.9	1,213	73,880	38,985	63,415
<i>Spring Lake</i>	225.9 kg/ha ± 45.6	1,141	119,504	66,615	103,652

Note that while Upper Prior and Spring Lakes are top priority lakes, the PLSLWD is tracking the other six connected chain-of-lakes as they are part of the whole system that the common carp population uses. Understanding the dynamics of the entire watershed system is the key component to successful long-term management of carp.

**Secondary Priority Lakes.** The PLSLWD also partners with SMSC in tracking carp on Arctic and Pike Lakes. SMSC is the lead partner on these two waterbodies and has completed removals on Arctic Lake with plans to prevent carp establishment on Pike Lake after the 2021 winterkill with the introduction of

native fish species such as bluegills. PLSLWD is assisting and complementing SMSC efforts with its carp program and plays only a supportive role at this time.

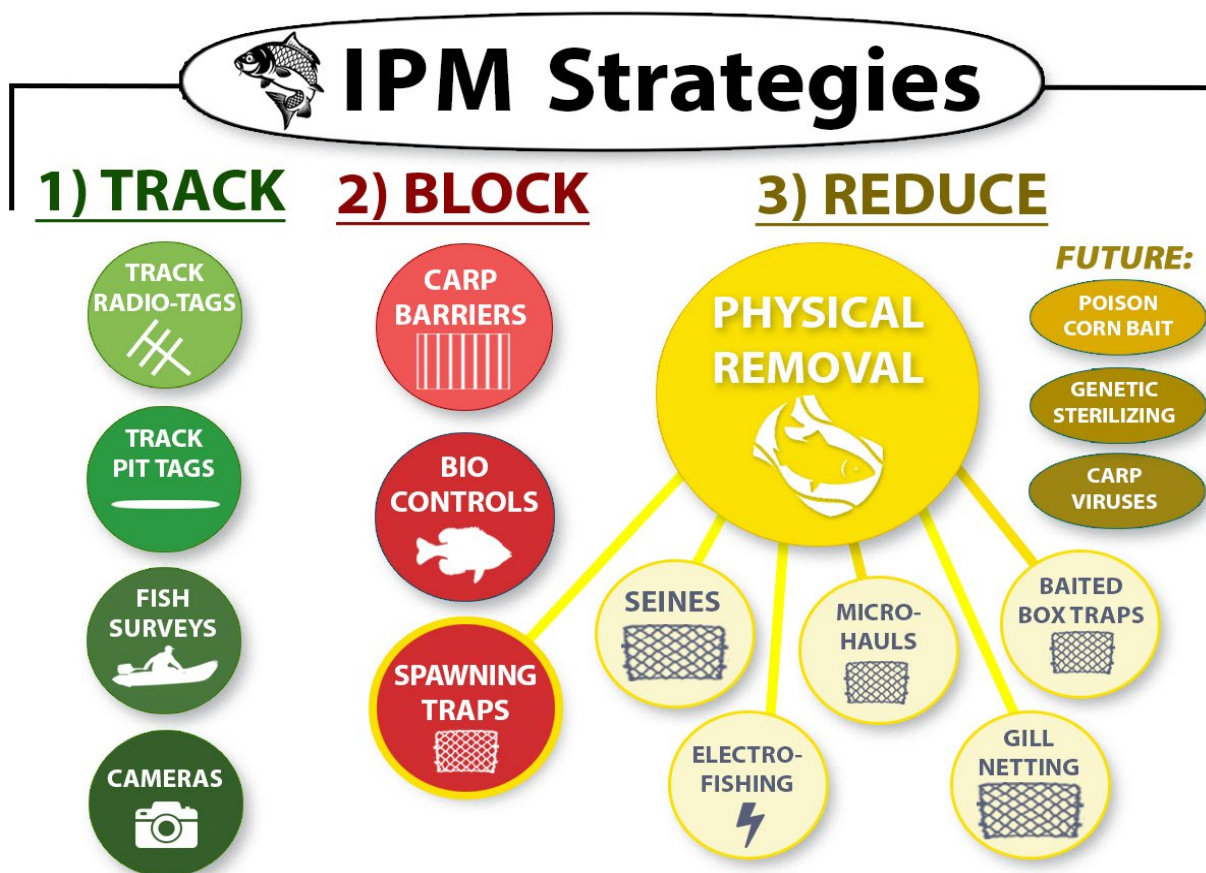


Figure 1. PLSLWD IPM Strategies

### 1.3 INTEGRATED PEST MANAGEMENT APPROACH

This plan uses integrated pest management (IPM) principles to effectively manage the common carp populations. IPM involves the use of targeted carp removals and barriers, as well as monitoring environmental parameters that can inhibit or promote carp population growth within the waterbodies. Adaptive management will use data that is collected on the carp population including population and biomass estimates as well as migration routes and winter aggregation locations.

This IPM plan is intended to be a living document; using adaptive management may include developing new management strategies and plan goals through data collection and analysis. As new data is collected and analyzed, current approaches, data collection efforts, and prioritization may change. This IPM aims to mitigate the effect that common carp are having on the load of excess nutrients to these lakes, and protect those that are currently meeting water quality standards.

## 1.4 REMOVAL METHOD SELECTION

By far, the single most expensive component to the IPM Plan is the REDUCE strategies (carp removals). With careful analysis and selection, the PLSLWD can select the best tool for the situation presented.

### COST-EFFECTIVE COMPARISON OF METHODS

From January to June 2020, the removal methods were assessed for cost-effectiveness. Those results were pooled together in order to look at each method as a whole. The following table summarizes that assessment comparison with removal methods listed from most to least cost-effective:

**Table 2. Cost-Effectiveness Comparison of Carp Removal Methods.**

Removal Method	Total Pounds Removed	% of Total Lbs.	Approx. Cost	<u>2020</u>	<u>2021</u>
				\$ per lb of carp removed	Est. \$ per lb of carp removed
<i>Seine:</i>	13,528	45%	\$ 48,840	\$ 3.61	\$ 0.81
<i>Micro-haul:</i>	565	2%	\$ 2,142	\$ 3.79	\$ 1.52
<i>Specialized Trap Net:</i>	2,008	7%	\$ 27,716	\$ 13.80	\$ 2.12
<i>Electrofishing:</i>	8,358	28%	\$ 20,000	\$ 2.39	\$ 2.39
<i>Baited Box Trap:</i>	2,989	10%	\$ 18,754	\$ 6.27	\$ 3.17
<i>Gill Netting:</i>	2,293	8%	\$ 15,000	\$ 6.54	\$ 3.56

Note that in some instances, costs are much lower in 2021 as all of the materials to deploy the method were calculated into the removal method which incurred in 2020. Cost-effectiveness is going to continue being used as a measure for removal methods and where to allocate future budgeting.

### REMOVAL METHOD CONSIDERATIONS

PLSLWD will consider the following when deciding which removal methods to employ:

- 1) **Feasibility:** How likely will this method result in success? What are the obstacles?
- 2) **Time-Oriented:** Is immediate removal necessary to meet water quality goal deadlines identified in the 2020-2030 Water Resources Management Plan? Will the timeliness affect success of other projects (e.g. alum treatment)?
- 3) **Cost-Effective:** Is this method worth the cost based on anticipated results?
- 4) **Effort for Results:** Is this the best method for the amount of effort required? Given limitations of staff, what methods produce the greatest results for the least amount of effort?

The consideration questions and table above will provide staff with a decision-making tool. Given limited resources, staff will assess which method is most feasible, time-oriented, cost-effective, and requires the least amount of effort for the greatest result.

## 1.5 2021-2022 STRATEGIES & TIMELINE

The PLSLWD set ambitious goals in 2019 to reach carp management levels of **30 kg/ha on both Spring & Prior Lakes** by 2021. While the PLSLWD made great strides in incorporating new, innovative removal

techniques beginning in 2020, it is still far from its goal nearing the end of 2021. A new timeframe has been established to accomplish these goals over a slightly long period of time with increased knowledge and a narrowing budget.

**Upper Prior Lake: 63,415 pounds reduction needed**

**Spring Lake: 103,652 pounds reduction needed**

**Table 3. EXAMPLE Illustration of Effort Required to Reach 30 kg/ha.**

Removal Method	UPPER PRIOR LAKE Estimated Pounds	SPRING LAKE Estimated Pounds	Timeline
Under Ice Seine	10,000		Winter 2022
Under Ice Seine		12,000	Winter/Spring 2022
Gill Netting	5,000		Winter/Spring 2022
Electrofishing	7,000	2,500	Spring 2022
Push Trap		2,000	Spring 2022
Newman Trap	2,000		Spring 2022
Baited Box Traps		3,000	Summer 2022
Open water Seine	2,000	2,000	Fall 2022
Under Ice Seine	7,500		Winter 2023
Under Ice Seine		17,000	Winter/Spring 2023
Gill Netting	5,000		Winter/Spring 2023
Electrofishing	5,000	5,000	Spring 2023
Push Trap		2,000	Spring 2023
Baited Box Traps	2,000		Spring 2023
Newman Trap		2,000	Summer 2023
Open water Seine		2,000	Fall 2023
Under Ice Seine	11,000		Winter 2024
Under Ice Seine		25,000	Winter/Spring 2024
Gill Netting	2,000		Winter/Spring 2024
Electrofishing	5,000	5,000	Spring 2024
Push Trap		1,000	Spring 2024
Open water Seine		5,000	Fall 2024
Under Ice Seine		9,000	Winter/Spring 2025
Electrofishing		6,000	Spring 2025
Push Trap		1,000	Spring 2025
Open water Seine		2,000	Fall 2025
<b>Total Pounds Removed</b>	<b>63,500</b>	<b>103,500</b>	
<b>Remaining Biomass</b>	<b>10,465</b>	<b>15,852</b>	

The table above illustrates the amount of effort that it would take on each lake to reduce carp down to 30 kg/ha goal levels, given the different removal methods available and their potential outputs on an average year. While the success and feasibility of the methods listed in these scenarios can be widely variable, this is meant to provide an example for planning purposes.

Note that successful commercial seines are a large component to removal success on each lake. In 2021, PLSLWD focused heavily on seine removals as its primary tool, supplementing with other tools to reach its goals. These other methods will be especially useful when populations are low enough not to be feasible to seine but high enough that more carp still need to be removed from the system. At this point the Carp Management Program will enter into maintenance phase.

Key supporting strategies will be employed to increase probability of removal success:

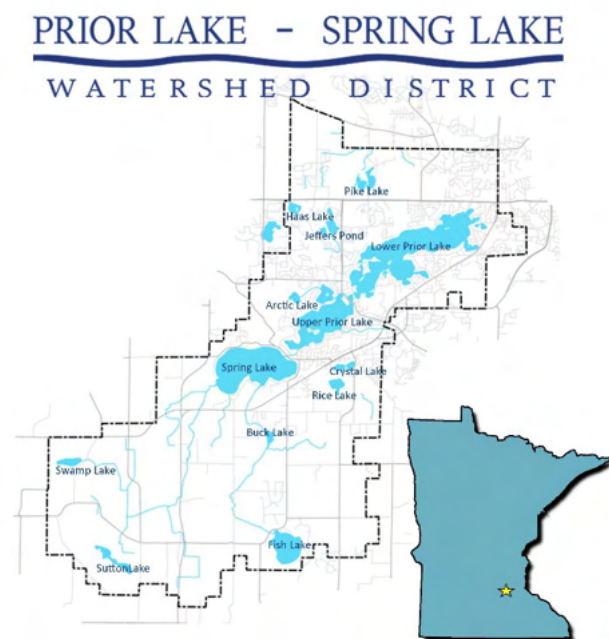
- **Tracking Carp:** Continuing to identify migration routes and aggregations for better removals
- **Blocking Carp:** Ensuring that carp barrier are working effectively; identifying additional spawning areas to block to ensure long-term population control after removals
- **Herding Carp:** Using underwater speakers to move carp into suitable seining areas
- **Removing Obstructions:** Diligently clearing known seine areas of any obstructions in October/early November prior to seine season. Checking seine areas with underwater drone so that obstructions can be cleared or avoided prior to removal events.

## PART 2 - BACKGROUND

### 2.1 WATERSHED OVERVIEW

Located within Scott County, the PLSLWD lies in the Minnesota River Basin in the southwestern portion of the Twin Cities metropolitan area, and covers roughly 42 square miles of land area with over 2,500 acres of open water (Figure 1). Spring Lake, Upper Prior Lake and Lower Prior Lakes are the largest waterbodies within the PLSLWD and provide boating, fishing and other recreational opportunities. Spring Lake is connected by a natural channel to Upper Prior Lake which discharges to Lower Prior Lake

which then outlets through a channel to the Minnesota River. All three lakes receive intense recreational pressure year-round and are important recreational resources to the Twin Cities metro area.



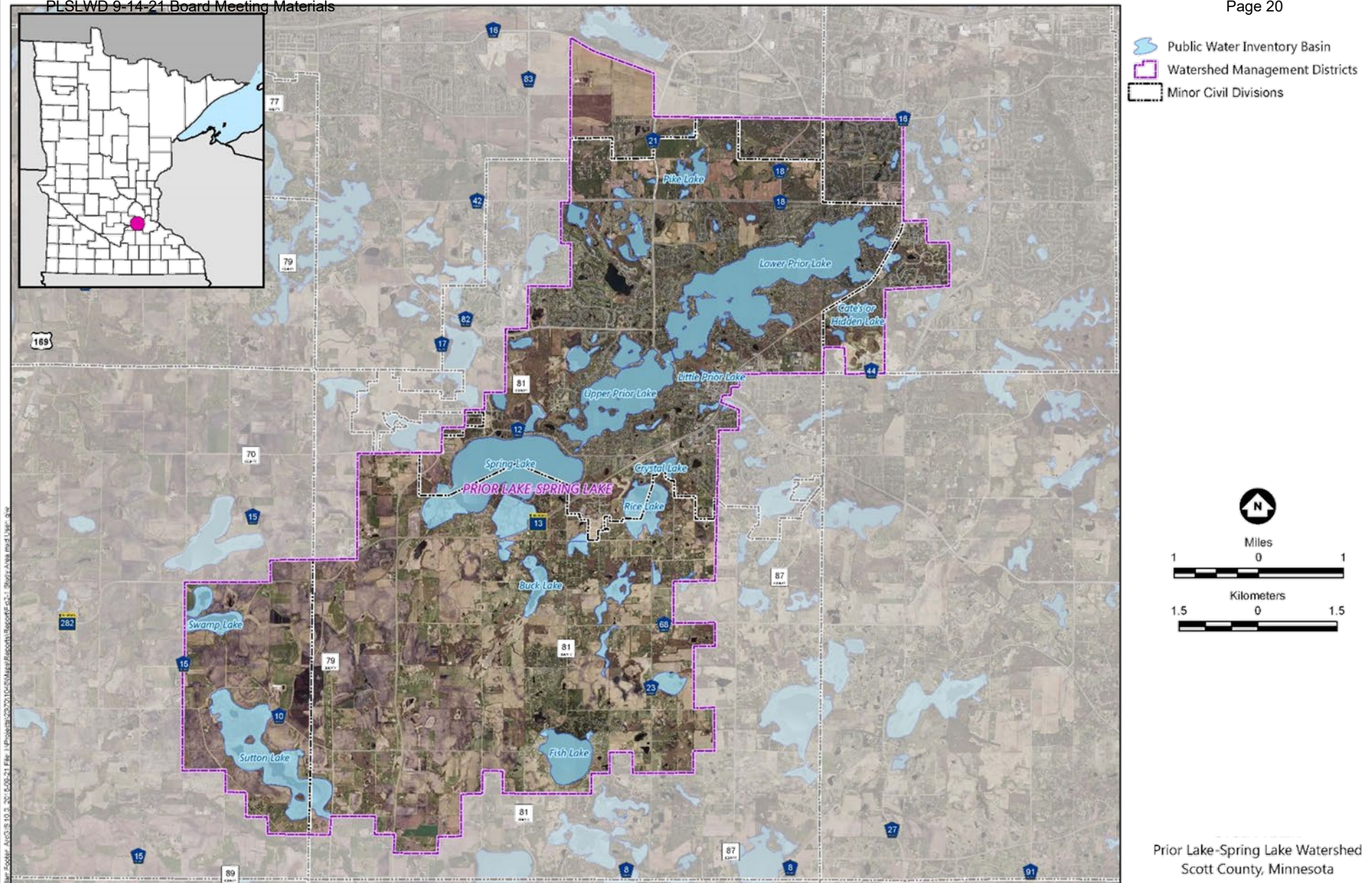
**Figure 2.** PLSLWD Location Map

The protection and restoration of Spring and Prior Lakes are high priorities for the PLSLWD and are considered Priority Lakes by the Metropolitan Council for their high regional recreation value. A DNR public boat landing is located on each of the lakes, in addition to winter access points. Sand Point, a swimming beach on the north shore of Lower Prior Lake, boasts as much as 48,000 visitors each year. Open water activities on the lakes include fishing, boating, paddling, water skiing, jet skiing, sailing, wake boarding, and swimming. During the winter when the lake is ice-covered, recreational activities include snowmobiling, ice fishing, skating, and cross-country skiing.

Since 1970, the PLSLWD has strived to conserve, protect, and manage the water resources within the PLSLWD and have implemented a variety of projects aimed to improve water quality.

The aerial map in **Figure 3** and highlights the waterbodies and wetland areas that carp may be present and/or use as spawning areas.





Prior Lake-Spring Lake Watershed  
Scott County, Minnesota

**Figure 3.** Watershed Overview Map



## 2.2 COMMON CARP SPECIES

Common carp (*Cyprinus carpio*), a non-native fish originating in the Caspian region of Eurasia, are the most widely distributed nuisance fish in the United States (Nico et al., 2012). Carp were intentionally introduced into Minnesota in the 1880s as a game fish and as a food staple for the increasing number of immigrants. By the turn of the century, the previously prized carp was considered a nuisance species for its rapid reproduction and detriment to water quality in the Minnesota's lakes.

### A. Life Cycle

Given ideal conditions, carp can be highly prolific. Carp eggs hatch usually within a week and it only takes about 15–30 days before feeding larvae grow into advanced fry. The next life stage, when the fish grows up to become a fingerling, lasts only about 45–85 days. By the end of their first summer, carp are known to get up to as much as 10 inches long, weighing 1 – 2 pounds.

They mature as early as two years old, when the carp is roughly 12-15 inches long. A single female carp can produce over a million sticky eggs which get laid onto vegetation and rocks. While most eggs and larvae die before they reach adulthood, this can result in several hundreds of successful offspring in a single season where there are no bluegills predators present and conditions are right. Floods seem to provide especially favourable conditions for carp breeding.

### A. Diet

Carp are omnivores and they consume a variety of small foods including molluscs, crustaceans, insect larvae and seeds. These food items are sucked up with the mud from the bottom of the lake or wetland and filtered out using their gill rakers, spitting out the mud and remaining debris into the water column. Carp can also consume plant material and other organic matter, especially when other food sources are not available. Carp rarely eat fish, but may consume fish eggs and larvae and disturb breeding sites for other fish species.

### B. Habitat & Behavior

Like largemouth bass, carp can inhabit a wide range of habitats, but they prefer lakes and slow moving rivers, especially those with turbid water. Carp also can be found in areas where there is abundant aquatic vegetation. They are capable of tolerating a range of environmental conditions. Carp have a greater tolerance of low oxygen levels, pollutants and turbidity than most native fish, and are often associated with degraded habitats, including stagnant waters.

The bottom-feeding habits of carp often create murky lake conditions, and muddy up the water. These conditions are often unsuitable for native fish, and carp drive out their competition for lake resources.

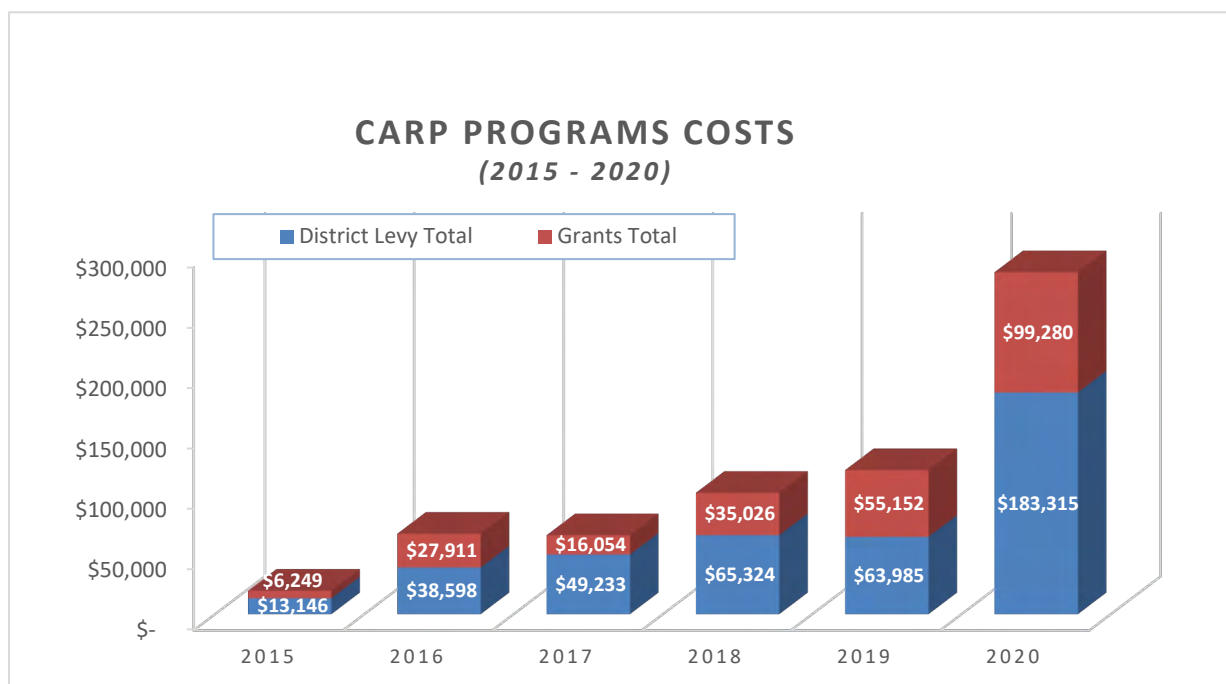
Carp travel in schools, usually of five or more. Carp migrate to and from breeding grounds in large groups during the spawning season, sometimes travelling several miles upstream. This behavior of traveling to shallow, upstream spawning areas allows them to reach wetlands that were either frozen over or had dry, low oxygen conditions in the previous season that winterkilled any sunfish that would have preyed on the carp eggs and larvae.

## B. Effects

Carp can have direct and indirect negative effects on water quality by uprooting submergent and emergent aquatic vegetation and by releasing phosphorous sequestered in lake sediments. The phosphorus is then available to free floating algae and can lead to an increase in total phosphorous and Chlorophyll-a concentrations in the lake and to a decrease in water clarity. By removing the carp from the system, both the phosphorus within the carp carcass and the amount that would typically be excreted will be completely removed, while also abating the release of phosphorus created by foraging behavior.

## 2.3 CARP MANAGEMENT FUNDING SOURCES

The District has been fortunate enough to receive multiple sources of grant funding since 2015 to support its carp management efforts as shown in Figure 4. The following is a summary of the funding received:



**Figure 4.** Annual Carp Management Program Funding Comparison.

Over the past 6 years the the district's carp management program has been partially funded through state and federal grant funding seen in table 4. The district plans to assess it's program needs and outlook so that a long term budget strategy can be developed. Moving forward into 2022, the district will be supporting the IPM for Common carp through District levy funds only. Continual efforts will be made to seek out additional funding to support the mission of the IMP.

**Table 4. Carp Management Program Funding Sources.**

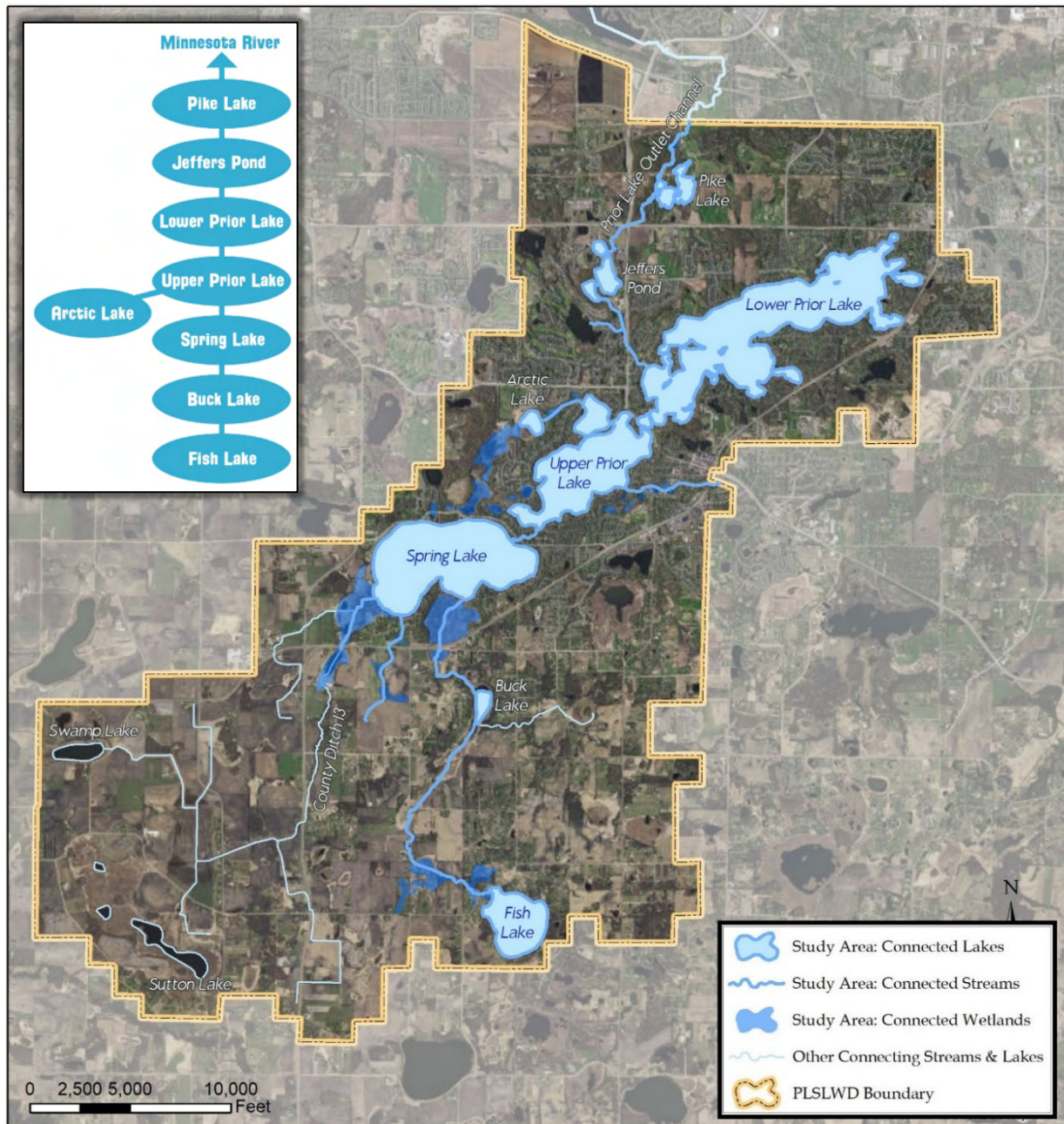
GRANT SOURCE	GRANT \$	TIMEFRAME
MPCA Clean Water Partnership	\$67,323	2015 - 2018
DNR Clean Water Legacy Grant	\$17,917	2017 - 2018
Federal Clean Water Act Section 319 grant	\$80,300	2019 - 2021
BWSR Metro Watershed Based Implementation Funding	\$144,000	2019 - 2021
<b>TOTAL:</b>	<b>\$309,540</b>	

## PART 3 - CARP MANAGEMENT WATERBODIES

### 3.1 CARP MANAGEMENT LAKES

While there are 14 lakes within the PLSLWD, this IPM Plan is focused only on those eight connected waterbodies that are known carp migration routes and/or are suspected to contain common carp as shown in Figure 6 below (Fish, Buck, Spring, Arctic, Upper Prior, Lower Prior, Jeffers Pond & Pike Lakes). An overview of each carp management lake is listed below.

## 2021-2022 Integrated Pest Management Plan (IPM) for Common Carp

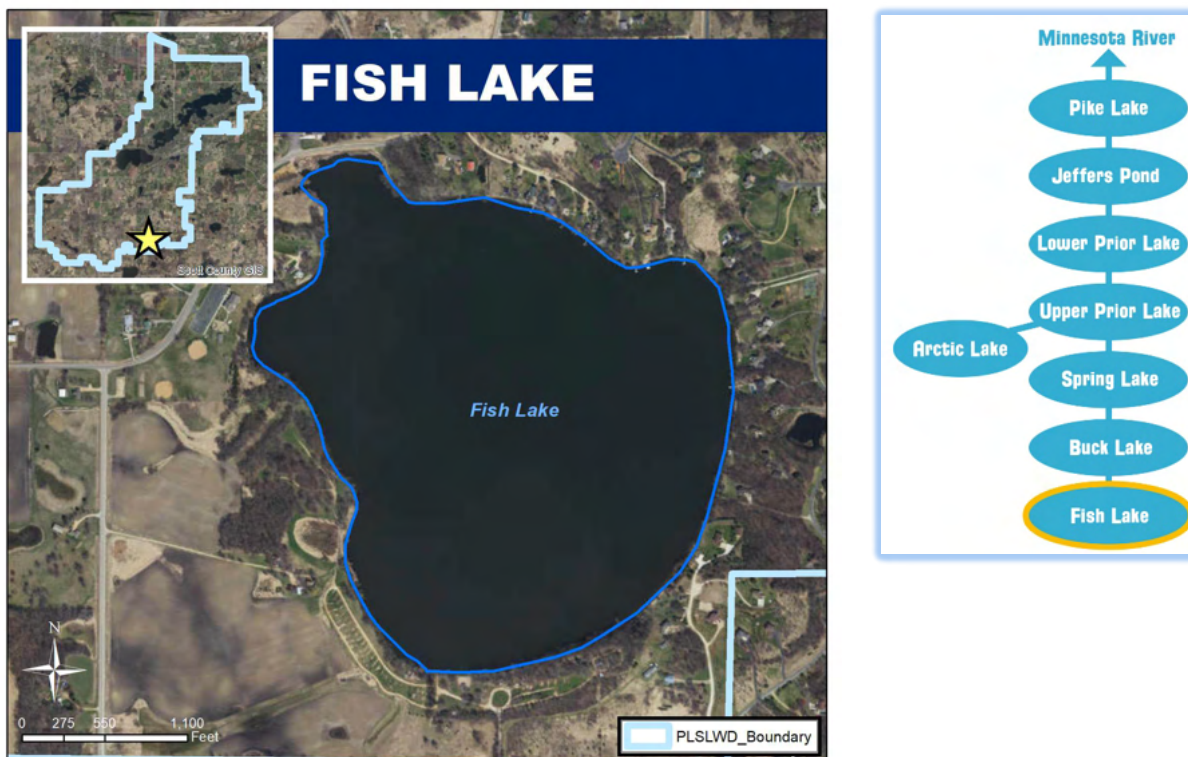


**Figure 5.** Carp Management Lakes



### 3.2 FISH LAKE

Fish Lake is a relatively small lake found in the upper watershed seen in figure 6. Fish Lake is approximately 173 acres, has an average depth of 14 feet, and a maximum depth of 28 feet. Roughly 74 acres or 43% of the lake is considered littoral. Fish Lake is a seepage lake-outflow, meaning that there is no direct inflow to Fish Lake; rather, the hydrologic contribution is from watershed runoff and groundwater which then flows out of Fish Lake to the north towards Buck Lake.



**Figure 6.** Fish Lake Map

#### INTERNAL LOADING

Fish Lake appears to be heavily impacted by internal loading. The 2006 Fish Lake Sustainable Lake Management Plan identifies an internal load ranging from 111 to 488 kg/yr (244 to 1,075 pounds/yr). The methodology used to derive this estimate is derived from a Canfield-Bachmann model. These models identify internal loading from anoxic release, hypolimnetic mass balance, and fall turnover; no analysis was done to determine the contribution from curly-leaf pondweed (CLP) senescence or from the foraging behavior of rough fish.

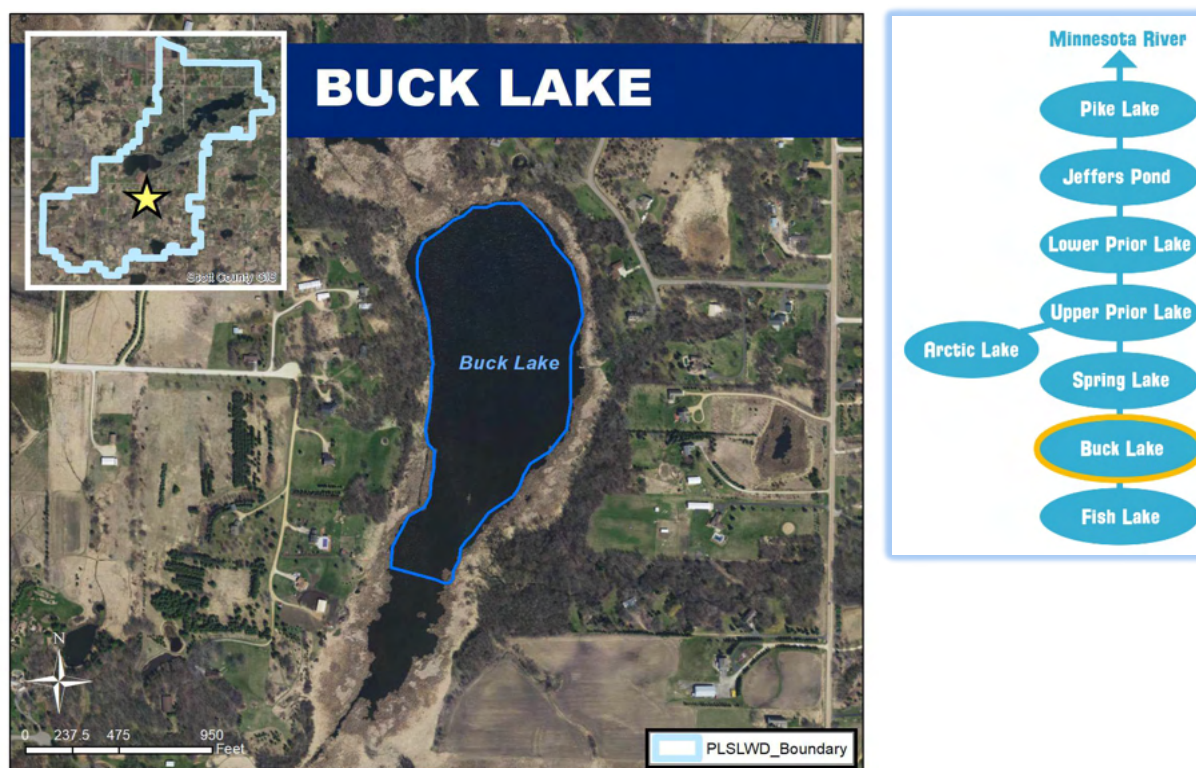
#### FISHERIES ASSESSMENT

A potential source of internal loading is from rough fish bioturbation. MN DNR fishery survey data from 2014 shows that carp and bullhead are present in Fish Lake. LaMarra (1975) identified an

internal loading rate of  $1.07 \text{ mg P/m}^2/\text{day}$  based on a carp density of  $200 \text{ kg/ha}$ . A very preliminary fish survey was conducted in fall of 2019 on Fish Lake and showed carp biomass at  $88.7 \pm 69.2$ .

### 3.3 BUCK LAKE

Buck Lake is a small lake (23 acres) located downstream of Fish Lake in the upper watershed shown in figure 7. The maximum depth is 9 feet; no numerical average depth given but average depth is noted as shallow. It is assumed, based on maximum depth that the entire lake is littoral. Buck Lake receives water from the connecting channel to Fish Lake and from the watershed to the East. Buck Lake then outflows to the north through a large wetland complex to Spring Lake.



**Figure 7.** Buck Lake Map

#### INTERNAL LOADING

The watershed to lake ratio for Buck lake is quite high:  $\sim 837:1$ , which may result in a large amount of phosphorus loading to Buck Lake from the surrounding watershed. The average TP concentration for Buck Lake between 2014 and 2017 was  $112.56 \mu\text{g/l}$  (almost twice the state standard).

While not specifically assessed, anoxic conditions within Buck Lake may be contributing to the phosphorus load through anoxic release within sediments. No assessment has been completed on the sediments in the Buck Lake basin to determine the sediment release rate of TP.

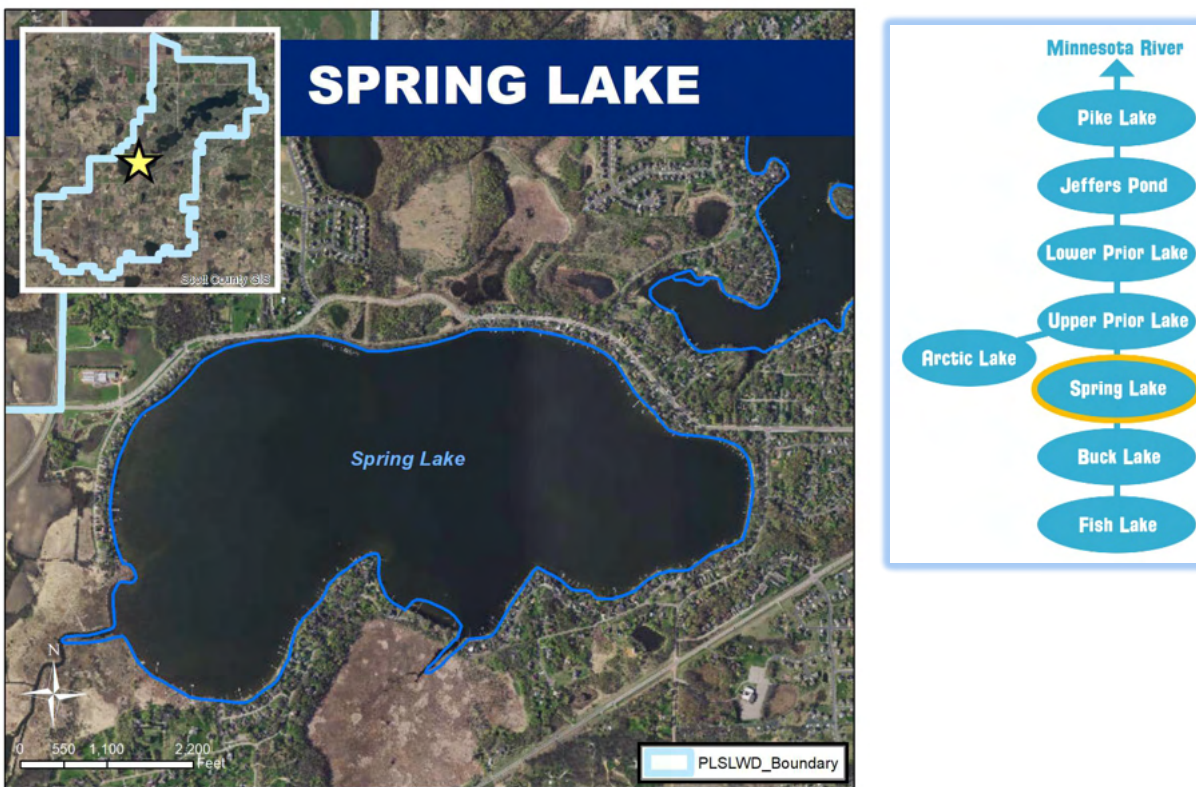
## FISHERIES ASSESSMENT

Very preliminary survey data from fall 2019 indicates that carp have low populations on Buck Lake. The widespread presence of aquatic vegetation in Buck Lake also may hint at a low density of rough fish presence in the lake. Typically, lakes that support high rough fish density are incapable of supporting dense or widely-distributed aquatic vegetation.

### 3.4 SPRING LAKE

Spring Lake is the second largest basin in the PLSLWD. The maximum depth is 34 feet with an average depth of 18 feet. Roughly half (49% or 290 acres) is identified as the littoral area. The watershed is quite large (12,340 acres) with a watershed to lake ratio of 20:1, which is a moderate ratio.

Spring Lake has three (3) major inflows located primarily on its southern and western sides. The 12/17 wetland on the northwest side of the lake also contributes to the overall water budget. County Ditch 13 provides the largest contribution to external load. Spring Lake outlets on its eastern side via a small channel which connects to Upper Prior Lake.



**Figure 8.** Spring Lake Map

## INTERNAL LOADING

Internal loading constitutes the bulk of the total phosphorus load to Spring Lake at 5,161 lbs/year or 49%. Internal loading may be from anoxic sediment release of phosphorus, senescence of aquatic vegetation during the growing season, and overabundant rough fish. The 2012 TMDL attributed the

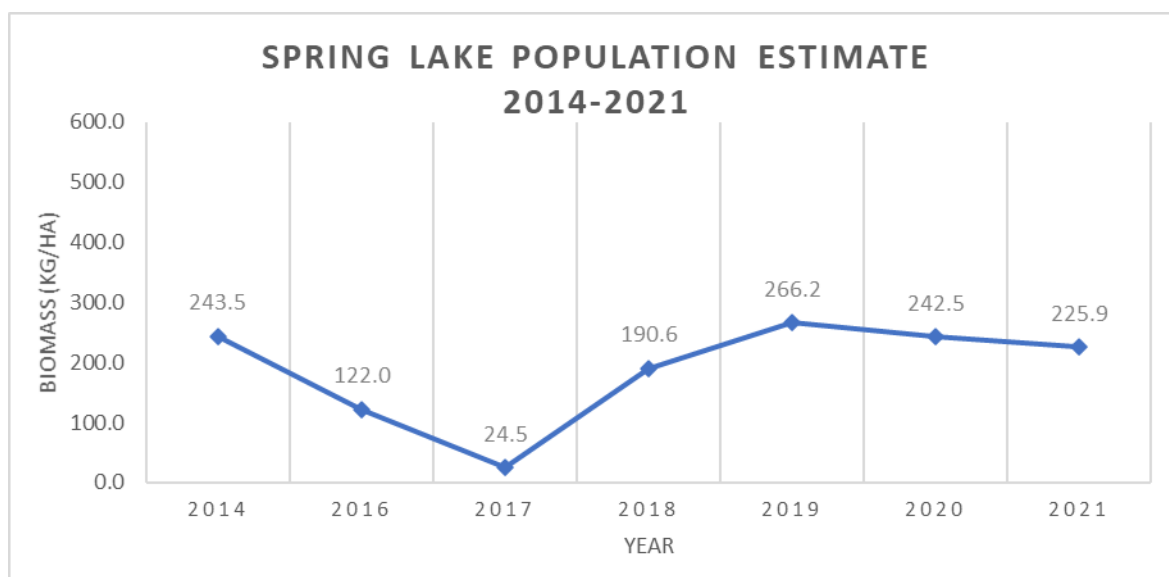


entire internal load to anoxic release; however subsequent fisheries surveys documented elevated carp biomass which may be heavily influencing the internal phosphorus load and subsequently, water quality in Spring Lake.

### FISHERIES ASSESSMENT

Past surveys show elevated carp biomass in Spring Lake, which is influencing internal loading. In winter 2012, the PLSLWD marked 1,752 adult carp by inserting floy tags in the dorsal area. The carp were initially captured using a commercial fishing crew that deployed a seine net around a winter aggregation of common carp. The carp were captured, measured for length and weight, tagged, and released. An attempt was made to recapture the carp in 2013, but was unsuccessful.

A 2014 study completed by St. Mary's University using a catch per unit effort (CPUE) model showed that carp biomass in Spring Lake was 343.5 kg/ha. A subsequent survey completed in 2016 by WSB showed 122.5 kg/ha using the CPUE method and 84.7 kg/ha using a mark-recapture methodology. Using this abundance estimate and LaMarra's estimation of calculating loading due to an abundance of rough fish, nearly 2.37 pounds of phosphorus per day were being added to Spring Lake. This number equates to an estimated loading rate of over 866 pounds of phosphorus per year caused by the overabundance of common carp.



**Figure 9.** Spring Lake Population Estimate 2014 – 2021

### PAST CARP MANAGEMENT EFFORTS

Carp in Spring Lake were netted and inspected for marks on January 30, 2017 as part of a recapture and removal event capturing 2,577 individual carp, an estimated 59.9 kg/ha of carp biomass resulting in a reduction of 615.5 pounds of phosphorus per year. Using the ratio of marked to unmarked carp, WSB calculated a pre-removal population estimate of  $3,623 \pm 1,167$  individual carp in Spring Lake. Using a 5.6 kg average weight, Spring Lake carp biomass was calculated at  $84.9 \pm$



27.3 kg/ha pre-removal, close to the ecological threshold value of 100 kg/ha and well above the value of 30 kg/ha that PLSLWD has identified as a biomass goal. Biomass calculated after removal is estimated to be 24.5 kg/ha  $\pm$  7.9.

During 2018 and 2019 there were not successful seine removal events and the population rebounded quickly. In the spring and summer of 2020, PLSLWD decided to add Accelerated Carp Management Strategies and different removal techniques to its toolbox. In 2020, a total of 8,070 pounds of carp have been removed from Spring Lake using these new tools, as well as another 3,078 pounds using traditional open water seines. As of September 1<sup>st</sup> 2021, 1,315 pounds of carp have been removed between electrofishing and baited box nets, as well as another 7,500 pounds using traditional under ice seines reducing the Spring Lake's estimated population to 225.9Kg/ha. Spring Lake's carp population estimate over the past 7 years is shown in Figure 10 above.

### 3.5 ARCTIC LAKE

Arctic Lake is 33 acres in size with a maximum depth of 30 feet and an average depth of 9.5 feet shown below in Figure 10. Arctic Lake flows into Upper Prior Lake, entering a large shallow bay on the north side of the lake through an man-made channel. Arctic Lake's watershed is 507 acres resulting in a 15:1 watershed to lake ratio, which is relatively small. Most of the watershed (56%) is composed of wetlands and woodlands with the remaining portions of the watershed composed of residential, prairie, water, open space, and cropland.



**Figure 10.** Arctic Lake Map

## INTERNAL LOADING

Sediment release rates from sediment coring was not available at the time the 2013 diagnostic report was drafted. However, HDR attempted quantify the internal load from anoxic sediment release using a mass balance approach. Results of this analysis showed that annual loading ranged from 177-327 lbs TP/year.

## FISHERIES ASSESSMENT

Carp have been documented in multiple fish surveys completed in 2012, 2014, 2017, and 2018. The 2012 survey utilized standard and mini trap nets to determine assemblage and size structure. Small carp (9.5-13") were captured in trap nets which indicates recruitment and suggests that Arctic Lake was functioning as a nursery. The 2014 electrofishing survey determined that the carp biomass density was 264.5 kg/ha and found numerous young of the year carp.

A carp mark-recapture population and biomass estimate were completed in 2017. Survey data shows that the carp biomass for Arctic Lake was 462.6 kg/ha, with juvenile carp dominating the biomass (336.9 kg/ha) and adults making up a smaller portion of the biomass (125.7 kg/ha). Note that a carp barrier was installed in 2016 at the connection to Upper Prior from Arctic, which may have prevented migration out of Arctic to Upper Prior, resulting in higher biomass than in 2014.

## PAST CARP MANAGEMENT EFFORTS

In 2017 to 2018, an estimated 398 kg/ha of carp biomass was removed from Arctic Lake resulting in a reduction of 230 pounds of phosphorus per year. The monitoring of the recruitment rates of young carp to the system is likely to continue through the partnership between PLSLWD and SMSC formed in 2013 and the actual effects of this removal on the phosphorus concentrations will be monitored by regular sampling throughout the growing months (May-September) of each year.

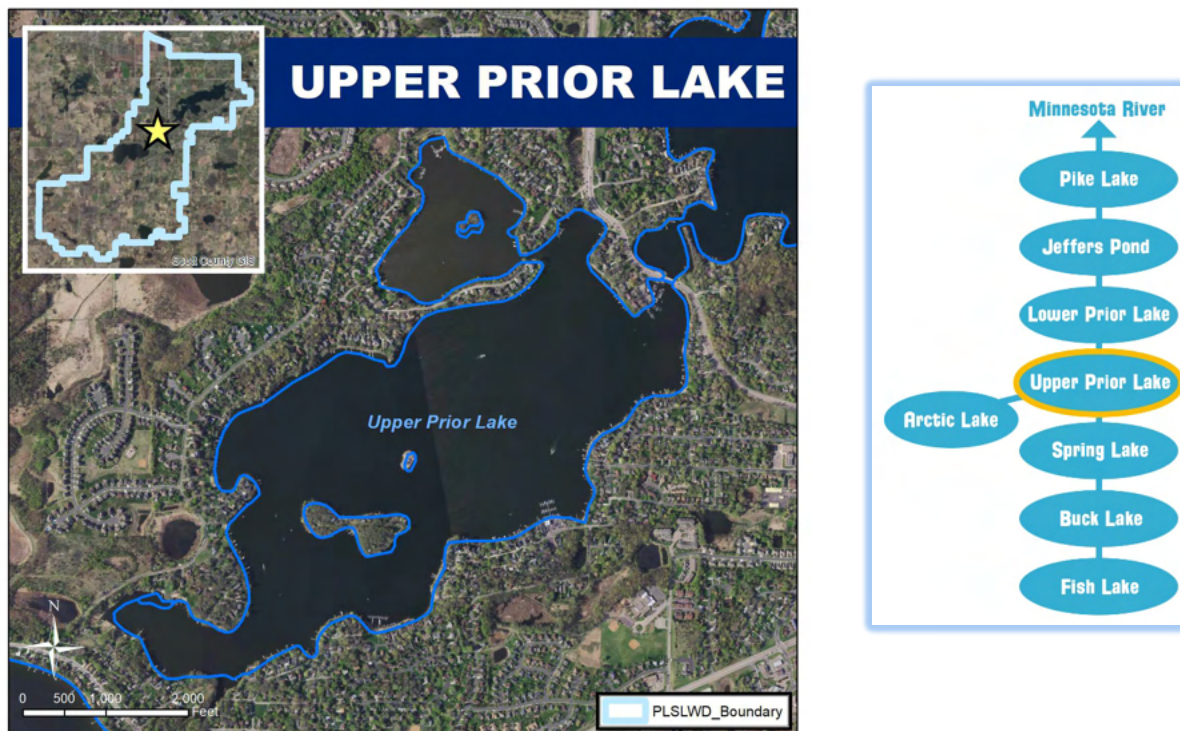
**Table 5. Arctic Lake Biomass & Loading Rate Before & After Removals.**

	CARP BIOMASS ESTIMATE (KG/HA)	PHOSPHORUS LOADING RATE (LBS/YEAR)
BEFORE REMOVAL	460.0	265
<b>2017-2018 REDUCTION AMOUNT</b>	<b>-398.0</b>	<b>-230</b>
AFTER REMOVAL	62.0	35

Following the biomass removal success from previous years, SMSC and the District continued efforts from 2019 through 2021 tracking fish migration within the Arctic Lake channel using PIT-tag stations. The stations were installed to confirm barrier effectiveness and population size of migration in the channel. In 2021, a PIT station was installed on the West side of Arctic Lake to find if carp are making it through a BMP installed in 2018. Results from 2019-2021 show that carp are not making it past the barrier on the downstream end of the Arctic Lake channel when it is installed as well as no movement through the BMP on the west side of the lake.

### 3.6 UPPER PRIOR LAKE

Upper Prior Lake displayed in Figure 11 is 416 acres in size with a maximum depth of 43 feet and an average depth of 10 feet. The littoral zone covers 329 acres or 79% of the basin. The lake receives



water from Spring and Arctic Lakes as well as from a small drainage area on the east side of the lake. The watershed is 16,038 acres resulting in a watershed ratio of 38:1.

#### INTERNAL LOADING

The internal load of Upper Prior is a major cause of water quality impairment in Upper Prior Lake. The 2012 TMDL indicates that 50% of the total phosphorus budget comes from internal loading. The TMDL assigns the entire internal load to anoxic sediment release; however, Upper Prior supports elevated carp biomass which may contribute and/or exacerbate internal loading.

With the upstream alum treatment of Spring Lake to reduce external nutrient loading, lower concentrations of phosphorus are reaching Upper Prior Lake. However, past studies have indicated that there is still an internal reservoir of phosphorus in Upper Prior Lake that continues to hinder the improvement of water quality in the lake. Beginning in 2020, Upper Prior Lake received its first of 3 planned alum treatment doses to target internal phosphorus in combination with the carp removals to meet TMDL goals.

**Figure 11.** Upper Prior Lake Map

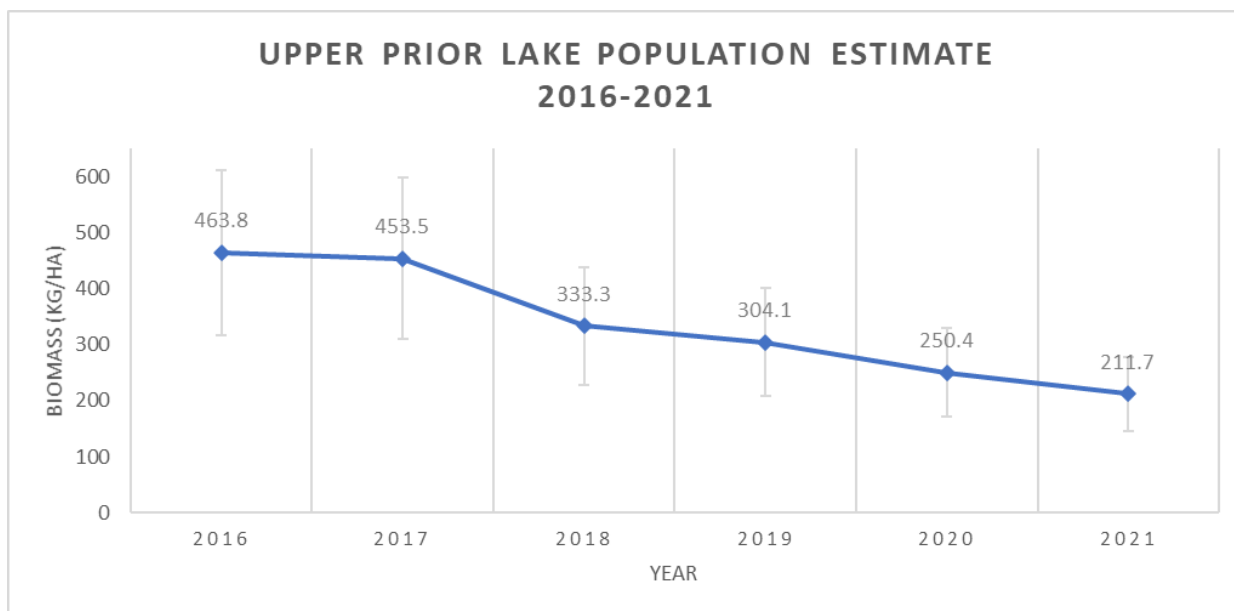
## FISHERIES ASSESSMENT

The initial carp population assessment begun when a number of carp were marked with a right pelvic and pectoral fin clip, radio tags, and passive integrated transponder (PIT) tags in Upper Prior Lake in 2015 and 2016. A mark-recapture estimate was calculated using the total number of fin clips and radiotags captured.

The biomass estimate as a result of this mark-recapture event was  $13,840 \pm 3,664$  individuals in Upper Prior Lake before the removal. Using a 6 kg average weight, Upper Prior Lake biomass was calculated at  $531.3 \text{ kg/ha} \pm 140.6$ , a biomass well above the  $30 \text{ kg/ha}$  biomass goal identified by the PLSLWD.

Using LaMarra's estimation of loading due to an abundance of rough fish, nearly 10.54 pounds of phosphorus per day were being added to Upper Prior Lake as a result of this elevated population. This number equates to a loading rate of over 3,840 pounds of phosphorus per year caused by the overabundance of common carp.

Since 2016, annual CPUE population estimates have been calculated as seen in Figure 12 using PIT tags and fin clips as recapture datapoints during removal events and electrofishing.



**Figure 12.** Upper Prior Lake Population Estimate 2016-2021

## PAST CARP MANAGEMENT EFFORTS

In the fall and winter of 2017-18, an estimated 113 kg/ha of carp biomass were removed from Upper Prior Lake resulting in a reduction of 845.8 pounds of phosphorus per year.

In the spring of 2019, two seine nettings and one electrofishing effort were completed in Crystal/Mud Bay, removing a total of 10,000 pounds of carp from Upper Prior Lake.



In the spring and summer of 2020, PLSLWD decided to add Accelerated Carp Management Strategies and different removal techniques to its toolbox. During that year, a total of 8,142 pounds of carp were removed from Upper Prior Lake using these new tools, as well as another 10,450 pounds using traditional open water seines.

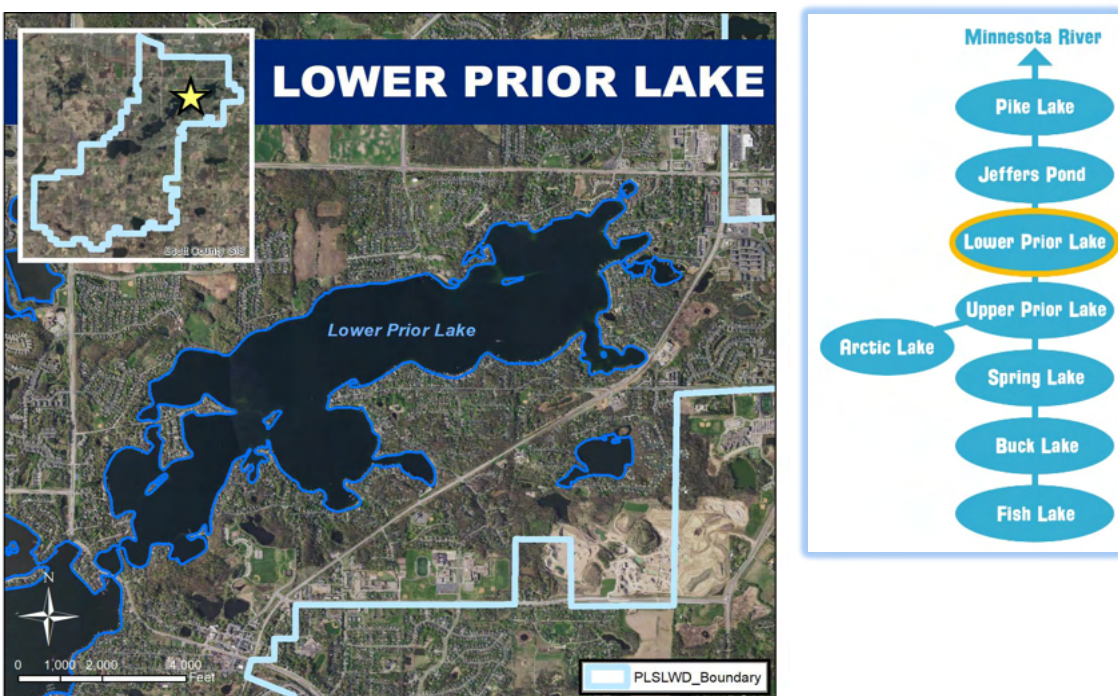
During the winter of 2021, the unified technique was used in Upper Prior Lake using underwater speakers, gill netting, and seine nets to effectively herd, drive, and capture fish from the less desirable rocky bottom location near Knotty Oar Marina out towards known safe seining grounds removing 4,900 pounds of carp.

The monitoring of the recruitment rates of young carp to the system is continuing on a yearly basis and the actual effects of this removal on the phosphorus concentrations will be monitored by regular sampling throughout the growing months (May-September) of each year.

### 3.7 LOWER PRIOR LAKE

Lower Prior Lake is the largest basin in the watershed at 940 acres shown below in figure 13. It has a maximum depth of 56 feet and an average depth of 13 feet; roughly 39% of the lake or 373 acres is in the littoral zone.

Water flows into Lower Prior from Upper Prior under the County Highway 21 Bridge and is the only major inflow; the remaining hydrology is derived from direct drainage from adjacent upland areas. The lake's outlet is the Prior Lake Outlet Channel (PLOC) located along the western portion of the lake. The watershed of Lower Prior is 18,904 acres, resulting in a moderately-sized 20:1 watershed to lake ratio.



**Figure 13.** Lower Prior Lake Map

## INTERNAL LOADING

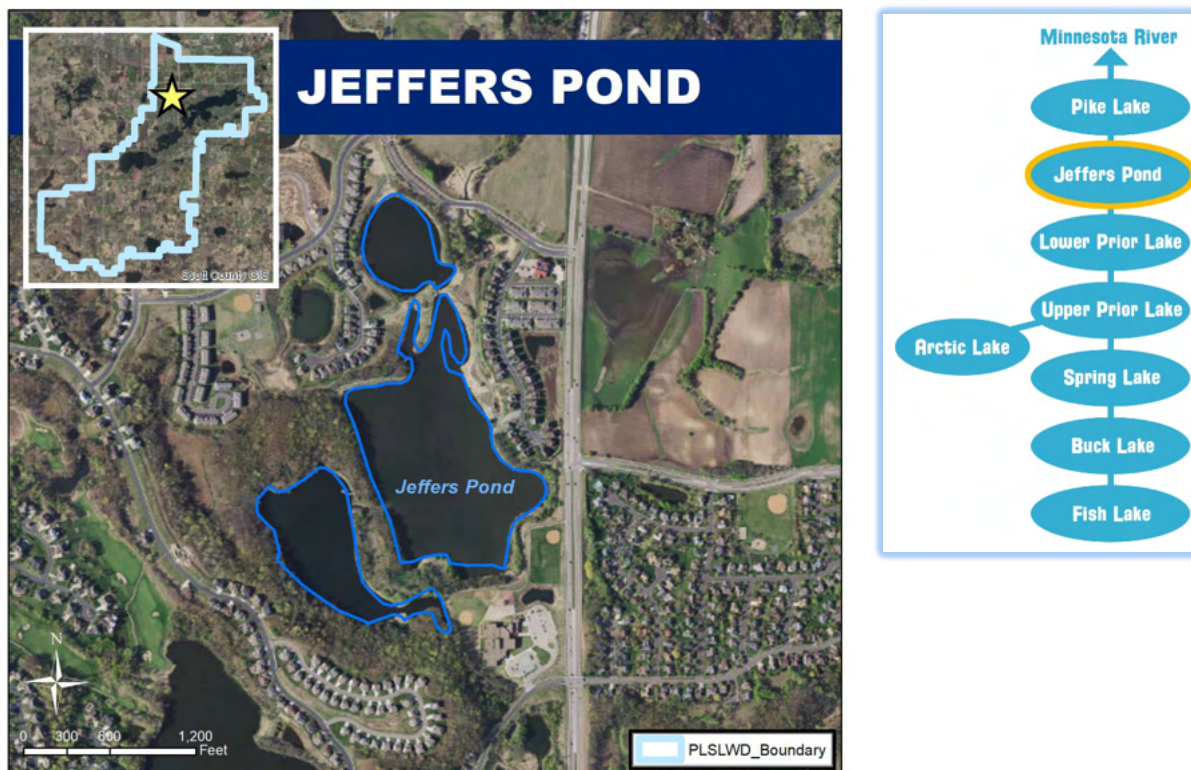
The 2013 Diagnostic report discusses internal loading from sediment release as a possible source of loading but does not quantify the potential loading from this source.

## FISHERIES ASSESSMENT

Carp are present in Lower Prior Lake and may travel freely between Lower Prior and Upper Prior Lakes through the existing connection under Eagle Creek Avenue (County Road 21). However, a biomass estimate completed in 2016 using a catch per unit effort (CPUE) model indicates that the annual load from carp is 158 lbs TP/year. Based on this, carp are not a significant source of phosphorus to Lower Prior Lake. Interestingly, during the summer of 2021, 2 radio-tagged carp have moved into Lower Prior Lake from Upper Prior Lake and serves as a reminder system mixing is occurring. Population mixing between systems where barriers are not feasible can impact the population estimates causing greater uncertainties.

### 3.8 JEFFERS POND

Jeffers Pond is located downstream of Lower Prior along the PLOC. Shown in figure 14, Jeffers Pond is divided into two basins (East and West Jeffers) separated by a narrow land bridge. The PLOC flows into the south side of West Jeffers and flows out on the north side of East Jeffers. The basins are connected by a series of cascading streams. Jeffers is 39 acres in size with a maximum depth of 70 feet (no average depth listed, total acreage includes both basins).



**Figure 14.** Jeffers Pond Map



## INTERNAL LOADING

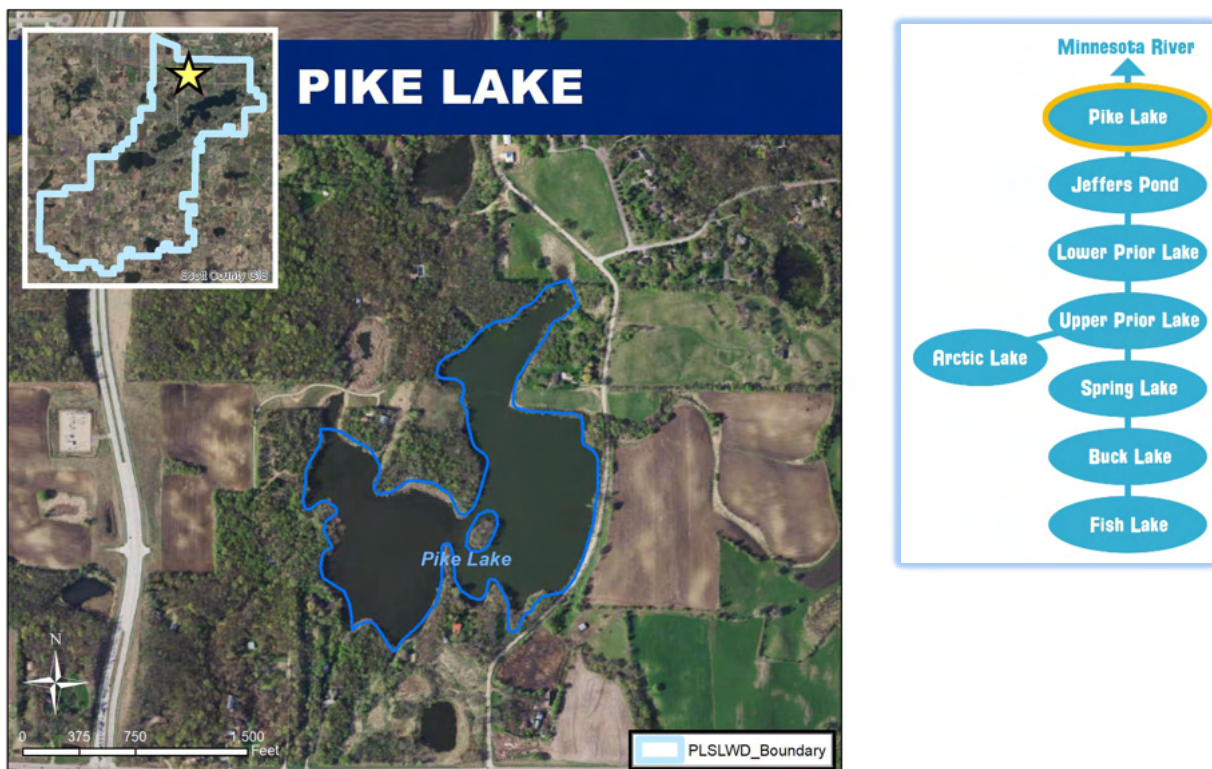
No diagnostic study has been completed to determine the phosphorus load (internal or external) to Jeffers Pond, nor is there any water quality data available to determine the impairment status of Jeffers Pond.

## FISHERIES ASSESSMENT

MnDNR lake fisheries surveys from 2016 suggest that Jeffers Pond is a potential carp nursery site, as many juvenile carp were documented. This could potentially be a source for new recruitment to Pike Lake downstream. Observations during the Spring of 2021 showed an extensive winterkill in both Eastern and Western basins of Jeffers Pond. Mortality was observed in high numbers including juvenile and adult carp reinforcing previous assumptions of Jeffers Pond acting as a nursery for Pike Lake.

### 3.9 PIKE LAKE

Pike Lake is the downstream-most basin in the watershed; located along the PLOC at the northern end or bottom of the watershed seen in Figure 15. Pike is 50 acres in size with a maximum depth of 9 feet and an average depth of 7 feet, resulting in the entire basin being littoral. The west side of Pike Lake is part of the PLOC and receives flow through the system during most years. The east side of Pike Lake is more stagnant and receives runoff from the nearby feedlot and agricultural lands across the road to the east, creating a contrast in water quality compared to the west side



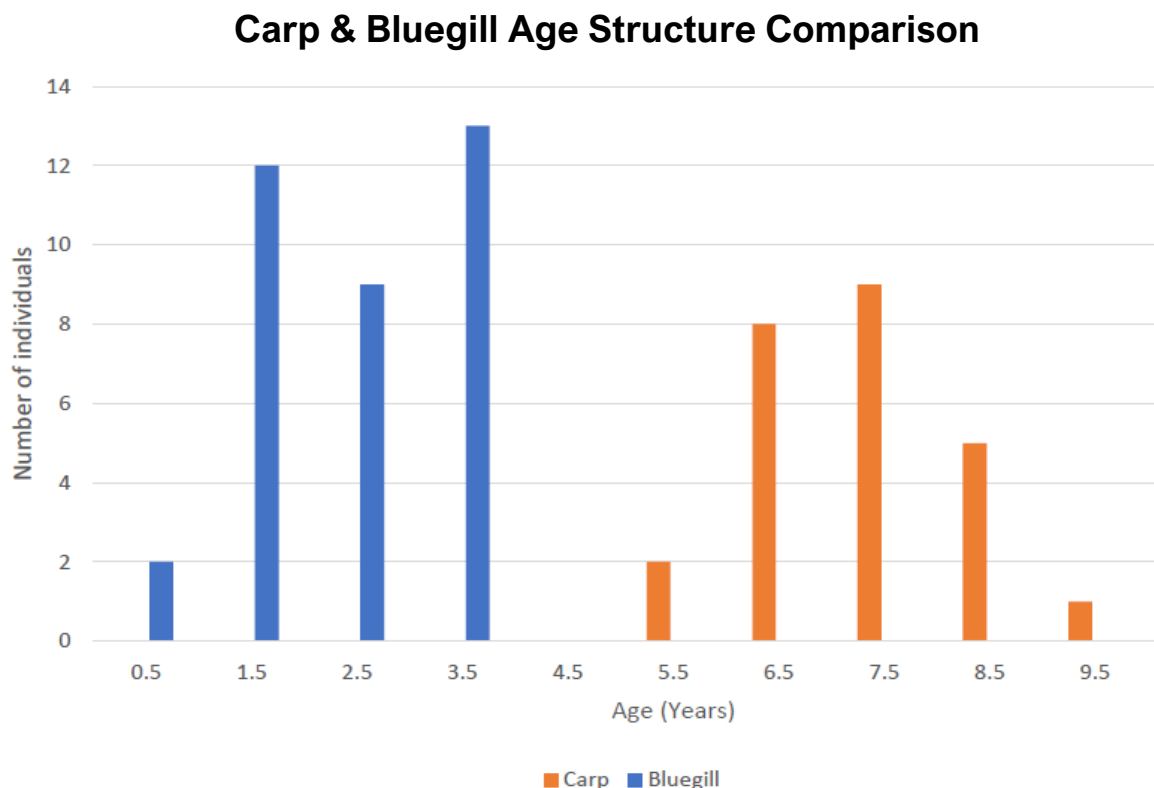
**Figure 15.** Pike Lake Map

## INTERNAL LOADING

Based on available water quality data, Pike Lake is listed as impaired for nutrients. The 2020 Lower Minnesota River Watershed TMDL Report identified benthivorous fish, such as common carp, as a “phosphorus source that is higher priority for targeting”, along with sediment release and curly-leaf pondweed as internal phosphorus sources to Pike Lake. With an internal load of 2,957 lbs of phosphorus per year, the study recommended reducing internal loading by 99% in the east basin and 87% reduction in the west basin.

## FISHERIES ASSESSMENT

SMSC completed a Pike Lake Fishery Assessment in 2020. This study concluded that the carp population is likely as much as three times the level recommended by the MnDNR at 100 kg/ha. While this initial study was only able to grab a small sample, it did conclude that the carp population is at  $287.2 \pm 137.9$  kg/ha. SMSC’s assessment is part of a larger carp management project that is funded by a grant that goes through the end of 2021, and includes tracking and removals. Similar to Jeffers Pond in 2021, Pike Lake encountered a severe winterkill from an anoxic water column. Winter and spring observations showed nearly all of the biomass in the lake was from common carp. A 2021 spring fisheries assessment was conducted to evaluate the extent of the winterkill and the results showed only a small population of bullheads existed. In order to prevent carp from being established again, SMSC is working toward repopulating the lake with native bluegill and perch.



**Figure 16.** Carp & Bluegill Age Structure Comparison in Pike Lake (2020)



When overlaying the age structure of carp with bluegill ages in Pike Lake, it is interesting to note that all the carp analyzed were between 5.5 and 9.5 years old at capture. All samples of bluegill were all younger than four years. Studies within the district have shown that bluegill prey on carp eggs. Figure 16 shows a direct relationship between bluegills and adverse carp recruitment. Recruitment refers to the process of small, young fish transitioning to an older, larger life stage.

## **PART 4 - CARP MANAGEMENT GOALS**

Through this IPM Plan, the District has developed a holistic approach to carp management, treating the entire connected watershed system as a whole. While it is the long-term goal of the District to see all of its lakes reach the water quality goal of 30 kg/ha of carp, the lakes must be prioritized and management focused to address the most imperative concerns first. As carp management information on the lakes and new techniques are always changing, this IPM Plan will address meeting goals of its priority lakes and assuring the efforts achieved through state and federal grants continue to support overarching TMDL goals.

### **4.1 PRIORITY LAKES**

While it is the District's long-term goal to maintain carp populations below the water quality management level on all waterbodies, this IPM Plan prioritizes those lakes that receive the most public use and those that are most affected by poor water quality, as well as their associated waterbodies that may harbor or support carp recruitment.

#### **PUBLIC ACCESS LAKES**

The four lakes in the PLSLWD with public access are listed below with highest public use listed first:

- 1) Lower Prior Lake
- 2) Upper Prior Lake
- 3) Spring Lake
- 4) Fish Lake

Of these four, only Upper Prior Lake and Spring Lake have documented detrimental levels of carp.

#### **TMDL LAKES**

The Minnesota Pollution Control Agency's 2020 Impaired Waters List (wq-iw1-65k) shows the list of impaired waters located within the PLSLWD as identified in Table 6 below. The list is approved of March 26, 2021. Of these lakes, only Spring and Upper Prior have approved total maximum daily load (TMDL) reports and an associated TMDL implementation plan completed. Pike Lake and Fish Lake TMDL reports were completed in 2020 as part of the Lower Minnesota River Watershed TMDL.

**Table 6. List of Impaired Lakes in PLSLWD.**

WATER BODY	YEAR LISTED	AFFECTED USE	POLLUTANT OR STRESSOR
Fish Lake	2002	Aquatic recreation	Nutrient/eutrophication biological indicators
	2006	Aquatic consumption	Mercury in fish tissue
Lower Prior Lake	2002	Aquatic consumption	Mercury in fish tissue
	2018	Aquatic life	Fish bioassessments
Pike Lake	2002	Aquatic Recreation	Nutrient/eutrophication biological indicators
Spring Lake	1998	Aquatic Consumption	Mercury in fish tissue
	2002	Aquatic Recreation	Nutrient/eutrophication biological indicators
	2018	Aquatic life	Fish bioassessments
Upper Prior Lake	2002	Aquatic Consumption	Mercury in fish tissue
	2002	Aquatic Recreation	Nutrient/eutrophication biological indicators

### PRIORITY LAKES DETERMINATION

As they are listed as Tier 1 Lakes in the PLSLWD's 2020-2030 Water Resources Management Plan, receive the highest public use, and are currently on the *state's impaired waters list*, the District has established the following two lakes as its **top carp management priority**:

- Upper Prior Lake
- Spring Lake

In addition, the PLSLWD supports the efforts of SMSC as the lead partner on tracking and reducing carp populations in Arctic and Pike Lakes. Arctic Lake is directly connected to Upper Prior Lake and Pike Lake has a current TMDL that has identified rough fish as a major contributor to internal loading. As such, the PLSLWD has established the following two lakes as its **secondary supportive carp management priority**:

- Arctic Lake
- Pike Lake

## 4.2 COST-BENEFIT ANALYSIS

The PLSLWD attempts to be as cost-effective as possible in all of its practices. In 2020, the PLSLWD completed a cost-benefit analysis comparison showed below in Table 7 on its carp program compared to other District projects (see Attachment C). A 10-year annualized cost was used to compare the carp management program results on Upper Prior Lake to other projects in the District shown in table 7.

Based on this analysis, the PLSLWD concluded that carp management was indeed cost-effective. However, all the different carp removal tools do not always produce the same result. To that effect, the PLSLWD will also consider cost-benefit when choosing carp management goals and tools. At some point, the PLSLWD may decide that reducing carp populations from 100kg/ha to 30 kg/ha would not be worth the cost, as it is increasingly more expensive to reduce carp populations when the existing biomass is already low similar to the law of diminishing returns. This will be assessed during each annual update of the IPM Plan.

**Table 7. Cost-Benefit of District Projects.**

<u>\$ / lb TP Removed</u>	<u>Project</u>
\$31	Cover Crops
\$81	Upper Prior Lake Alum Treatment
\$97	Carp Management Project
\$202	Ferric Chloride System
\$252	Fish Point Park Iron-Enhanced Sand Filter
\$1,131	Indian Ridge Biofiltration Basin
\$1,136	Fairlawn Shores Biofiltration Basin

### 4.3 CARP MANAGEMENT STRATEGIES & GOALS

The PLSLWD has three distinct overarching strategies for carp management. At the direction of the Board of Managers, there are two accelerated carp management goals for Upper Prior and Spring Lakes to reduce and maintain overall carp populations to below the water quality threshold. To help achieve successful long-term management without carp population rebound, it is important to also take steps to block recruitment and to understand how the connected system works as a whole to better management the carp population.

#### CARP MANAGEMENT STRATEGIES:

- 1) **Comprehensively TRACK** carp to improve the understanding of carp dynamics, behavior, and movement that will inform effective management decisions.
- 2) **Effectively BLOCK** all identified carp spawning areas connected to Upper Prior & Spring Lakes.
- 3) **REDUCE** carp down to management goal levels in priority lakes:

#### CARP MANAGEMENT GOALS:

**Table 8. List of Priority Lake Management Goals for Carp.**

<u>PRIORITY</u>	<u>WATER BODY</u>	<u>CURRENT CARP BIOMASS</u>	<u>CARP BIOMASS GOAL</u>	<u>TIMELINE / NOTES</u>
#1	Upper Prior Lake	211.7 kg/ha	< 30 kg/ha	Achieve goal by 2025
#1	Spring Lake	225.9 kg/ha	< 30 kg/ha	Achieve goal by 2026
#2	Pike Lake*	~0 kg/ha	< 100 kg/ha	SMSC is the lead; Achieved goal in 2021. Efforts focused on preventing reestablishment
#2	Arctic Lake*	62.0 kg/ha	< 100 kg/ha	SMSC is the lead; Maintain levels

\* Note that PLSLWD takes only a supportive role in carp management.

Previous studies demonstrate that carp biomass densities of 100 kg/ha are ecologically damaging. To effectively manage and maintain carp below this threshold, an initial reduction to

a density of 30 kg/ha has been recommended by the District board of managers for the two top priority lakes. By managing at a lower level, early detection of potential recruitment events may provide managers an opportunity to address the increase in carp population and biomass before it returns to a damaging level. Once this milestone has been achieved and recruitment has been managed, the PLSLWD may consider working towards the 30 kg/ha goal for all lakes in the District.

- **Goal #1:** Reduce carp populations to 30 kg/ha in Upper Prior Lake by 2025.
- **Goal #2:** Reduce carp populations to 30 kg/ha in Spring Lake by 2026.

## PART 5 - IPM STRATEGIES

For years after the introduction of carp in the United States, various government agencies and other entities attempted to manage and mitigate carp populations simply through large-effort mass removals. This one swing approach did not include quantifying the amount of carp before or after these efforts, or

*While commercial fishing efforts (seines) are not an effective means to control carp populations by itself, it can be a valuable component of an integrated pest management plan for long-term population management.*

blocking carp recruitment. Without baseline carp population information, this management method proved to be ineffective as managers were not able to quantify the extent of the invasion and did not know when they were “done”. Carp often recolonized waterbodies since a long-term approach was not implemented, and spawning areas remained open and available. This management approach was largely abandoned in the late 1900s. Ideas and strategies have

since been adapted from management practices being used in Australia (Diggle et al., 2012) and by studying movement and behavior patterns of carp in the Upper Midwest. In the early-2000s the University of Minnesota Aquatic Invasive Species Research Center (MAISRC) instituted research to develop a sustainable approach to effectively mitigating and controlling common carp in the United States. This research showed that by addressing different life stages and developing an understanding of the entire system or watershed sustainable carp control could be possible. The following diagram illustrates considerations to be made in the development of a carp IPM for the Prior Lake-Spring Lake Watershed District (Figure 17).

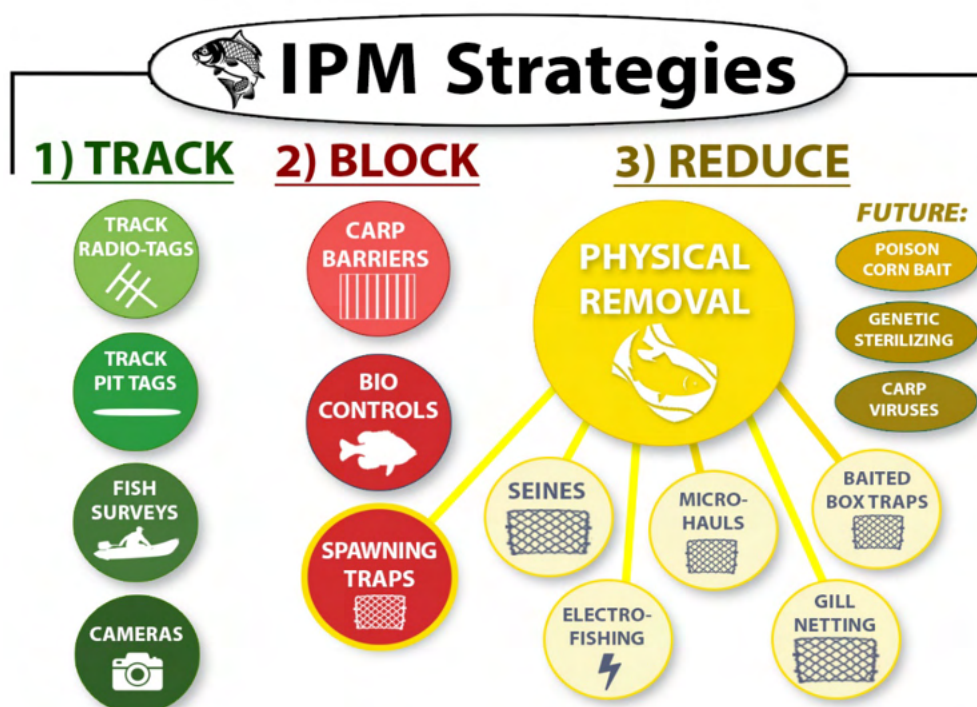


Figure 17. IMP Strategies

## 5.1 TRACK

Before implementation of **BLOCK** and **REDUCE** activities, the extent of the problem needs to be addressed. There are three questions that need to be answered:

- 1) How many carp are in the system?
  - Population estimates
  - Setting removal goals
- 2) Where and when do carp travel and aggregate in the system?
  - Identify migration routes between waterbodies
  - Locate areas where carp are aggregating to aid in removal efforts
- 3) What basins are the carp using to spawn?
  - Identify potential locations for carp barriers
  - Use to locate potential spawning trap locations

### A. DATA COLLECTION TOOLS & TECHNIQUES

Whatever method that is used to estimate carp populations, the first step is always to capture the carp for counting and measuring. This can be completed using a variety of methods.

#### COLLECTING CARP:

**Electrofishing.** An electric field is generated between anodes and cathodes placed in the water. The current causes muscle contraction and temporary paralysis in fish; most species will float to the surface



where they can then be netted. Stunned fish usually recover quickly when the power is switched off. Unfortunately, fish in deep water are not often captured, so this technique is best used in shallower areas near the shore. Different electrofishing methods (e.g. backpack, bank-mounted and boat, including electroseining) are used depending on local site conditions. *Note: This method is also used for small scale removals.*

**Gill Netting.** Mesh net panels are placed vertically in the water to entangle fish. The net has a rope along the top with floats attached and another rope along the bottom with weights attached. The mesh of a gill net is uniform in size and shape and the netting is large enough for a fish to fit its head through, but not its body, trapping them in place. *Note: When employed with commercial fishermen and with permission from the MnDNR, this method is also used for larger-scale removals.*

**Fyke Nets.** Collapsible, cone-shaped trap nets, held open by hoops. Leader net panels or wings guide fish towards the trap entrance. Due to their size and placement in shallow locations, fyke nets are effective for catching smaller carp.

**Large-Scale Removal Events.** While not its main purpose, data is collected during large scale removal events to better estimate current carp populations and removal efforts. These methods include seines, baited box traps, specialized trap nets, and commercial gill netting.

After the carp have been captured, counted, and measured, they are tagged and re-released into the waterbody in order to track their movement and monitor their populations. This tagging effort is completed through a variety of tools used to track carp as listed below.

## TRACKING CARP:

**Passive Integrated Transponder (PIT) Tags.** PIT tags act as a lifetime barcode for an individual carp and when scanned are as reliable as a fingerprint (Gibbons & Andrews 2004). The tag is usually between 10 and 14 mm long and 2 mm in diameter. PIT tags are injected with a needle or inserted by surgical incision under the skin of the fish. PIT tags are dormant until activated; they therefore do not require any internal source of power throughout their lifespan. To activate the tag, a low-frequency radio signal is emitted by a scanning device that generates a close-range electromagnetic field. The tag then sends a unique alpha-numeric code back to the reader (Keck 1994). Scanners are available as handheld, portable, battery-powered models and as stationary, automated receiver devices that are used for automated scanning. PIT tag receivers are strategically placed in suspected carp migratory routes to determine movement behaviors in those channels.

**Radio-Tags.** A radio-tag consists of a 2.5 inch long cylinder which is surgically inserted inside the body of the carp with a foot long antenna extending outside of its body. Unlike PIT tags, radio-tagged fish can be located manually and tracked in real-time with an antennae from a boat or from on top of the ice in winter. Radio-tags implanted in the carp last for about two to three years, providing the District with key information about where the carp gather to overwinter and where they go to spawn. Each radio tag has a unique frequency, which can be picked up from up to a mile away with the tracking antennae device.

**Fin Clips / Plastic Tags.** In order to determine population estimates, carp are sometimes marked with a unique fin clip for the waterbody (e.g. right dorsal fin, pectoral fin, etc.) which does not harm the fish but leaves an identifiable marker. In other studies, carp have been marked with plastic tags that are inserted into the body of the fish and are similar-looking to retail clothing tags.



**Figure 18.** Plastic Tag

### POPULATION ESTIMATE TECHNIQUES:

**Mark-Recapture Estimate.** To complete a mark-recapture estimate of abundance, captured carp will be marked with a unique mark (e.g. a fin clip, a plastic tag, a PIT tag, or a radio-tag), measured for length and weight, and released back into the basin that they were captured. Subsequent surveys will note the ratio of marked to un-marked fish and a population estimate will begin to develop using this method of estimation. This method assumes that marked carp are redistributed with the unmarked population, meaning that sufficient time (upwards of one-week) must be given between the date of marking a carp to the recapture event (Chapman, 1951). It also assumes that no emigration or immigration of the species occurs in the lake during the survey period. This method of estimation will be evaluated throughout the project period in case one or more of these assumptions is being violated.



**Figure 19.** Measuring carp

**Catch Per Unit Effort (CPUE) Survey.** CPUE boat electrofishing surveys can be used to estimate carp abundance and to predict the density of adult common carp in some cases (Bajer, 2012). These surveys are completed in the late summer to early fall and over the span of one to two months. Ideally, up to



**Figure 20.** CPUE Survey

three (3) separate electrofishing surveys in each lake are conducted to establish an average CPUE. Surveys will consist of at least three (3) 20-minute transects that cover shoreline and littoral zones that are suitable habitat for carp. Time spent, number of carp captured, and length and weight data are recorded. A population and biomass estimate of common carp are then calculated using this data in a CPUE model developed for using the protocol and gear described and reflects the population at the time of the survey (Bajer et al., 2012). An average of multiple surveys aims to develop a more robust estimate over a larger span of time.

## B. CARP ABUNDANCE ESTIMATES

**OBJECTIVE 5.1.B (1):** *Establish abundance estimates for each of the carp management waterbodies in the PLSLWD.*

For this plan, the abundance of carp is defined as the number of individuals and the amount of biomass present within each waterbody, reported in kilograms per hectare. To determine the abundance of carp within the system, two methods have been deployed: a mark recapture population estimate and an electrofishing catch per unit effort (CPUE) model. The protocol used for these methods of estimation are described above.

As the PLSLWD implements carp management activities (removal, barriers, etc.), it will be important to monitor changes in carp abundance on these lakes to determine if these efforts are successful in suppression of carp population post-management or if adjustments to existing strategies or new strategies are necessary. Table 8 lists the current population estimates of district lakes. Pike Lake has been estimated to be 0 as a result of the 2021 winterkill and spring fisheries surveys. See Part 3 for specific information on current populations of individual lakes.

**Table 9. Carp Biomass & Phosphorus Loading in PLSLWD Carp Management Lakes.**

LAKES IN ORDER OF PRIORITY	YEAR	CARP BIOMASS ESTIMATE (KG/HA)	ESTIMATED TOTAL WEIGHT (LBS)	PHOSPHORUS LOADING RATE (LBS/YEAR)
<i>Upper Prior Lake*</i>	2021	211.7 ± 66.9	73,880	1,213
<i>Spring Lake*</i>	2021	225.1 ± 45.6	119,504	1,141
<i>Pike Lake**</i>	2021	0	0	0
<i>Arctic Lake**</i>	2018	62.0	1,094	7.24
<i>Fish Lake</i>	2019	88.7 ± 69.2	13,886	46.89
<i>Lower Prior Lake</i>	2018	8.9	7,593	23.71
<i>Jeffers Pond</i>	-	unknown	unknown	unknown
<i>Buck Lake</i>	-	unknown	unknown	unknown

\* *Carp Management Top Priority Lakes*

\*\* *Carp Management Secondary Priority Lakes (supportive role only)*

\*\* *Pike Lake Estimate based on winterkill of entire biomass*

**OBJECTIVE 5.1.B (2):** *Develop a baseline understanding of recruitment patterns in waterbodies that connect to the two top priority lakes.*

Although spawning observations can suggest areas for recruitment, the strength of these recruitment events is not known without sampling using nets or electrofishing in these basins. To help determine priority waterbodies to block movement to or from, it is recommended that steps be taken to sample basins suspected for recruitment. Radio-tags and PIT tags can be used to help document springtime

movement by adults. Trap netting can be used for small sampling efforts. Another tool for determining potential spawning sites is observing spawning behavior of carp.

**Table 10. Carp Survey Status of Potential Spawning Sites Connected to Priority Lakes**

WATERBODY	PRESENCE/ABSENCE	
	SURVEY	CARP BIOMASS ESTIMATE (KG/HA)
<i>Geis Wetland</i>	Present	183.0 +/- 83.6 (2018): surveys on 8/13, 8/15, 10/4 54.3 +/- 12.1 (2019): survey on 8/15/19, 2021 winterkill observed
<i>Northwood Pond</i>	Present	Unknown-2020 Spawning observed, 2021 winterkill observed
<i>Tadpole Pond</i>	Present	Unknown – 2020 and 2021 spawning observed
<i>Charlie's Wetland</i>	Absent	Unknown
<i>Desilt Pond</i>	Present	Unknown – 2020 Spawning observed, 2020 winterkill observed

### C. CARP SPATIAL USAGE

Determining how carp use the system is critical to the development of the carp IPM plan. Understanding movement patterns will allow PLSLWD staff to identify potential nursery sites, migration routes, and wintering areas where carp may be vulnerable to large scale biomass removal or blockage to movement to limit recruitment (Bajer, 2011).

To track movement, the PLSLWD has deployed several high frequency radio tags implanted in carp (Judas fish) as well as passive integrated transponder (PIT) tags with seven (7) PIT tag monitoring stations in 2021. PLSLWD and WSB staff have actively tracked radio-tags using a 3-element Yagi antennae since 2015. Survey frequency was greatest during the spring spawning period (1-2/week) and during the winter aggregation period when ice conditions were safe enough for foot travel. The remainder of the year, radio telemetry surveys were completed on a once per week basis.

The District also uses two stationary cameras to be placed at strategic locations to confirm carp migration routes and/or aggregations of carp during spawning season. These cameras are set up wirelessly and transmit real-time information so that staff can move quickly to coordinate carp removals at optimal times.

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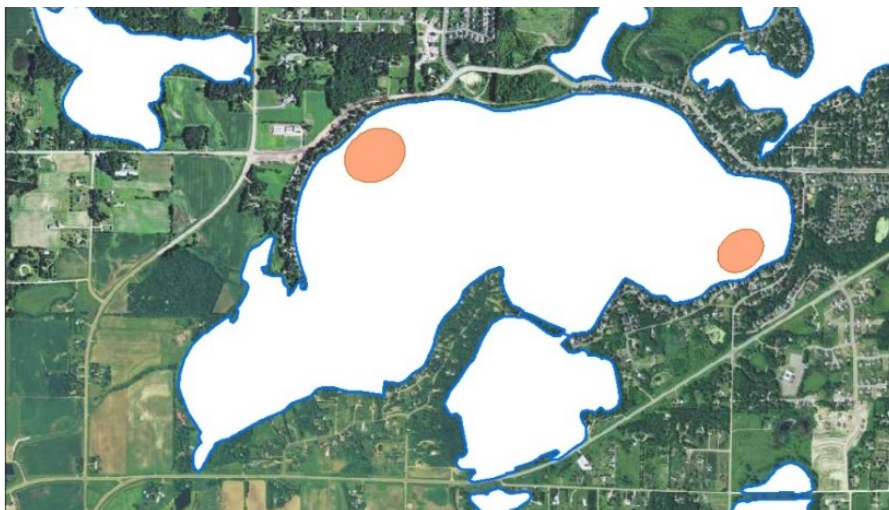
#### **OBJECTIVE 5.1.C (1): Identify carp aggregations on Spring Lake and Upper Prior Lake**

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Winter-time telemetry surveys and past studies have proven that carp tend to aggregate together in large groups during the winter (Johnsen, 1977; Penne, 2008). This phenomenon allows for these aggregations to be targeted for removal using under ice netting techniques, thus the identification of carp wintering areas on Spring Lake and Upper Prior Lake was determined to be a main objective in the 2015 carp management project.

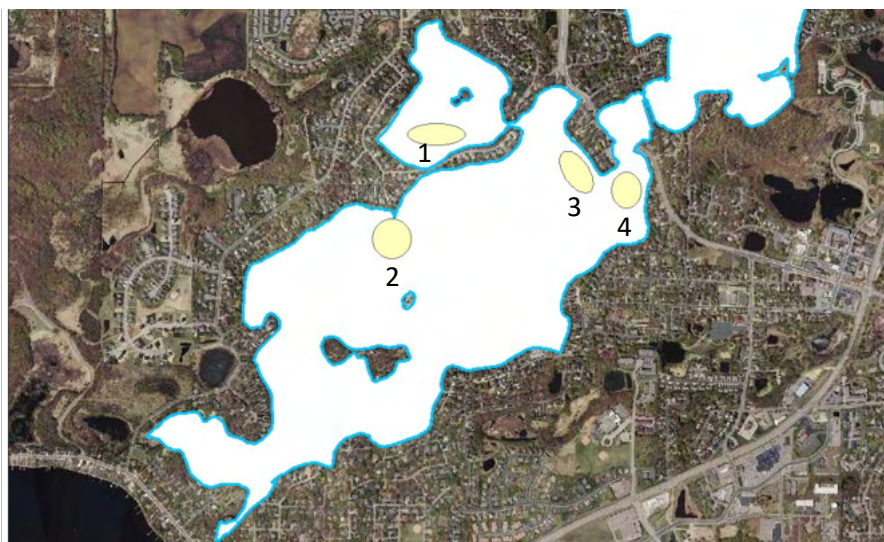


Radio-tagged carp have been periodically monitored since 2015 to identify winter carp aggregation areas that could be targeted for carp biomass removal. Two (2) distinct sites were identified, both of which commercial fishermen have been able to pull a seine net through.



**Figure 21.** Identified Spring Lake Carp Aggregation Areas Suitable to Seine

Four full winters of telemetry data are available to identify winter aggregation areas on Upper Prior Lake and four (4) distinct sites have been identified in figure 22 where carp tend to aggregate, mainly in the winter. Locations 1-3 depicted have been successfully seined in both open water and under ice. Location 4 poses a significant risk of snagging lake bottom rocks and is not suitable for netting. In 2020 and 2021 when carp were located near the rocks at location 4, the district utilized underwater speakers to herd carp from the undesirable seining location. Additionally all 4 locations have been targeted with gill nets during the Gill Netting Pilot project.



**Figure 22.** 2016-2021 Upper Prior Lake Carp Aggregation Areas Suitable to Seine

Radio-tags will continued to be tracked, mapped and documented to identify new and continued areas that carp are congregating on Upper Prior and Spring Lakes.

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**OBJECTIVE 5.1.C (2):** *Visually monitor carp at spawning areas to identify aggregations at connections to Spring and Prior Lakes.*

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Using staff, volunteers, and stationary cameras, monitor the locations at or near Upper Prior or Spring Lakes that are suitable for small-scale carp removals when fish begin aggregating in the spring. This information will be used to coordinate electrofishing, gill-netting, micro-hauls, or seine netting carp removals with consultants and/or commercial fishermen.

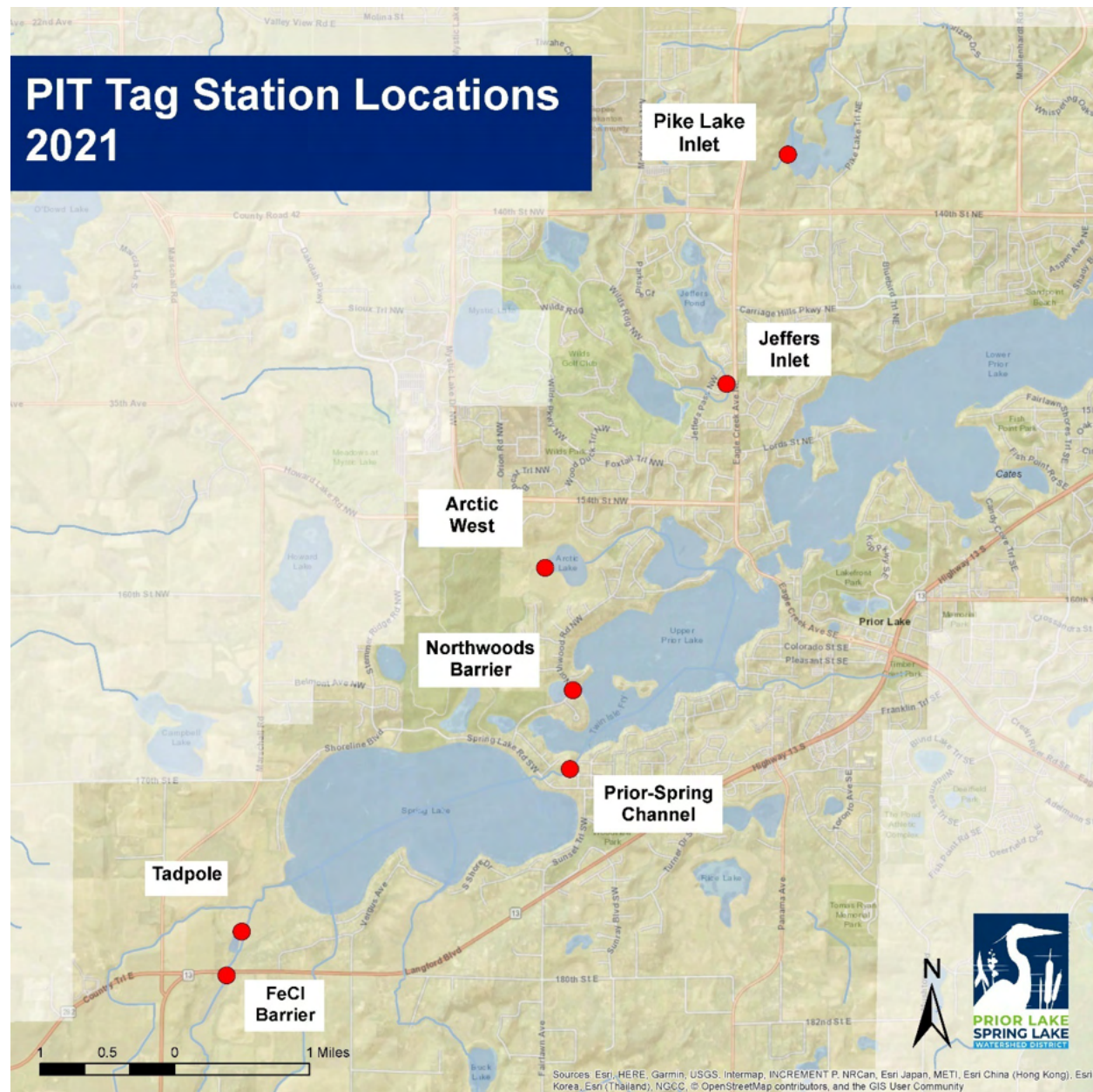
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**OBJECTIVE 5.1.C (3):** *Map migration routes and identify connected nursery sites for Upper Prior and Spring Lakes.*

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Migration routes that allow access to shallow basins that carp exploit for use as nursery sites are the support mechanism for carp recruitment in those systems where carp spawn outside the main basins. Carp have evolved to seek out these sites since hard winters in Minnesota periodically freeze shallow basins resulting in winter-kill of most or all fish species. Absence of predator species, such as bluegill sunfish, greatly increase the chance for survival of carp eggs and larvae. Radio-tags and passive integrated transponder (PIT) tags and stationary receivers are currently being used to track the movement of carp each season (Appendix C).

Carp movement out of the Spring Lake and Upper Prior Lake system is being studied using the same radio-tags used in the Judas fish technique to find carp winter aggregations. Several apparent surface connections exist on Spring Lake and Upper Prior Lake and in some cases, anecdotal information suggests that carp are using a connection even though no radio-tags have been detected moving. In response to this, the PLSLWD initiated a study using Passive Integrated Transponder (PIT) tags and seven (7) unmanned receivers/loggers placed in streams to detect movement and quantify the extent of movement in locations of highest priority. Five of the sites are using solar powered PIT Stations which allows for a more complete data set at remote locations where frequent battery swapping is difficult.



**Figure 22.** PIT tag receiver locations in 2021



**Table 11. Current and future PIT tags.**

	<b>CURRENT REMAINING PIT TAGS</b>	<b>2021 PLANNED PIT TAGS</b>	<b>2022 PLANNED PIT TAGS</b>
<b>Upper Prior Lake</b>	<b>230</b>	<b>50</b>	<b>50</b>
<b>Spring Lake*</b>	<b>156</b>	<b>50</b>	<b>50</b>
<b>Pike Lake**</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Arctic Lake</b>	<b>26</b>	<b>0</b>	<b>0</b>
<b>Geis Wetland</b>	<b>114</b>	<b>50</b>	<b>0</b>
<b>Fish Lake</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Cates Lake</b>	<b>0</b>	<b>0</b>	<b>50</b>

\*A small amount of PIT tags have been removed during recent baited box trap efforts

**Table 12. Current and future radio-tags.**

	<b>CURRENT ACTIVE RADIO-TAGS</b>	<b>2019 RADIO-TAGS</b>	<b>2020 RADIO-TAGS</b>	<b>2021 RADIO-TAGS</b>	<b>PLANNED 2022 RADIO-TAGS</b>
<b>Upper Prior Lake</b>	<b>7</b>	<b>9</b>	<b>7</b>	<b>5</b>	<b>5</b>
<b>Spring Lake</b>	<b>3</b>	<b>9</b>	<b>4</b>	<b>5</b>	<b>5</b>
<b>Arctic Lake</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Pike Lake**</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>

\*\*Note that SMSC is the lead on the Pike Lake carp management project.

Tagged carp are suspected to have traveled between Upper Prior Lake and Arctic Lake after the barrier was installed in 2016. Additional PIT tags in Arctic will help confirm or deny whether or not carp are finding another way to travel between the two waterbodies. There have not been conclusions on how these tagged fish managed to make their way out of Arctic Lake.

PIT tag stations at the Northwood barrier and the FeCl barrier were reinstalled to help the District verify if these barriers are sufficiently working to prevent carp migration during spawning. Summer 2021 data supports the design of the barrier preventing carp movement. The Tadpole station was placed in the planned 2021 Tadpole barrier location confirming there is movement of carp through the channel. Arctic station was moved to the west side of Arctic Lake to determine if there could be movement westward into a wetland complex through newly constructed BMP. Jeffers Inlet and Pike Lake Inlet are two stations located along the Prior Lake Outlet Channel (PLOC). Low flows likely prevented much movement along the PLOC in 2021.

## **5.2 BLOCK**

### **A. BIOLOGICAL CONTROLS**

Research completed by the Minnesota Aquatic Invasive Species Research Center (MAISRC) showed that bluegill sunfish are the main predator of carp, preying on the eggs and larvae of carp young of year.



Carp actively seek out nursery sites that are devoid of these predator fish and proliferate in lakes where bluegill abundance is low. A robust panfish and gamefish population may act as biological control and complements the other IPM strategies (Weber et al., 2012). These predator fish are necessary to prevent carp recruitment after a significant portion of the carp biomass has been removed or to keep carp from establishing in lakes.

Larger gamefish may also prey upon carp young of the year, but that relationship is not as well documented. Also, carp growth rates are quite accelerated compared to other fish species. By the second growing season (age 1) carp may be > 12 inches, reducing the likelihood that piscivorous fish species will be able to prey upon them.

In 2017, the PLSLWD partnered with the University of Minnesota as part of a graduate research project to assess the effectiveness of using bluegill sunfish as biocontrol for common carp (Poole, 2018). The eastern basin at the 12/17 wetland restoration site was one of four study basins in the Twin Cities metro area used; it was stocked with both spawning carp and adult bluegill to measure the effective rate of bluegill predation on carp eggs. The results from the study indicate that bluegill predation had a major effect on the abundance of post-larval carp. In the 12/17 wetland study basin, there 0% recruitment of carp during the study period.

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***OBJECTIVE 5.2.A (1): Manage lakes & upstream spawning grounds to support a robust gamefish and/or panfish population to effectively control carp recruitment.***

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MN DNR fisheries data is available for both Upper Prior, Lower Prior, Spring, and Fish Lakes. Two (2) independent fisheries studies have been completed on Arctic Lake, and a recent fisheries assessment was completed on Pike Lake. Existing data for these lakes show a variety of fish assemblages and abundances.

The remaining lakes (Buck Lake and Jeffers Pond) in the watershed have not been assessed. An initial sampling in Buck Lake did not indicate that it was a nursery and it had a good panfish population. Jeffers Pond was confirmed to be a carp recruitment site and should be monitored for carp activity for the next several years. The 2020/2021 winter-kill showed an abundant carp population signaling the lake has suitable habitat. A baseline fisheries assessment is planned in 2022 by SMSC. Data collected after the assessment will be used to prioritize if and how this lake needs to be managed.

An analysis of all existing fisheries data in 2021 will provide insights into each of the fisheries where such data is available, identify data gaps, and determine if the fishery is functioning to biologically control carp where necessary. Habitat improvements and other restorative efforts may be identified through this effort as well as waterbodies that may need additional survey work where minimal data is available.

As recommended by the PLSLWD's Citizen Advisory Committee, the PLSLWD is moved forward in 2020 with its first lake fish stocking event in both Spring and Prior Lakes since 2010. With donations from the Spring Lake Association and the Prior Lake Association, along with a District contribution.

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**OBJECTIVE 5.2.A (2): Stock bluegills as needed in carp nursery locations connected to Upper Prior and Spring Lakes to prevent recruitment.**

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While winter dissolved oxygen measurements show elevated oxygen levels (7 ppm) in the Geis wetland, which is high enough to support winter survival, it is unknown if the habitat is sufficient to support bluegill recruitment. Waterbody size, water chemistry data along with April and May bluegill sampling helped determine stocking rates.

In spring of 2020, the PLSLWD began stocking the existing carp spawning sites at the Geis wetland, Tadpole Pond, and the Northwoods Pond with 2-4" bluegills before carp migration and spawning. These bluegills were marked with fin-clips before releasing them into the wetland to aid in future assessment of stocking success.

In spring of 2021 the Geis wetland, Northwoods Pond, Tadpole Pond, and Desilt Pond were resurveyed to assess if the stocked bluegills survived. There were no 2020 bluegill recaptures during the 2021 pre-stocking surveys. Based on recommended stocking rates, the Geis wetland was stocked with 2,000 bluegills, Northwoods Pond site was stocked with 700 bluegills, and Desilt Pond was stocked with 700 bluegills to ensure low recruitment in this nursery sites in spring of 2021.

**Table 13. Summary of Bluegill Stocking in Nursery Sites**

	<i>SPRING 2020 STOCKING</i>	<i>SPRING 2021 STOCKING</i>
<b><i>Geis Wetland</i></b>	<b>2,000</b>	<b>2,000</b>
<b><i>Northwoods Pond</i></b>	<b>900</b>	<b>700</b>
<b><i>Tadpole Pond</i></b>	<b>100</b>	<b>0</b>
<b><i>Desilt Pond</i></b>	<b>0</b>	<b>700</b>

PLSLWD will continue assessing carp nursery locations for bluegill populations. More bluegills will be stocked in identified nursery locations if deemed necessary to prevent carp recruitment. Additional nursery locations base on spring 2022 spawning observations will be analyzed for potential bluegill stocking 2023.

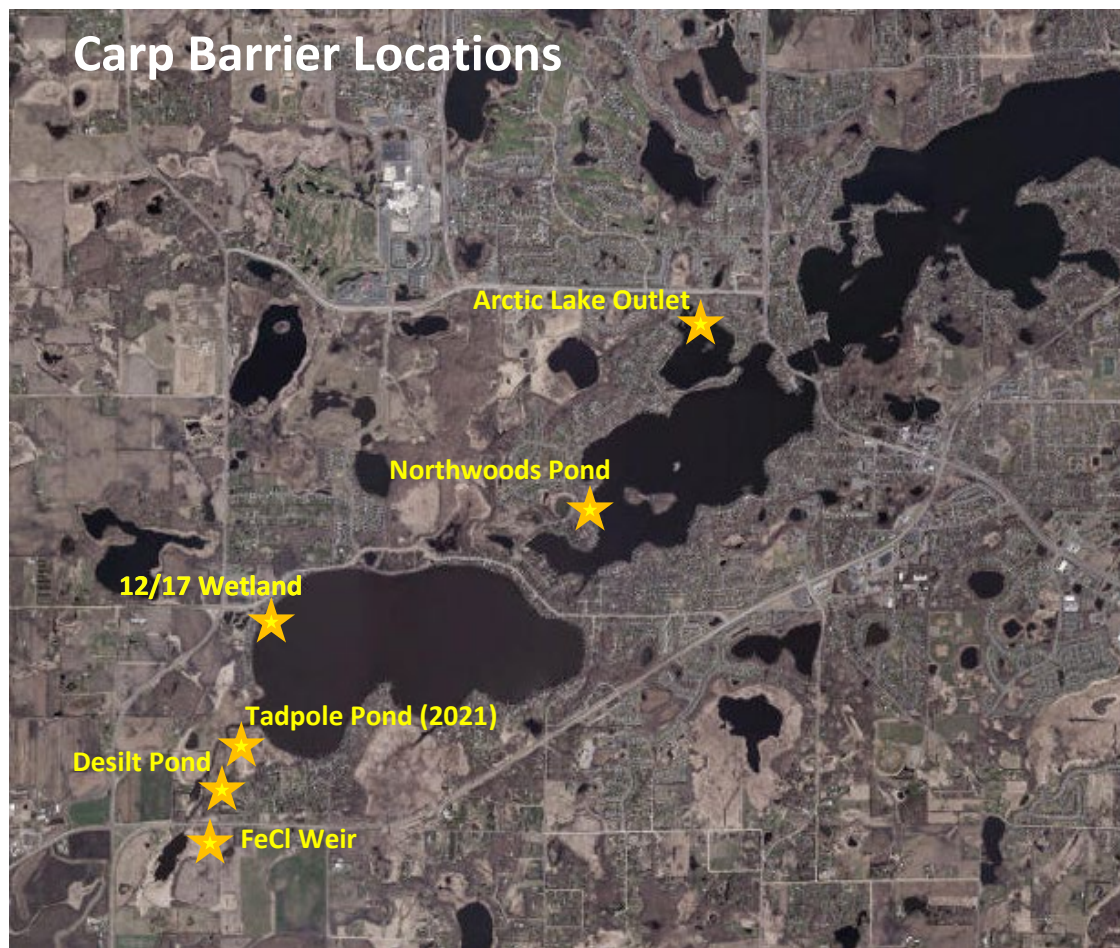
## **B. CARP BARRIERS**

Barriers can be an incredibly effective component of a carp IPM. Barriers may be employed to protect sensitive areas from the destructive foraging behavior of carp or prevent carp from exploiting migration routes to disrupt recruitment. Barrier placement should be balanced with the potential need for fish

passage with respect to native gamefish. Placement of barriers is supported by the implementation of movement monitoring as described in section 5.1.C (3).

Existing carp barriers were placed throughout the Upper Prior and Spring Lake connections based on documented carp migratory information and include the following locations:

- Arctic Lake Outlet
- 12/17 Wetland (west side of Spring Lake)
- FeCl Weir (south of Spring Lake on Ditch 13)
- Desilt Pond (south of Spring Lake at Ditch 13 outlet)
- Northwoods Pond (west side of Upper Prior Lake)



**Figure 23.** Barrier locations within the PLSLWD, including installed and proposed barrier sites.

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**OBJECTIVE 5.2.B:**      *Install new barriers within carp migration routes to spawning areas as documented by tracking data or fisheries assessments.*

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In 2020, the PLSLWD installed one new barrier (Northwood barrier) located on the west side of Upper Prior Lake. This carp nursery site was discovered when radio-tagged carp were documented entering this waterbody during spawning season. Visual observations confirmed that it was an active spawning site.

The existing FeCl Weir barrier from 2003 was also re-designed and updated in 2020. This barrier system was in need of repair for nearly a decade. The new system requires less maintenance and is designed to be more effective in high water flood conditions with less maintenance.

Carp have been documented visiting a small connected waterbody to the southwest of Spring Lake during spawning season named Tadpole Pond. A PIT station installed in 2021 confirmed season movement. The design and permitting for the Tadpole Pond barrier site has been finalized. The build and installation are projected to be completed in fall of 2021.

The PLSLWD plan to continue investigating other potential barrier locations in 2022. These locations will be identified using the tracking methods described in Section 5.1.1. Furthermore, as access to prime spawning habitats are continuously being blocked off, the district will be confirming barrier effectiveness and looking at previously identified lower risk connections to potential spawning habitats.

### 5.3 REDUCE

Carp can be removed from waterbodies using a variety of methods as documented below. PLSLWD will consider the following when deciding which removal methods to employ:

- 5) **Feasibility:** How likely will this method result in success? What are the obstacles?
- 6) **Time-Oriented:** Is immediate removal necessary to meet goal deadlines? Will the timeliness affect success of other projects (e.g. alum treatment)?
- 7) **Cost-Effective:** Is this method worth the cost based on anticipated results?
- 8) **Effort for Results:** Is this the best method for the amount of effort required? Given limitations of staff, what methods produce the greatest results for the least amount of effort?

While the IPM plan addresses the carp management strategies on a holistic, watershed-based approach, the PLSLWD is dedicated to first reaching carp management goals on its top priority carp management lakes before it works to actively manage the other six lakes.

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**OBJECTIVE 5.3: Reduce carp populations to 30 kg/ha in top priority carp management lakes: Spring and Upper Prior Lakes.**

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## A. CARP REMOVAL METHODS

### SEINES

Commercial fishermen use long mesh nets that hang vertically in the water with floats along the top and weights along the bottom. They are typically used to surround fish in an area and pulled through the water and along the lake bottom to crib up the carp in a shallow area for removal. Both open water and under ice seine netting is very effective but limited to areas where carp aggregate and are snag free.



**Figure 24.** Under Ice Seine on Spring Lake

**Clearing Obstructions.** One of the most critical factors to a successful seine is have an area that is clear of obstructions on the lake bottom. The

PLSLWD can help prepare known aggregation areas prior to seine season (November – April) by engaging a commercial fishermen to run a test seine through areas with their nets, or by running a chain on the bottom of the lake. These obstruction removals may occur on Spring Lake and Upper Prior Lake

## FACTORS TO CONSIDER FOR A SEINE EVENT:

<p><b>LOCATION</b></p> <ul style="list-style-type: none"> <li>• Is the potential seine in an area that has been seined before?</li> <li>• Are there any deep holes where the nets won't reach?</li> <li>• Is the nature of the shoreline unsuitable for netting (e.g. substrate, docks, tree for winching, etc.)</li> <li>• Is there too much vegetation to pull the net through?</li> </ul>	<p><b>WEATHER</b></p> <ul style="list-style-type: none"> <li>• Is it too windy for an open water seine?</li> <li>• Is it too cold for native fish to survive being out of water during an ice seine?</li> </ul>	<p><b>SNOW &amp; ICE</b></p> <ul style="list-style-type: none"> <li>• Is the snow too thick for winter seine?</li> <li>• Is the ice thick enough to support weight of vehicles?</li> </ul>
<p><b>AGGREGATION</b></p> <ul style="list-style-type: none"> <li>• Is there a large enough carp aggregation grouped tightly enough?</li> </ul>	<p><b>OBSTRUCTIONS</b></p> <ul style="list-style-type: none"> <li>• Has the area been cleared of any obstructions?</li> <li>• Is this an area where fishermen have thrown in trees for fish cribs?</li> <li>• Is there rocks or other known obstructions that cannot be avoided or removed?</li> <li>• Is the lake bottom too muddy to pull the seine net through?</li> </ul>	<p><b>FISHERMEN</b></p> <ul style="list-style-type: none"> <li>• Are commercial fishermen willing, able and ready?</li> <li>• Do the nets need to be tagged for zebra mussels? <i>Note: Due to zebra mussel infestation, the fisherman is not able to use the nets for three weeks during decontamination.</i></li> <li>• Is there an existing market to take the carp to once removed?</li> <li>• Will the carp haul be large enough for market viability?</li> </ul>

**Figure 25.** Factors to Consider for a Seine Event

each October/early November to prep the sites if a seine event is anticipated. In the Fall of 2020, district staff and consultants located obstructions on the lake bottoms that had caused issues during prior seining attempts. The obstructions were mapped using side scanning sonar and verified using an under water drone. Coordinating with commercial fisherman and a diver, debris ranging from tires to blocks were found and either moved outside of the seining perimeter or disposed of.

The PLSLWD will also use its underwater drone to check the removal area conditions prior to a seine to avoid any new or unforeseen obstructions in an area. If there are new obstructions under the ice, they can potentially be avoided or removed prior to the seine.

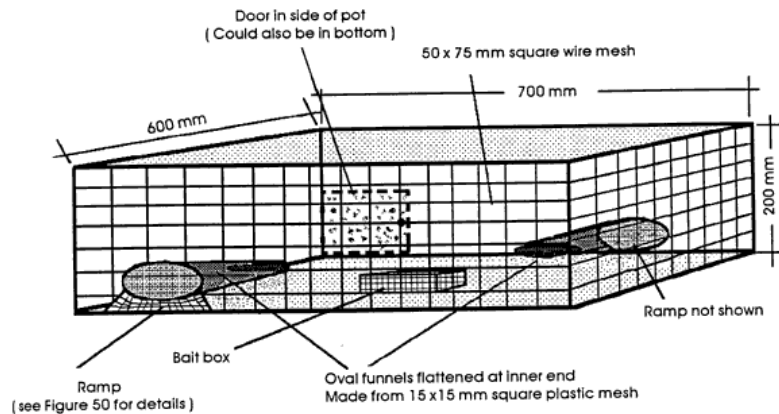
**Upper Prior Lake Seine Net.** There has been some hesitancy by commercial fishing crews to commit resources to netting Upper Prior Lake due to the presence of aquatic invasive species (Eurasian watermilfoil, curly leaf pondweed, and zebra mussels) and the DNR's requirement to decontaminate nets and associated equipment. Depending on the weather, the decontamination period may be up to 21 days, meaning that commercial crews may not have gear to net other high priority lakes/projects. The PLSLWD's seine net available for use by commercial fishermen in the District should mitigate this obstacle by providing a net that could be properly decontaminated or used repeatedly in the same waterbody while not restricting the fishing crews' ability to continuously net in other waters.

### **SPECIALIZED TRAPS**

Specialized fish traps were designed at attempting to exploit behavioral patterns during spawning migrations. The idea is to guide carp traveling toward spawning habitat into holding compartments. These traps are usually set in shallow water, and style and size can vary. The District has developed two specialized trap nets for capturing carp during spawning season: the Push Trap Net that will include a one-way trap door style panel on the opening, and the Newman Trap Net that will include multiple-staged guidance walls and openings for enhanced entrapment, both of which can be placed seasonally at carp spawning migratory routes.

In 2020, headed by the accelerated carp management initiative, specialized traps were built and installed. Both traps were successful in capturing carp during the spawning migration. With minor modification, both traps were again installed in the same locations in 2021. The springtime water levels posed a significant challenge as flowing water ceased. Without the flowing water through these traps they failed to catch carp. The silver lining to this is that while carp were not actively being caught, the traps have a secondary purpose as a barrier. Both traps effectively block the movement past their respective sites preventing carp from reaching spawning areas.

**Newman Cage.** The Newman Cage design is similar to a baited box net. Rather than having to set the net by pulling up the sides to capture the carp, this net provides constant capture of carp when set. Carp swim into the trap and cannot escape. Figure 26 below is an approximate version:



**Figure 26.** Newman cage reference example.

**Push-Trap.** This trap takes advantage of the migratory behavior of carp as well as their propensity to “push” through barriers and is modeled conceptually on a design described in detail by Thwaites (2015). Initial laboratory results indicate that the push trap was successful in capturing 91% of adult carp in the experiment.

The design incorporates a row of PVC pipe fingers mounted on a crossbar and set at angles that allow carp to push through and swim upstream into a collection basin. The rotating fingers are similar to those mounted at the ferric chloride weir, which rotate on a fixed cylinder. The fingers are set at a height that allow for the forward or upstream movement of the fingers that “open” the trap, but the fingers cannot swing back to allow carp to exit the trap. The trap itself is composed of economical fencing materials.



**Figure 27.** Push-Trap at the Desilt Pond



**Figure 28.** Newman Trap in Mud/Crystal Bay

### BAITED BOX TRAPS

The baited box trap is a mesh net trap that lays flat on the bottom of the lake, but quickly forms into a box when lifted to trap the carp inside. Eight solid pipes are secured around the box and ropes are run through the net and up the poles to a pulley system. Carp are typically baited with corn at the box trap location for several days with help from volunteers until a large grouping forms. While a baited box trap catches fewer fish, it holds an advantage over a seine net because the carp are much less likely to escape.





**Figure 29.** Baited box trap



**Figure 30.** Deploying the baited box trap net

### **MICRO-HAULS**

Micro-hauls are simply smaller removals that are completed using a variety of methods as opportunities arise. For example, using a small 500' section of a seine net called a "block net", the PLSLWD is able to complete small micro-haul events when carp group up in small areas unsuitable for seining. The removal is often assisted by electrofishing efforts, small gill nets and/or the unified sound technique to drive carp towards an area. Corn may also be used to bait an area prior to a micro-haul attempt to achieve greater removal numbers.

### **ELECTROFISHING**

This method was further described above in Section 5.1.A.

### **GILL NETTING**

This method was further described above in Section 5.1.A.

## **B. ACCELERATED STRATEGIES**

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**OBJECTIVE 5.3.B:** *Develop alternative or innovative methodologies/techniques to improve or facilitate removal of carp biomass on priority carp management lakes.*

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In many instances carp may become aggregated, but cannot be removed in the aggregation area due to obstructions on the bottom or along the shoreline. By developing alternative removal methodology, the PLSLWD will be able to expedite carp biomass removal and in some instances, make removal possible. By developing these techniques, the PLSLWD may be able to assist other water resource management entities in addressing carp management; especially in areas where traditional methods are difficult to employ.

The unified method may provide opportunity to enhance carp removal efforts by concentrating carp using underwater speakers; essentially using sound to herd carp to a specific location or drive them from undesirable removal locations.

### **HERDING CARP**

The underwater sound system for herding carp consists of an MP3 player wired to underwater speakers and an amplifier to "pump" sound near an aggregation to drive them into nets or herd them to an area

of the waterbody that is conducive to netting. This is especially effective in an area like the northeast corner of Upper Prior Lake where rock obstructions exist near the Knotty Oar Marina. The underwater speakers were successfully used many times during an under ice seine on Upper Prior Lake in 2020 and 2021.

### TRAINING CARP

The District is also testing the effectiveness of training carp using sound and bait. Multiple studies have shown that carp can be trained within two weeks of consistent noise and rewards and will remember this training for as long as 4-5 months afterwards. If the District can train carp to come to a location when they hear a specific noise, this could be used to create or enhance opportunities for carp removal efforts (seines, box traps, etc.). In 2020, the District attempted to attract carp to associate the sound of running water with bait but could not produce conclusive results.

### FUTURE REMOVAL METHODS BEING STUDIED:

The University of Minnesota and other colleges are studying ways to reduce the carp population by methods other than physical removal. The PLSLWD is keeping in close contact with researchers of these programs to see if the District can participate as a test site or if there research is ready to implement. Note that the projects are likely a few years away from regulatory approval of these innovative new methods listed below.

**Poison Corn Bait.** This research project is testing whether common carp can be baited and killed using corn pellets with antimycin-a, a natural fish toxin, without harming other species. Carp have a unique diet (plant seeds, such as corn, which native fish are not attracted to) and can be trained to aggregate in baited areas. Researchers first determined the concentration of antimycin-a needed and the species-specificity of the approach. They then conducted trials to test this “bait and switch” concept with carp of different sizes in experimental ponds. This research project will conclude at the end of 2021.

**Genetic Sterilization.** This research project is looking at introducing a synthetic species-like barrier to carp reproduction. This method involves altering the genetics of males in the invasive species (carp) before releasing them among the population, leading to sterile offspring and the eventual control of the species overall. In order to make this method usable, this study aims to develop this technology further in zebrafish, from which the system can be applied to other invasive fish species and eventually other vertebrate pests. As of July 2019, researchers tested several genetic constructs in the model laboratory fish, *Danio rerio*., although they have not yet found a genetic design that is suitable for introduction to carp.

**Carp Viruses.** The koi herpes virus has killed off large quantities of common carp in other lakes in Minnesota, such as Lake Elysian. These die-offs lead to an interest in exploiting this carp-specific virus and introducing it into lakes infested with this invasive species. The University of Minnesota has researched the koi herpes virus, along with two other carp-killing viruses, and are in the process of researching what impacts or unintended consequences this might have on native fish. Once the virus is shown to be carp-specific and non-detrimental, there will still be regulatory hoops to jump through before it is allowed to be introduced into Minnesota lakes.



## PART 6 - CARP MANAGEMENT SCHEDULE

The following table includes the carp activities for 2021-2022 in order to achieve the goals identified in Part 4.

## CARP MANAGEMENT SCHEDULE

2021-2022



			Winter 2021			Spring 2021			Summer 2021			Fall 2021			Winter 2022			Spring 2022			Summer 2022			Fall 2022		
TASK	START	END	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
TRACK: Carp Tracking & Project Development																										
Implant carp with PIT tags & Radiotags	Apr 2019	Dec 2022																								
Install/monitor PIT tag reader stations	Apr 2019	Dec 2022																								
Track PIT & Radio tags across waterbodies	Apr 2019	Dec 2022																								
Update GIS location information & online maps	Apr 2019	Dec 2022																								
Install stationary cameras at strategic locations	Sep 2019	Dec 2022																								
Use underwater camera for tracking/training carp	Sep 2019	Dec 2022																								
Analysis: identify aggregation areas, migration routes and population status	Jun 2019	Dec 2022																								
BLOCK: Carp Barriers & Biological Controls																										
Identify strategic locations for carp barriers	Oct 2019	Dec 2022																								
Site analysis & design of barriers	Dec 2019	Dec 2022																								
Install Northwood Barrier	Sep 2019	Dec 2022																								
Install Tadpole Barrier	Feb 2021	Dec 2022																								
REDUCE: Carp Removals																										
Remove obstructions from seine areas	Oct 2020	Dec 2022																								
Spring Lake carp seines	Nov 2019	Dec 2022																								
Upper Prior Lake carp seines	Mar 2019	Dec 2022																								
Electrofishing removals	Apr 2020	Dec 2022																								
Micro-hauls	Apr 2020	Dec 2022																								
Gill Netting Pilot Project	Mar 2020	Dec 2022																								
Geis wetland carp removals	Apr 2019	Dec 2022																								
Pike Lake carp removals	Apr 2020	Dec 2022																								
Deploy Newman Trap in Arctic Lake outlet	Apr 2020	Dec 2022																								
Deploy Push Trap in desilt pond	Apr 2020	Dec 2022																								
Stock bluegills	Apr 2020	Dec 2022																								
Box Trap removals with volunteers	Apr 2020	Dec 2022																								
Herding	Jan 2020	Dec 2022																								
Carp removals in other waterbodies (TBD)	Nov 2020	Dec 2022																								
Education & Outreach																										
Outreach mailings	Apr 2019	Dec 2022																								
Lake Association meetings/presentations	Apr 2020	Dec 2022																								
Update website with current information	Jan 2019	Dec 2022																								
Educational activities with local schools	Sep 2019	Dec 2022																								
Update IPM Plan																										
Annually update plan to include new information	Sep 2019	Dec 2022																								

Note: The Carp Management Schedule includes 2021 work funded by a 319 Grant, a BWSR Watershed Based Funding Grant, and the PLSLWD District Levy. Proposed 2022 workplan funded only by the district.

## PART 7 - SUMMARY

With the understanding that common carp play a role in the decline of water quality within the PLSLWD and with the knowledge that they are present, the goals and action items established in this plan will aid the PLSLWD in accomplishing its primary goal of managing and preserving the water resources across the watershed.

This plan is intended to be a living document; using adaptive management that may develop new management strategies and plan goals through data collection and analysis. As new data is collected and analyzed, current approaches, data collection efforts, and prioritization may change. The PLSLWD Carp IPM should be reviewed annually to provide updates to identified goals and action items and potentially add or modify goals as data collection may dictate. This plan incorporates an adaptive management approach. As data is collected and analyzed it will be used to inform the plan and possibly develop new objectives or approaches.

The PLSLWD Carp IPM has been developed as a guidance document for the management of common carp populations within the Prior Lake - Spring Lake Watershed District. The PLSLWD Carp IPM supports the goals of the 2011 Upper Prior and Spring lake TMDL and goals established for individual waterbodies throughout the watershed.

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## APPENDICES

*Visit the following sites online to download the appendices documents:*

**APPENDIX A – 2018 CLEAN WATER PARTNERSHIP GRANT FINAL REPORT**

[https://www.plslwd.org/wp-content/uploads/2020/09/CWP-Carp-Management-Grant-FINAL-Report\\_Jun-2018.pdf](https://www.plslwd.org/wp-content/uploads/2020/09/CWP-Carp-Management-Grant-FINAL-Report_Jun-2018.pdf)

**APPENDIX B – ARCTIC LAKE FISHERIES ASSESSMENT 2017**

[https://www.plslwd.org/wp-content/uploads/2020/09/Arctic-Lake-Fisheries-Assessment\\_Spring2017\\_Final.pdf](https://www.plslwd.org/wp-content/uploads/2020/09/Arctic-Lake-Fisheries-Assessment_Spring2017_Final.pdf)

**APPENDIX C – CARP MANAGEMENT COST-BENEFIT SUMMARY 2020**

<https://www.plslwd.org/wp-content/uploads/2020/09/Carp-Cost-Benefit-Summary.pdf>

**APPENDIX D – CARP REMOVAL DATA 2016 – 2020**

<https://www.plslwd.org/wp-content/uploads/2020/09/PLSLWD-Carp-Removal-Data.pdf>

**APPENDIX E – PIKE LAKE FISHERY ASSESSMENT 2020**

[https://www.plslwd.org/wp-content/uploads/2020/09/Pike-Lake-Fishery-Assessment\\_FINAL-Report\\_01-2020.pdf](https://www.plslwd.org/wp-content/uploads/2020/09/Pike-Lake-Fishery-Assessment_FINAL-Report_01-2020.pdf)

**PLSLWD Board Staff Report**

September 9, 2021


**PRIOR LAKE  
SPRING LAKE  
WATERSHED DISTRICT**
**Subject |** Wise Addition Development Agreement

**Board Meeting Date |** September 14, 2021

**Item No |** 4.4

**Prepared By |** Joni Giese, District Administrator

**Attachments |** 1) Project Location Map  
2) Wise Addition Development Agreement

**Action |** Motion to approve the Wise Addition Development Agreement
**BACKGROUND**

At the July 10th, 2018 Board Meeting, the Board provided guidance to staff on how to move forward with the potential acquisition of new conservation easements. New procedures were established for all new developments located within an MOA permitting area that trigger the District Rule J for wetland buffer preservation. District Rule J requires a 20' wide minimum buffer around wetlands with a 30' average which helps maintain the long-term health and function of these basins, most of which are connected to one or more of the Districts' lakes.

The procedures include acquiring a development agreement in conjunction with the permanent conservation easements. The development agreements provide a way for the District to recover costs associated with the acquisition of the easements including title work, staff time, and engineering review, as well as to ensure that the easement areas are properly established with native plants that filter stormwater.

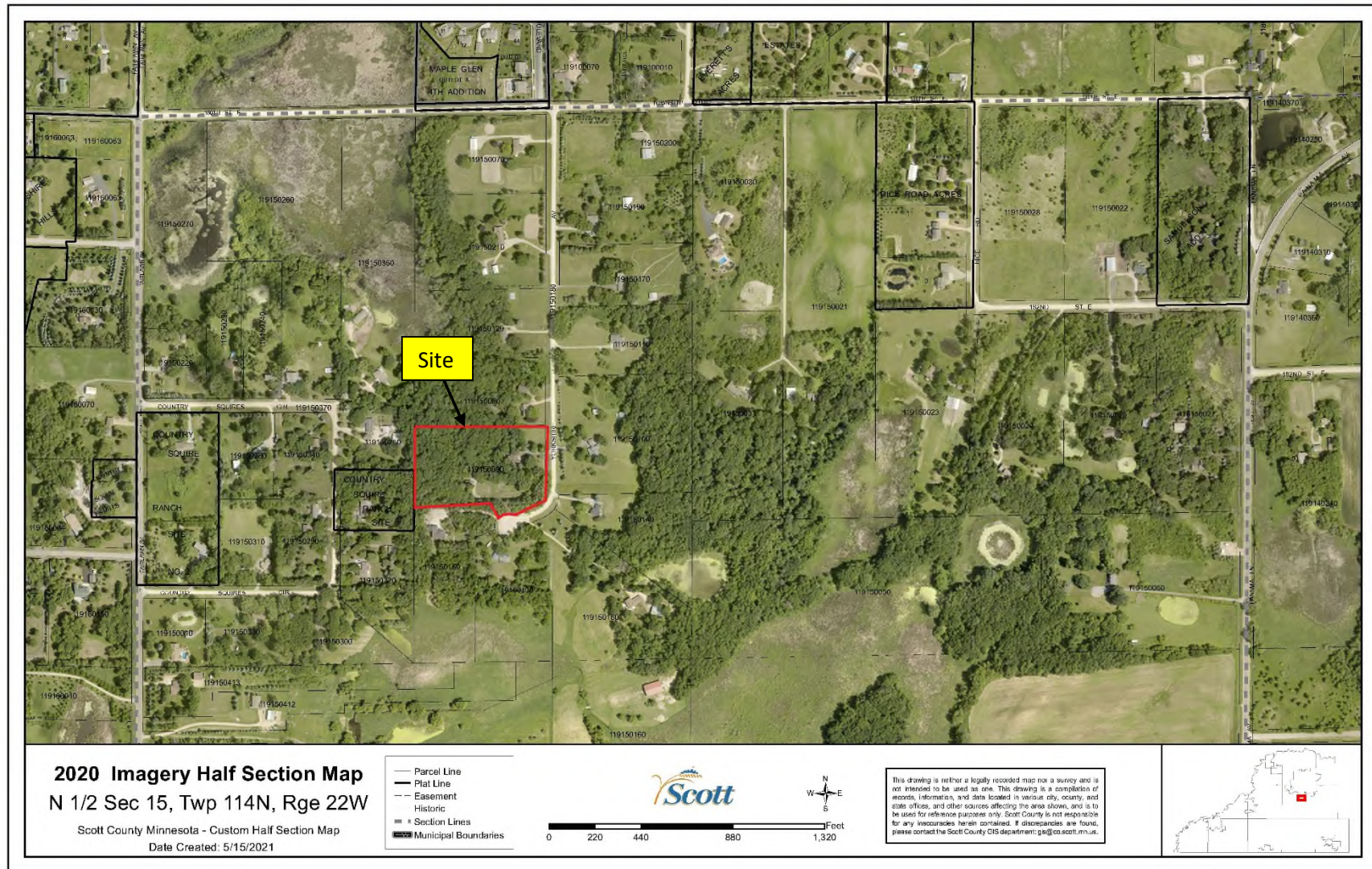
**PROJECT OVERVIEW**

District staff is working with the property owner representative and EOR to establish a wetland buffer area and to permanently protect with a conservation easement. The location of the project is shown on the attached map.

The development agreement attached is based on a template developed by the District Attorney. The development agreement is a legal document that will be recorded in the Scott County Land Records Office.

**ACTION REQUESTED**

District staff is requesting that the Board of Managers approve the attached development agreement for execution by the District Administrator and recording in the Scott County Land Records Office.



**Figure 1**  
**Location of Wise Parcel #119150090**

## DEVELOPMENT AGREEMENT

This Agreement is made this \_\_\_\_\_ day of \_\_\_\_\_, 2021, between Donna M. Wise, a single person ([collectively] “Owner”), and the Prior Lake-Spring Lake Watershed District, a political subdivision of the State of Minnesota (“Watershed District” or “District”).

## RECITALS

A. Owner is the fee owner of and is proceeding to subdivide certain land located in Scott County, Minnesota, and legally described in Exhibit A (the “Property”).

B. As a condition of the approval for the subdivision of the Property, Scott County requires that the Declarant grant the Watershed District a conservation easement over a buffer strip around the perimeter of wetland within the Project that meets the requirements of the Watershed District’s Rules (“Rules”).

C. Declarant desires to establish a conservation easement (“Conservation Easement”) under Minnesota Statutes, Chapter 84C, to create a buffer strip around the perimeter of wetlands (both existing and to be created) within the Project as required by the Rules.

## AGREEMENT

In consideration of the mutual covenants herein, the parties hereto agree as follows:

1. RECITALS. The foregoing recitals are true and correct and incorporated herein by this reference.
2. SURVEY. Within 30 days after this agreement has been fully executed, the Owner shall supply the Watershed District with a satisfactory legal description and survey drawing of the proposed Conservation Easement area that meets the requirements of the Rules. Buffer strips



shall be a minimum of 20 feet wide with an average width of 30 feet, measured from the ordinary high water level of the wetland as determined by the wetland delineation.

3. **EASEMENT DOCUMENT.** Within 30 days after of final approval of the subdivision of the Property, the Owner will properly execute and hand-deliver to the District a Conservation Easement that has been drafted by the District and meets the requirements of the Rules. The District will hold the Conservation Easement in escrow.

4. **TITLE.** The Watershed District shall obtain a title commitment for the Conservation Easement prior to its recording. If the affected area is subject to a mortgage or other encumbrance in conflict with the terms of the Conservation Easement, the Owner will work diligently to obtain a signed consents from interest holders, and to deliver the consent documents to the District as soon as possible. On receipt of the consent(s), the District will execute the Conservation Easement and file it for recording.

5. **BUFFER ESTABLISHMENT.** Owner shall, at its expense, establish native vegetation the Conservation Easement in accordance with the requirements of District Rules as shown in Exhibit B, unless the District agrees in writing that the existing vegetation in the easement area is currently in a condition that meets these requirements. All structures, including fencing, shall be removed from the buffer area within three (3) months after the Conservation Easement is fully executed and before the Property is sold.

6. **MONUMENTATION.** A monument shall be required at each parcel line where it crosses the Conservation Easement boundary, and at the point of each corner where there is a change in boundary direction of the Conservation Easement. A monument shall consist of a 4" x 4" wooden post and a buffer strip sign provided by the Watershed District, or as otherwise approved in writing by the Watershed District. The sign shall be securely mounted to a minimum height of 4 feet above grade. If there is a subdivision after initial monumentation, monuments will be adjusted to maintain conformance with this paragraph.

7. **INDEMNITY.** Owner shall indemnify, defend and hold the District and its agents, employees, officers, and contractors, harmless from all claims made by itself and third parties for damage or loss sustained or costs incurred, in connection with or arising out of this Agreement. Costs incurred includes District staff costs, and consultant and attorney fees, incurred as a result of a claim.

8. **COSTS AND FEES.** Owner shall reimburse the District for all costs incurred in the preparation and review of the Conservation Easement, including District staff time, title policy cost, recording fees, and engineering & attorneys' fees. The Owner shall also reimburse the District for all costs related to the enforcement of this Agreement. Owner shall fully pay all invoices ("Invoices") submitted by the District for obligations incurred under this Agreement within 30 days after receipt. Amounts not so paid shall accrue interest at the rate of 8 percent per year or the maximum rate allowed by law, if less.



9. DEFAULT. If Owner defaults as to any obligation required by this Agreement, the District may, at its option and after not less than 7 days' notice to Owner, enter and perform the work, and Owner shall reimburse the District for all costs incurred thereby. In the event of an emergency as determined by the District, the requirement of 7 days advance notice of default shall be waived.

10. DURATION. This Agreement shall terminate on the date that the Watershed District provides formal written documentation that the Conservation Easement has been planted and fully established in accordance with Exhibit B, meets all Rule requirements, and that all reimbursable costs incurred by the District have been paid. At Owner's request, the District will execute a notice of termination that Owner may record on the title.

11. ESCROW; SURVIVAL. Notwithstanding the foregoing paragraph 9, as a prerequisite to termination, Owner will provide the District the sum of \$1,000 to secure the establishment of Conservation Area vegetation in accordance with Exhibit B through two full growing seasons, the removal of the fencing, and the required installation of buffer signs. The District will hold the funds in escrow, may commingle the funds with other similar escrow funds, and with 7 days' notice may use the funds for the purpose of securing vegetation establishment and fence removal in accordance with Exhibit B. When establishment has been completed, the District will return remaining escrow funds to Owner, less the amount of any unpaid Invoices. The District is not obligated to hold the funds in an interest-bearing account, but if the funds have accrued interest, it will be included in the sum returned. The establishment requirement of paragraph 4 and the escrow requirement of this paragraph 10 will survive termination of the Agreement.

12. BINDING EFFECT. This Agreement shall run with the land and bind and inure to the benefit of the parties hereto and their respective heirs, successors and assign. However, Owner and each successor record owner of the Property shall be fully discharged and relieved of liability under this Agreement upon ceasing to own any interest in the Property and paying all amounts and performing all obligations hereunder to the time ownership terminates.

13. RECORDING. Owner shall provide the signed original copy of this agreement to the District for recording. Owner shall be responsible for payment of the recording fee(s) and if such fee(s) are advanced by the District, Owner shall reimburse the District for those fee(s).

14. MISCELLANEOUS.

(a) The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision.

(b) The failure of the District to insist on compliance or enforcement of any provision of this Agreement shall not affect the validity or enforceability or constitute a waiver of future enforcement of that provision or any other provision by the District.

(c) All notices under this Agreement shall be deemed to be sent or delivered when personally delivered to the recipient or when mailed by certified or registered mail, postage prepaid, addressed to Owner at 18326 Yorkshire Avenue, Prior Lake, MN 55372 or other place of business, and to the Watershed District at 4646 Dakota Street SE, Prior Lake, Minnesota 55372, or at such other address as either party may hereafter designate in writing to the other.

(d) This Agreement shall be subject to and governed by Minnesota law.

IN WITNESS WHEREOF, the Owner has voluntarily executed this Development Agreement on this \_\_\_\_\_ day of \_\_\_\_\_, 2021.

OWNER:

By: \_\_\_\_\_  
Donna M. Wise

STATE OF MINNESOTA    )  
  ) ss.  
COUNTY OF SCOTT        )

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 2021, by Donna M. Wise, a single person.

\_\_\_\_\_  
Notary Public

My Commission Expires: \_\_\_\_\_

**ACCEPTANCE**

The Prior Lake-Spring Lake Watershed District hereby accepts the foregoing Development Agreement this \_\_\_\_\_ day of \_\_\_\_\_, 2021.

PRIOR LAKE-SPRING LAKE WATERSHED  
DISTRICT

By: \_\_\_\_\_  
Joni Giese

Title: District Administrator

STATE OF MINNESOTA    )  
  ) ss.  
COUNTY OF SCOTT        )

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 2021, by Joni Giese, as the District Administrator of the Prior Lake-Spring Lake Watershed District, a political subdivision under Minnesota law.

\_\_\_\_\_  
Notary Public

My Commission Expires: \_\_\_\_\_

This instrument was drafted by:  
Prior Lake-Spring Lake Watershed District  
4646 Dakota Street SE  
Prior Lake, MN 55372

Return to:  
Prior Lake-Spring Lake Watershed District  
4646 Dakota Street SE  
Prior Lake, MN 55372

## EXHIBIT A:

## LEGAL DESCRIPTION OF PROPERTY:

That part of the West Half of the East Half of the Northwest Quarter of Section 15, Township 114, Range 22, Scott County, Minnesota described as follows:

Commencing at the southeast corner of said West Half of the East Half of the Northwest Quarter; thence South 89 degrees 01 minutes 14 seconds West assumed bearing along the south line of said West Half of the East Half of the Northwest Quarter a distance of 370.00 feet; thence North 00 degrees 13 minutes 02 seconds East parallel with the east line of said West Half of the East Half of the Northwest Quarter a distance of 600.00 feet; thence North 68 degrees 15 minutes 18 seconds East along a line drawn to a point on the east line of said West Half of the East Half of the Northwest Quarter a distant 1910.00 feet southerly of the northeast corner thereof, a distance of 162.57 feet to the point of beginning of the land to be described; thence continuing North 68 degrees 15 minutes 18 seconds East a distance of 236.30 feet to a point on the east line of said West Half of the East Half of the Northwest Quarter distant 1910.00 feet southerly of the northeast corner thereof; thence northerly along said East line of the West Half of the East Half of the Northwest Quarter to the north line of the South 330.00 feet of the North 1850.00 feet of said West Half of the East Half of the Northwest Quarter; thence westerly along said north line of the South 330.00 feet of the north 1850.00 feet of the West Half of the East Half of the Northwest Quarter to the west line of said West Half of the East Half of the Northwest Quarter; thence southerly along said west line of the West Half of the East Half of the Northwest Quarter a distance of 379.38 feet; thence North 85 degrees 10 minutes 22 second East a distance of 349.73 feet to a point located North 40 degrees 23 minutes 46 seconds West and 148.27 feet from the point of beginning; thence South 40 degrees 23 minutes 46 seconds East a distance of 148.27 feet to the point of beginning.

Together with and subject to an easement for road purposes over and across a strip of land 66 feet in width the centerline of which is described as follows:

Beginning at the northeast corner of the West Half of the East Half of the Northwest Quarter of Section 15, Township 114, Range 22, Scott County, Minnesota; thence southerly along the east line of said West Half of the East Half of the Northwest Quarter a distance of 1850 feet; thence southwesterly 105.60 feet along a tangent curve concave to the northwest and having a radius of 89.05 feet and a central angle of 67 degrees 56 minutes 39 seconds; thence tangent to last described curve a distance of 176.00 feet and there terminating; also subject to said road easement in that part which lies within the circumference of a circle having a radius of 60 feet. The center of said circle is the above described terminus.



## EXHIBIT B:

## Excerpt from Watershed District Rules

## Rule J, Section 4 (c):

All open areas within the buffer strip shall be seeded or planted in accordance with Paragraph 8 below. All seeding or planting shall be completed prior to removal of any erosion and sediment control measures. If construction is completed after the end of the growing season, erosion and sediment control measures shall be left in place and all disturbed areas shall be mulched for protection over the winter season.

## Rule J, Section 8:

## 8. VEGETATION:

- (a) Where acceptable natural vegetation exists in buffer strip areas, the retention of such vegetation in an undisturbed state is required unless an applicant receives approval to replace such vegetation. A buffer strip has acceptable natural vegetation if it:
  - (i) Has a continuous, dense layer of perennial grasses that has been uncultivated or unbroken for at least 5 consecutive years; or
  - (ii) Has an overstory of trees and/or shrubs that has been uncultivated or unbroken for at least 5 consecutive years; or
  - (iii) Contains a mixture of the plant communities described in Subparagraphs 8(a)(i) and
  - (iv) above that has been uncultivated or unbroken for at least 5 years.
- (b) Notwithstanding the performance standards set forth in Paragraph 8(a), the managers may determine existing buffer strip vegetation to be unacceptable if:
  - (i) It is composed of undesirable plant species including but not limited to common buckthorn, purple loosestrife, leafy spurge or noxious weeds; or
  - (ii) It has topography that tends to channelize the flow of runoff; or
  - (iii) For some other reason it is unlikely to retain nutrients and sediment.
- (c) Where buffer strips are not vegetated or have been cultivated or otherwise disturbed within 5 years of the permit application, such areas shall be replanted and maintained. The buffer strip plantings must be identified on the permit application. The buffer strip landscaping shall comply with the following standards:
  - (i) Buffer strips shall be planted with a seed mix approved by MnDOT, NRCS or SWCD, with the exception of a one-time planting with an annual nurse or cover crop such as oats or rye.
  - (ii) The seed mix shall be broadcast according to MnDOT, NRCS or SWCD specifications of the selected mix. The annual nurse or cover crop shall be applied at a minimum rate of 30 pounds per acre. The MnDOT or NRCS seed

mix selected for permanent cover shall be appropriate for soil site conditions and free of invasive species. MnDOT, NRCS or SWCD approved mixtures appropriate for specific soil and moisture conditions can be used to meet these requirements.

- (iii) Native shrubs may be substituted for native forbs. All substitutions must be approved by the District. Such shrubs may be bare root seedlings and shall be planted at a minimum rate of 60 plants per acre. Shrubs shall be distributed so as to provide a natural appearance and shall not be planted in rows.
  - (iv) Any groundcover or shrub plantings installed within the buffer strip are independent of any landscaping required elsewhere by the municipality or county.
  - (v) Grasses and forbs shall be seeded or planted by a qualified contractor. The method of application shall be approved by the District prior to planting or seeding.
  - (vi) No fertilizer shall be used in establishing new buffer strips, except on highly disturbed sites when necessary to establish acceptable buffer strip vegetation and then limited to amounts indicated by an accredited soil testing laboratory.
  - (vii) All seeded areas shall be mulched immediately with clean straw at a rate of 1.5 tons per acre. Mulch shall be anchored with a disk or tackifier.
  - (viii) Buffer strips (both natural and created) shall be protected by erosion and sediment control measures during construction in accordance with Rule E. The erosion and sediment control measures shall remain in place until the area crop is established.
- (d) Buffer strip vegetation shall be established and maintained in accordance with the requirements found in this Paragraph 8. During the first two full growing seasons, the owner must replant any buffer strip vegetation that does not survive. The owner shall be responsible for reseeding and/or replanting if the buffer strip changes at any time through human intervention or activities. At a minimum the buffer strip must be maintained as a “no mow” area.

**PLSLWD Board Staff Report**

September 9, 2021


**PRIOR LAKE  
SPRING LAKE  
WATERSHED DISTRICT**
**Subject |** Mesenbrink Development Agreement

**Board Meeting Date |** September 14, 2021

**Item No |** 4.5

**Prepared By |** Joni Giese, District Administrator

**Attachments |** 1) Project Location Map  
2) Mesenbrink Parcel Development Agreement

**Action |** Motion to approve the Mesenbrink Parcel Development Agreement
**BACKGROUND**

At the July 10th, 2018 Board Meeting, the Board provided guidance to staff on how to move forward with the potential acquisition of new conservation easements. New procedures were established for all new developments located within an MOA permitting area that trigger the District Rule J for wetland buffer preservation. District Rule J requires a 20' wide minimum buffer around wetlands with a 30' average which helps maintain the long-term health and function of these basins, most of which are connected to one or more of the Districts' lakes.

The procedures include acquiring a development agreement in conjunction with the permanent conservation easements. The development agreements provide a way for the District to recover costs associated with the acquisition of the easements including title work, staff time, and engineering review, as well as to ensure that the easement areas are properly established with native plants that filter stormwater.

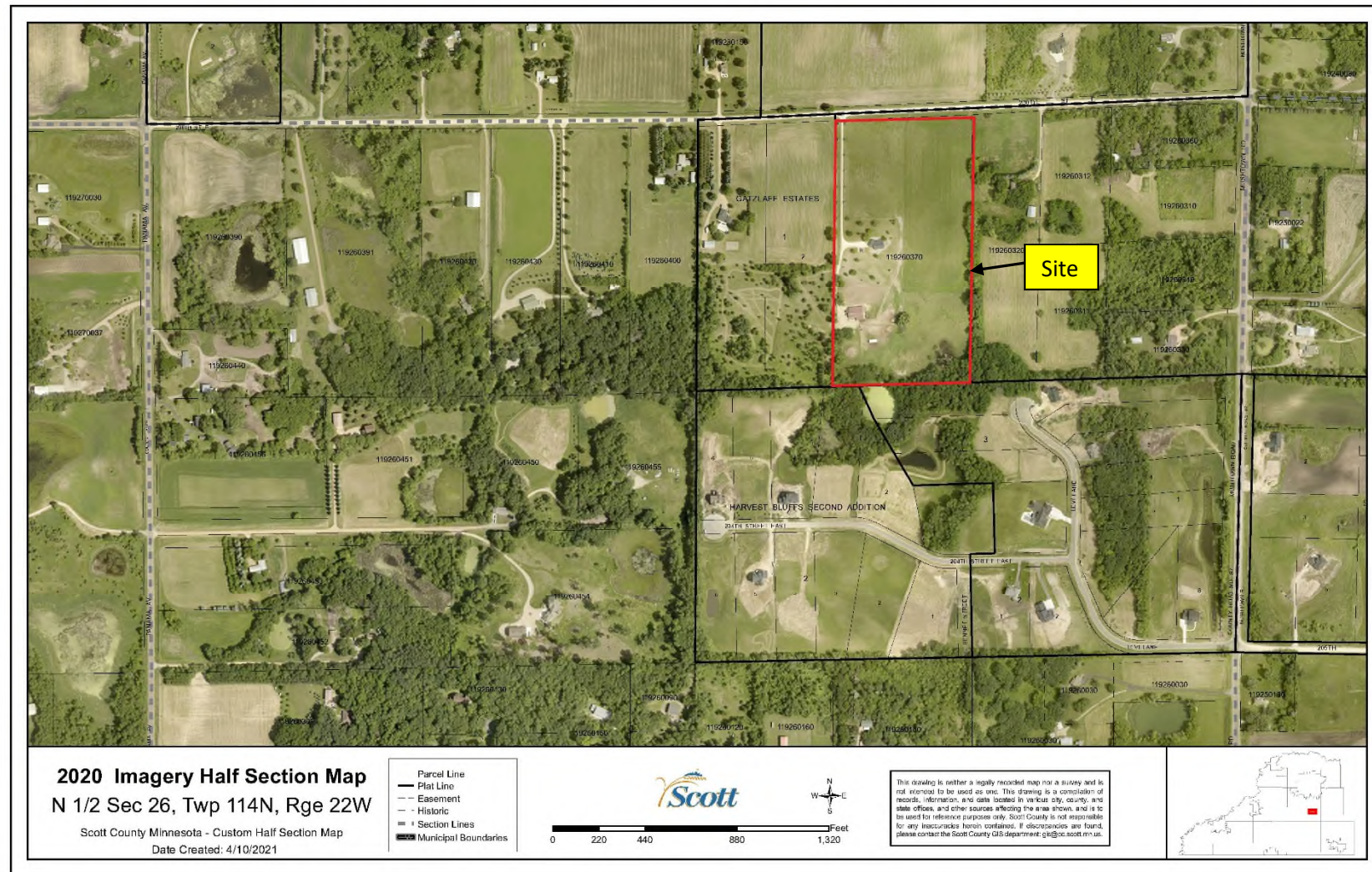
**PROJECT OVERVIEW**

District staff is working with the property owner representative and EOR to establish a wetland buffer area and to permanently protect with a conservation easement. The location of the project is shown on the attached map.

The development agreement attached is based on a template developed by the District Attorney. The development agreement is a legal document that will be recorded in the Scott County Land Records Office.

**ACTION REQUESTED**

District staff is requesting that the Board of Managers approve the attached development agreement for execution by the District Administrator and recording in the Scott County Land Records Office.



**Figure 1**

**Location of Mesenbrink Parcel #119260370**

### DEVELOPMENT AGREEMENT

This Agreement is made this \_\_\_\_\_ day of \_\_\_\_\_, 2021, between Robert Mesenbrink and Lori Mesenbrink, each the spouse of the other (collectively the “Owner”), and the Prior Lake-Spring Lake Watershed District, a political subdivision of the State of Minnesota (“Watershed District” or “District”).

### RECITALS

A. Owner is the fee owner of and is proceeding to subdivide certain land located in Scott County, Minnesota, and legally described in Exhibit A (the “Property”).

B. As a condition of the approval for the subdivision of the Property, Scott County requires that the Declarant grant the Watershed District a conservation easement over a buffer strip around the perimeter of wetlands within the Project that meets the requirements of the Watershed District’s Rules (“Rules”).

C. Declarant desires to establish a conservation easement (“Conservation Easement”) under Minnesota Statutes, Chapter 84C, to create a buffer strip around the perimeter of wetlands (both existing and to be created) within the Project as required by the Rules.

### AGREEMENT

In consideration of the mutual covenants herein, the parties hereto agree as follows:

1. RECITALS. The foregoing recitals are true and correct and incorporated herein by this reference.

2. SURVEY. Within 30 days after this agreement has been fully executed, the Owner shall supply the Watershed District with a satisfactory legal description and survey drawing of the proposed Conservation Easement area that meets the requirements of the Rules. Buffer strips



shall be a minimum of 20 feet wide with an average width of 30 feet, measured from the ordinary high water level of the wetland as determined by the wetland delineation.

3. EASEMENT DOCUMENT. Within 30 days after of final approval of the subdivision of the Property, the Owner will properly execute and hand-deliver to the District a Conservation Easement that has been drafted by the District and meets the requirements of the Rules. The District will hold the Conservation Easement in escrow.

4. TITLE. The Owner shall supply the Watershed District an attorney's title opinion for the Conservation Easement prior to its recording. If the affected area is subject to a mortgage or other encumbrance in conflict with the terms of the Conservation Easement, the Owner will work diligently to obtain a signed consents from interest holders, and to deliver the consent documents to the District as soon as possible. On receipt of the consent(s), the District will execute the Conservation Easement and file it for recording.

5. BUFFER ESTABLISHMENT. Owner shall, at its expense, establish native vegetation in the Conservation Easement in accordance with the requirements of District Rules as shown in Exhibit B, unless the District agrees in writing that the existing vegetation in the easement area is currently in a condition that meets these requirements. All structures, including fencing, shall be removed from the buffer area within three (3) months after the Conservation Easement is fully executed and before the Property is sold.

6. TEMPORARY GRAZING. The Watershed District will allow the current Owner to temporarily graze horses in the Conservation Easement for six (6) months after the Conservation Easement is fully executed or until the Property is sold, whichever comes first. After this time, grazing will no longer be allowed in the Conservation Easement.

7. MONUMENTATION. A monument shall be required at each parcel line where it crosses the Conservation Easement boundary, and at the point of each corner where there is a change in boundary direction of the Conservation Easement. A monument shall consist of a 4" x 4" wooden post and a buffer strip sign provided by the Watershed District, or as otherwise approved in writing by the Watershed District. The sign shall be securely mounted to a minimum height of 4 feet above grade. If there is a subdivision after initial monumentation, monuments will be adjusted to maintain conformance with this paragraph.

8. INDEMNITY. Owner shall indemnify, defend and hold the District and its agents, employees, officers, and contractors, harmless from all claims made by itself and third parties for damage or loss sustained or costs incurred, in connection with or arising out of this Agreement. Costs incurred includes District staff costs, and consultant and attorney fees, incurred as a result of a claim.

9. COSTS AND FEES. Owner shall reimburse the District for all costs incurred in the preparation and review of the Conservation Easement, including District staff time, title policy cost, recording fees, and engineering & attorneys' fees. The Owner shall also reimburse the District for all costs related to the enforcement of this Agreement. Owner shall fully pay all invoices ("Invoices") submitted by the District for obligations incurred under this Agreement

within 30 days after receipt. Amounts not so paid shall accrue interest at the rate of 8 percent per year or the maximum rate allowed by law, if less.

10. **DEFAULT.** If Owner defaults as to any obligation required by this Agreement, the District may, at its option and after not less than 7 days' notice to Owner, enter and perform the work, and Owner shall reimburse the District for all costs incurred thereby. In the event of an emergency as determined by the District, the requirement of 7 days advance notice of default shall be waived.

11. **DURATION.** This Agreement shall terminate on the date that the Watershed District provides formal written documentation that the Conservation Easement has been planted and fully established in accordance with Exhibit B, meets all Rule requirements, and that all reimbursable costs incurred by the District have been paid. At Owner's request, the District will execute a notice of termination that Owner may record on the title.

12. **ESCROW; SURVIVAL.** Notwithstanding the foregoing paragraph 9, as a prerequisite to termination, Owner will provide the District the sum of \$3,000 to secure the establishment of Conservation Area vegetation in accordance with Exhibit B through two full growing seasons, the removal of the fencing, and the required installation of buffer signs. The District will hold the funds in escrow, may commingle the funds with other similar escrow funds, and with 7 days' notice may use the funds for the purpose of securing vegetation establishment and fence removal in accordance with Exhibit B. When establishment has been completed, the District will return remaining escrow funds to Owner, less the amount of any unpaid Invoices. The District is not obligated to hold the funds in an interest-bearing account, but if the funds have accrued interest, it will be included in the sum returned. The establishment requirement of paragraph 4 and the escrow requirement of this paragraph 10 will survive termination of the Agreement.

13. **BINDING EFFECT.** This Agreement shall run with the land and bind and inure to the benefit of the parties hereto and their respective heirs, successors and assign. However, Owner and each successor record owner of the Property shall be fully discharged and relieved of liability under this Agreement upon ceasing to own any interest in the Property and paying all amounts and performing all obligations hereunder to the time ownership terminates.

14. **RECORDING.** Owner shall provide the signed original copy of this agreement to the District for recording. Owner shall be responsible for payment of the recording fee(s) and if such fee(s) are advanced by the District, Owner shall reimburse the District for those fee(s).

15. **MISCELLANEOUS.**

(a) The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision.

(b) The failure of the District to insist on compliance or enforcement of any provision of this Agreement shall not affect the validity or enforceability or constitute a waiver of future enforcement of that provision or any other provision by the District.

(c) All notices under this Agreement shall be deemed to be sent or delivered when personally delivered to the recipient or when mailed by certified or registered mail, postage prepaid, addressed to Owner at 4635 200<sup>th</sup> St. E. Prior Lake, MN 55372 or other place of business, and to the Watershed District at 4646 Dakota Street SE, Prior Lake, MN 55372, or at such other address as either party may hereafter designate in writing to the other.

(d) This Agreement shall be subject to and governed by Minnesota law.

IN WITNESS WHEREOF, the Owner has voluntarily executed this Development Agreement on this \_\_\_\_\_ day of \_\_\_\_\_, 2021.

OWNER:

By: \_\_\_\_\_  
Robert Mesenbrink

By: \_\_\_\_\_  
Lori Mesenbrink

STATE OF MINNESOTA    )  
  ) ss.  
COUNTY OF SCOTT        )

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 2021, by Robert Mesenbrink and Lori Mesenbrink, each the spouse of the other.

\_\_\_\_\_  
Notary Public

My Commission Expires: \_\_\_\_\_

**ACCEPTANCE**

The Prior Lake-Spring Lake Watershed District hereby accepts the foregoing Development Agreement this \_\_\_\_\_ day of \_\_\_\_\_, 2021.

PRIOR LAKE-SPRING LAKE WATERSHED  
DISTRICT

By: \_\_\_\_\_  
Joni Giese

Title: District Administrator

STATE OF MINNESOTA    )  
  ) ss.  
COUNTY OF SCOTT        )

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 2021, by Joni Giese, as the Administrator of the Prior Lake-Spring Lake Watershed District, a political subdivision under Minnesota law.

\_\_\_\_\_  
Notary Public

My Commission Expires: \_\_\_\_\_

This instrument was drafted by:  
Prior Lake-Spring Lake Watershed District  
4646 Dakota Street SE  
Prior Lake, MN 55372

Return to:  
Prior Lake-Spring Lake Watershed District  
4646 Dakota Street SE  
Prior Lake, MN 55372



EXHIBIT A:

LEGAL DESCRIPTION OF PROPERTY:

The East half of the North West Quarter of the North East Quarter (E  $\frac{1}{2}$  of NW  $\frac{1}{4}$  of NE  $\frac{1}{4}$ ) of Section Twenty-six (26) except the North One (1) rod thereof, Township One Hundred Fourteen (114), Range Twenty-two (22), Scott County, Minnesota.

## EXHIBIT B:

### Excerpt from Watershed District Rules

#### Rule J, Section 4 (c):

All open areas within the buffer strip shall be seeded or planted in accordance with Paragraph 8 below. All seeding or planting shall be completed prior to removal of any erosion and sediment control measures. If construction is completed after the end of the growing season, erosion and sediment control measures shall be left in place and all disturbed areas shall be mulched for protection over the winter season.

#### Rule J, Section 8:

##### 8. VEGETATION:

- (a) Where acceptable natural vegetation exists in buffer strip areas, the retention of such vegetation in an undisturbed state is required unless an applicant receives approval to replace such vegetation. A buffer strip has acceptable natural vegetation if it:
  - (i) Has a continuous, dense layer of perennial grasses that has been uncultivated or unbroken for at least 5 consecutive years; or
  - (ii) Has an overstory of trees and/or shrubs that has been uncultivated or unbroken for at least 5 consecutive years; or
  - (iii) Contains a mixture of the plant communities described in Subparagraphs 8(a)(i) and
  - (iv) above that has been uncultivated or unbroken for at least 5 years.
- (b) Notwithstanding the performance standards set forth in Paragraph 8(a), the managers may determine existing buffer strip vegetation to be unacceptable if:
  - (i) It is composed of undesirable plant species including but not limited to common buckthorn, purple loosestrife, leafy spurge or noxious weeds; or
  - (ii) It has topography that tends to channelize the flow of runoff; or
  - (iii) For some other reason it is unlikely to retain nutrients and sediment.
- (c) Where buffer strips are not vegetated or have been cultivated or otherwise disturbed within 5 years of the permit application, such areas shall be replanted and maintained. The buffer strip plantings must be identified on the permit application. The buffer strip landscaping shall comply with the following standards:
  - (i) Buffer strips shall be planted with a seed mix approved by MnDOT, NRCS or SWCD, with the exception of a one-time planting with an annual nurse or cover crop such as oats or rye.
  - (ii) The seed mix shall be broadcast according to MnDOT, NRCS or SWCD specifications of the selected mix. The annual nurse or cover crop shall be applied at a minimum rate of 30 pounds per acre. The MnDOT or NRCS seed

mix selected for permanent cover shall be appropriate for soil site conditions and free of invasive species. MnDOT, NRCS or SWCD approved mixtures appropriate for specific soil and moisture conditions can be used to meet these requirements.

- (iii) Native shrubs may be substituted for native forbs. All substitutions must be approved by the District. Such shrubs may be bare root seedlings and shall be planted at a minimum rate of 60 plants per acre. Shrubs shall be distributed so as to provide a natural appearance and shall not be planted in rows.
  - (iv) Any groundcover or shrub plantings installed within the buffer strip are independent of any landscaping required elsewhere by the municipality or county.
  - (v) Grasses and forbs shall be seeded or planted by a qualified contractor. The method of application shall be approved by the District prior to planting or seeding.
  - (vi) No fertilizer shall be used in establishing new buffer strips, except on highly disturbed sites when necessary to establish acceptable buffer strip vegetation and then limited to amounts indicated by an accredited soil testing laboratory.
  - (vii) All seeded areas shall be mulched immediately with clean straw at a rate of 1.5 tons per acre. Mulch shall be anchored with a disk or tackifier.
  - (viii) Buffer strips (both natural and created) shall be protected by erosion and sediment control measures during construction in accordance with Rule E. The erosion and sediment control measures shall remain in place until the area crop is established.
- (d) Buffer strip vegetation shall be established and maintained in accordance with the requirements found in this Paragraph 8. During the first two full growing seasons, the owner must replant any buffer strip vegetation that does not survive. The owner shall be responsible for reseeding and/or replanting if the buffer strip changes at any time through human intervention or activities. At a minimum the buffer strip must be maintained as a “no mow” area.



### **WORKSHOP MEETING MINUTES**

***Tuesday, August 10, 2021***

***Prior Lake City Hall, Parkview Conference Room***

Members Present: Curt Hennes, Steve Pany, Frank Boyles, Bruce Loney & Mike Myser

Staff Present: Joni Giese, District Administrator

Others Present: Lisa Quinn, Spring Lake Township; Matt Tofanelli, PLSLWD CAC; David Beer, Scott County; Annette Thompson, City of Prior Lake; Josh Accola, Stantec

*The meeting was called to order by President Mike Myser at 3:32 p.m.*

#### **Upper Watershed Blueprint Analysis Update**

Administrator Giese provided a brief overview of the updated analysis. The Managers suggested that the feasibility studies for Buck Lake Channel Treatment System and County Ditch 13 Chemical Treatment System projects be advanced from 2023 to 2022. The Managers thought the estimated cost for final design, easements and permits for the Sutton Lake Iron Enhanced Sand Filter project seemed too high and asked Administrator Giese to confirm that estimated cost. Discussed the need to retain a public finance consultant to review the analysis and provide thoughts on how to best handle issuance of debt to fund the Upper Watershed projects. There was a brief conversation of whether eminent domain would ever be used to implement a project, with differing opinions expressed on its potential use, if needed.

#### **2022 Budget Draft**

Administrator Giese provided an overview of the draft budget spreadsheet and memorandum. The Managers inquired if the spreadsheet could better communicate that select budget reserve items are intentionally not being spent in the current year to build up funds for larger expenditures in future years. The Managers also requested that the spreadsheet better communicate budget reserves that are intentionally being brought forward to the prior year. The level of detail provided in the budget memo regarding general fund line items were discussed. Administrator Giese stated the additional detail will provide better guidance to staff on how to code expenses in 2022. Manager Myser requested that 2021 expenses be shown in the memorandum, along with the 2021 budget. A few typographical errors in the memorandum were pointed out for correction.

#### **Staffing Update**

Administrator Giese stated she is evaluating various ways to reallocate work tasks among staff moving forward and will try to get two position announcements developed and posted shortly.

**Little Prior Lake Water Quality**

Manager Hennes stated that he had been concerned about the water quality in Little Prior Lake and had invited a representative from HAB to look at the lake with him and provide some suggestions on how the water quality could be improved. He found out from HAB that most of the green he was seeing on the water was duckweed and not algae. Through lake signage and a conversation with City staff he also learned that a chemical treatment had been performed on the lake this summer by the City to better facilitate fishing at select locations on the lake. Manager Hennes was interested in doing additional treatments on Little Prior Lake to improve water quality. A majority of the managers felt that Little Prior Lake was not a priority lake for the watershed district and felt if the City wanted to perform additional treatments, they should approach the watershed district with a request. Otherwise, no additional lake treatments were deemed needed at this time.

**Office Lease**

Administrator Giese stated PLSLWD and City staff were in the final stages of negotiating lease terms. She had hoped it would be ready for the Managers' review for this meeting, but it was taking a little longer than originally anticipated. The contract terms include an option to extend the lease up to three years if desired by PLSLWD.

*The meeting was adjourned at 5:50 p.m.*





# PRIOR LAKE SPRING LAKE WATERSHED DISTRICT

## REGULAR MEETING MINUTES

*Tuesday August 10, 2021*

*Prior Lake City Hall*

*6:00 PM*

### BOARD OF MANAGERS:

Mike Myser, President; Curt Hennes, Vice President; Bruce Loney, Treasurer  
Steve Pany, Secretary and Frank Boyles, Manager

Members Present: Mike Myser, Curt Hennes, Bruce Loney, Steve Pany, Frank Boyles

Staff & Consultants Present: Joni Giese, District Administrator  
Maggie Karschnia, Water Resources Project Manager  
Jaime Rockney, Water Resources Specialist  
Shauna Capron, Water Resources Assistant  
Carl Almer, EOR, District Engineer

Others Present: Lisa Quinn, Spring Lake Township  
Wes Steffan, President, Spring Lake Association

### **CALL TO ORDER & PLEDGE OF ALLEGIANCE:**

Meeting called to order by President Myser at 6:01 P.M.

### **2.0 PUBLIC COMMENT:**

Wes Steffan President of Spring Lake Association (SLA) thanked the PLSLWD for its efforts and projects to improve the water quality for Spring Lake. Wes shared information on SLA's mission statement. With the detection of Eurasian Watermilfoil in Spring Lake, SLA is looking for opportunities to further collaborate with the watershed district on the management of this new aquatic invasive species.

### **3.0 APPROVAL OF AGENDA**

Manager Boyles moved to approve the agenda. Second by Manager Hennes. All Ayes. Passed 5-0.

## **4.0 OTHER OLD/NEW BUSINESS**

### **4.1 Programs & Projects Update:**

Jaime Rockney reports that 1527 boats were inspected in June. 560 on Lower Prior Lake, 375 on Upper Prior Lake, 550 on Spring Lake, and 42 on Fish Lake. Aquatic plants were found on 28 boats exiting lakes and one boat entering a lake that was removed before launching.

Eurasian Milfoil was detected in Spring Lake at 12 locations. Some of the plants were hand removed by Blue Water Science and the DNR. Eradication is unlikely, a sign about this invasive plant was posted at the boat landing. Steve McComas with Blue Water Science submitted the opinion that Spring Lake is not conducive to heavy growth. PLSLWD has not treated Eurasian Milfoil in the past. It does not affect water quality but does affect navigation and recreation. No zebra mussels have been detected on Spring Lake. It is unknown how long the milfoil has been in Spring Lake. There are 13 species of native aquatic plants there. The PLSLWD is developing a rapid response plan to take action with invasive plants.

The I-LIDS system on Spring Lake continues to operate. The device was cleaned, a nest removed, and speaker volume increased. 170 videos were reviewed and indicated no violations. Lake level for Prior Lake is 901.1 and the lake level for Spring Lake is 909.7 with no flow in the channel from Spring to Upper Prior.

Maggie Karschnia reports that carp removal is an effective way to achieve better water quality. The cost benefit shows that the program is a good investment when compared to other methods. The cost compares to alum treatment. In the future an electro fishing back pack may be purchased for carp removal by electro fishing. Identified carp spawning / nursery areas have been cut off. Since 2015 the carp population has been cut in half. There is still a ways to go. Carp can be elusive and difficult to remove.

Shauna Capron reports that a first year Wetlands Monitoring Survey Project is being done. This involves vegetation and macroinvertebrates (bugs) surveys and analysis. Some wetlands in this project are Geis, Sandey, and Fish Point. The phosphorous content and health of the wetland will be studied and evaluated.

### **4.2 2021 Intern Update Presentation: Camille Will.**

Camille was not able to attend and the update will be at the September meeting.

### **4.3 Board Acknowledgement of Water Resources Project Manager Maggie Karschnia.**

All five Managers and Administrator had high praise and appreciation for her excellent work. Maggie's skills and talent are greatly appreciated. Maggie used great innovation with a number of projects and programs. The Managers thanked her, and stated how well they liked working with her. All Managers wished her luck and best wishes in her future employment.

### **4.4 Managers Presentations & Liaison Updates.**

Manager Loney: On July 29 the Managers and Citizens Advisory Committee had a joint meeting. Good information was exchanged. The 10 member CAC contributed to District initiatives, such as I-LIDS and staffing the WD booth at Chamber Days. Other potential initiatives suggested and lightly discussed included water quality enhancements, lakeshore restoration, and legislative

liaisons. Manager Myser reports that he received favorable comments about the PLSLWD water quality improvements in the lakes and that a local business owner would like to donate funds to projects such as blue gill-walleye stocking.

## **5.0 CONSENT AGENDA**

Manager Pany moved to approve the Consent Agenda. Second by Manager Hennes. All Ayes. Passed 5-0

- 5.1 Meeting Minutes— July 13, Board Workshop
- 5.2 Meeting Minutes—July 13, Board Meeting
- 5.3 Meeting Minutes— July 29 Joint Board of Managers-CAC Special Meeting.
- 5.4 Claims List & Visa Expenditures Summary

## **6.0 TREASURER'S REPORT:**

Manager Loney reported that finances are in good order, new reports providing better information, and year end projections are clear. The budget and visa bills are now more clearly reported also.

- 6.1 Financial Reports Update
  - Fund Performance Analysis*
  - Cash and Investments Summary*
  - Cash Flow Projections*

## **7.0 UPCOMING MEETING/EVENT SCHEDULE:**

**CAC Meeting Thursday August 26, 2021 in Parkview Conference Room 6:30 p.m.**

## **ADJOURNMENT**

Manager Hennes moved to adjourn meeting. Second by Manager Pany. All Ayes. Motion Passed 5-0. Meeting adjourned at 6:51 P.M.

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Steve Pany, District Secretary

August 10, 2021



# PRIOR LAKE SPRING LAKE WATERSHED DISTRICT

**CAC Meeting Minutes**  
8/26/2021 6:30-8:00 PM

## Attendees:

### CAC Members:

- ☒ Christian Morkeberg (Chair)
- ☐ ~~Christopher Crowhurst~~
- ☒ Jim Weninger
- ☒ Matt Tofanelli
- ☒ Maureen Reeder

7 of 10 members present = 70%

- ☐ ~~Woody Spitzmueller~~
- ☐ ~~Matt Newman~~
- ☒ Ben Burnett
- ☒ Loren Hanson
- ☒ David Hagen

Staff: ☒ Joni Giese (District Administrator)

### Board members:

- ☒ Bruce Loney (CAC rep)
- ☒ Curt Hennes

Guests: Lisa Quinn, Spring Lake Assoc. (SLA)

I. Meeting called to order: 6:35 pm by Chair Christian Morkeberg

## II. Minutes & Agenda

- a. June and July Minutes approved Motioned: Maureen, seconded: Jim, passed
- b. August Agenda
  1. Christian suggested postponing water clarity report by Matt
  2. Ben suggested adding subcommittee realignment discussion
  3. Christian suggested adding Milfoil updated
  4. Jim suggested adding weeds discussion
  5. Approval (as amended): Motioned: Loren, seconded: Jim; Passed.

## III. Water Quality Presentation

- o Lake Plant Removal Cost-Benefit presented by Matt Tofanelli
  - Plant removal is a method to remove phosphorus (P) from lakes
  - Not meant to replace alum treatments, but to be used together
  - Report Matt looked at compared plant removal based on cost per lb. P removed
    - 116,000 lbs. weeds removed, dried, and measured P = \$300/lb. P removed
    - Alum treatment compared in report was: \$220/lb. P removed (locked away)
      - o PLSLWD has been doing alum for \$96/lb. P removed
  - Once removed, need to find a place to put the plant matter, can be used for fertilizer (newer regulations make this a bit difficult)
  - Comments:
    - Jim reported this had been done in the past, some of the costs were pushed to homeowners, plants were dumped on fields for fertilizer
    - In 1980(?) Dick Osgood released a report about Spring Lake having such a high buildup of P, that he wouldn't bother studying again.
    - Question: how long does Alum lock away phosphorus?
    - In hot late summer (Aug/Sept) some trapped P released (from Alum)
    - CAC generally liked the idea, should pursue

## IV. CAC Business

- o Joint Meeting Debrief (Christian)
  - Success, we should do yearly
  - Discussed yearly timing, budget and Levy deadline is Sept. 15 every year, so budget is completed by Sept and being finalized in July, so July or June would be good timeframe for joint meeting.

- Could have 2 joint meetings a year (Jan and July?)
- Chamber Fest Debrief (Joni & Christian)
  - Went well
  - Discussed ways to improve communications with the public and residents
    - Plan ahead next year, have 50<sup>th</sup> anniversary flyers, hike the watershed maps/flyers, more flyers or posters about “What we’ve done”
- CAC Project Definition & New Process Template-Draft: 6/24/21 (Ben)
  - Ben presented latest, some suggestions made, see attachment
- New member orientation packet update (Loren)
  - Collecting files and acronyms, planning a draft for next meeting
- V. Staff Project Updates - Joni
  - Budget Process Update
  - Fall PLOC Tour – Mon Oct. 4<sup>th</sup> 1-4:30 pm
  - Hike the Watershed – guided hikes (9:30 – 11:00 AM)
    - Aug 18 (Spring Lake Regional/Arctic Lake)
- VI. Aug. Workshop Meeting – CAC Member Report – Matt T  
 Aug. Board Meeting – CAC Member Report – Christopher (previously emailed)
  - September Board Meeting – attendee: Ben
  - Ben will send out Board meeting sign up for the remainder of 2021 (see attached)
- VII. Board Liaison Updates & Requests to CAC – Bruce
  - CAC line item in budget needs to be added (has been in previously)
  - Increased the PLOC easement through Whispering Waters development/properties.
  - Budget and Levy final discussions (due Sept. 15)
  - Staff replacement plans
  - Board presented a lake friendly award at the FLC (Farmer Led Council)
    - CAC discussed and suggested someone from CAC start going to the FLC meetings. Joni wants to talk to FLC first to make sure they are fine with it.
    - Maureen volunteered to go pending approval.
    - May become new CAC agenda line item
  - Lots of updates planned for 2022
- VIII. CAC Subcommittee Reports
  - Discussed re-alignment (see attachment, and possible alignment below)
  - Shoreline Restoration (Loren, David, Jim)
    - Low-water and high-water problems
    - Landscaping, rules, regulations, ideas, sustainability
  - Lake-Life and Water Quality (Christopher, Matt N, Maureen, Matt T)
    - Muck digesters, fish stocking, etc.
  - Storage, flooding [and drought] (Woody)
    - Storage Assessment, Plans and Wetland Banking
  - AIS (Christian, Ben)
    - Staff reported that some of the suggestions from Christian and Ben from the visit/tour last month were put in place. Ben drove thru before meeting and reported the Spring Lake access I-LIDS looks good after DNR approved locals could help with weed control in rain garden around I-LIDS device. Other ideas are pending for public education.
    - Lisa from SLA talked about a new spring lake initiative to spend money to help remove milfoil found on the lake. After finding milfoil last month they started pulling and found more than expected. They are working with DNR on paperwork for removal and process, etc.
- IX. Goals & Topics for Next and future Meetings



- State of public access ramps, from “power-loading” causing gravel and sand buildup and causing problems for smaller boats
  - Idea: 15 min. subcommittee meeting prior to full CAC meeting
  - Re-assess the VP position to switch to a committee “whip” to help track/push subcommittees
- X. Other Topics & Announcements
- Lisa from SLA stated SLA will have some board member openings soon.
- XI. Adjourn
- Motioned: David, Seconded, then passed
  - Adjourned at 8:04 pm
- XII. Upcoming Meetings:
- a. Board Meeting: Tues, September 14, 6:00 pm
    - 1. Workshop starts at 4:00 pm
  - b. CAC Meeting: Thurs, September 30, 6:30 – 8:00 pm

Minutes submitted by: Ben Burnett



## 2021 Board Meeting Assignments

*Held the second Tuesday of the month*

**Board meetings:** 6 pm in Prior Lake Council Chambers

**Board workshops** (optional): 4:00 pm\* in Wagonbridge

(\*Start time can vary, check meeting agenda beforehand)

- **January 12:** Woody
- **February 9:** Ben
- **March 9:** Christopher
- **April 13:** Jim
- **May 11:** Maureen
- **June 8:** Maureen
- **July 13:** Loren
- **August 10:** Christopher
- **September 14:** Ben
- **October 12:**
- **November 9:**
- **December 14:**

## **CAC Subcommittee Re-alignment Ideas & Discussion**

### **From May 2021:**

Matt suggested re-aligning subcommittee structure to cover both short-term projects and long-term goals in 4 groups

Current CAC Subcommittees	PLSLWD goals	Proposed CAC Subcommittees
1) Shoreline Restoration 2) Muck digesters 3) AIS/Signage 4) Fish Stocking 5) Storage Assessment, Plans and Wetland Banking	1) Water quality 2) AIS (Aquatic Invasive Species) 3) Flooding	a) Shoreline restoration b) Lake life health c) Regulations d) Water storage

- a. **Shoreline restoration** – both sides of water's edge - focus on earth-based management (weed management by beach, erosion of shoreline, riprap/sand blanket, planting, muck in water).
- b. **Lake life health** – fish health (e.g., carp numbers, fishery stock, etc.), water clarity, aquatic vegetation (quantity, type, and health), algae, muscle health, invertebrate/phytoplankton numbers, and AIS inspections.
- c. **Regulations** – enforcement/responsibility (I-LIDS, zebra mussel inspection ENFORCEMENT [not the management of the inspections]), business compliance attached to lakes (e.g., dock usage, numbers, etc.).
- d. **Water storage** – water contamination from outside sources (run off/fields), wetland banking, surveys(?), flooding, etc.

#### **Discussion:**

- e. CAC: agreed with re-alignment idea – should be in-line with WD goals; CAC has a statutory position, we are the advisory/ review group, we have some limitations on how much we can “do”; need to be coordinate with the board
- f. Staff (Joni) – agree, broader subcommittees, but should match with WD goals
  1. Clarification: CAC is an advisory body, and has been helping with projects...
- g. Board (Bruce) – More heads, to review and improve plans and ideas, trying to find the “best bang for the buck” for projects and benefits
  1. Help getting more farmer input (projects and ditch 13)
  2. Want CAC to continue with plan reviews
- h. No Motion was made, tabled until next meeting.

### **From June 2021:**

#### **Discussed benefits/drawbacks of alternate subcommittee structure**

- Should Subcommittees follow PLSLWD Board three focus areas? Most thought so.
  - What about new areas? How should they be addressed?
- Project focused vs Focus areas
- Are “fixed committees” better? What about variable (“pop-up”) or working groups per idea?
  - Are task forces ever used? (Task force: temporary project/idea specific group/subcommittee)
- How much structure is realistic? Will it cause fracturing of time and resources from CAC members?
- **Consensus:** *CAC subcommittee structure is dependent on how the PLSLWD Board and CAC decide to work together on old and new project ideas. This needs to be determined first before CAC subcommittee structure is decided...*
  - The Staff and Board need to bring in the CAC BEFORE contractors and studies are done/contracted. CAC should be part of staff and board review (hasn't been able in the past, but is changing/evolving).
- Motioned to table until next meeting by Matt, second by Ben, passed

### **From July 2021:**

Joint meeting, not discussed

**PLSLWD Board Meeting 8-10-2021 - CAC Notes taken by Christopher Crowhurst for information only****2.0 PUBLIC COMMENT**

- Wes Steffan SLA president, reviewed bylaws about cooperating to discuss, specifically improving the water quality, brought up the curly leaf milfoil. The DNR found more than they had expected in. The SLA had a board meeting on 8/9 and SLA would like to work with the board to look at what steps can be taken and what funding is needed to combat the Milfoil.

**4.1 Programs & Projects Update****Water level**

- Prior lake rose slightly, currently at 901.1'.
- Spring lake also very low.
- Currently no flow between spring and prior.

**Boat inspections**

- 1527 done in July.
- Only 1 found with mass (Coontail weed) on entry.
- 28 times found with plants exiting.

**I-LIDS**

- updated the speaker volume, made the signs more rigid.
- 170 launch videos reviewed with no violations.
- Weeds were observed on boats going out of lake but not going in.

**Milfoil in Spring Lake**

- 12 locations milfoil observed.
- Hand removal occurred on 8/4.
- They found a lot more during the process and ran out of time.
- They estimated an additional week of hand pulling and deemed ineffective as a method of eradication.
- What next: currently milfoil is not treaded in the watershed as treatments were not effective in the 1990s. They believe Spring Lake will not get a heavy growth, expect a peak in a couple of years and not get out of control, insufficient nitrogen. Milfoil does not affect water quality Current improved water quality has caused greater diversity in species. Only an issue in water under 15' deep.
- Agreed to put it forward as a workshop item, to work out what to do next.

**Carp management**

- Traps are not working as well as previous years possibly due to low water.
- Baited box traps are working better when pulled later in the day. Upper prior lake, estimate the population has halved since 2016. Still double the DNR recommended level.
- 13,500Lbs removed in 2021.
- Spring lake hasn't reduced much by comparison, due to previously not harvesting near their reproduction sites.
- So far only 8,815lbs removed in 2021.
- Need a very large Seine to have a substantive impact on this lake.
- Carp management is second most cost affective way to remove phosphors. \$97 per pound compared to \$81 for Alum, \$200 for ferric chloride.

**Wetland monitoring**

- Sampling bugs from five different wetlands, tabulating results now. (Fish point, Northwoods, 12/17, Geis, Sandey)
- Vegetation surveys carried out.
- Bugs and vegetation good indication of health of wetlands.
- Results will be presented later this year.
- Newly created wetland did not yet have the biological health of a natural wetland, hoping to see it improve over time, and so plan on continuing to monitor.
- Very low cost \$2k annually and provides valuable information.
- Board interested in analyzing phosphorus loading of wetlands.

#### *4.2 2021 Intern Update Presentation: Camille Will*

- Did not happen due to absences.

#### *4.3 Board Acknowledgement of Maggie Karschnia*

- Maggie has been with the watershed district for 6-7 years and a notable contributor to the success of many initiatives, upper water shed plan, carp removal and Farmer Led Council liaison, Sutton Lake Outlet project manager. Wonderful feedback from each board member.

#### *4.4 Manager Presentations & Liaison Updates*

- Joint Board of Managers & CAC Meeting, very good meeting, planning on making it annual.
- Recognized the amount of work done by the CAC in past year.
- Now 10 CAC members now.
- Lots of good ideas for 2021-2022.
- Chamberfest – very good turnout, Slater realty group said he has been watching the board and commented on the lake being cleaned up and asked how to contribute. **Jim Salter has contributed a \$1000 to the fish stocking efforts.**

#### *5.0 CONSENT AGENDA*

- Approved without comments

#### *6.0 TREASURER'S REPORT*

- Roughly 1M available cash
- Cashflow analysis, by end of year will be a little less

#### *7:50 - 7:55 PM 7.0 UPCOMING MEETING/EVENT SCHEDULE:*

- CAC Meeting, Thursday, August 26, 6:30 – 8:00 pm (Parkview Conference Room)



# CAC Project Definition & New Process Template

Draft: 9/7/2021

## 1. Problem Statement or Project Opportunity

What is being studied? Define what problem is intended to be addressed or what project opportunity the subcommittee would like to explore. If this is focused on a particular lake or resource, state the focus resource.

## 2. Relationship to District Goals

How does this topic or project relate to established District goals? (i.e., addresses invasive species, water quality improvement, shoreline restoration, reduce flooding, etc.)

## 3. Project Deliverables

What are the intended project deliverables/timeline for this project or subcommittee?

- Example questions/details to answer:
  - Define resources needed: Staff time, how many staff, cost
  - Length/duration of project (when start? now/later is there a deadline or window?)
  - How to pay: do now (use misc. \$ pool), or later and add to next budget?
  - Background and support
    - What types of scientific research is needed/acceptable?
    - Should experts be consulted or use CAC funds to bring in for a meeting
- Deliverable examples:
  - Producing a product (ex. factsheet)
  - Researching a project proposal
  - Developing a project research/ implementation proposal for Board consideration
  - Planning an event or outreach activities

## → 4. Present to District Staff (*bulk of idea development is in this loop/process*)

- Receive/apply feedback from District staff on (1, 2, 3, intended project direction, etc.).
- Based on staff feedback, develop/refine work tasks, project schedule (when would start? Which budget year? etc.) and deliverable(s), decide when to share with board.
  - Present monthly updates to CAC
  - Refine idea and restart task 4, until ready for 5 (or decide to drop idea).
- Once project is clearly defined and work program is approved by the staff and board liaison, present to CAC.
  - Present to CAC with staff and/or experts
  - Full CAC vote on recommendation to present to board (proceed to step 5)
    - If not, loop back through (step 4)

## 5. Present to Board

Present to Board for final review and approval.

- Board may request changes, or alterations

If approved, Board will add to PLSLWD plan and budget

Patty Dronen - Administrative Assistant	CLA is accountant		Bruce Loney, Treasurer
9/14/2021			
Prior Lake Spring Lake Watershed District			
Claims list for Invoice Payments due for the prior month			
Managers will consider approving this claims list - Staff payroll and Manager per diems have already been paid via ADP. After the managers vote, two Managers will sign checks within three days of the meeting for approve claims. Then, staff will US mail checks (written on the Sterling State Bank) to the claims list parties. Staff will request that all vendors provide information on their invoices to fit into the categories below			
Vendor	Invoice	Description	Amount
1. Watershed District Projects (excluding staff payroll)			
EOR	00758-0139	General Engineering	1,174.50
	00758-0145	Sutton Lake IESF Feasibility	1,597.50
	00758-0146	Buck Lake East Wetland Enhancement Feasibility	1,949.25
	00758-0139	Permitting	1,650.00
	00758-0139	BMP Eastments	1,596.50
WSB	R-017421-000-13	Carp Management	1,377.50
	R-017421-000-12	Carp Management	4,125.00
	R-017785-000-3	Regulation	126.00
	R-017785-000-2	Regulation	165.00
Scott SWCD	2021-153	Task 1 - Cost Share	8,242.75
	2021-153	Task 2 - Farmer-Led Council	4,944.86
	2021-153	Task 3 - Monitoring	
	2021-153	611 Ferric Flows	167.50
	2021-153	611 Ferric Samples	469.00
	2021-153	637 DMP Flows	603.00
	2021-153	637 DMP General	469.00
	2021-153	839 PLOC Flows	167.50
	2021-153	637 DMP Samples	703.50
	2021-153	Task 4 - Regulation	300.50
	2021-153	Task 5 - Education & Outreach	657.43
MNL	30391	Weed Control	300.00
Waterfront Restoration	1506	Watercraft Inspector - Onsite in July	6,393.75
Scott County Abstract & Title Company	I-34033-01	Policy and Title Search Fee	500.00
Twin Cities Fab Inc.	2624	Spring Lake Fish Barrier/Tadpole Barrier	2,942.13
Xcel Energy	745632778	18051 Langford Blvd - September	18.30
		Subtotal	40,640.47
2. Outlet Channel - JPA/MOA (excluding staff payroll)			
EOR	00758-0086	2021 PLOC Vegetation Maintenance	1,873.52
	00758-0147	PLOC Segement 1,4,5A Bank Repair	6,045.75
	00758-0140	Segment 4	870.00
	00758-0140	Segment 5	573.75
	00758-0140	Nonspecific	1,000.50
		Subtotal	10,363.52
3. Payroll, Office and Overhead			
ADP Manager Per Diems		Per Diems	1,794.94
ADP Staff Payroll		Payroll Services	31,411.56
ADP Taxes & Benefits		Taxes and Benefits	23,578.80
HSA Bank		HSA Bank	323.07
NCPERS		Life Insurance -September	64.00
Reliance Standard		September Premium (LTD, STD)	678.38
HealthPartners		September	5,373.61
Optum	9510090934	Monthly Service Fee (April, May, June)	26.25
Gallagher	202132730	2020-2021 Compensation Study	1,050.00
SW News Media	100426	Public Hearing Notice	119.52
PAC USA	946	Imprinted Materials	1,964.67
			538.81
Smith Partners	42568		717.09
	42645		1,701.58
			191.20
			768.10
CLA	2981501	Monthly Bookkeeping	1,300.00
	2981501	Payroll Services	400.00
	2981501	Working with ADP on amended W-2s	200.00
	2981501	Budget Meeting	300.00
	2981501	Technology and Client Support Fee	110.00
Metro Sales	1876388	August - September Usage	936.37
	1879407	September Contract Lease	110.60
VISA		August Billing	2,041.57
		Subtotal	75,700.12
TOTAL			126,704.11
X		X	

Prior Lake - Spring Lake Watershed District  
VISA Transactions July 27-August 23, 2021

Posting Date	Merchant Name	Amount	Receipt	Class	Customer	Expense	Descriptions
7/26/2021	WIRELESSBUY LLC	\$59.00	x	611 Operations & Maintenance	Fish Management	876 Field Equipment & Maintenance	Carp 2 - Arlo
7/28/2021	ADOBE *800-833-6687	\$29.99	x	626 Planning	Planning & Program Development	903 Dues/Fees/Subscriptions	Stock image library
7/28/2021	CUB FOODS #1640	\$6.42	x	652 Education & Outreach	MS4 Education Program	806 Program Costs - Miscellaneous	Chamber Fest Materials
7/28/2021	IRONCLAD STORAGE	\$199.00	x	611 Operations & Maintenance	Fish Management	876 Field Equipment & Maintenance	Equipment storage unit
7/30/2021	LUNDS&BYERLYS PR LA	\$2.50	x	626 Planning	Planning & Program Development	902 Meals and Lodging	Water for CAC/Board Meeting
7/30/2021	TRACTOR SUPPLY #1156	\$27.90	x	611 Operations & Maintenance	Fish Management	876 Field Equipment & Maintenance	Corn - Baited box traps
8/1/2021	HOLIDAY STATIONS 0198	\$31.01	x	611 Operations & Maintenance	Fish Management	801 Mileage	Gas
8/1/2021	HOLIDAY STATIONS 0198	\$35.97	x	611 Operations & Maintenance	Fish Management	801 Mileage	Gas
8/1/2021	PANERA BREAD #601316 O	\$238.12	x	626 Planning	Planning & Program Development	902 Meals and Lodging	CAC/Board Meeting
8/2/2021	DOLLARTREE	\$5.37	x	652 Education & Outreach	MS4 Education Program	806 Program Costs - Miscellaneous	Chamber Fest Materials
8/3/2021	YOUR BOAT CLUB LLC	\$8.58	x	637 Monitoring & Research	Auto Vegetation Monitoring	876 Field Equipment & Maintenance	Boat gas
8/3/2021	TST* CHARLIE S ON PRIOR	\$145.55	x	626 Planning	Planning & Program Development	902 Meals and Lodging	Intern Luncheon
8/3/2021	MENARDS BURNSVILLE MN	\$10.73	x	652 Education & Outreach	MS4 Education Program	806 Program Costs - Miscellaneous	Chamber Fest Materials
8/4/2021	AMZN Mktp US	(\$113.99)	x	405 General Fund		751 Office Equipment & Maintenance	Tablet Protection Plan/tech support - returned
8/4/2021	VZWRLSS*APOCC VISB	\$60.16	x	839 Operations & Maintenance	Customer Operations Non-Specific	876 Field Equipment & Maintenance	Outlet Structure Arlo
		\$37.08	x	648 Regulation	Permitting & Compliance	876 Field Equipment & Maintenance	Carp 1 - Arlo
		\$15.08	x	611 Operations & Maintenance	Fish Management	876 Field Equipment & Maintenance	Tablet Cell Service
8/5/2021	AMZN Mktp US*2P4U72EH2	\$34.98	x	648 Regulation	Permitting & Compliance	876 Field Equipment & Maintenance	Tablet screen protector/case
8/5/2021	AMZN MKTP US*2P3W705Y0 AM	\$659.00	x	648 Regulation	Permitting & Compliance	876 Field Equipment & Maintenance	Tablet
8/5/2021	McCoys Copper Pint	\$45.53	x	626 Planning	Planning & Program Development	902 Meals and Lodging	Meeting with Mike Myser
8/5/2021	TRACTOR SUPPLY #1156	\$27.90	x	611 Operations & Maintenance	Fish Management	876 Field Equipment & Maintenance	Corn - Baited box traps
8/5/2021	TRACTOR SUPPLY #1156	\$41.63	x	611 Operations & Maintenance	Fish Management	876 Field Equipment & Maintenance	Corn - Baited box traps
8/6/2021	USPS PO 2676300882	\$10.20	x	405 General Fund		701 Postage	Mailing to Board Managers
8/8/2021	MSFT * E0100FDFPT	\$120.79	x	626 Planning	Planning & Program Development	903 Dues/Fees/Subscriptions	Software Subscription
8/8/2021	MSFT * E0100FDBGX	\$32.21	x	626 Planning	Planning & Program Development	903 Dues/Fees/Subscriptions	Software Subscription
8/8/2021	TRACTOR SUPPLY #1156	\$27.90	x	611 Operations & Maintenance	Fish Management	876 Field Equipment & Maintenance	Corn - Baited box traps
8/10/2021	ARLO TECHNOLOGIES INC	\$9.99		648 Regulation	Monitoring	876 Field Equipment & Maintenance	Cellular service - Arlo Cameras
8/10/2021	JIMMY JOHNS - 1206 - ECOM	\$102.92	x	626 Planning	Planning & Program Development	902 Meals and Lodging	Board Meeting Meal
8/10/2021	ADOBE *800-833-6687	\$56.90	x	626 Planning	Planning & Program Development	903 Dues/Fees/Subscriptions	Software Subscription
8/10/2021	GROUPGREETING	\$4.99	x	405 General Fund		706 Office Supplies	Staff recognition card
8/11/2021	TRACTOR SUPPLY #1156	\$27.47	x	611 Operations & Maintenance	Fish Management	876 Field Equipment & Maintenance	Corn - Baited box traps
8/12/2021	TRACTOR SUPPLY #1156	\$68.67	x	611 Operations & Maintenance	Fish Management	876 Field Equipment & Maintenance	Corn - Baited box traps
8/12/2021	GROUPGREETING	\$4.99	x	405 General Fund		706 Office Supplies	Staff recognition card
8/16/2021	PAYMENT - THANK YOU	(\$3,201.32)					
8/17/2021	CANVAS SOLUTIONS INC	\$51.00	x	648 Regulation	Permitting & Compliance	903 Dues/Fees/Subscriptions	Software Subscription
8/17/2021	YOUR BOAT CLUB LLC	\$30.03	x	611 Operations & Maintenance	Fish Management	876 Field Equipment & Maintenance	Boat gas
8/18/2021	AMZN Mktp US	(\$549.99)	x	405 General Fund		751 Office Equipment & Maintenance	Incorrect Tablet purchased - returned
8/18/2021	AMZN Mktp US*2D7MO3Z52	\$28.08	x	637 Monitoring & Research	Auto Vegetation Monitoring	876 Field Equipment & Maintenance	Batteries
8/18/2021	CARLSON HDWE CO	\$8.14	x	637 Monitoring & Research	Auto Vegetation Monitoring	876 Field Equipment & Maintenance	Wire Connectors
8/18/2021	CARLSON HDWE CO	\$39.71	x	637 Monitoring & Research	Auto Vegetation Monitoring	876 Field Equipment & Maintenance	Digital Multimeter and 9V Batteries
8/18/2021	OFFICEMAX/DEPOT 6767	\$15.56	x	405 General Fund		706 Office Supplies	Mailing labels
8/18/2021	FLEET FARM 2500	\$115.65	x	637 Monitoring & Research	Auto Vegetation Monitoring	876 Field Equipment & Maintenance	12V Batteries
8/18/2021	AMZN Mktp US*2D6T38DZ1	\$35.11	x	405 General Fund		706 Office Supplies	Envelopes
8/19/2021	MICROSOFT#G005258009	\$3.09		I have disputed this charge as neither we or Microsoft know what the charge is for			
8/20/2021	HOLIDAY STATIONS 0198	\$54.94	x	637 Monitoring & Research	BMP and Easement Inventory and Inspect	801 Mileage	Boat gas
8/20/2021	HOLIDAY STATIONS 0198	\$54.56	x	611 Operations & Maintenance	Fish Management	801 Mileage	Truck gas
8/20/2021	DNH*GODADDY.COM	\$21.17	x	626 Planning	Planning & Program Development	903 Dues/Fees/Subscriptions	Website Domain Renewal
8/20/2021	AMZN Mktp US*2D1J480E2	\$59.98	x	611 Operations & Maintenance	Farmer-Led Council	806 Program Costs - Miscellaneous	Award Plaques
	TOTAL DUE	\$ 2,041.57					

**PLSLWD Board Staff Report**  
September 9, 2021



**Subject |** Sutton Lake Outlet Access Improvement: EOR Work Order

**Board Meeting Date |** September 14, 2021

**Item: 5.5**

**Prepared By |** Joni Giese, District Administrator

**Attachment |** Sutton Lake Outlet Access Improvement: EOR Work Order

**Action |** Vote to approve EOR work order

### **Background**

Construction of the Sutton Lake Outlet is substantially complete. Construction activity is being performed by Veit Contracting with site engineering and construction administration being performed by the District's engineer, EOR. As part of negotiations with the property owner, the District agreed to issue a construction change order to construct a trail across the rock berm and improve access to the monitoring manhole. Landowner negotiations also included an agreement to issue a construction change order to construct an improved access from North Sutton Lake Boulevard to the outlet. EOR has expended their existing contracted funds to address the first change order and to perform a survey of the drainage area tributary to the access road. This work order will cover EOR's estimated fees to design and oversee construction of the access road and to address remaining construction administration activities associated with the outlet. The District has sufficient funds to accommodate the estimated cost of the construction change order and the associated engineering and construction administration fees for EOR.

### **Requested Board Action**

Staff recommends that the Board vote to approve the EOR work order as attached.



## SCOPE OF SERVICES

### SUTTON LAKE OUTLET ACCESS IMPROVEMENT

PLSLWD	
CLASS:	
PROJECT:	Sutton Lake Outlet Access Improvement

EOR	
JOB:	00758-0114
PHASE:	N/A
TASK:	N/A

START DATE: 9/15/2021END DATE: 12/31/2021TOTAL PROJECT BUDGET: \$11,972

**OVERVIEW OF PROJECT SCOPE:** A new scope of services is proposed to address a request made at a meeting with District staff and one of the landowners of the Sutton Lake Outlet Project. This scope of services is related to the design, permitting and construction oversight of an improved access off of North Sutton Lake Boulevard to the Sutton Lake Outlet. Engineering services includes plans and specifications, permitting services, change order request from the existing contractor (Veit), contract management, and construction observation. EOR has been able to cover one contractor change order (for establishment of a trail across the constructed rock berm and improved staff access to the monitoring manhole) and has performed a survey of the drainage area tributary to the access road via verbal authorization under the existing 2021 construction management budget, which is now exhausted.

#### PROJECT TEAM

PLSLWD	
PROJECT LEAD:	Joni Giese, District Administrator
OTHER STAFF:	
EOR	
PROJECT LEAD:	Carl Almer
OTHER STAFF:	Kyle Crawford, Madison Rogers, Dan Mossing, Brian Rucker

#### SUMMARY OF TASKS

TASK 1: Engineering Plan Set	
SUMMARY:	A detailed plan set will be developed that will be used for requesting a change order, permit application and construction. This will include line-item

quantities, existing and proposed contours, erosion control measures, and site restoration, and a traffic management plan.	
<b>DELIVERABLES:</b>	1) Draft plan set (pdf) 2) Final plan set (pdf)
<b>TIMELINE:</b>	September 2021 – October 2021
<b>ESTIMATED COSTS:</b>	\$3,080
<b>TASK 2: Permitting Services</b>	
<b>SUMMARY:</b>	All supporting exhibits and narratives will be completed for obtaining a permit from the County. This task will also include any hydrologic and hydraulic modeling required for access road culvert sizing and obtaining the permit.
<b>DELIVERABLES:</b>	1) Exhibits and narratives for obtaining permits, as necessary (pdf)
<b>TIMELINE:</b>	September 2021 – October 2021
<b>ESTIMATED COSTS:</b>	\$2,160
<b>TASK 3: Contract Management</b>	
<b>SUMMARY:</b>	This task includes soliciting a change order request, day-to-day construction management communications, pay request review, and project close-out.
<b>DELIVERABLES:</b>	1) Change Order Memo (pdf)
<b>TIMELINE:</b>	September 2021 – October 2021
<b>ESTIMATED COSTS:</b>	\$2,452
<b>TASK 4: Construction Observation</b>	
<b>SUMMARY:</b>	This task includes field time as needed to perform construction observation. It is estimated that construction would be at most of 4 days.
<b>DELIVERABLES:</b>	1) Correspondence as necessary with PLSLWD staff 2) Memo to the file at the end of construction, summarizing observations and detailing problems, if any, that were addressed. (pdf) 3) Construction as-built/record drawing
<b>TIMELINE:</b>	October 2021 – November 2021
<b>ESTIMATED COSTS:</b>	\$4,280

**ESTIMATED COST SUMMARY**

DESCRIPTION		HOURS/ QUANTITY	ESTIMATED COST
<b>TASK 1:</b>	Engineering Plan Set	22	\$ 3,080
<b>TASK 2:</b>	Permitting Services	16	\$ 2,160
<b>TASK 3:</b>	Contract Management	16	\$ 2,452
<b>TASK 4:</b>	Construction Observation	28	\$ 4,280
<b>EXPENSES:</b>	Mileage Equipment rental Other	***Included in the above estimated costs***	
<b>TOTAL</b>			<b>\$11,972</b>

*NOTE: Actual costs per task may differ from the estimated costs listed above, but the TOTAL amount must not exceed \$11,972.*



**ASSUMPTIONS:** The estimated cost summary for the execution of the tasks in this Scope of Services is based upon the following assumptions:

- 1) District will pay all necessary permitting and application fees required for this project.

**SIGNATURES:**

The services described in this Scope of Services are being provided in accordance with the Master Services Consulting Agreement between PLSLWD and EOR dated December 13, 2019. Any changes to the project team, tasks, deliverables, timeline, or total cost will require a signed amendment/update to this Scope of Services.

Prior Lake-Spring Lake Watershed District

Emmons & Olivier Resources, Inc.

Signature: \_\_\_\_\_

Name: Joni Giese

Title: District Administrator

Date: \_\_\_\_\_

Signature:  \_\_\_\_\_

Name: Carl K. Almer

Title: Water Resources Lead

Date: September 8, 2021

**PLSLWD Board Staff Report**  
September 9, 2021



**Subject |** Office Lease

**Board Meeting Date |** September 14, 2021

**Item: 5.6**

**Prepared By |** Joni Giese, District Administrator

**Attachment |** Lease Agreement Between the City of Prior Lake and the Prior Lake-Spring Lake Watershed District

**Action |** Vote to approve the lease agreement

**Background**

On July 13, 2021, the Board of Managers voted to enter into a one-year lease with the City of Prior Lake effective July 1, 2021. Subsequent the July Board meeting, the City Manager and the District Administrator have been working to define the terms of the lease. The Prior Lake City Council approved the agreement at their September 7, 2021, City Council meeting. The negotiated lease that is acceptable to both the City Manager and the District Administrator is attached.

**Requested Board Action**

Staff recommends that the Board vote to approve the lease agreement as attached.

**LEASE AGREEMENT  
BETWEEN THE CITY OF PRIOR LAKE  
AND THE PRIOR LAKE-SPRING LAKE WATERSHED DISTRICT**

THIS LEASE, made this \_\_\_\_ day of \_\_\_\_\_, 2021, by and between the CITY OF PRIOR LAKE, hereinafter referred to as "LESSOR", and PRIOR LAKE-SPRING LAKE WATERSHED DISTRICT, hereinafter referred to as "TENANT":

WITNESSETH THAT:

1. **PREMISES.** LESSOR does hereby lease to TENANT and TENANT hereby hires and takes of and from LESSOR those certain premises known and designated as a portion of the main and lower level of City Hall consisting of 2 offices, 6 work stations, portions of three storage rooms, and copier and refrigerator space at 4646 Dakota Street SE, Prior Lake, MN 55372, containing approximately 1,380 square feet, depicted on the attached **Exhibits A and B** incorporated herein, hereinafter referred to as the "Leased Premises" or "Premises".
2. **TERM.** The initial term of this Lease shall commence on the 1<sup>st</sup> day of July, 2021, and continue thereafter to and including the 30<sup>th</sup> day of June, 2022, unless earlier terminated as hereinafter provided. This Lease may be renewed annually for four additional one-year terms by mutual agreement of the TENANT and LESSOR. The initial term and all additional annual one-year terms shall be considered the Term of the Lease.
3. **BASE RENT.** The TENANT shall pay to LESSOR during the initial term of this Lease an annual Base Rent of \$2,250.00 per month (the Base Rent and any additional rent identified in the Lease are collectively the "Rent"). The Base Rent shall be payable on the 1<sup>st</sup> day of the month in which the payment is due. A late fee of \$25.00 per day shall be assessed for payments received after the 5<sup>th</sup> day of the month. All Rent payments required hereunder shall be paid to the City at 4646 Dakota Street S.E., Prior Lake, MN 55372, Attn: Accounts Receivable, or such other place as determined by the City. TENANT shall not be required to pay a security deposit. For each year the Lease is renewed the Base Rent shall increase by three percent. After the four additional one-year terms (5 years total including the initial term), the TENANT and LESSOR may agree to extend the Lease but the Base Rent shall be renegotiated.
4. **USE OF PREMISES.** The Leased Premises shall be used for general office purposes associated with TENANT's operations, including the cleaning, maintenance and storage of TENANT's field clothing, small equipment and appurtenances, and document storage. In addition, TENANT may use City Council chambers for meetings of its Board of Managers, and may use common rooms within City Hall, pursuant to reasonable scheduling coordination and consistent with LESSOR's use of those facilities. The Premises shall be used for no other purpose. In accordance with practice to date, use of premises also includes LESSOR's provision of staff to provide videorecording of TENANT's Board of Managers meetings.
5. **ENTRY; SIGNAGE.** LESSOR will provide TENANT's employees with cards and/or fobs, including replacements, for access to the City Hall building and secured areas, at a cost of \$5 for each. TENANT may maintain portable signage informing the public of its location, within the building entry and in the common hallway outside of the leased premises. The size and form of said signage shall be subject to LESSOR's approval, approval not to be unreasonably withheld.
6. **PARKING, VEHICLE STORAGE.** TENANT's employees may park in the lot at 16150 Arcadia Avenue SE, provided LESSOR retains its right to use that lot. TENANT may park its truck in LESSOR's lot at 4649

Dakota Street SE. When not in seasonal use, TENANT may store a boat and kayak in a shed at 4270 140<sup>th</sup> Street NE, Prior Lake, provided LESSOR, at its discretion, continues to own that property and continues to maintain the shed.

7. ACCEPTANCE OF PREMISES. Taking possession of the Leased Premises by TENANT shall be conclusive evidence that Leased Premises were, on that date, in good, clean and tenantable condition and as represented by LESSOR.

8. RIGHT TO ASSIGN OR SUBLET. TENANT shall not assign this Lease. TENANT shall not have the right to sublet all or any portion of the Leased Premises. Neither this Lease nor any interest therein, nor any estate thereby created, shall pass to any trustee or receiver in bankruptcy, or any assignee for the benefit of creditors, or by operation of law.

9. RULES AND REGULATIONS. TENANT shall use the Leased Premises and the public areas in the Building in accordance with such rules and regulations as may from time to time be made by LESSOR for the general safety, comfort and convenience of the owners, occupants and tenants of the Building, and shall cause TENANT'S employees to abide by such rules and regulations. In addition, TENANT shall cause any persons whom TENANT or its employees allow into private areas in the Building to comply with said rules and regulations. TENANT shall not be responsible for the actions of the general public; however, TENANT shall take all reasonable actions to encourage compliance with said rules and regulations and shall take appropriate actions if TENANT is aware of a violation of said rules and regulations (such as directing the person to leave, calling the police, and/or reporting an incident to the City Manager).

10. RIGHT TO ENTER. LESSOR, its agents and representatives may at any and all reasonable times during the day and night enter to view and inspect the Leased Premises, or to clean and maintain the same, or to make repairs, or to make such improvements or changes in the Leased Premises or the Building as LESSOR may deem proper. There shall be no diminution of Rent or liability on the part of LESSOR by reason of inconvenience, annoyance or injury to business on account of any such entry or acts by LESSOR, its agents or representatives.

11. PERSONAL PROPERTY. TENANT shall be responsible for any personal property brought onto the Leased Premises, and shall remove personal property at the termination or expiration of this Lease. LESSOR shall not be liable to TENANT, or those claiming through or under TENANT, for injury, death or property damage occurring in, on or about the Building and appurtenances thereto, and TENANT shall indemnify LESSOR and hold it harmless from any claim or damage arising out of any injury, death or property damage occurring in, on or about the Leased Premises, to TENANT or any employee of TENANT, or to a person that TENANT or its employees have allowed into private areas of the Building, except to the extent the injury, death or property damage results from LESSOR's negligent or willful act or omission. Nothing herein diminishes any immunity, defense or liability limit to which either party is entitled under law.

12. WAIVER OF SUBROGATION. LESSOR and TENANT each shall maintain standard municipal liability insurance in the amount of at least \$1.5 million per occurrence. The parties release each other and their respective authorized representatives from any claims for injury or death to any person or damage to the Leased Premises or the Building, and to the fixtures, personal property, improvements, and alterations of either LESSOR or TENANT, in or on the Leased Premises and the Building that are caused by or result from risks insured against in policies carried by the parties and in force at the time of any such damage. Each party shall cause each insurance policy required to be carried under this Lease to provide that the insurance company waive all right of recovery by way of subrogation and shall, upon notice from the other, provide evidence to the other that such insurance provider has waived such rights.

13. SUBORDINATION. TENANT agrees that this Lease shall, at the request of the LESSOR, be subordinate to any mortgages or deeds of trust that may hereafter be placed upon said premises and to any and all advances to be made thereunder, and to the interest thereon, and all renewals, replacements and extensions thereof, provided the mortgagees or trustees named in said mortgage or trust deeds shall agree to recognize the Lease of TENANT in the event of foreclosure if TENANT is not in default.

14. TENANT TO SURRENDER PREMISES. Upon the expiration or termination of the Term of this Lease, TENANT shall at its sole expense: (i) remove TENANT'S goods and effects and those of all persons claiming under TENANT; (ii) quit and deliver the Leased Premises to LESSOR, peaceably and quietly, in as good order and condition as the same were in on the date the Term of this Lease commenced or were thereafter placed by LESSOR, reasonable wear and tear excepted; and (iii) at LESSOR'S request, restore the Leased Premises to general office standards adopted from time to time by LESSOR for general application throughout the Building. Any property left in the Leased Premises after the expiration or termination of the Term of this Lease shall be deemed to have been abandoned and the property of LESSOR to dispose of as LESSOR deems expedient. Notwithstanding the preceding sentence, recognizing TENANT's legal duty to maintain documents and records, both hard copy and electronic, LESSOR will notify TENANT of any documents and records that it discovers TENANT has left in the Leased Premises, and will allow TENANT 60 days to retrieve the documents and records before disposing of them.

15. HOLDING OVER. If TENANT shall hold over the Leased Premises or any part thereof after the expiration of the Term or the earlier termination of this Lease, such holding over shall be construed only to be a tenancy from month to month subject to all of the covenants, conditions and obligations hereof except that the rent shall increase by fifty percent (50%) of the then existing rent amount due. Nothing herein shall be construed to give TENANT any rights to hold over or to continue in possession of the Leased Premises.

16. UTILITIES AND SERVICES. LESSOR will furnish reasonable heat and air conditioning during usual business hours and during the usual and appropriate seasons. LESSOR will also furnish electricity for standard Building lighting and office use, electric lamps, starters and ballasts used in the Leased Premises, water, elevator service and toilet facilities during usual business hours and janitorial services. In addition, LESSOR will share existing levels of broadband and telephone services, including server storage space for laserfiche data storage, utilized at City Hall. If the TENANT demands increased or alternative services for broadband or telephone operations, such services and any costs associated with hardware and software acquisition or its implementation shall be paid solely by TENANT. If TENANT desires a different or alternative service level, such services and any costs associated with hardware or software acquisition or implementation shall be paid solely by TENANT.

17. TEMPORARY INTERRUPTION OF SERVICES. LESSOR shall not be liable to TENANT, its agents, employees, representatives, customers or invitees for any inconvenience, loss or damage or for any injury to any person or property caused by or resulting from any casualties, riots, strikes, picketing, accidents, breakdowns and any cause beyond LESSOR'S reasonable control, or from any temporary failure or lack of such services. TENANT shall hold LESSOR harmless from any claim or damage because of such inconvenience. LESSOR shall exercise reasonable diligence to restore any such failure or lack of services.

18. OTHER SERVICES. The LESSOR and TENANT may enter into separate written agreements or memorandums of understanding for additional services during the Term of this Lease.

19. FURNITURE AND FIXTURES. The TENANT shall be responsible for the initial costs for new furniture and fixtures. Any new fixtures shall be configured and ordered by LESSOR to be consistent with existing office environment used by City Hall staff. All furniture and fixtures shall be the property of the LESSOR during and

after the Term of this Lease; except for the following which shall be property of the TENANT during and after the Term of this Lease: office chairs; and computers, monitors and related equipment.

20. NOTICES. A bill, statement, notice or communication which LESSOR desires to or is required to give to TENANT, including any notice of termination, shall be deemed sufficiently given or rendered if in writing, delivered to TENANT's staff in-hand at the Leased Premises, or sent by registered or certified mail, addressed to TENANT at the Leased Premises, and the time of rendition or giving shall be deemed to be the time when the same is delivered to TENANT, or deposited in the mail, as herein provided. Any notice by TENANT to LESSOR must be served by registered or certified mail addressed to LESSOR at the address where the last previous rental hereunder was payable, or upon notice given to TENANT at such other place as LESSOR designates.

21. DEFAULT. If TENANT shall default in the payment of any installment of Rent, or in the observance or performance of any of TENANT'S other covenants, agreements or obligations hereunder and such default is not cured by TENANT within ten (10) days after notice by LESSOR with respect to payment of Rent or within thirty (30) days after notice by LESSOR with respect to any other default, or if any proceeding is commenced by or against TENANT for the purpose of subjecting the assets of TENANT to any law relating to bankruptcy or insolvency or for an appointment of a receiver of TENANT or any of TENANT'S assets, or if TENANT makes a general assignment of TENANT'S assets for the benefit of creditors, then, in any such event, LESSOR may (i) without process, reenter immediately into the Leased Premises and remove all persons and property therefrom and at its option, terminate this Lease as to all future rights of TENANT and have, regain, repossess and enjoy the Leased Premises, anything contained herein to the contrary notwithstanding, and TENANT hereby expressly waives the service of any notice in writing of intention to reenter as aforesaid, and also all right of restoration or possession of the Leased Premises. In case of any such termination, TENANT will indemnify LESSOR against all loss of Rents and other damages which it may incur by reason of such termination during the residue of the Term of this Lease, and also against all attorneys' fees and expenses incurred in enforcing any of the terms of this Lease; or at LESSOR'S sole option, (ii) reenter and take possession of the Leased Premises in the manner provided in (i) immediately above, without such reentry constituting a cancellation or termination of this Lease or a forfeiture of the Rent to be paid or of the covenants, agreements and conditions to be kept and performed by TENANT for and during the remainder of the term hereof. Failure of LESSOR to notify TENANT in writing of its election hereof at the time it reenters and takes possession of the Leased Premises shall indicate an election to reenter and take possession without terminating this Lease.

To secure the payment of Rent for the Leased Premises and the other obligations of the TENANT, all as herein agreed, TENANT does hereby pledge and give a lien to LESSOR upon all fixtures and furniture of every kind and nature now or hereafter placed in the Leased Premises, which said fixtures and furniture may, upon the termination of this Lease, and upon the payment in full of all sums of money then due, and not otherwise, be removed from the Leased Premises by TENANT.

LESSOR shall have the right to show the Leased Premises for leasing at all reasonable times during the last three (3) months of this Lease.

LESSOR shall not be deemed to be in default under this Lease until TENANT has given LESSOR written notice specifying the nature of the default and LESSOR does not cure such default within thirty (30) days after receipt of such notice or within such reasonable time thereafter as may be necessary to cure such default if such default is of such a character as to reasonably required more than thirty (30) days to cure.

22. MISCELLANEOUS. There are no understandings or agreements not incorporated in this Lease, except as may be provided in a written addendum signed and accepted by both parties. This is a Minnesota contract and shall be construed according to the laws of Minnesota. The captions in this Lease are for convenience only



and are not a part of this Lease. The covenants and agreements hereof shall as fully and completely bind the heirs, executors, administrators, legal representatives, successors and assigns of the parties hereto as if they have been specifically mentioned in each of said covenants and agreements. If any provision in this Lease should for any reason be adjudged invalid or illegal, that provision shall be deemed omitted herefrom and shall not invalidate any other provision of this Lease and the remainder hereof shall remain in full force and effect. The riders and/or exhibits attached to this Lease, are hereby declared to be a part of this Lease to the same extent and in the same manner as if the provisions thereof were actually embodied in this Lease.

23. TERMINATION. Either party may terminate this Lease at any time for any reason with 90 days prior written notice to the other party. In the event of termination as a result of a partial or entire condemnation of the Premises, all damages paid as a result of the condemnation are the property of the LESSOR and TENANT shall have no right to the damages. In the event of termination as a result of casualty affecting all or a portion of the Premises, TENANT shall have no claim against LESSOR arising out of the casualty nor to any payments made to LESSOR under LESSOR'S insurance; except to the extent the claim results from LESSOR's negligent or willful act or omission. If through any cause other than TENANT's negligence or willful act or omission the Leased Premises cease to be habitable for TENANT's purposes, TENANT may terminate this Lease with 30 days' written notice.

IN WITNESS WHEREOF, LESSOR and TENANT, respectively, have duly signed this Lease, the day and year first above written.

LESSOR: CITY OF PRIOR LAKE

TENANT: PRIOR LAKE SPRING LAKE  
WATERSHED DISTRICT

By: \_\_\_\_\_  
Its: Mayor

By: \_\_\_\_\_  
Its: President

By: \_\_\_\_\_  
Its: City Manager

State of Minnesota       )  
                                      : ss.  
County of Scott         )

The foregoing instrument was executed and acknowledged before me, a Notary for said County, this \_\_\_\_ day of \_\_\_\_\_, 2021, by Kirt Briggs and Jason Wedel, the Mayor and City Manager, respectively of the City of Prior Lake, the LESSOR mentioned in the foregoing Lease, by and through the authority granted by its City Council.

(NOTARY SEAL)

\_\_\_\_\_  
Notary Public

State of Minnesota        )  
                                     : ss.  
County of Scott            )

The foregoing instrument was executed and acknowledged before me, a Notary for said County, this \_\_ day of \_\_  
\_\_\_\_\_, 2021, by \_\_\_\_\_, the President, of the Prior Lake-Spring Lake Watershed District, the  
TENANT mentioned in the foregoing Lease, by and through the authority grants by its Board of Commissioners.

(NOTARY SEAL)

\_\_\_\_\_  
Notary Public

**EXHIBITS A AND B**  
**LEASED PREMISES**



# EXHIBIT A

Offices: 1 & 2

Cubicles: 3-8

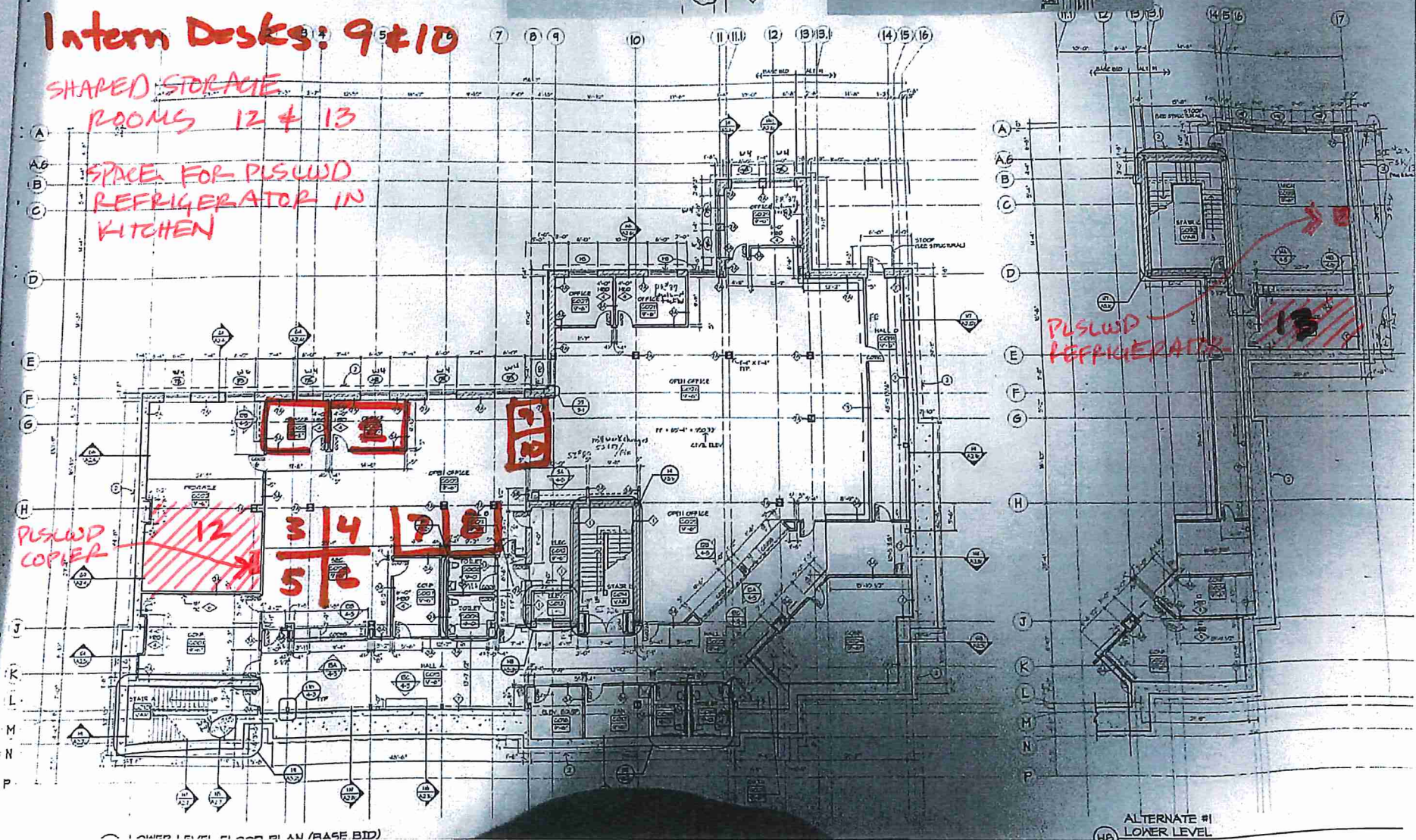
Intern Desks: 9 & 10

SHARED STORAGE

ROOMS 12 & 13

SPACE FOR PLSLWD  
REFRIGERATOR IN  
KITCHEN

PLSLWD  
COPIER

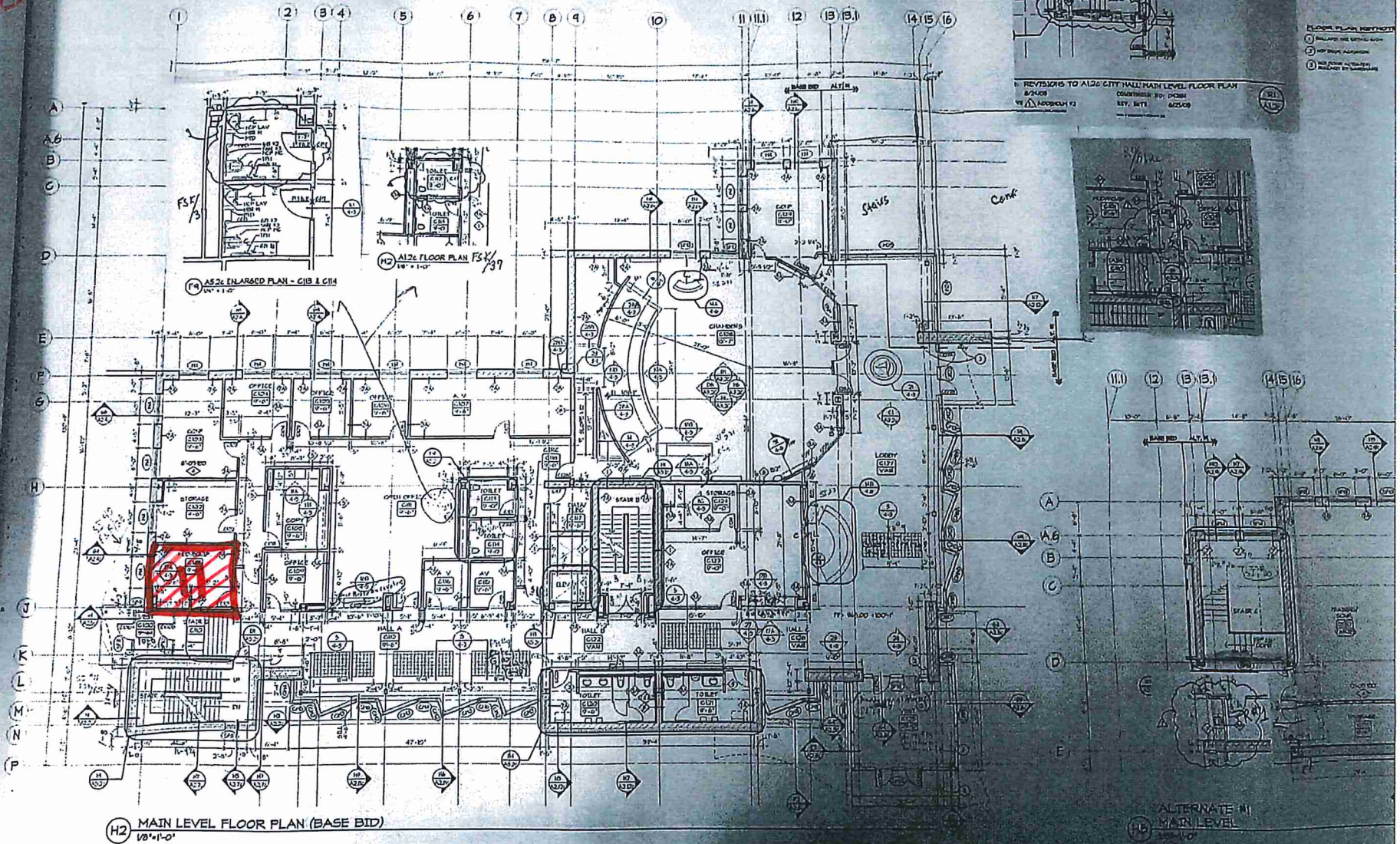


ALTERNATE #1  
LOWER LEVEL



# EXHIBIT A

Storage Room: 11  
SHARED





\*\*Reflects bills paid through August 2021\*\*

Program Element		2021 Source of Funds			2021 Budget	Actual Results		
		2021 Levy	Budget Reserve	Grant Funds/Fees		Monthly Activity	YTD Actual Results	YTD percents
<b>General Fund (Administration)</b>								
<b>Revenues</b>								
	Property Taxes	166,126			166,126	-	87,904	53%
	Grants	-			-	-	-	0%
	Interest	-			-	34	83	-100%
	Other	-			-	831	831	-100%
	<b>Total Revenues</b>	<b>166,126</b>	<b>-</b>	<b>-</b>	<b>166,126</b>	<b>866</b>	<b>88,818</b>	<b>53%</b>
<b>Expenditures</b>								
	Administrative Salaries and Benefits	90,186			90,186	15,570	88,713	98.37%
	703 - Telephone & Internet	10,000			10,000	215	3,012	30.12%
	706 - Office Supplies	8,690			8,690	1,806	9,429	108.51%
	709 - Insurance and Bonds	10,000			10,000	713	12,488	124.88%
	670 - Accounting	30,000			30,000	1,865	26,426	88.09%
	671 - Audit	10,250			10,250	-	7,500	73.17%
	903 - Fees	2,000			2,000	-	9,692	484.59%
	660 - Legal (not for projects)	5,000			5,000	-	5,419	108.39%
	702 - Rent	-			-	4,500	6,750	#DIV/0!
	<b>General Fund (Administratio) Expenditures</b>	<b>166,126</b>			<b>166,126</b>	<b>24,669</b>	<b>169,430</b>	<b>101.99%</b>
	<b>Net Change in General Fund</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>(23,804)</b>	<b>(80,611)</b>	



\*\*Reflects bills paid through August 2021\*\*

Program Element		2021 Source of Funds			2021 Budget	Actual Results		
		2021 Levy	Budget Reserve	Grant Funds/Fees		Monthly Activity	YTD Actual Results	YTD percents
	<b>Implementation Fund</b>							
	<b>Revenues</b>							
	Property Taxes	1,628,506			1,628,506	0	861,385	53%
	Grants	-		297,000	297,000	3,475	103,769	35%
	Interest	-			-	-	50	#DIV/0!
	Sales/Others	-			-	1,000	1,000	#DIV/0!
	<b>Total Revenues</b>	<b>1,628,506</b>	<b>-</b>	<b>297,000</b>	<b>1,925,506</b>	<b>4,475</b>	<b>966,205</b>	<b>50%</b>
	<b>Expenditures</b>							
	<b>Program Salaries and Benefits (not JPA/MOA)</b>	<b>440,323</b>			<b>440,323</b>	<b>74,030</b>	<b>280,311</b>	<b>63.66%</b>
Water Qual	550 Public Infrastructure Partnership Projects	20,000			20,000	-	-	0.00%
Water Qual	611 Farmer-led Council	51,000			51,000	139	10,850	21.27%
Water Qual	611 Cost-Share Incentives	58,000			58,000	-	3,415	5.89%
Water Qual	611 Highway 13 Wetland, FeCl system & Desilt, O&M	35,000			35,000	735	13,840	39.54%
Water Qual	611 Fish Management, Rough Fish Removal	60,000			60,000	11,229	26,421	44.04%
Water Qual	611 Spring Lake Demonstration Project Maintenance	1,500			1,500	1,096	1,096	73.07%
Water Qual	611 Alum Internal Loading Reserve	230,000			230,000	-	-	0.00%
Water Qual	611 County Rd 12/17 Maintenance	1,000			1,000	-	-	0.00%
Water Qual	611 Fish Lake TMDL Implementation		3,000		3,000	-	-	0.00%
Water Qual	611 Pike Lake TMDL Implementation		3,000		3,000	-	-	0.00%
Water Qual	611 Feasibility Reports	-			-	-	-	#DIV/0!
Water Qual	637 District Monitoring Program	128,000			128,000	7,133	24,984	19.52%
Water Qual	GRANT Carp Management/Removal	30,000		90,000	120,000	2,493	72,454	60.38%
Water Qual	626 Planning and Program Development	32,000			32,000	744	4,154	12.98%
Water Qual	626 LGU Plan Review		3,000		3,000	-	44	1.45%
Water Qual	626 Engineering not for programs	30,000			30,000	647	6,365	21.22%
Water Qual	648 Permitting and Compliance	17,000			17,000	3,417	16,243	95.55%
Water Qual	648 Update MOAs with cities & county	5,000	5,000		10,000	-	-	0.00%
Water Qual	648 BMP and easement inventory & inspections	14,000			14,000	1,436	7,637	54.55%
Water Qual	626 Upper Watershed Blueprint	235,543			235,543	14,272	27,048	11.48%
Water Qual	626 District Plan Update	2,500			2,500	-	-	0.00%
Water Qual	752 Fish Lake Shoreline Restoration Project Maintenance	1,000			1,000	-	-	0.00%
Water Qual	626 Spring Lake West Subwatershed Project	30,000			30,000	-	1,269	4.23%
Water Qual	648 Non-project Reg. Reporting, Rules & Stand. Rev.	5,000			5,000	-	740	14.79%
Water Qual	611 Fish Stocking	6,000			6,000	-	-	0.00%
	<b>WQ TOTAL</b>	<b>992,543</b>	<b>14,000</b>	<b>90,000</b>	<b>1,096,543</b>	<b>43,343</b>	<b>216,558</b>	<b>19.75%</b>
Water Storage	550 District-wide Hydraulic & Hydrologic model	7,500			7,500	-	-	0.00%
	550 S&I Sutton Lake Outlet Structure Project	25,000	182,000	207,000	414,000	935	241,125	58.24%
	<b>WS TOTAL</b>	<b>32,500</b>	<b>182,000</b>	<b>207,000</b>	<b>421,500</b>	<b>935</b>	<b>241,125</b>	<b>57.21%</b>
AIS	611 Aquatic Vegetation Mgmt	-			-	-	6,506	#DIV/0!
AIS	637 Automated Vegetation Monitoring	4,700			4,700	-	2,799	59.55%
AIS	637 Aquatic Vegetation Surveys	18,000			18,000	-	9,372	52.07%
AIS	637 Boat Inspections on Spring, Upper & Lower Prior	38,000			38,000	-	10,902	28.69%
AIS	637 AIS Management Plans	20,000			20,000	-	-	0.00%
	<b>AIS TOTAL</b>	<b>80,700</b>	<b>-</b>	<b>-</b>	<b>80,700</b>	<b>-</b>	<b>29,580</b>	<b>36.65%</b>
Ed & Out	652 Education and Outreach Program	7,440	11,910		19,350	304	2,277	11.77%
Ed & Out	652 Prior Lake-Savage Schools partnerships	-			-	-	35	#DIV/0!
	<b>E&amp;O TOTAL</b>	<b>7,440</b>	<b>11,910</b>	<b>-</b>	<b>19,350</b>	<b>304</b>	<b>2,312</b>	<b>11.95%</b>
	<b>PLOC expenses</b>	<b>75000</b>			<b>75,000</b>	<b>-</b>	<b>27,624</b>	<b>36.83%</b>
	<b>Total Implementation Fund</b>	<b>1,628,506</b>	<b>207,910</b>	<b>297,000</b>	<b>2,133,416</b>	<b>118,612</b>	<b>797,510</b>	<b>37.38%</b>
	<b>Net Change in Fund Balance Implementation Fund</b>				<b>(207,910)</b>	<b>(114,136)</b>	<b>168,695</b>	

	<b>Grant Funds/Fees Anticipated</b>				
Water Qual	<b>648 Permitting and Compliance</b>			1,000	1,000
Water Qual	<b>648 BMP and easement inventory &amp; inspections</b>			1,000	1,000
AIS	<b>611 Aquatic Vegetation Mgmt. (Scott County)</b>			6,000	6,000
	<b>Total Grant Funds/Fees Anticipated</b>			<b>8,000</b>	<b>8,000</b>

No assurance is provided on this statement.

This statement omits required disclosures.

This statement is prepared on the cash basis of accounting.

**PLSLWD monthly Treasurers Report**

Treasurer: Bruce Loney

*Account balances as of 8/31/2021*

Old National Bank (Checking Account) *	\$	620,189
Sterling Bank (Checking Account)	\$	904,972
Total Uncleared Transactions	\$	-
Northland Securities (Investments) (Cash)	\$	380,798
<b>SUBTOTAL</b>	<b>\$</b>	<b>1,905,960</b>

**RESTRICTED/ASSIGNED FUNDS**

Restricted - Permit Deposits, etc.	\$	94,435
Restricted - PLOC Contingency Reserve (850)*	\$	260,000
Restricted - PLOC O&M Funds (830)*	\$	351,116
Assigned - Alum Internal Loading	\$	230,000
<b>TOTAL DISTRICT/PLOC RESTRICTED OBLIGATIONS</b>	<b>\$</b>	<b>935,551</b>

<b>Available cash at end of August 2021</b>	<b>\$</b>	<b>970,409</b>
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42.2% of 2021 Budget

PLSL Watershed District

Starting cash on hand

Cash Minimum Balance Alert \$ 150,000

	YTD Through May	Jun 2021	Jul 2021	Aug 2021	Sep 2021	Oct 2021	Nov 2021	Dec 2021	Total
Cash on hand + Northland Securities(beginning of month)	\$ 1,742,187	\$ 1,242,318	\$ 2,091,827	\$ 2,014,872	\$ 1,905,960	\$ 1,889,255	\$ 1,669,576	\$ 1,450,170	

## Cash Receipts

Property Tax Levy	\$ -	\$ 949,290	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 830,000	\$ 1,779,290
BWSR Grant	-	-	-	-	-	-	-	-	-
Sutton Lake Grant	-	-	-	-	207,000	-	-	-	207,000
Watershed Based Funding	74,000	-	-	-	-	-	-	-	74,000
Metro WBIF - Lower	19,788	-	-	-	-	15,903	-	-	35,691
Internal Loading BMPs	-	-	-	-	11,877	-	-	-	11,877
Grants - Other	-	-	-	-	-	-	-	1,734	1,734
PLOC Contributions	77,358	-	42,209	-	-	-	-	-	119,567
Interest Income	(33)	14	79	34	10	10	10	10	134
Other Receipts	-	-	1,001	1,000	-	-	-	-	2,001
Total Cash Receipts	\$ 171,113	\$ 949,303	\$ 43,289	\$ 1,034	\$ 218,887	\$ 15,913	\$ 10	\$ 831,744	\$ 2,231,293
Total Cash Available		\$ 2,191,621	\$ 2,135,116	\$ 2,015,906	\$ 2,124,847	\$ 1,905,168	\$ 1,669,586	\$ 2,281,914	

### Cash Paid Out

Salaries and Per Diems	\$ 213,300	\$ 50,365	\$ 45,174	\$ 47,290	\$ 44,209	\$ 44,209	\$ 44,209	\$ 44,209	\$ 532,966
Office Expense, Audit, Accounting	38,950	18,509	16,782	9,229	6,328	6,328	6,328	6,328	108,784
PLSLWSD Program Costs	371,526	21,419	52,424	44,452	134,091	134,091	117,915	117,915	993,833
PLOC Contribution	27,624	-							27,624
PLOC Operations	19,582	9,501	5,864	8,974	50,964	50,964	50,964	50,964	247,775
Subtotal	\$ 670,981	\$ 99,794	\$ 120,244	\$ 109,946	\$ 235,592	\$ 235,592	\$ 219,416	\$ 219,416	
Cash on Hand + Northland Securities (end of month)		\$ 2,091,827	\$ 2,014,872	\$ 1,905,960	\$ 1,889,255	\$ 1,669,576	\$ 1,450,170	\$ 2,062,498	

## Investments - Northland Securities

[illegible]

## Cash Flow Chart

Month (End of Month)	YTD Through May	Jun 2021	Jul 2021	Aug 2021	Sep 2021	Oct 2021	Nov 2021	Dec 2021
Cash on Hand	\$ 958,443	\$1,711,029	\$1,634,074	\$1,525,162	\$1,508,457	\$1,288,778	\$1,069,372	\$1,681,700
Northland Securities	\$ 380,798	\$ 380,798	\$ 380,798	\$ 380,798	\$ 380,798	\$ 380,798	\$ 380,798	\$ 380,798
Total Cash on Hand & Northland Securities	\$ 1,339,241	\$2,091,827	\$2,014,872	\$1,905,960	\$1,889,255	\$1,669,576	\$1,450,170	\$2,062,498

