

AGENDA

Tuesday, July 9, 2019

6:00 PM

Prior Lake City Hall

www.plslwd.org

BOARD OF MANAGERS:

Mike Myser, President; Fred Corrigan, Vice President; Charlie Howley, Treasurer;

Bruce Loney, Secretary; Curt Hennes, Manager

Note: Indicated times are estimates; actual times may vary considerably. 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 4:30 PM – Wagon Bridge Conference Room (Downstairs)

4:30-4:45 p.m. Microsoft Technology—Chesapeake Bay Conservancy

4:45-4:55 p.m. Ferric Chloride Plant Property

4:55-5:15 p.m. Water Organization Efficiency in Scott County

5:15-5:40 p.m. 2020 Budget Kick-off

5:40-5:45 p.m. Emerging Issues

After Board Meeting: Continued discussion of the Budget

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|----------------|-----|--|
| 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, turn on the microphone and state your name and address. (The Chair may limit your time for commenting.) |
| 6:10-6:15 PM | | PUBLIC HEARING—Stormwater Pollution Prevention Plan (SWPPP) Annual Public Hearing <ul style="list-style-type: none">• Summary of Annual Report (Jaime) |
| 6:15 – 6:20 PM | 3.0 | APPROVAL OF AGENDA (Additions/Corrections/Deletions) |
| 6:20-7:00 PM | 4.0 | OTHER OLD/NEW BUSINESS |
| | 4.1 | Programs & Projects Update (Discussion Only) <ul style="list-style-type: none">○ Water Quality, Water Storage and AIS Inspections |
| | 4.2 | Carp Management Timeline (Discussion Only) |
| | 4.3 | Sutton Lake Storage Project Options (Vote) |
| | 4.4 | MAWD Summer Tour Report (Discussion Only) |
| 7:00-7:10 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 – June 11 Board Workshop & Board Meeting |
| | 5.2 | Meeting Minutes—June 27 CAC |
| | 5.3 | Claims List |
| | 5.4 | Approval of Revised Memorandum of Agreement for the Prior Lake Outlet Channel |
| 7:10-7:25 PM | 6.0 | TREASURER’S REPORT |

6.1 Cash & Investments (Discussion Only)

6.2 Financial Report (Discussion Only)

7:25-7:35 PM 7.0 Manager Presentations on Watershed-related Items (Discussion Only)

7:35 – 7:40 PM 8.0 **UPCOMING MEETING/EVENT SCHEDULE:**

- CAC Meeting, Thursday, July 25 from 6:30-8:00 PM, Prior Lake City Hall
- Farmer-Led Council Meeting TBD July

PRIOR LAKE – SPRING LAKE

W A T E R S H E D D I S T R I C T

Public Hearing: Annual SWPPP Public Hearing and MS4 Annual Report Summary

Diane Lynch will provide a brief background on the SWPPP and Jaime Rockney will provide an overview of the MS4 Annual Report. Both the SWPPP public hearing and MS4 Annual Report are required by the MN Pollution Control Agency because the District has an MS4 (a municipal separate storm sewer system) for the Prior Lake Outlet Channel. MS4s in urbanized areas are required to obtain an NPDES/SDS Stormwater permit (which will be renewed in 2020) and are required to develop and implement a SWPPP (stormwater pollution prevention program) to reduce the discharge of pollutants from their storm sewer system to the maximum extent practicable.

The link to the SWPPP is located here:

<https://priorlakespr.sharepoint.com/:b:/g/Edv3-ujXO7pMkc44SnRuXDsBgA4uQHSQN2rVXAMTJCnemg?e=varz5w>

PRIOR LAKE – SPRING LAKE

WATERSHED DISTRICT

JULY 2019

PROGRAMS & PROJECTS UPDATE

Capital Projects

PROJECT	LAST MONTH'S STAFF ACTIVITIES	NEXT STEPS
Public Infrastructure Partnership Projects <i>Project Lead: Maggie</i>	<ul style="list-style-type: none"> Received Board direction that partnership contribution is required to move forward with Red Wing Ave or Ditch 13 projects. 	<ul style="list-style-type: none"> Attend Sand Creek Township meeting on July 11th to discuss Red Wing Ave project. Solicit quotes for Fairlawn Shores Project.
Storage & Infiltration Projects <i>Project Lead: Diane</i>	<ul style="list-style-type: none"> Discussed DNR's concerns with Board Advised the two property owners about the delay 	<ul style="list-style-type: none"> Board approval to move ahead with a strategy
Carp Management <i>Rough Fish Management (Class 611)</i> <i>Carp Management Project (Class 750 & 751)</i> <i>Project Lead: Maggie, Jeff & Kathryn</i>	<ul style="list-style-type: none"> Continued to track tagged carp throughout the lakes. Monitor and maintain PIT tag stations. Coordinated with staff and WSB to brainstorm new "out of the box" ways to reach carp management goals at an accelerated pace. Prepared a recommendation to improve probability of reaching carp management goals in Spring and Upper Prior Lake within one year timeframe. 	<ul style="list-style-type: none"> WSB and PLSLWD staff will continue to track the tagged carp. Install permanent Northwood carp barrier. Final design and installation of the FeCl barrier redesign. Carp removals in Geis wetland & Northwood wetland (electrofishing/box traps/trap nets). Repair drum barrier at desilt pond. Work with WSB to schedule and coordinate upcoming carp removals/tagging as opportunities arise. Analyze PIT tag station "hits" for movements and trends. Move forward with any additional carp management activities as directed by Board.

PRIOR LAKE – SPRING LAKE

WATERSHED DISTRICT

Operations & Maintenance

PROGRAM	LAST MONTH'S STAFF ACTIVITIES	NEXT STEPS
Ferric Chloride System Operations <i>Project Lead: Jaime</i>	<ul style="list-style-type: none"> Sampled 1x/week Inspect shed/pump 3x/week DMR Report Opened/closed weir gate for MnDOT culvert replacement 	<ul style="list-style-type: none"> New walkway and fish barrier Look into permanent fix to driveway for ferric delivery Sample 1x/week Inspect 3x/week DMR Report
Farmer-Led Council <i>Project Lead: Maggie</i>	<ul style="list-style-type: none"> Met with SWCD staff to coordinate upcoming FLC meeting tentatively scheduled for the end of July. 	<ul style="list-style-type: none"> Continue to solicit new participants for the cover crop initiative. Explore farmer mentorship program with FLC members. Prep for next meeting in July.
Cost Share Incentives <i>Project Lead: Kathryn, Diane</i>	<ul style="list-style-type: none"> Verified installation of installed projects and processed applications. 	<ul style="list-style-type: none"> Process applications as they are received. Verify installation of completed projects.
Spring Lake Parcel Restoration Project <i>Project Lead: Maggie & Kathryn</i>		<ul style="list-style-type: none"> Order and install large sign visible from lake. Monitor restoration and control invasive species during growing season. Install small plant identification signs.
Raymond Park Restoration Project <i>Project Lead: Kathryn</i>		<ul style="list-style-type: none"> Install educational interpretative signs. GRG will continue maintenance at park in 2019. Follow-up visits will keep buckthorn and other invasives at bay. Additional seeding will be done this year, if needed.
Fish Lake Shoreline & Prairie Restoration Project <i>Project Lead: Kathryn</i>	<ul style="list-style-type: none"> MN Native Landscapes begins initial restoration work Coordinated with Spring Lake Township & MNL. 	<ul style="list-style-type: none"> MN Native Landscapes continue initial restoration work.

PRIOR LAKE – SPRING LAKE

WATERSHED DISTRICT

Operations & Maintenance

PROGRAM	LAST MONTH'S STAFF ACTIVITIES	NEXT STEPS
CR 12/17 Wetland Restoration <i>Project Lead: Maggie</i>	<ul style="list-style-type: none"> Coordinated with City and AES to line up spring maintenance work. Corresponded with County regarding piping & underground channeling along/near outlet structures of two of the wetland basins and the stormwater pond. 	<ul style="list-style-type: none"> Continue to work with AES on invasive species control and vegetation establishment. Coordinate with the County & City to make sure that the issues have been resolved at the outlet structures.
Lower Prior Lake Retrofit Projects <i>Project Lead: Maggie</i>	<ul style="list-style-type: none"> AES completed annual maintenance work at Fairlawn Shores and Indian Ridge projects. 	<ul style="list-style-type: none"> Continue to work with AES on site maintenance until the projects are fully established and accepted by the City of Prior Lake. Install interpretive signs for projects.

PRIOR LAKE – SPRING LAKE

WATERSHED DISTRICT

Planning

PROGRAM	LAST MONTH'S STAFF ACTIVITIES	NEXT STEPS
<i>District Plan Update</i> <i>Project Lead: Diane</i>	<ul style="list-style-type: none">• Staff revised the format and referred it to EOR	<ul style="list-style-type: none">• Meet with Board to review changes
<i>Feasibility Reports</i> <i>Project Lead: Maggie</i>	<ul style="list-style-type: none">• Worked with EOR on a Scope of Work for the two feasibility studies which will be completed by the end of the year.	<ul style="list-style-type: none">• EOR will begin gathering information for the two feasibility studies.

PRIOR LAKE – SPRING LAKE

WATERSHED DISTRICT

Education & Outreach

PROGRAM	LAST MONTH'S STAFF ACTIVITIES	NEXT STEPS
Website and Media <i>Project Lead: Kathryn</i>	<ul style="list-style-type: none"> • As of July 2, 12:00 pm: • Website articles posted: none. • Scott Co. SCENE articles. • Prior Lake Am articles. • Facebook & Twitter- continuing Trivia Tuesday (question posted on Tues, answer posted Wed). • Facebook: <ul style="list-style-type: none"> • 459 page followers, 8 new followers • 27 Posts w/ 100+ views • Twitter: 7,100 total post impressions. <ul style="list-style-type: none"> • 290 followers • 18 Tweets w/ 100+ views 	<ul style="list-style-type: none"> • Continue writing posts and updates about projects • Will tweet and/or update Facebook about projects & news. • Write article for next SCENE edition.
Citizen Advisory Committee <i>Project Lead: Diane & Kathryn</i>	<ul style="list-style-type: none"> • Met on June 27 • Will assist with the District's 50th year Anniversary activities • Three Board members (liaison plus two others) were again present at CAC meeting • Continue to work on new member Welcome Packet 	<ul style="list-style-type: none"> • Next CAC meeting is on July 25. • No August meeting. • CAC member volunteers at Lakefront Days.
MS4 Education Program <i>Project Lead: Kathryn</i>	<ul style="list-style-type: none"> • Implement education activities • Completed Annual MS4 Report • Coordinate volunteer group interested in doing volunteer work at Fish Lake Park 	<ul style="list-style-type: none"> • Implement education activities

PRIOR LAKE – SPRING LAKE

WATERSHED DISTRICT

Monitoring & Research

PROGRAM	LAST MONTH'S STAFF ACTIVITIES	NEXT STEPS
Monitoring <i>Project Lead: Jaime</i>	<ul style="list-style-type: none">• Data management.• Database maintenance/entry.• Long Term Monitoring Plan• Took samples and flow measurements• Brown water complaints on Spring and Upper Prior	<ul style="list-style-type: none">• Data management.• QA/QC data.• Enter data into the water quality database• Finish Long-Term Monitoring Plan for WRMP• Work with City of Prior Lake on Fish Point IESF study
Aquatic Vegetation Management and Surveys (Class 626 and 637) <i>Project Lead: Jaime</i>	<ul style="list-style-type: none">• Survey and BioBase reports• Assessed CLP treatment zones	<ul style="list-style-type: none">• BioBase mapping

PRIOR LAKE – SPRING LAKE

WATERSHED DISTRICT

Regulation

PROGRAM	LAST MONTH'S STAFF ACTIVITIES	NEXT STEPS
BMPs & Easements <i>Project Lead: Maggie & Kathryn</i>	<ul style="list-style-type: none"> Corresponded with Living Hope Church on the vegetation establishment of their conservation easement amendment. Worked with landowners to resolve existing violation issues on their properties prior to the annual inspections. Continued annual easement inspections & met with several landowners who contacted us with questions. Worked on easement baseline reports. Sent pre-inspection letters for July inspections. Wrote post-inspection letters for completed June inspections. 	<ul style="list-style-type: none"> Review amendment requests as they are received and work with landowners towards closing out approved amendment requests. Work with landowners to resolve easement violations. Create baseline documentation for each conservation easement property. Continue annual easement inspections. Send post-inspection letters for completed inspections.
Permitting <i>Project Lead: Maggie & Jeff</i>	<ul style="list-style-type: none"> Completed erosion & sediment control inspections for permits in active construction. Followed-up with permittees on problem areas. Corresponded with Living Hope Church on necessary steps to close out the permit and bring areas out of non-compliance. EOR corresponded with Hwy 13 project contractor on challenges with the site. Staff keeping close eye on culvert replacement area located to the north of the FeCl shed for the Hwy 13 project. Issued permits #19.02 and #19.03. 	<ul style="list-style-type: none"> Continue to inspect, follow-up on and close remaining open permits. Issue permits for #18.06 and #19.01 once conditional items are met. Execute Stormwater Credit MOA with the County.
Rules Revisions <i>Project Lead: Diane</i>	<ul style="list-style-type: none"> No activity 	<ul style="list-style-type: none"> Reconvene the TAC in late July/early August

PRIOR LAKE – SPRING LAKE

WATERSHED DISTRICT

Prior Lake Outlet Structure & Channel

ACTIVITY	LAST MONTH'S STAFF ACTIVITIES	NEXT STEPS
Prior Lake Outlet Channel <i>Project Lead: Jaime</i>	<ul style="list-style-type: none"> Weekly channel inspections Cleared obstructions in culverts Cleared vegetation from 3X or more weekly Kept low-flow gate open 	<ul style="list-style-type: none"> Weekly channel inspections.
Channel Bank Erosion (FEMA) <i>Project Lead: Diane</i>	<ul style="list-style-type: none"> 	<ul style="list-style-type: none"> Continue construction in late summer/fall
JPA/MOA & TAC Meetings & Admin <i>Project Lead: Diane & Jaime</i>	<ul style="list-style-type: none"> May 2 Cooperators Mtg Start 2020 PLOC Workplan and budget 	<ul style="list-style-type: none"> TAC Mtg June 13 & July 22 Cooperators Mtg Aug 8 2020 Workplan and budget
Invasive Species Removal <i>Project Lead: Jaime</i>	<ul style="list-style-type: none"> Summer channel inspection Spot treating segments 1, 4, 5, 6, and 7. Biological control (beetle) collection and release segment 7 	<ul style="list-style-type: none"> Biological control (beetle) collection and release segment 7 Segment 7 invasive removal
MS4 Permit <i>Project Lead: Diane & Jaime</i>	<ul style="list-style-type: none"> Completed the MS4 Annual Report 	<ul style="list-style-type: none"> Review annual permit draft Provide annual public hearing on the District's SWPPP at the July board meeting
PLOC Easements <i>Project Lead: Diane</i>	<ul style="list-style-type: none"> Reviewed easements at Cooperators' meeting Shakopee offered its interns to work on the shapefiles for the easements 	<ul style="list-style-type: none"> Review easements at the July 22 TAC meeting, if possible

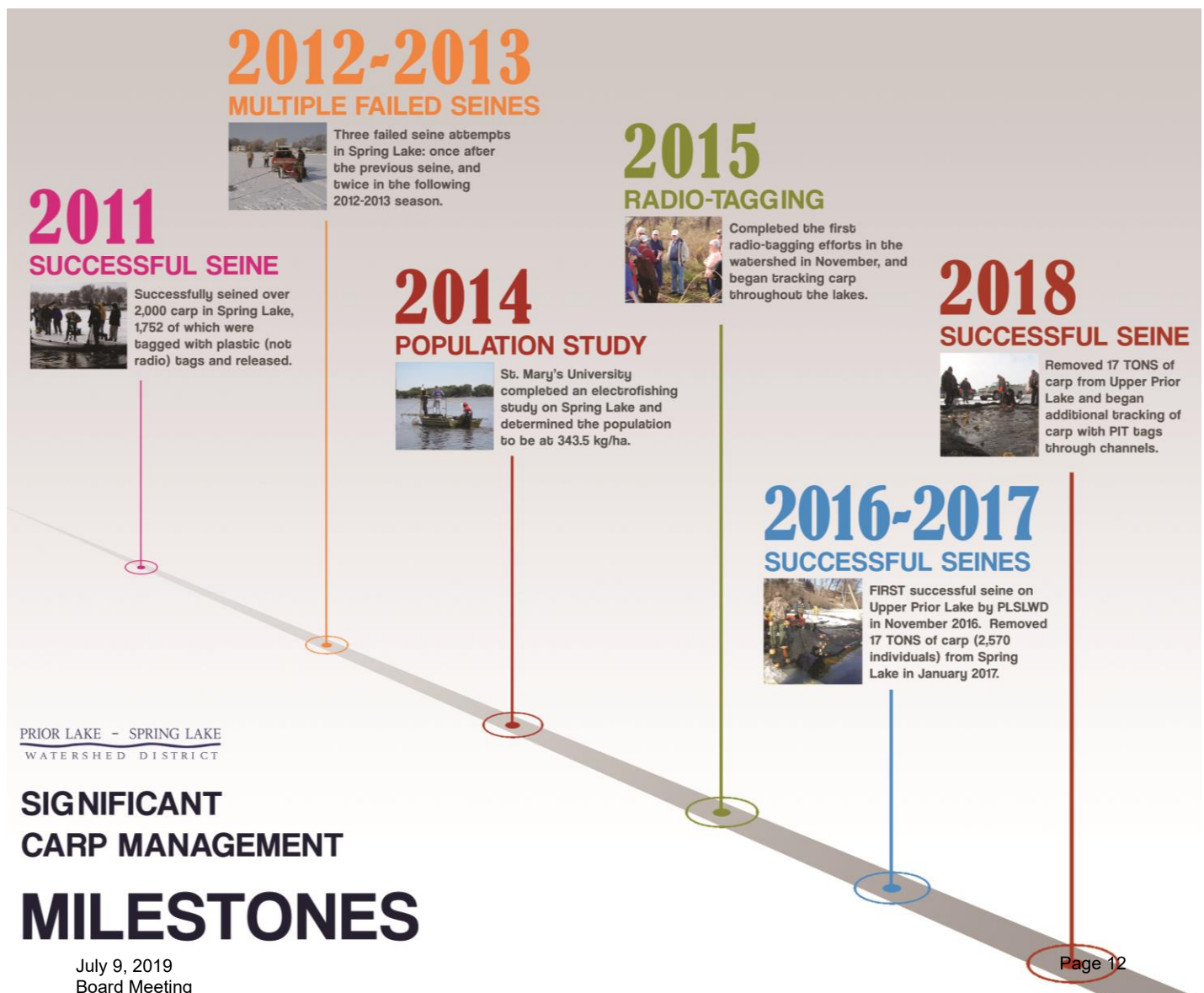
PRIOR LAKE - SPRING LAKE WATERSHED DISTRICT

MEMORANDUM

TO: BOARD OF MANAGERS
FROM: MAGGIE KARSCHNIA, WATER RESOURCES PROJECT MANAGER
SUBJECT: ACCELERATED CARP MANAGEMENT STRATEGIES
DATE: JULY 3, 2019

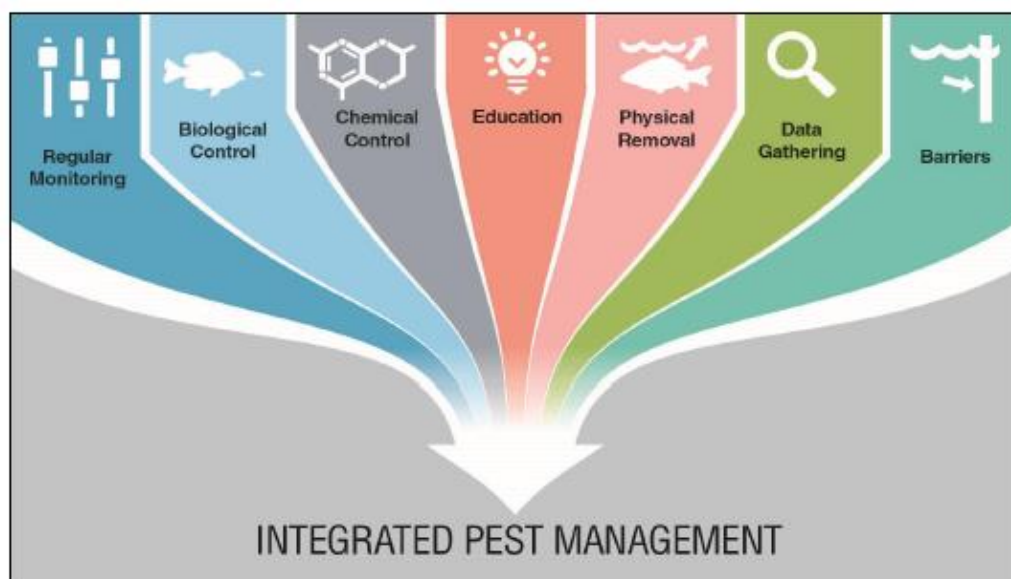
BACKGROUND

The PLSLWD has made great strides in its carp management program over the past four years, adding smart technology tools to its toolbox to be more successful.



Reducing the overall biomass of common carp within a waterbody through removal alone was an approach that was taken by the MnDNR in the past and abandoned after it was considered unsustainable, as carp quickly recruited to previous population levels. Recent efforts in Australia and here in the Midwest have utilized an integrated pest management approach for controlling common carp in a sustainable manner. Research has identified specific behavioral and life history characteristics that can be exploited to support carp management efforts.

The PLSLWD has adopted an integrated pest management approach that includes the following components:



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. This approach was first implemented within the district in late 2015 and began with data collection efforts. Before initiated a large scale carp management program, it is imperative to first answer the question: is carp biomass elevated above a critical threshold? The first line of data is determining the size of the carp population, overall biomass, and biomass density. The District accomplished this in 2016 for Upper Prior Lake and Spring Lake. This line of data also identifies the amount of biomass that needs to be removed to support water quality; without this managers have no way of determining appropriate harvest levels or when harvesting/removal may no longer be necessary. Year to year data collection provides an opportunity to determine how successful management efforts may be; is overall population size decreasing, is recruitment slowing or eliminated, etc.

After determining population size, the District employed radio telemetry and passive integrated transponder (PIT) technology to collect spatial data on carp. The most critical outcomes of this data collection effort are identifying winter aggregation areas, migration

routes, and nursery sites. The District has identified these areas/locations within Upper Prior and Spring lakes and connected waterbodies; however new lines of data will be necessary to understand movement on a watershed wide scale and prevent new or recurring carp recruitment into the Prior Lake/Spring lake main basins.

These critical lines of data support the remaining IPM strategies. Movement data informs managers on where barriers may be constructed to reduce carp recruitment and where carp aggregations are for removal (in real time). Data collected on fisheries and water quality during the course of regular data collection efforts provide insights as to whether biological control may be necessary or possible. This baseline data also forms the basis for comparative assessments in the future to track changes in the carp population and fishery so managers may be proactive in response to changes, rather than retroactive.

Physical removal is the most visible component of the carp IPM. However, the length of time necessary to meet harvest/removal goals varies considerably and is a multi-year strategy. Examples of this include Clam Lake in NW Wisconsin. A total of 660,000 pounds of carp biomass was removed between 2011 and 2017 to meet management goals; the lake has responded well and is being monitored regularly. Silver Lake (in St Anthony Village) took 3 years to meet harvest goals and the biomass removal total was ~8,000 pounds. Silver lake has also seen improvements in water quality vegetation abundance.

Within the PLSLWD removal has been successfully implemented in Spring Lake although recent population data indicates that it is vital to cut off spawning areas as the carp are quickly rebounding and additional removals will be necessary to bring the population back down. Removal has also been accomplished in Upper Prior, but additional biomass removal will be necessary to meet management goals.

To date, removal have been completed under ideal conditions (when a majority of radio tagged carp are aggregated, the aggregation is in an area that can be netted, ice is thick enough, snow depth doesn't limit access, and commercial fishing crews are available). Traditionally, we have not completed a removal when conditions are not ideal to conserve budget and to not "train carp" to avoid seine activities. For all projects, it is a balance of removing carp, while spending limited resources wisely and attempting removals under ideal conditions.

Carp biomass removal within the District will continue and biomass thresholds will most likely be met; however, the timeline remains underdetermined based on the variables described above. Additional removal techniques (supplemented by additional budget) can be implemented and may accelerate meeting management goals. However, IPM will still need to be the guiding directive to sustainably manage carp in a watershed wide scale. Without these removals may only provide short term benefit.

ACCELERATED ACTIVITIES TO REACH GOALS

At the Board meeting in June, it was requested that staff explore additional methods and activities so that the carp populations can get down to management levels at a more accelerated rate. With the idea of thinking outside the box, staff and WSB consultants explored all potential activities, proven and theoretical, that could increase the probability of success within a year's timeframe.

The attached spreadsheet “Potential Accelerated Strategies” includes the world of options that was compiled through two brainstorming events and research of other carp management organizations. Note that only the strategies that have a higher probability of success (3-5) are included in the table in order to aid in decision-making.

A secondary table is included that provides the recommended strategies for consideration on a yearly basis for two years in consideration of limited budget. These strategies were chosen based on what staff and WSB consultants thought would provide the greatest return of success based on investment, and what would best compliment strategies already in place.

Note that while #14 Ten or More Seine Efforts was not included in the recommendation, staff would like to offer this on a “as opportunities arise” basis which will be limited by additional funding allocated to the program, allowing staff to do 1-5 additional seines as determined by conditions. This will be discussed more in-depth at the Board meeting.

The final attachment includes a graphic of scheduled activities for the following year based on grant funding available, as well as recommended accelerated activities to be included.

DISCUSSION

At this time, District staff would like to get Board feedback and direction on the following:

- *What accelerated activities, if any, would you like to include for the following year?*
- *What budget item/transfer would be needed to provide funding for any selected activities?*
- *What does success look like in a year?*

NEXT STEPS

After receiving feedback from the Board, District staff will update the IPM Plan, move forward with any accelerated activities selected, and present the IPM Plan and any activity updates to the Board at its August meeting for approval.

POTENTIAL ACCELERATED CARP MANAGEMENT STRATEGIES

ISSUE/ OPPORTUNITY	STRATEGY	DESCRIPTION	COST	EFFECTIVENESS	AVAILABILITY OF RESOURCES	TIMEFRAME	PROBABILITY OF SUCCESS
			<i>Ballpark Range</i>	<i>(approx. % of carp removed)</i> 1: 10% or less 2: 20 - 30% 3: 40 - 50% 4: 60 - 70% 5: 80% or more	<i>(information, equipment, etc.)</i> Scale of 1 - 5 1 = low 5 = high	<i>(how long to implement)</i> 1: 3+ years 2: 2 years 3: 1 1/2 years 4: 1 year 5: less than 1 year	<i>(Estimated rate of successful implementation)</i> 3: 40 - 50% 4: 60 - 70% 5: 80% or more
REMOVAL STRATEGIES							
<i>Taking advantage of spawning migrations</i>	1 Newman Cage	Use gill nets and a funnel entry point to trap carp en route to upstream spawning grounds (e.g. Arctic Lake outlet) which will allow fish capture in this area 24/7 during deployment.	\$15k - \$20k	1	5	5	5
	2 Pushtrap in Desilt Pond	Take advantage of carp returning to desilt pond to spawn by building a trap that allows carp to push in but not exit out of the net	\$10k - \$15k	1	4	5	4
	3 Box Traps	Deploy box traps at opportune locations throughout the watershed. Note: may use corn baiting or herding techniques in combination with box traps.	\$20k - \$30k	1	5	5	5
	4 Retractable Gill Net	Established location for gill net mount which will make trapping carp easier/speedier for small removals	\$3k - \$5k	2	4	4	4
	5 Jump-Box Trap (modified Williams cage)	Create a modified channel/box trap that takes advantage of carp jumping behavior during spawning. Spring hinge would allow carp jumping upstream to enter into holding bin, but would not allow them to return downstream.	\$25k - \$40k	1	3	2	5
<i>Timely removals</i>	6 Backpack Electrofishing Unit	District would have its own unit to take quick advantage of smaller removal opportunities that arise.	\$10k	1	5	5	5
<i>Too many obstructions</i>	7 Purchase Boat for District Use	Have boat available and ready-to-go for removal opportunities and assistance with herding/baiting efforts.	\$20k	-	5	5	5
	8 Accelerated Electrofishing Efforts (min. 10)	Will create a way to remove fish from Geis wetland, as it will be a long line of electricity that runs deeper than the current electrofishing boat.	\$20k	1	5	5	5
	9 Net Outside of Weed Beds	Monopolize on carp spawning behavior to set traps outside of weed beds.	\$25k	1	3	3	3
	10 Carp Cook-off Event	Event would include mulit-day carp tournament with prizes for most carp only to encourage removals, carp recipe contest, etc. that would focus on encouraging public recreation removals of carp.	\$5k	1	4	5	5
	11 Bounty for Carp Removals	Create a phone app that allows the public to photo and log carp captured from Spring and Prior Lakes, creating a \$1 per fish bounty when captured and removed, partnering with the ORF for free disposal.	\$5k - \$10k	1	2	2	5
	12 Rotenone Treatment on Geis wetland and Northwood wetland	Close off the waterbodies and treat with rotenone to remove the carp during seasons where recruitment is a high risk problem.	\$10k - \$20k	1	5	5	5
<i>New ability to work with multiple fishermen</i>	13 Multiple Seine Efforts on Same Day (Spring Lake + Upper Prior Lake)	Coordinate fishermen to complete seines on Spring and Upper Prior Lake at the same time so that they can share in the load(s), and to maximize efforts during ideal conditions.	\$15k - \$20k	5	3	5	4
	14 Ten or More Seine Efforts in Same Lake during One Season (~\$10k per effort)	This would include engaging fishermen multiple times during one season, during both optimal and less-than-optimal conditions to get as much carp out of the lake as possible. The risk would include that carp would begin to learn to move away from the nets/sounds during seining which would make future efforts less successful.	\$100k+	5	3	5	4
<i>Biological controls</i>	15 Stocking Bluegills	Stocking bluegills in spawning grounds that have frozen over, as they eat carp eggs and larvae.	\$5k - \$8k		5	4	4
	16 Stocking Buffalo Fish (or other native	Filling lake biomass threshold with buffalo fish instead of carp.	\$5k - \$10k		1	2	3
	17 Restore Spawning Areas to Repopulate Native Fish (create cribs for bluegills)	Create areas in spawning grounds that encourage bluegill populations.	\$15k		5	5	4
	18 Restore Geis wetland	Creating habitat beneficial for carp predators	\$150k - \$300k		5	1	4
	19 Artificial Spawning Habitat for Removals	Place floating devices with artifical plants/string attached in carp spawning grounds, removing the devices when filled with carp eggs.	\$5k - \$10k	1	5	4	3
TOOLS TO ENHANCE SUCCESS OF STRATEGIES							
<i>Luring Carp</i>	20 Training Carp with Noise & Bait	Research has indicated that carp have the ability to learn behavior. Certain noise could be played at corn bait areas repeatedly until a large aggregation of carp is develops when the noise is played in an area. Would then set-up a box trap or seine net in an area and "call" the fish to it with the noise.	\$1k - \$10k	3	5	5	5
	21 Engaging Volunteers for Baiting/Removals	Train volunteers to use bait and box traps to aid in carp removal efforts. Note: includes training time and box trap.	\$5k	1	5	5	5
	22 Training Carp to Gather with Aeration	Anecdotal evidence indicates that carp (and other fish) like to congregate near aerators in winter. Taking advantage of this, an aerator could be placed in a preferred seine area. Note: this is risky, as it could cause thin ice.	\$10k - \$25k	1	4	5	4
	23 Baiting with Sterile Females During Spawning	Some studies have used sterile females to attract males near spawning grounds. The female is trapped in a net and males will spawn in futile as the female is sterile, which will decrease the potential for that male to reproduce with fertile females.	\$20k - \$30k	1	1	2	3
<i>Herding Carp</i>	24 Herding Carp Using Additional Speakers	Purchase additional underwater speakers to create multiple sound points to herd carp into desired seine areas.	\$5k - \$10k	3	5	5	4
	25 Man-of-War Electrofishing Equipment	Use a long floating string of electrofishing wire that sends current 10+ feet deep to push carp into preferred seine areas or out of obstruction areas.	\$100k - \$200k	4	2	3	4
<i>No market for carp</i>	27 Solicit Recipients for Carp (farmers, zoo, etc.)	Identify sources to receive carp removed from the lake at no cost during smaller removal events.	\$1k	-	2	4	4
	26 Holding Pond for Small Carp Removals	Creating a nearby holding pond for carp could make it more profitable for commercial fishermen to go after smaller hauls, as they will be able to add them together into one truck when they are ready to take them to market.	\$100k	-	1	1	4
	28 Local Market Incentives for Carp	Develop a local market/purchasing source for carp so that small seines are more desirable to commercial fishermen.	\$5k-\$30k	-	2	1	3
<i>Zebra mussel infested waters</i>	29 Purchase Seine Net for District	Allow fishermen to borrow/use the District's seine net for removals in Upper Prior Lake, making them more likely to agree to a seine as they won't need to decontaminate their nets for zebra mussels after seine.	\$15k - \$20k	-	4	5	5
<i>Enhanced Tracking</i>	30 Underwater Cameras	Set up underwater cameras at desired seine areas so that the District can better determine the most successful opportunities to seine.	\$5k - \$8k	-	5	5	5
	31 Tag Additional Fish for Better Tracking	Tag an additional 30 radio-tags and 200 PIT tags for enhanced tracking to make seines more successful. Also, purchase two more Yagi attenaes that could be "checked out" by volunteers for increased tracking of carp.	\$15k - \$20k	-	5	5	5
	32 PIT Tag Receiver on Upstream Side of Geis wetland	Identify whether or not carp are moving in from upstream into Geis.	\$3k	-	5	5	5
	33 Acoustic Monitoring		\$15k	-	5	5	5
	34 Radiotags with GPS and Stationary, Continuous Recorders	Deploy 30 additional radio-tags and set up 10 stations around the shoreline of the lake that continously capture location information and remotely record it to a database to better determine carp locations at any given moment.	\$100k	-	2	2	4
	35 Tracking Carp with Drones	Contract with SWCD or SMSC to use their drones to track carp during spawning.	\$5k - \$8k	-	5	5	5
	36 Hook and Line Sampling Events	Engage state, federal, and local agencies during two events each year for hook and line sampling events to provide another method to determine carp population.	\$1k - \$2k	-	3	4	5
	37 Pop-Up Satellite Archival Tags	Pop-up satellite archival tags (PSATS) have the capacity to transmit the stored information to a satellite, making tracking information more instantaneous.	\$25k - \$30k	-	5	5	5

COLOR KEY:

YEAR ONE Recommendations

YEAR TWO Recommendations

Special Consideration Projects

ACCELERATED CARP MANAGEMENT STRATEGIES: *Recommended Items for Consideration*

YEAR ONE	ISSUE/OPPORTUNITY		STRATEGY		DESCRIPTION		COST	EFFECTIVENESS	AVAILABILITY OF RESOURCES	TIMEFRAME	PROBABILITY OF SUCCESS	
							Ballpark Range	(approx. % of carp removed) 1: 10% or less 2: 20 - 30% 3: 40 - 50% 4: 60 - 70% 5: 80% or more	(information, equipment, etc.) Scale of 1 - 5 1 = low 5 = high	(how long to implement) 1: 3+ years 2: 2 years 3: 1 1/2 years 4: 1 year 5: less than 1 year	(Estimated rate of successful implementation) 3: 40 - 50% 4: 60 - 70% 5: 80% or more	
	REMOVAL STRATEGIES											
	Taking advantage of spawning migrations		1	Newman Cage	Use gill nets and a funnel entry point to trap carp en route to upstream spawning grounds (e.g. Arctic Lake outlet) which will allow fish capture in this area 24/7 during deployment.			\$20,000	1	5	5	5
			2	Pushtrap in Desilt Pond	Take advantage of carp returning to desilt pond to spawn by building a trap that allows carp to push in but not exit out of the net			\$15,000	1	4	5	4
	New ability to work with multiple fishermen			Multiple Seine Efforts on Same Day (Spring								
			13	Lake + Upper Prior Lake)	Coordinate fishermen to complete seines on Spring and Upper Prior Lake at the same time so that they can share in the load(s), and to maximize efforts during ideal conditions.			\$20,000	5	3	5	4
	Biological controls		15	Stocking Bluegills	Stocking bluegills in spawning grounds that have frozen over, as they eat carp eggs and larvae.			\$8,000	1	5	4	4
	Subtotal:							\$63,000				
	TOOLS TO ENHANCE SUCCESS OF STRATEGIES											
Luring Carp		20	Training Carp with Noise & Bait	Research has indicated that carp have the ability to learn behavior. Certain noise could be played at corn bait areas repeatedly until a large aggregation of carp is develops when the noise is played in an area. Would then set-up a box trap or seine net in an area and "call" the fish to it with the noise.			\$10,000	3	5	5	5	
	No market for carp		27	Solicit Recipients for Carp (farmers, zoo, etc.)	Identify sources to receive carp removed from the lake at no cost during smaller removal events.			\$1,000	-	2	4	4
Zebra mussel infested waters		29	Purchase Seine Net for District	Allow fishermen to borrow/use the District's seine net for removals in Upper Prior Lake, making them more likely to agree to a seine as they won't need to decontaminate their nets for zebra mussels after seine.			\$20,000	-	4	5	5	
Enhanced Tracking		30	Underwater Cameras	Set up underwater cameras at desired seine areas so that the District can better determine the most successful opportunities to seine.			\$8,000	-	5	5	5	
Subtotal:							\$39,000					
TOTAL COST YEAR ONE:							\$102,000					

YEAR TWO	ISSUE/OPPORTUNITY	STRATEGY	DESCRIPTION	COST <i>Ballpark Range</i>	EFFECTIVENESS <i>(approx. % of carp removed)</i> 1: 10% or less 2: 20 - 30% 3: 40 - 50% 4: 60 - 70% 5: 80% or more	AVAILABILITY OF RESOURCES <i>(information, equipment, etc.)</i> Scale of 1 - 5 1 = low 5 = high	TIMEFRAME <i>(how long to implement)</i> 1: 3+ years 2: 2 years 3: 1 1/2 years 4: 1 year 5: less than 1 year	PROBABILITY OF SUCCESS <i>(Estimated rate of successful implementation)</i> 3: 40 - 50% 4: 60 - 70% 5: 80% or more	
	REMOVAL STRATEGIES								
	<i>Too many obstructions</i>	7	Purchase Boat for District Use	Have boat available and ready-to-go for removal opportunities and assistance with herding/baiting efforts.	\$20,000	-	5	5	5
	<i>Biological controls</i>	16	Stocking Buffalo Fish (or other native fish)	Filling lake biomass threshold with buffalo fish instead of carp.	\$10,000	1	1	2	3
				Total Cost:	\$30,000				
	TOOLS TO ENHANCE SUCCESS OF STRATEGIES								
	<i>Luring Carp</i>	21	Engaging Volunteers for Baiting/Removals	Train volunteers to use bait and box traps to aid in carp removal efforts. Note: includes training time and box trap.	\$5,000	1	5	5	5
	<i>Herding Carp</i>	24	Herding Carp Using Additional Speakers	Purchase additional underwater speakers to create multiple sound points to herd carp into desired seine areas.	\$10,000	3	5	5	4
	<i>Enhanced Tracking</i>	31	Tag Additional Fish for Better Tracking	Tag an additional 30 radio-tags and 200 PIT tags for enhanced tracking to make seines more successful. Also, purchase two more Yagi antennae that could be "checked out" by volunteers for increased tracking of carp.	\$20,000	-	5	5	5
				Total Cost:	\$35,000				
TOTAL COST YEAR TWO:				\$65,000					

Special Items for Consideration:

ISSUE/OPPORTUNITY		STRATEGY	DESCRIPTION	COST	EFFECTIVENESS	AVAILABILITY OF RESOURCES	TIMEFRAME	PROBABILITY OF SUCCESS
				<i>Ballpark Range</i>	<i>(approx. % of carp removed)</i> 1: 10% or less 2: 20 - 30% 3: 40 - 50% 4: 60 - 70% 5: 80% or more	<i>(information, equipment, etc.)</i> Scale of 1 - 5 1 = low 5 = high	<i>(how long to implement)</i> 1: 3+ years 2: 2 years 3: 1 1/2 years 4: 1 year 5: less than 1 year	<i>(Estimated rate of successful implementation)</i> 3: 40 - 50% 4: 60 - 70% 5: 80% or more
<i>Herding Carp</i>	25	Man-of-War Electrofishing Equipment	Use a long floating string of electrofishing wire that sends current 10+ feet deep to push carp into preferred seine areas or out of obstruction areas.	200000	4	2	3	4
<i>No Market for Carp</i>	26	Holding Pond for Small Carp Removals	Creating a nearby holding pond for carp could make it more profitable for commercial fishermen to go after smaller hauls, as they will be able to add them together into one truck when they are ready to take them to market.	100000	-	1	1	4
Total Cost:				\$300,000				

CARP MANAGEMENT STRATEGIES



01

NORTHWOOD & GEIS BARRIERS

Complete construction on Northwood & Geis barriers to block recruitment at known spawning locations.



03

OPEN WATER & WINTER SEINES

Two seine events were scheduled for 2019/2020 seasons with existing grant supplemented funding. **This could be enhanced with multiple simultaneous seines and/or two more additional events.**



05

SPAWNING REMOVALS

2019 spawning removals in Mud Bay were successful. **To enhance these efforts, structures (Newman cage, push-trap) could be placed in spawning areas for continuous carp capture to increase removals.**

July
2019

PLANNING

01

Carp Barriers

02

Baiting &
Trapping

03

Seine Events

04

Enhanced
Tracking

05

Spawning
Removals

06

Biological
Controls

July
2020



02

BAITED BOX TRAPS

Box traps would strategically placed in Spring and Upper Prior Lakes and baited with corn until a large enough aggregation is present for removals. Would also use training carp with noise.



04

UNDERWATER CAMERAS

Increase accuracy of determining carp aggregations for removals by placing underwater cameras in desired spawning areas that send continuous feed back to the District office.



06

STOCKING BLUEGILLS

Stock bluegills (a carp egg and larvae predator) in spawning grounds to reduce amount of recruitment back into Spring and Upper Prior Lakes.

July 9, 2019
Board Meeting

Page 18

Enhanced Activities (not included in current grant project budget) in BOLD.

CARP MANAGEMENT STRATEGIES



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Project Name | Sutton Lake Outlet Structure

Date | July 1, 2019

To | PLSLWD Board of Managers

Cc | Diane Lynch, District Administrator

From | Carl K. Almer

Regarding | Options to Proceed in Response to DNR Permit Amendment Requirement

Background

A DNR Public Waters Work Permit was issued on February 8, 2019 for the Sutton Outlet Control Structure based on the 60% Draft Plan Set (see attached Permit 2018-3741). This permit is conditioned on final construction plan set and operating plan approval by the DNR Area Hydrologist and Wildlife Manager prior to construction. In response to these conditions EOR submitted to DNR on April 4, 2019 a draft operating plan for review and comment. On April 18, 2019 the District was informed that the operating plan triggered additional statute and rule requirements that were not considered by the DNR when the permit was issued.

The purpose of this memorandum is to provide further detail regarding these additional requirements and the potential options for moving forward with obtaining an amended DNR permit for the project.

Draft Operating Plan and Additional Rule & Statute Triggered

DNR's notice for the need to amend the permit is predicated on the District's proposed operating plan which includes temporary drawdown (below the existing control elevation of 939.0). The draft operating plan proposes temporary drawdown: 1) annually over the winter to maximize storage capacity, and 2) periodically in early summer for habitat management.

Table 1. Operation schedule summary.

Drawdown Goal	Drawdown Date	Frequency	Storage Benefit	Habitat Benefit
Maximize Storage Capacity	End of Waterfowl Season – March 15 (or after snow melt)	Annual	<ul style="list-style-type: none"> - Captures spring runoff - Maximizes storage capacity during growing season 	<ul style="list-style-type: none"> - Promotes aquatic plant abundance and diversity via consolidation of sediments and stimulation of native seed bank
Habitat Management*	May 15 – July 15	Every 3-10 years dependent on habitat response and lower watershed conditions (BWSR 2014)	<ul style="list-style-type: none"> - Maximizes flood storage capacity after July 15 	<ul style="list-style-type: none"> - Favors native perennial emergent vegetation such as bulrush and spikerush species - Strengthens submerged vegetation in remaining inundated areas - Allows floating cattail mat to settle, root to lake bottom and be flood

**Early season drawdown will only be initiated if Prior Lake elevation is at or below 903.0. Early season drawdown will only be maintained if Prior Lake elevation does not exceed 903.5.*

In order for the District to proceed with the proposal for temporary drawdown, the District will need to meet [MN Statute 103G.408](#) and [MN Rule 6115.0271](#) paragraph C (both attached for reference).

In short, this will require that:

1. The DNR commissioner deems the project to be beneficial and makes findings of fact that the drawdown is in the public interest,
2. The District obtains permission from 75% of riparian landowners, and
3. The District conducts a public hearing.

Estimated Flood Reduction Benefits

The flood reduction benefit associated with the proposed design is primarily attributed to constructing a managed outlet that restricts the rate of discharge for events up to the 100-year event. Without drawdown, the proposed design provides an estimated 300 ac-ft of storage and has an estimated benefit of 0.09' in peak water level reduction on Prior Lake.

In addition, the proposed drawdown provides an additional 100 ac-ft of storage – or approximately 2' of depth across the open water surface – and provides an additional estimated benefit of 0.03' (+33%) in water level reduction on Prior Lake. This estimate is conservative in that the bathymetry of the open water and floating cattail portions of the Sutton Lake basin is largely undetermined, and 2' of storage under the open water surface represents a low-end estimate of the potential storage provided by the basin at lower elevations.

DNR Permit Amendment Options

As discussed at the May 14, 2019 Board meeting, there are four (4) apparent paths for proceeding with amendment of the DNR permit and continuing with the project. It should be noted that there is no substantive difference in construction cost for these options since all would require the same overall outlet capacity to manage large rainfall events. The design difference for these options is the control elevation and operation protocols.

Option 1 – Eliminate Drawdown

This option excludes the ability to drawdown the lake below the existing runout elevation.

Advantages

- a. Ability to proceed without MN Statute 103G.408 requirements

Disadvantages

- a. Loss of design component that the majority of riparian landowners favored
- b. Loss of all flood reduction benefit associated with temporary drawdown
- c. Wetland exemptions based on ability to provide wildlife enhancement will be questioned; mitigation likely required

Estimated additional cost: \$50,000 (wetland mitigation via purchase of banking credits)

Option 2 – Periodic Drawdown: Growing Season Only

This option excludes winter drawdown.

Advantages

- a. Addresses DNR Wildlife Department's primary concern that annual winter drawdown would freeze-out (kill) herptiles and amphibians
- b. Maintains secondary benefit of wildlife habitat improvements

Disadvantages

- a. Need to meet MN Statute 103G.408 requirements
- b. Limits design component that the majority of riparian landowners favored
- c. Loss of primary flood reduction benefit associated with winter drawdown
- d. Need to revise outlet operation plan

Estimated additional cost: \$10,000 (hearing, landowner approvals and operating plan revision)

Option 3 – Annual & Periodic Drawdown (as originally proposed)

This option pursues the drawdown as currently proposed (with annual winter and periodic summer drawdowns).

Advantages

- a. Preserves the flood reduction benefits originally proposed

Disadvantages

- a. Need to meet MN Statute 103G.408 requirements
- b. Need to develop additional baseline documentation – NRI, Seed Bank Investigation, Bathymetry and flood reduction benefit refinement
- c. Need to follow Shallow Lake Protocol, develop a Lake Management Plan and revise the Outlet Operation Plan accordingly
- d. Delays momentum pushing construction out at least 1-year
- e. Risk that DNR may not approve annual winter drawdown based on findings of Item b

Estimated additional cost: \$45,000 (baseline documentation, hearing, landowner approvals, and operating plan revision)

Option 4 – Conditioned Drawdown

This option preserves the ability for drawdown in the future by revising the operating plan with drawdown as a management option conditioned upon fulfilling the requirements of MN Statute 103G.408.

Advantages

- a. Limits delay in construction and affords the flood reduction benefits associated with a managed outlet sooner
- b. Keeps drawdown on the table from the perspective of all parties
- c. Preserves the ability to maximize flood reduction benefits in the future

- d. Defers the need to meet MN Statute 103G.408 requirements until such time that the District is more confident of the drawdown-associated flood reduction benefit and the potential natural resource impacts
- e. Defers expense of development of a Lake Management Plan need is demonstrated

Disadvantages

- a. Does not afford the ability to conduct drawdown immediately; it's just a potential management option
- b. Still a risk that DNR will not approve annual winter drawdown

Estimated additional cost: \$25,000 (baseline documentation and operating plan revision)

Recommendation

It is recommended that the Board direct the District Administrator to proceed with Option 4.

Attachments:

- 1. DNR Permit
- 2. MN Statute 103G.408
- 3. MN Rule 6115.0271

Public Waters Work Permit

Expiration Date: 02/08/2024

Pursuant to Minnesota Statutes, Chapter 103G, and on the basis of statements and information contained in the permit application, letters, maps, and plans submitted by the applicant and other supporting data, all of which are made part hereof by reference, **PERMISSION IS HEREBY GRANTED** to the applicant to perform actions as authorized below.

Project Name: Sutton Lake	County: Scott	Watershed: Lower Minnesota River	Resource: Lake: Sutton (70009400)
Purpose of Permit: Water Level Control Structure		Authorized Action: Grade and fill existing berm and natural runout. Construct a new controlled outlet at the existing runout of Sutton Lake.	
Permittee: PRIOR LAKE - SPRING LAKE WATERSHED DISTRICT CONTACT: LYNCH, DIANE, (952) 378-2164 4646 DAKOTA STREET SE PRIOR LAKE, MN 55372 (952) 447-4166		Authorized Agent: EMMONS AND OLIVIER RESOURCES CONTACT: PALLARDY, JOE, (651) 203-6035 7030 6TH STREET OAKDALE, MN 55128 (651) 770-8448	
Property Description (<i>land owned or leased or where work will be conducted</i>): UTM zone 15N, 458699m east, 4943576m north, Meandered water body of Section 31, T114N, R22W			
Issued Date: 02/08/2019	Effective Date: 02/08/2019	Expiration Date: 02/08/2024	
Authorized Issuer: Jennie Skancke	Title: Area Hydrologist	Email Address: jennie.skancke@state.mn.us	Phone Number: (651) 259-5790

This permit is granted **subject to** the following **CONDITIONS**:

APPLICABLE FEDERAL, STATE, OR LOCAL REGULATIONS: The permittee is not released from any rules, regulations, requirements, or standards of any applicable federal, state, or local agencies; including, but not limited to, the U.S. Army Corps of Engineers, Board of Water and Soil Resources, MN Pollution Control Agency, watershed districts, water management organizations, county, city and township zoning.

NOT ASSIGNABLE: This permit is not assignable by the permittee except with the written consent of the Commissioner of Natural Resources.

NO CHANGES: The permittee shall make no changes, without written permission or amendment previously obtained from the Commissioner of Natural Resources, in the dimensions, capacity or location of any items of work authorized hereunder.

SITE ACCESS: The permittee shall grant access to the site at all reasonable times during and after construction to authorized representatives of the Commissioner of Natural Resources for inspection of the work authorized hereunder.

TERMINATION: This permit may be terminated by the Commissioner of Natural Resources at any time deemed necessary for the conservation of water resources of the state, or in the interest of public health and welfare, or for violation of any of the conditions or applicable laws, unless otherwise provided in the permit.

COMPLETION DATE: Construction work authorized under this permit shall be completed on or before the date specified above. The permittee may request an extension of the time to complete the project by submitting a written request,

CONDITIONS *(Continued from previous page)*

stating the reason thereof, to the Commissioner of Natural Resources.

WRITTEN CONSENT: In all cases where the permittee by performing the work authorized by this permit shall involve the taking, using, or damaging of any property rights or interests of any other person or persons, or of any publicly owned lands or improvements thereon or interests therein, the permittee, before proceeding, shall obtain the written consent of all persons, agencies, or authorities concerned, and shall acquire all property, rights, and interests needed for the work.

PERMISSIVE ONLY / NO LIABILITY: This permit is permissive only. No liability shall be imposed by the State of Minnesota or any of its officers, agents or employees, officially or personally, on account of the granting hereof or on account of any damage to any person or property resulting from any act or omission of the permittee or any of its agents, employees, or contractors. This permit shall not be construed as estopping or limiting any legal claims or right of action of any person other than the state against the permittee, its agents, employees, or contractors, for any damage or injury resulting from any such act or omission, or as estopping or limiting any legal claim or right of action of the state against the permittee, its agents, employees, or contractors for violation of or failure to comply with the permit or applicable conditions.

EXTENSION OF PUBLIC WATERS: Any extension of the surface of public waters from work authorized by this permit shall become public waters and left open and unobstructed for use by the public.

WETLAND CONSERVATION ACT: Where the work authorized by this permit involves the draining or filling of wetlands not subject to DNR regulations, the permittee shall not initiate any work under this permit until the permittee has obtained official approval from the responsible local government unit as required by the Minnesota Wetland Conservation Act.

CONTRACTOR RESPONSIBILITY: The permittee shall ensure the contractor has received and thoroughly understands all conditions of this permit. Contractors must obtain a signed statement from the property owner stating that permits required for work have been obtained or that a permit is not required, and mail a copy of the statement to the regional DNR Enforcement office where the proposed work is located. The Landowner Statement and Contractor Responsibility Form can be found at: <http://www.bwsr.state.mn.us/wetlands/wca/index.html#general>.

INVASIVE SPECIES - EQUIPMENT DECONTAMINATION: All equipment intended for use at a project site must be free of prohibited invasive species and aquatic plants prior to being transported into or within the state and placed into state waters. All equipment used in designated infested waters, shall be inspected by the Permittee or their authorized agent and adequately decontaminated prior to being transported from the worksite. The DNR is available to train inspectors and/or assist in these inspections. For more information refer to the "Best Practices for Preventing the Spread of Aquatic Invasive Species" at http://files.dnr.state.mn.us/publications/ewr/invasives/ais/best_practices_for_prevention_ais.pdf. Contact your regional Invasive Species Specialist for assistance at www.mndnr.gov/invasives/contacts.html. A list of designated infested waters is available at www.mndnr.gov/invasives/ais/infested.html. A list of prohibited invasive species is available at www.mndnr.gov/invasives/laws.html#prohibited.

FISHERY PROTECTION - EXCLUSION DATES: No activity affecting the bed of the protected water may be conducted between April 1 and June 30, to minimize impacts on fish spawning and migration. If work during this time is essential, it shall be done only upon written approval of the Area Fisheries Manager. See contact list at: http://files.dnr.state.mn.us/fisheries/management/dnr_fisheries_managers.pdf. Should work begin elsewhere in the project area within these dates, all exposed soils that are within 200 feet of Public Waters and drain to those waters must complete erosion control measures within 24 hours of its disturbance to prevent sediment from entering Public Waters.

MAINTENANCE: Maintenance of this project to originally authorized conditions may be authorized by amendment to this permit.

PHOTOS AND AS-BUILTS: Upon completion of the authorized work, the permittee shall submit representative photographs and any as-built surveys, as appropriate, of the project area to the DNR Division of Ecological & Water Resources.

FINAL CONSTRUCTION PLANS AND OPERATING PLAN: The final construction plan set and operating plan must be approved by the DNR Area Hydrologist and Wildlife Manager prior to construction. This project may not proceed without an approved operating plan.

NATURAL EROSION CONTROL: Only natural erosion control material may be used in all riparian areas.

cc: Jeanne Daniels, EWR District Manager
James Fogarty, Conservation Officers, Prior Lake
Ben Carlson, BWSR Wetland Specialists, Scott
Leslie Parris, DNR Regional Environmental Assessment Ecologist, Region 3
Becky Horton, DNR Regional Environmental Assessment Ecologist, Region 3
Diana Regenscheid, DNR Wildlife, Shakopee
Daryl Ellison, DNR Fisheries, West Metro Area
Marty Schmitz, County, Scott
Corps of Engineers, Corps of Engineers, Scott
Troy Kuphal, SWCD, Scott SWCD

103G.408 TEMPORARY DRAWDOWN OF PUBLIC WATERS.

(a) The commissioner, upon consideration of recommendations and objections as provided in clause (2), item (iii), and paragraph (c), may issue a public-waters-work permit for the temporary drawdown of a public water when:

(1) the public water is a shallow lake to be managed for fish, wildlife, or ecological purposes by the commissioner and the commissioner has conducted a public hearing presenting a comprehensive management plan outlining how and when temporary drawdowns under this section will be conducted; or

(2) the permit applicant is a public entity and:

(i) the commissioner deems the project to be beneficial and makes findings of fact that the drawdown is in the public interest;

(ii) the permit applicant has obtained permission from at least 75 percent of the riparian landowners; and

(iii) the permit applicant has conducted a public hearing according to paragraph (d).

(b) In addition to the requirements in section 103G.301, subdivision 6, the permit applicant shall serve a copy of the application on each county, municipality, and watershed management organization, if one exists, within which any portion of the public water is located and on the lake improvement district, if one exists.

(c) A county, municipality, watershed district, watershed management organization, or lake improvement district required to be served under paragraph (b) or section 103G.301, subdivision 6, may file a written recommendation for the issuance of a permit or an objection to the issuance of a permit with the commissioner within 30 days after receiving a copy of the application.

(d) The hearing notice for a public hearing under paragraph (a), clause (2), item (iii), must:

(1) include the date, place, and time for the hearing;

(2) include the waters affected and a description of the proposed project;

(3) be mailed to the director, the county auditor, the clerk or mayor of a municipality, the lake improvement district if one exists, the watershed district or water management organization, the soil and water conservation district, and all riparian owners of record affected by the application; and

(4) be published in a newspaper of general circulation in the affected area.

(e) Periodic temporary drawdowns conducted under paragraph (a) shall not be considered takings from riparian landowners.

(f) This section does not apply to public waters that have been designated for wildlife management under section 97A.101.

History: 2009 c 48 s 1; 2012 c 277 art 1 s 80

6115.0271 SPECIFIC STANDARDS; DRAINAGE.

In addition to compliance with the general standards in part 6115.0270, subparts 2 to 4, specific requirements for drainage or drawdown activities shall be met as follows:

A. the drainage or diversion of public waters for mining iron ore, taconite, copper, copper-nickel, or nickel shall be approved only when all of the provisions of Minnesota Statutes, section 103G.297 and part 6115.0280 have been met;

B. the drainage or diversion of public waters for mining all other metallic and nonmetallic minerals shall be approved only when the public waters being drained are replaced by public waters that will have equal or greater public value, subject to provisions of part 6115.0280; and

C. all other drainage or diversion of public waters allowed in part 6115.0270, subparts 2 to 4, shall be approved if all of the following specific criteria are met:

(1) for public waterbasins and public water wetlands, permits shall be issued only to governmental agencies having the authority to undertake such projects. In addition, a public need for the partial drainage or temporary drawdown shall be established by specifying the public interests to be enhanced;

(2) written consent for the partial drainage or temporary drawdown of public waterbasins and public water wetlands is obtained from all riparian owners;

(3) partial drainage or temporary drawdown of public waterbasins and public water wetlands shall be approved only when the applicant has submitted data to confirm:

(a) that the partial drainage will improve navigation or recreational uses;

(b) that the partial drainage will improve or restore fish and wildlife habitat; or

(c) that agricultural lands have been flooded due to artificial obstruction of downstream drainage or increased upstream discharge;

(4) any proposed temporary drawdown shall not exceed two years in duration under normal climatic conditions;

(5) there are no feasible and practical means to attain the intended purpose without drainage; and

(6) the proposal adequately protects public safety and promotes the public welfare.

Statutory Authority: *MS s 103G.315; 105.415*

History: *8 SR 533; 25 SR 143; 27 SR 529*

Published Electronically: *June 11, 2008*

PRIOR LAKE – SPRING LAKE

WATERSHED DISTRICT

4.4 MAWD Summer Tour Report

Manager Corrigan, District Administrator Diane Lynch, Water Resources Project Manager Maggie Karschnia and CAC Member Marianne Breitbach attended the MN Association of Watershed Districts' Summer Tour, located in the Moorhead area, June 26-28. They will provide an overview of the Tour.

PRIOR LAKE – SPRING LAKE

WATERSHED DISTRICT

WORKSHOP MEETING MINUTES

Tuesday, June 11, 2019

Prior Lake City Hall

Members Present: Curt Hennes, Bruce Loney, Charlie Howley, Fred Corrigan & Mike Myser

Staff Present: Diane Lynch, District Administrator

Others Present: Glenn Kelly, Spring Lake Township Board; Kathryn Keller-Miller; Vincent Grube and Talori Dunsworth

The meeting was called to order by President Mike Myser at 4:30 p.m.

Introduce Interns

Kathryn Keller-Miller introduced the District's summer interns: Vincent Grube and Talori Dunsworth. They each described their background and their work this summer. They are employed by the District through August, depending upon their availability.

Spring Lake Association Video Staff Request

Diane mentioned Dan Kelly's request for staff to participate in a series of four videos. Managers instructed Diane to offer to:

- Pull together videos/photos from our files on those various topics for SLA to use in their videos. All we ask is that they give us credit, if they use them
- Maggie will help them in a video re. carp management, given grant requirements and background videos available
- Staff will continue to give updates at SLA's annual meetings

Closed Meeting

Managers reviewed the District Administrator's performance. The review was not completed due to lack of time and will be continued at a subsequent meeting.

The meeting adjourned at 5:50 p.m.

PRIOR LAKE – SPRING LAKE WATERSHED DISTRICT

REGULAR MEETING MINUTES

Tuesday, June 11, 2019

Prior Lake City Hall

6:00 PM

Members Present: Fred Corrigan, Curt Hennes, Charlie Howley, Mike Myser & Bruce Loney

Staff & Consultants Present: Diane Lynch, District Administrator
Maggie Karschnia, Water Resources Project Manager
Jaime Rockney, Water Resource Specialist
Carl Almer, EOR, District Engineer

Others Present: Tony Havranek, WSB
Avery Hildebrand, Conservation Minnesota
Dave Beer, Scott County

- **CALL TO ORDER/PLEDGE OF ALLEGIANCE:** Meeting called to order by President Myser at 6:02 PM.
- **2.0 PUBLIC COMMENT:** Avery Hildebrand, Regional Manager, Southeast Metro with Conservation Minnesota gave an update on what they do and offered to partner on ongoing projects.
- **3.0 APPROVAL OF AGENDA:**
Manager Corrigan moved to approve the agenda. Second by Manager Howley. All ayes. Motion passed 5-0.

OTHER OLD/NEW BUSINESS

- **4.01 SWEARING IN OF MANAGER CURT HENNES**
- **4.1 PROGRAMS & PROJECT UPDATES**
Staff gave updates on current and ongoing District projects and activities. Focusing on Water Quality, Upper Subwatershed Storage, AIS and Spring Flood Damage (Kici Yapi)
- **4.2 CARP MANAGEMENT STRADEGY**
Discussion with Tony Havranek, WSB, on carp management. Staff was directed to present options for the board to consider accelerating carp removal at the next Board meeting. No votes taken.

- **4.3 LEGISLATIVE UPDATE**

Discussion only, focusing on Carp Management, Upper Subwatershed Storage/Bonding Bill and LCCMR: Innovative ideas for In-Lake Phosphorus. The statute was changed to allow governmental agencies and their subcontractors to arrange for carp management outside of commercial fisheries operators' assigned fishing areas. A bonding bill, which included the District's request for Hazard Mitigation Funding for storage, was not voted on; one is expected to be voted on in the 2020 Legislative Session. The District applied for an Legislative Commission on Minnesota Resources (LCCMR) grant to explore options to manage in-lake phosphorus. No vote taken.

- **4.4 SUMMER/FALL DISTRICT TOURS**

Initial discussion to plan touring the District and visiting different project sites. Staff recommended combined two tours: Follow Ditch 13 from Upper Watershed, including streams; FEMA PLOC Bank Repair of Segments 1 and 2; and carp barriers. No vote taken.

- **4.5 BUDGET PREPARATION PROCESS**

Discussion on the budget preparation process for 2020. Agreement to review the budget at the July, August and September workshops, before and after the Regular Board meetings. Staff reminded managers that the Water Resources Management Plan will also be discussed during this schedule—at the August board workshop. No vote taken.

- **4.6 STAFF TIMESHEET EXPANSION**

Discussion on the process of staff tracking time. The existing Harvest timesheet will be expanded to coincide with the 2019 budget. No vote taken.

- **4.7 PUBLIC INFRASTRUCTURE PROJECTS RECOMMENDATION**

Manager Myser moved to proceed with engineering costs and to split the cost with the agency partners for the Redwing Ave Ditch and Ditch 13 Headwaters stabilization projects. Second by Manager Hennes. All ayes. Motion passed 5-0.

- **5.0 APPROVAL OF CONSENT AGENDA**

Manager Corrigan moved to approve the consent agenda after removing item 5.6 - Permit #19-02 SMSC Kici Yapi, for further discussion. Second by Manager Hennes. All ayes. Motion passed 5-0.

5.6 Permit #19-02 SMSC Kici Yapi

After further discussion, Manager Corrigan moved to approve per staff recommendation. Second by Manager Loney. All ayes. Motion passed 5-0.

- **6.0 TREASURER REPORT/FINANCIAL REPORT**

Manager Howley gave updates on current financial reporting.

- **7.0 MANAGER PRESENTATIONS ON WATERSHED RELATED ITEMS**

Managers gave updates on liaison meetings and other related items. Discussion only, no vote taken.

- **8.0 UPCOMING MEETINGS/EVENTS**

- CAC Meeting, Thursday, June 27 from 6:30-8:00 PM, Prior Lake City Hall
- MAWD Summer Tour, June 27 & 28

ADJOURNMENT

Manager Corrigan moved to adjourn meeting. Second by Manager Hennes. All ayes. Motion passed 5-0. Meeting adjourned at 8:53 PM.

Bruce Loney, Secretary

PRIOR LAKE - SPRING LAKE

WATERSHED DISTRICT

Citizen Advisory Committee

Thursday June 27, 2019

6:30-8:00 p.m.

Prior Lake City Hall

4646 Dakota Street SE Prior Lake, MN 55372

Attendees:

- **CAC Members present:** Steve P., Elizabeth S., Jody S., Jim W., Woody S., Adam F.
- **Others present:** Water Resources Outreach Specialist: Kathryn K-M, District Board President: Mike M., Board Member: Curt H., Board Secretary: Bruce L.

- I. Call meeting to order 6:34 pm – President Steve Pany
- II. Agenda-additions-Approval of Agenda & April meeting minutes.
 - a. Approved minutes. (Noted a correction: Sunfish eat the eggs, not the baby carp)
 - b. Approved agenda.
- III. Watershed District Projects update / Discussion topics
 - a. Welcome packet for new CAC members update.
 - i. Handed out a draft and asked for feedback at the next meeting. The draft will be emailed to everyone.
 - b. Carp control methods - thinking out of the box.
 - i. Spring Lake population has come back somewhat
 - ii. Lake Volney in the early 70's had a gate into a bay that carp could go through but couldn't get back out. Kathryn said such a device was under discussion this week. It is a trap door they go through and are then penned until they can be removed.
 - iii. Noted that we are learning quite a bit about carp habits in our chain of lakes that should help us improve our methods for eradication.
 - c. Sutton Lake Project update (upper watershed storage)
 - i. The project is in the DNR permitting stage. A plan was submitted but the DNR asked for the plan to include how wildlife in the surrounding area would be affected.
 - ii. Can Sutton Lake be reclassified as a wetland, like Dean Lake? Yes but it may not have much effect on the permitting.
 - iii. The board will discuss what water level is most beneficial.
 - d. Thinking out of the box on water levels in general (thoughts from Kim)
 - i. Should we be opening the gates in fall as well as spring? Maybe get the fall level to be at 901.5 if it isn't by September.
 - ii. It's in the guidelines to be able to open the gates in fall but it exposes us to the risk of a dry winter and later low levels.
 - iii. There seems to be a single point of failure in that Upper Prior has one outlet to remove water when the lake levels are high, but there are multiple inlets of water on Spring and Lower Prior
 1. Could we have multiple options to let water out of both lakes, i.e.,:
 - a. Other controlled outlets on Spring such as a swamp or low lying area that can accommodate being filled to take some of the overage.

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WATERSHED DISTRICT

- b. Is there any land mining that is potentially going to occur on nearby land that can create a lake for storage
 - c. Can Arctic Lake take on additional water?
 - d. Can an outlet be put in that takes water off of Spring and transports it miles away?
- e. Adopt a Storm Drain program and Master Water Steward Program suggestions:
 - i. Adopt a storm drain project is something to consider doing with the CEC (City Engagement Committee)
 - ii. Provide a map or bring tablet for sign ups at Lakefront Days with the locations of storm drains for adoption as well as the website where they can be found.
 - iii. Master Water Steward Program – this maybe better promoted at the manager’s meeting to reach the public via cable TV. This program requires 50 hours in a year.
- f. Suggestions for the WD 50th year anniversary next year:
 - i. Have a watershed float in the parade (stationary this year) (Steve)
 - ii. Teddy Bear Band (a big draw, especially for families) event (like at the library) to celebrate the anniversary and promote the watershed. (Adam)
 - iii. Display of invasive species – actual species. Could possibly partner with the library on this project. (Adam).
 - iv. Partner with the local brew pub, The Boathouse Brothers Brewery, to create a Watershed 50th Anniversary beer complete with a watershed coaster to promote watershed work awareness. (Liz)
 - v. Story corps idea presented at the last meeting of interviewing members with prepared questions to capture their memories of the watershed challenges and accomplishments. Could also combine it with a collection of watershed materials in a time capsule. (Liz)
 - vi. Sponsor a Junior Water Stewardship badges for Girl Scouts/Boy Scouts during the anniversary year (could continue if successful). (Jodi)
 - vii. Have a public information event with a water clean-up event showing what was removed (big clean-up like Minnehaha Creek). Possibly tie in with the ‘Dive the Lake’ event that is going to take place next year with the Knotty Oar. (Jodi)
 - viii. Geocaching event with prizes (Mike)
 - ix. Brochure showing the watershed historical timeline. (Bruce)
 - x. Put an article in the local papers in Dec/Jan with the anniversary calendar of events. (Jodi)
- g. Lakefront Days booth. Bring 2 questions for visitors.
 - i. Submit questions to Kathryn. Multiple choice questions are good.
- h. Aquatic plant harvesters hired by citizens causing outlet to plug up? More citizen outreach?
 - i. The harvesters haven’t been seen this year. Could be because of the zebra mussels in the lake and the lack of a proper place to dump the infected weeds. Also they were warned last year that they need permits and many don’t want to go through the permitting process.
 - ii. People on the lake are cutting weeds on their own this time of year.
 - iii. There are people selling chemicals to kill lake weeds and these are not approved.
 - iv. Aqua thrusters were used to clear weeds last year and these are against DNR regulations when used at levels below the water surface. It went to court and those using water thrusters lost. Noted that water thrusters can be used on the water surface just not at deep levels where they kill all plants.
 - v. Do we want to look into an extensive harvest of invasive lake weeds with proper disposal? This is not currently on the board’s agenda. Currently we have Steve McComas of Blue

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Water Science inventory and spot treat invasive weed locations identified during inventory with chemicals. Members agreed it was a good idea to investigate weed harvesting.

- i. List of projects and accomplishments by CAC
 - i. Steve provided a list of projects and accomplishments.
 - j. CAC goals for 2019. (These should coincide with watershed district goals)
 - i. Education about shoreline management and possibly have incentives to do so. (Shoreline ordinances are a city responsibility, but the results affect the water quality). Maybe work with CEC (Citizen Engagement Committee) of the city of Prior Lake. Possibly ordinances regarding boats that do damage? Again a city responsibility.
 - ii. Identify the best brochure available on shoreline stabilization that we can publish everywhere (possibly from the shoreline restoration seminars that SWCD puts on)
 - k. 2020 budget for classes and events for CAC members (\$500 in 2019)
 - i. The CAC will make a 2020 budget proposal. Will include the annual MAWD meeting (1st weekend in Dec in Alexandria), etc.
 - l. Upcoming project tours.
 - i. Tours being planned now and may include a bus for transportation.
 - m. Lakefront Days booth volunteers.
 - i. Will be only one day this year - August 10.
 - ii. Will need volunteers.
 - n. Next CAC meeting: July 25. (will not meet in August)
 - i. Set aside a half hour for Marianne to summarize the MAWD Summer Tour
 - ii. New member Christian M.
- IV. Comments, suggestions, questions.
- a. CAC would like to ask the DNR to present their information about fish inventory including their northern pike nurseries at a CAC meeting. (Could open that meeting to the public for education.) Staff will check on who contacts the DNR.
- V. Adjourned 8:00pm

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

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

Projects: ferric chloride treatment facility, alum treatments, carp seining, carp management program, carp mapping, carp contests, carp barriers, easement enforcement, permits, 12/17 wetland, Lower Prior Lake protection program, outlet channel, outlet channel repair, invasive aquatic plant control, NW Spring Lake shore project, lake and stream water monitoring, flood reduction plan, Farm Led-Council, partnerships with other agencies, workshops, project cost share, Water Quality Improvement Award, Fish Point Park, Raymond Park, Indian Ridge Park, Sand Point Beach Project, Watzl's Beach shoreline restoration.

7/9/2019
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 Klein Bank) to the claims list parties.

Staff will request that all vendors provide information on their invoices to fit into the categories below

UPDATED 7/3/2019

Vendor	Invoice	Description	Amount
1. Watershed District Projects (excluding staff payroll)			
Brett Furber		Rain Barrel - Cost Share	50.00
EOR	00758-0018	General Engineering	507.00
EOR	00758-0015	Permitting	295.75
EOR	00758-0018	District Plan Update	1,056.25
EOR	00758-0019	TMDL Implementation	62.50
Eric Zastrow		Rain Barrel - Cost Share	50.00
RMB	445719	Water Sample Analysis	270.00
RMB	447853	Water Sample Analysis	270.00
RMB	446553	Water Sample Analysis	765.00
RMB	44386	Water Sample Analysis	334.00
Smith Partners	40640	Water Resource Plan	225.00
WSB	003032-010-44	Carp Project	7,915.28
Xcel Energy	639823817	June	17.51
Subtotal			11,818.29
2. Outlet Channel - JPA/MOA (excluding staff payroll)			
Applied Ecological Services, Inc.	52861	Invasive Plant Management	2,480.00
EOR	00758-0038	PLOC Engineering Assistance	1,522.86
EOR	00758-0129	PLOC Vegetation Maintenance	1,132.90
EOR	00758-0122	PLOC Master Plan	816.00
HG & K		June Accounting	415.00
Smith Partners	40641	PLOC	64.50
Subtotal			6,431.26
3. Payroll, Office and Overhead			
ADP Manager Per Diems		Already Paid	450.02
ADP Staff Payroll		Already Paid	22,477.42
ADP Taxes & Benefits		Already Paid	13,588.16
Connexus Credit Union		Health Savings Account	115.38
H SA Bank		Health Savings Account	115.38
HG & K		June Accounting	1,198.75
Metro Sales	1372071	Copy Machine Contract	110.60
NCPERS		Life Insurance	80.00
PC Force	202394	On Site IT Service1	737.10
Smith Partners	40639	General Admin & Legal Services	720.00
VISA		June Charges	3,071.24
Subtotal			42,664.05
4. Debt repayment and Interest			
Northland Trust Services		Principal	
Northland Trust Services		Interest	
Northland Trust Services		Agent Fee	
Subtotal			0.00

TOTAL

60,913.60

PRIOR LAKE – SPRING LAKE

W A T E R S H E D D I S T R I C T

5.4 Approval of Revised MOA for the PLOC

At the May 2 PLOC Cooperators Meeting, the cooperators approved the updated Memorandum of Agreement for Use, Operation and Maintenance of the Prior Lake Channel and Outlet Structure. There were many changes made to the Prior Lake Outlet Channel MOA, due to the need to update the earlier 2006 document. Each of the cooperators need to sign the agreement to make it valid. The four cooperators are: city of Prior Lake; city of Shakopee; Shakopee Mdewakanton Sioux Community and the District.