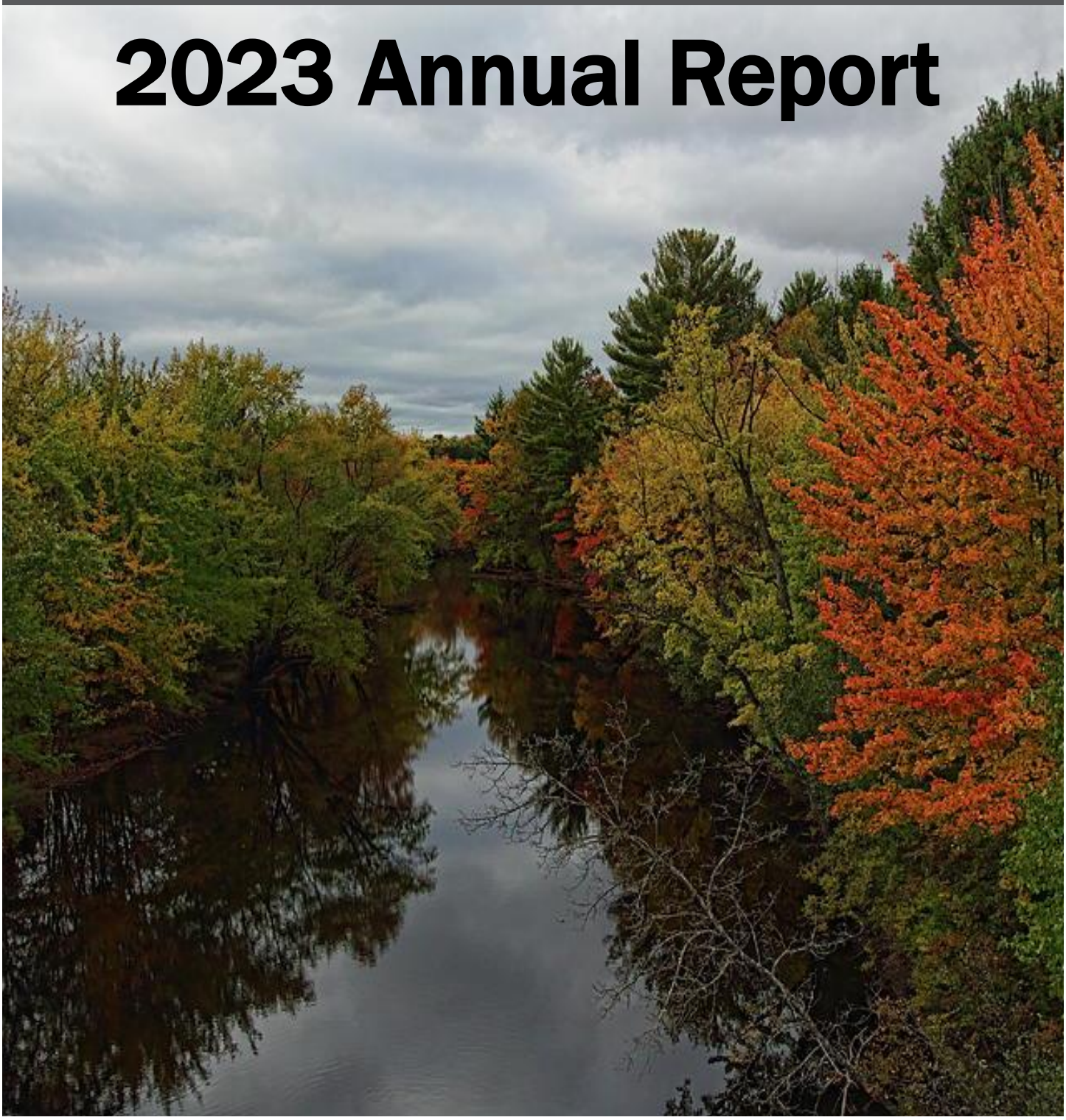
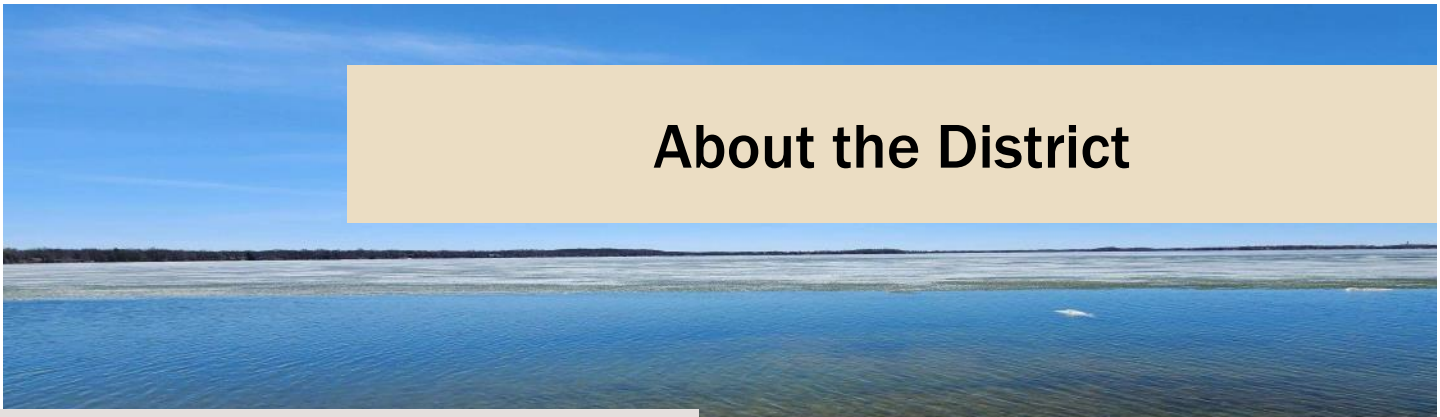
Pelican River
watershed district

2023 Annual Report





About the District

DISTRICT INFORMATION

Office:
Wells Fargo Bank Building
211 Holmes St. West, Suite 201
Detroit Lakes, MN 56501
218-846-0436

Office Hours:
8:00 AM to 4:30 PM
Monday—Friday

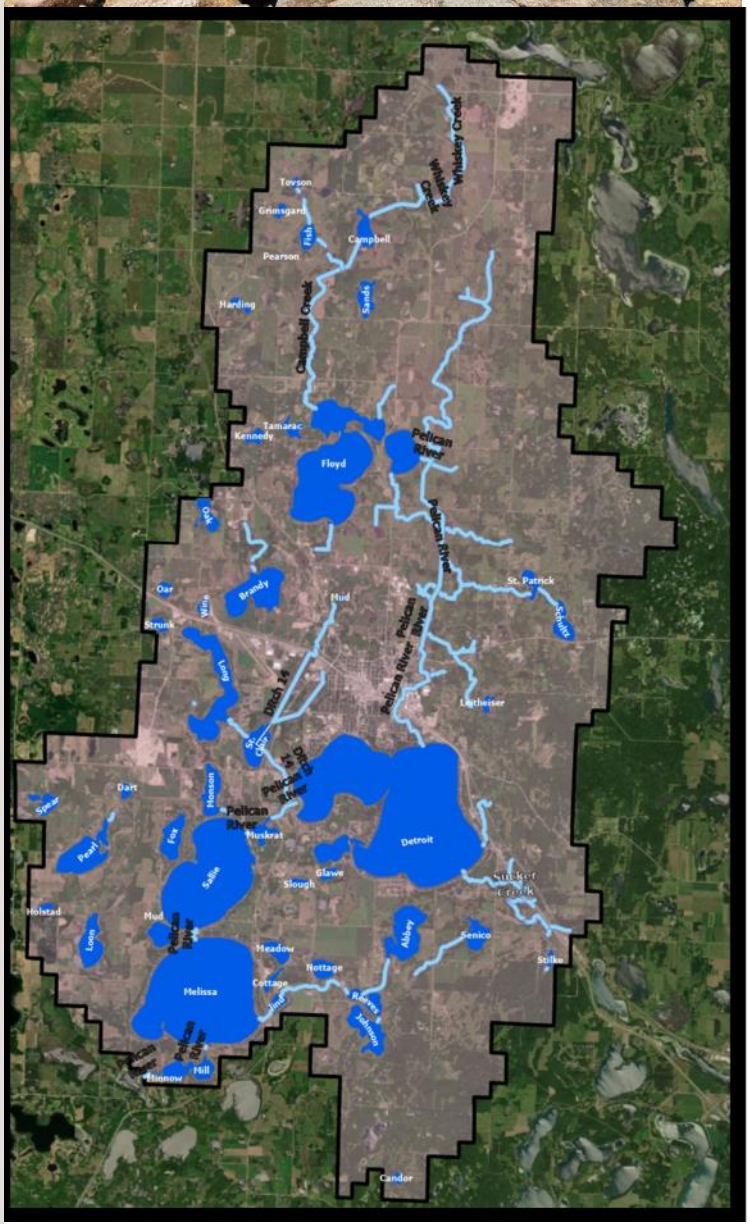
Website:
www.prwd.org

E-mail Inquiries:
General: prwdinfo@arvig.net
Permits: prwdpermit@arvig.net
Monitoring: prwdmonitor@arvig.net

Background

Pelican River Watershed District (PRWD) is one of 45 watershed districts established under MN Statute 103D. The purpose of watershed districts is to conserve the natural resources of the state by land use planning, flood control, and other conservation projects utilizing sound scientific principles for the protection of the public health and welfare and the prudent use of the natural resources.

PRWD covers approximately 120 square miles in Becker (95%) and Otter Tail (5%) Counties and includes the upper reaches of the Pelican River which eventually drains to the Otter Tail and Red Rivers. The District was established on May 27, 1966 by community and lake association leaders to address poor lake water quality conditions.



OPERATIONS
Board of Managers

The PRWD is led by a seven member Board of Managers that guides the implementation of the goals and objectives set forth in the Otter Tail Comprehensive Watershed Management Plan, which was adopted on January 25, 2023. Board Managers are appointed by the Becker County Commissioners and each manager represents a distinct geographical area within the District. Managers serve a 3-year term and can be re-appointed to serve additional terms.

The board held 12 Regular meetings, along with 2 Public Input meetings, 3 manager workshops, and a Stakeholder Advisory meeting.

Four managers and two staff also attended the Annual Minnesota Watershed conference held in Alexandria on November 29-December 1.

Jan. 19, 2023	Regular Meeting
Feb. 22, 2023	Regular Meeting
Mar. 15, 2023	Regular Meeting
Apr. 14, 2023	Stakeholder Advisory Meeting
Apr. 21, 2023	Regular Meeting
May 17, 2023	Regular Meeting
May 30, 2023	Stormwater 101 Workshop
Jun. 14, 2023	Regular Meeting
Jul. 19, 2023	Regular Meeting
Jul. 26, 2023	Stormwater 101 Workshop
Aug, 16, 2023	Regular Meeting
Sep. 13, 2023	Public Hearing/Regular Meeting
Oct. 18, 2023	Regular Meeting
Nov. 8, 2023	Special Meeting/FEMA Grant Public Input
Nov. 15, 2023	Regular Meeting
Dec. 20, 2023	Manager Workshop/Regular Meeting

2023 Board of Managers

Dennis Kral, President
Term Expires: May 2025
Subwatershed: Big Floyd

Orrin Okeson, Vice-President
Term Expires: May 2024
Subwatershed: Campbell Creek

Rick Michaelson, Treasurer
Term Expires: May 2025
Subwatershed: Sallie

Chris Jasken, Secretary
Term Expires: May 2026
Subwatershed: Long

Charlie Jasken, Manager
Term Expires: May 2024
Subwatershed: Small Lakes

Phil Hansen, Manager
Term Expires: May 2025
Subwatershed: Melissa

Laurie Olson, Manager
Term Expires: May 2026
Subwatershed: Detroit

Technical Advisory

MN Pollution Control Agency: Scott Schroeder

City of Detroit Lakes: Kelcey Klemm, Shawn King, Tom Gulon

Becker SWCD: Bryan Malone

MN BWSR: Peter Waller

MN DNR: Rodger Hemphill, Rob Baden, Nick Kludt

Education Committee

Becker County Coalition of Lakes Association: Wanda Roden, Dick Hecock, Larry Anderson

Detroit Lakes Public Schools: Kellie Wolf, Shelly Gilson, Renee Kerzman

OPERATIONS
Staff & Advisory

Tera Guetter,Administrator

As Administrator, Tera implements PRWD plans, policies and programs on behalf of the PRWD Board of Managers. She oversees all PRWD operations, including staff, the annual budget and work and plan, capitol improvement projects, grant programs, plan reviews, project coordination , and watershed restoration planning.

Gina Kemper, Water Resource Coordinator

Gina manages the PRWD's water quality monitoring program, Rules and permitting program, as well as directing in-lake aquatic plant control treatments. She conducts water data collection, analysis, GIS mapping, reporting and oversees the installation and maintenance of monitoring equipment. Gina also works with permit applicants and coordinates site plan review and approvals.

Brenda Moses, Sr. Office Coordinator

Brenda takes care of the District's financials including payroll, accounts payable, budget, grant tracking and policies. She manages the District's outreach and education program including developing education materials and working with school-age children. She also assists with the Rules permitting program contractors, board packets, website and social media updates, and keeps the overall office running smoothly. Brenda will be retiring in February 2024.


Data Collection—Summer Interns: Owen Reding & Oliver Kritzberger

The District relies on Summer Interns to collect water samples from area lakes and streams, conduct shoreline and aquatic plant surveys, and update monitoring databases. They also assist with outreach events such as the Becker County Fair. Student interns work from mid-May to mid-August and may earn college credits while completing the District's work.

2023 District Consultants

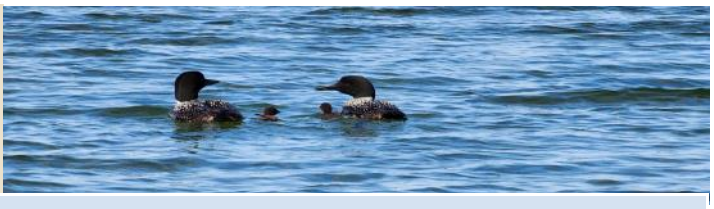
Marlon Mackowick & Travis Kluthe,
District Engineer, Stantec
Fargo, ND 58103
Ph: (701) 297-9600

Karen Skoyles, Attorney
Ramstad, Skoyles & Winter, PA
114 West Holmes St.
Detroit Lakes, MN 56501
Ph: (218) 847-5653

Welcome Colton Utecht!

With the Otter Tail 1 Watershed 1 Plan grant funding, Colton Utecht was hired to assist landowners with shoreline and raingarden planning and installations.
Mr. Utecht is a shared employee between the Pelican River Watershed District, Cormorant Lakes Watershed District, and Becker County Soil and Water Conservation District.

2023 Highlights
January—June



JANUARY

* Board Meetings: It was the consensus of the board of managers to change the regular board meeting time from the third Thursday of the month in the afternoon, to the third Wednesday of the month, beginning at 8:30 AM for 2023.
* 1W1P: The Resolution to Adopt and Implement the Otter Tail River 1W1P Comprehensive Watershed Management Plan was passed by the board. This plan replaces the Revised Management Plan currently used by the District (adopted March 2020).
* Grant Agreement: The managers voted to enter into grant agreements for the MN DNR Conservation Partners Legacy-Little Floyd Lake Rock Arch Rapids and the BWSR Clean Water Fund C23-0127 Rice Lake Wetland Restoration Project Construction-Phase 2 projects, and designate Administrator Guetter as the Authorized grant representative.

FEBRUARY

* MAWD Legislative Review: Kral and Guetter met with MN Senators Kupec and Green, and Rep. Jim Joy. They shared the 2021 Annual Report and other handouts and invited them to visit the District to review projects. Guetter also testified at the Senate Environment Committee via Zoom on the need to increase the General levy cap for smaller Watershed Districts.
* 2023 Work Plan: The 2023 Work Plan was compiled using the Otter Tail Water Management Plan 2023-32 outline for the water resource, goals, and targeted actions. .
* AIS Treatment Grants: Applications were submitted for 2023 AIS treatment grants for Flowering Rush and Curly-leaf Pondweed on Big Detroit, Curfman, Muskrat, Melissa and Sallie Lakes. MN DNR grants were received for Melissa ($1650) and Muskrat ($1500).

MARCH

* AIS Education: Staff presented to local 5th grade students, as well as 7th & 8th grade students at Holy Rosary School, on the Aquatic Invasive Species (AIS) in local lakes and chemical treatments currently being administered. Also discussed was the Minnesota AIS Research Center (MAISRC) and their role in AIS research in the state.
* FEMA Study Update: Stantec Engineering staff presented on the FEMA grant study work including hydrologic and hydraulic modelling completed, the ArcGIS map capabilities, and information to guide future stormwater management and focus areas. The District will be holding information/input meetings in the next few months.
* Personnel: Guetter met with Cormorant WD and Becker SWCD to review job description and position advertising for shared employee through the use of shared funds from the Otter Tail 1W1P grant program.

APRIL

* Rules/Permitting Input:: A special meeting was held with invited stakeholders to review the current District Rules/Permitting program and provide feedback with approximately 30 people in attendance. Based upon the feedback, the District will move forward with clarifying and updating the Rules with the assistance of an outside facilitator/firm to assist with this process.
* Water Management Rules: Contractors are beginning to line up projects and apply for permits with the warmer temperatures.
* Education: Moses & Kemper presented at the 4th Grade Water Fest hosted by the City of Detroit Lakes.

MAY

* Manager Appointments: Becker County Commissioners re-appointed Laurie Olson and Chris Jasken for 3-year terms.
* Personnel: The District enter into a Joint Agreement to hire a shared Shoreland Technician (PRWD, Cormorant WD, Becker SWCD).
* Education: Assisted with 4th grade water festival.
* District Rules Update: The board hired Jay Michels with Emmons & Olivier Resources ($25,000) to assist with the facilitation of the District Rules update/clarification process which includes: education workshops; review of the District's and other agencies regulations, policies, and processes; public input; and updated Rules. The first education workshop, "Stormwater 101" was held on May 30 with managers and staff.
* Summer Interns: Owen Reding (U of M, Crookston) & Oliver Kritzberger (Valley City State University) started with the District on May 15. They assisted with lake and stream monitoring, education events, AIS mapping, and a variety of other tasks.

JUNE

* CLP Treatments: Little to no growth of Curly-leaf pondweed (CLP) observed in area lakes. Muskrat lake was treated for 9 acres. CLP was delineated and mapped for treatment in 2024 later in the summer as it was spotted in area lakes.
* FR Treatments: The first of two FR (Flowering rush) treatments was administered on June 27 as follows: Detroit-44.69 acres, Curfman-4.79 acres, Sallie-12.68 acres, Melissa-13.92 acres. The second FR treatment will occur towards the end of July.
* Temperatures: June 2023 was the 4th warmest in state history dating back to 1873, trailing 2021, 1988 and 1933.

2023 Highlights July—December

JULY

* District Rules Update—Stormwater 101 Workshop #2: At the July 26th meeting, Jay Michels, EOR informed the Board he was halting the Rules update process until the Managers had consensus on the goals and direction of the Rules and permitting program. The board agreed to engage mediation services to assist with this effort and then resume the Rules update/clarification process.
* Shoreland Technician: Colton Utecht from Grand Rapids, MN was hired as a shared employee with Pelican River WD, Cormorant WD, and Becker SWCD using Otter Tail 1W1P grant funds. He will start his position in September.
* Becker County Fair: Moses, Kemper, and summer interns Kritzberger and Reding staffed the PRWD tables on July 26-29. Despite the brutal heat the first two days, and slightly cooler temps second two days, the Fair was well attended.
* Water Quality: Water quality is relatively good due to the dry weather. There were no samples taken in the Campbell Creek area due to no flow during the last week of July.

AUGUST

* FR Treatment: The second treatment occurred on August 8. The same acres were treated in Detroit, Curfman and Melissa, however, Lake Sallie's treatments acres increased by 4.88 along the north shore.
* August Board Meeting: The draft 2024 Preliminary Budget, Levies, Assessments, and Fees were reviewed. It was noted that starting July 1st, water monitoring program expenses were doubled to due to RMB Lab increasing their analysis rates by 100%. The Managers proposed to increased the cost share grant program budget as it will provide good public relations in addition to resource benefits.
* Weather: Rainfall in August was 2.93" (.47" below normal), however most of the county is considered to be in moderate drought conditions. Area lakes have low water levels, which can be challenging for removal of water equipment.

SEPTEMBER

* Preliminary 2024 Budgets, Levies, Assessments and Fees were approved.
* Collaboration and Mediation Services: The Board will be working with Aimee Gourlay, League of MN Cities Insurance Trust to provide conflict assessment and recommendations and mediation/facilitation services to the District. Managers and staff were interviewed and the interview results will be presented at an upcoming board meeting.
* Enforcement: Staff continues to be busy issuing permits as contractors continue their work with the warm fall temperatures.
* MPCA 319 Small Watershed—Campbell Creek Project: After the on-site technical meeting, there was general agreement to use the services of the District's engineering firm, Stantec, to design the plans for the streambank stabilization project.

OCTOBER

* 2024 Consultant Services (Legal, Engineering) - The Managers agreed to advertise for 2024 consulting services. Proposals, interviews, and firm selection will occur in early 2024.
* Lakes & Streams: Lake monitoring has been completed for the year and streams will continue to be monitored until freeze up. Data is currently being entered in the MPCA EQUIS systems for their records.
* Environmental Field Trips: Using PRWD grant funds, local students were able to learn in the outdoor classroom this fall. 4th graders visited the Cormorant Lakes Conservation Club, 5th graders spent a half day a the Ike Fischer Farm, 6th graders visited Sucker Creek, and 7/8th grade Special Education students visited Dunton Locks County park.

NOVEMBER

* Consultant Services: Mackowick is leaving his position at Stantec and resigned as District Engineer. Stantec will continue to provide consulting engineering services to the District.
* FEMA Grant: A public meeting was held on November 8 to receive public input on localized flooding areas. There were 14 attendees comprised of township, county, city and watershed officials.
* MN Watersheds Annual Conference: The conference was held in Alexandria, MN from November 29—December 1. Guetter, Kemper and Managers Kral, Olson, Hansen, and Chris Jasken attended various sessions.

DECEMBER

* The Managers approved the Final 2024 Budgets, Levies, Assessments and Fees, 2024 Cost Share Program, and Personnel Policy updates.
* MN DNR AIS Management grant applications for Curly-leafed Pondweed treatment on Floyd, Detroit and Sallie were submitted.
* Personnel: After working 14 years with the District, Brenda Moses will be retiring in February 2024. Shanna Rix-Bach was hired as the new Office Coordinator and will start in early January 2024.

District Financial Management

General operations of the District are funded through an ad valorem levy assessed within the watershed district. These funds, along with special assessments, basic water management fees, and grants are used to fund the District's water management projects and programs. The District's regulatory program is funded through a combination of permit review fees, basic water management fees, and through the General administration fund.

The District's audited financial report was prepared by Clasen & Schiessl CPAs, Ltd of Pequot Lakes, MN. The Audited Financial Report includes classification and reporting of revenues and expenditures, a balance sheet, an analysis of changes in final balances, and all additional statements necessary for full financial disclosures as required by the State of Minnesota.

A public hearing was held September 13, 2023 in order to adopt a preliminary budget, levies, assessments and fees for 2024. Following the public hearing, the Board of Managers approved the Preliminary 2024 budgets, levies, assessments and fees and certification was sent to Becker and Otter Tail County Auditors before the September 15 deadline. The final approval occurred at the December 20, 2023 Board of Managers meeting.

FUNDS OF THE DISTRICT

General: The General fund is used to pay for administrative, operations, and contracted services.

LMP-01: The LMP-01 fund was established on July 15, 2010 by a petition from the City of Detroit Lakes to undertake Aquatic Invasive Species (AIS) research, education, treatments, and management.

DCM-01: The DCM-01 project was established on July 15, 2021 by petition from the City of Detroit Lakes for data collection and monitoring work.

Stormwater Treatment Facility Project (UTILITY): On February 16, 2000, the Stormwater Treatment Project (MS 103D.730) was established to implement water quality projects, stormwater management programs, and capital improvement projects to provide recreational benefits, navigational benefits, and preservation and improvement of water quality within the District. The costs of the Stormwater Treatment Facility project are funded by district-wide Water Management District (MS 103D.729, MS 444.075, Subd. 2a).

Project 1B: Project 1B was established by landowner petition on October 8, 1984 for control and management of aquatic vegetation in lakes Sallie and Melissa. I

Project 1C: Project 1C was established by landowner petition on September 21, 1989for the control of aquatic vegetation in Detroit and Curfman lake.

Drainage Systems:

Ditch 11-12: Campbell Creek (Moon Lake to Floyd Lake) - No Assessment in 2023.
Ditch 13: Pelican River (Little Floyd Lake to Detroit Lake) - 2023 Assessment $20,000.
Ditch 14: (St. Clair Lake area) - No assessment in 2023.
Drainage Buffer Enforcement: The District received $7,797 in 2023 from the State of MN to enforce the buffer requirements on Ditch 11,12,13, and 14.

See the District's website: https://**prwd.org/resources/** under the **Operations/Admin** heading for financial and annual work plan information.

Regulatory Program Rules & Permitting

Water Management Rules

Watershed Districts are required by MN Statute 103D to adopt rules. The District's rules primary focus on water quality protection standards. Regulation plays an important role in preventing and mitigating water resource issues which impact the quality and function of our lakes, streams, wetlands.

Since 1967, PRWD Rules have underwent three revisions with the latest revision adopted in April 2003 which prioritized and focused on stormwater management and nearshore actions.

In 2023, the Managers started the Rule Revision process with the goal of updating and clarifying the current rules and will continue this process in 2024 for adoption and implementation in early 2025.

In April, a meeting was held with invited landscapers, engineers, and government agencies to provide feedback on current PRWD Water Management Rules and permitting program. The last Rule update was in 2003. Recommendations included: 1. updating and clarifying the Rules; 2. streamlining the permitting process; and 3. increase agency coordination.

Permit Type	2023
Shore Impact Zone Alterations (sand blanket, riprap, vegetation changes)	69
Subdivisions/ PUD	2
Stormwater Management	
Commercial	7
Residential	8
Roads, Parking Lot, Bridges, Culverts, Storm Sewer	4
Buried Cables	5

Permitting Program

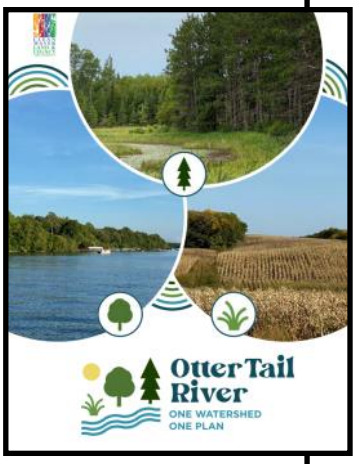
Through the rules and permitting process, PRWD works in cooperation with property owners, contractors, engineers, and local units of government to protect the water quality and shoreline health districtwide.

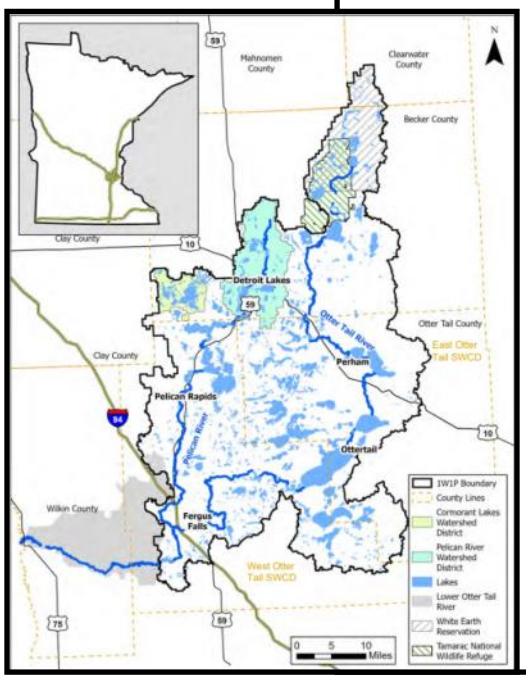
The majority of the permits issued each year are for Shore Impact Zone Alterations (shoreline repairs). The District encourages using native trees and shrubs in shoreline plantings and promotes it's Cost-Share Program in these efforts.

The District Staff also assists with Stormwater Management planning through site visits and providing guidance.

Otter Tail River
One Watershed One Plan (OT 1W1P)

January 25, 2023 marked a watershed moment for management of the natural resources in this area with the approval of the "Otter Tail River One Watershed One Plan" by MN Board of Water and Soil Resources (BSWR). This action combined plans from local units of government located with in the Otter Tail Watershed area into a single comprehensive water management plan. This 10-year plan will guide the management of diverse and valuable natural resources in the watershed. The partnership includes Otter Tail County, East Otter Tail Soil and Water Conservation District (SWCD), West Otter Tail SWCD, Becker County, Becker SWCD, Pelican River Watershed District, and Cormorant Lakes Watershed District.





OT 1W1P Goals

Otter Tail River ONE WATERSHED ONE PLAN

Measurable Goals

Measurable goals identify the desired change in the resource and indicate how progress will be measured. Goals are developed to address the priority issues, and models and data are used to quantify milestones for progress. The measurable goals were developed over the course of three Technical Advisory Committee meetings and approved by the Policy Committee. They are described in detail in Section 5.

Phosphorus Reduction
- 5% reduction in focus lakes and streams through agricultural practices, stormwater management, and shoreline stabilization.

Sediment Reduction
- 4% reduction in focus streams through agricultural practices, stormwater management, and shoreline stabilization.

Soil Health
- 1,500 acres/year of soil health practices such as cover crops, no till, pasture management, and conservation crop rotation (15,000 acres in 10 years).

Groundwater Protection
- 690 acres/year groundwater protection practices such as nutrient management, irrigation water management, and DWSMA protection (6,900 acres in 10 years).

Land Protection
- 500 acres/year of land protection or forest management (5,000 acres in 10 years).

Stream Stabilization
- 1.8 miles of stream stabilization and riparian easements in the watershed.

Aquatic Connectivity
- Modify 4 dams on the Pelican River to reconnect 81 river miles, and modify 4 dams on the Otter Tail River to reconnect 88 river miles.

Water Retention
- 0% change in watershed discharge while building resilience through agricultural practices, forest protection, stormwater retention, and wetland restoration.

Bacteria Reduction
- Implement 2 projects/year to prevent new impairments and make progress toward removing current impairments (20 projects in 10 years).

AIS Prevention & Management
- Continue implementation of local AIS Plans including inspections, compliance, decontaminations, outreach, monitoring, and enforcement.

Figure 1.6. Measurable goals for the Otter Tail Watershed

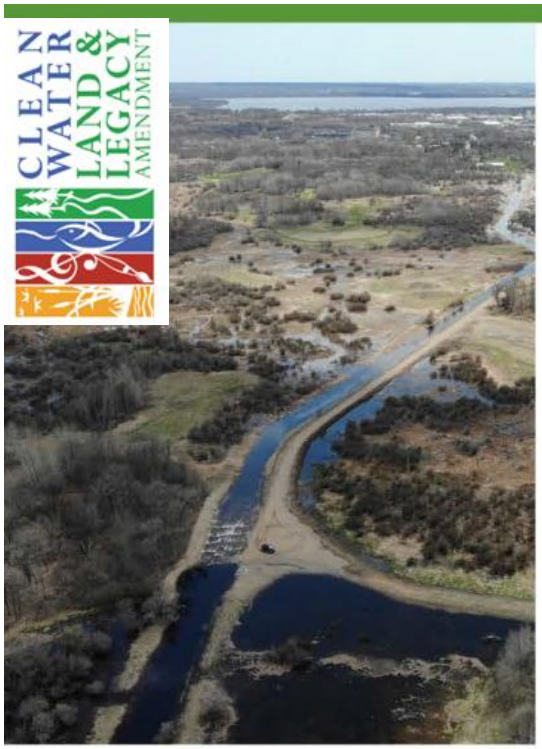
Pelican River Watershed District OT 1W1P Focus Areas

Category	Primary Issues	Secondary Issues	As Opportunities Arise
 Surface Water	Wind and Water Erosion Untreated Stormwater Nutrient Loading Sufficient Protection Unstable Stream Channels	High *E.coli* Altered Hydrology	
 Ground-Water		Groundwater Quality	Groundwater Sustainability
 Land Stewardship		Soil Health Fragmentation of Uplands	
 Habitat	Aquatic Invasive Species	Destruction of Riparian Habitat Barriers to Fish Movement	

Where	Identified Plan
Lake St. Clair	Restore—Focus on Phosphorus Reduction
Lake Sallie, Big & Little Detroit Lakes	Enhance—Focus on Phosphorus Reduction
Floyd Lakes	Protect—Stable and improving trend.
Campbell Creek	Restore—Phosphorus, Dissolved Oxygen, & Sediment Streambank stabilization
Pelican River	Restore & Enhance—Phosphorus, Dissolved Oxygen, & *E. coli*.
County Ditch 14	Enhance—Phosphorus & Dissolved Oxygen
Little Floyd & Bucks Mill Dams	High Priority Dams

Review the full plan at

https://prwd.org/resources/water-management-plan/

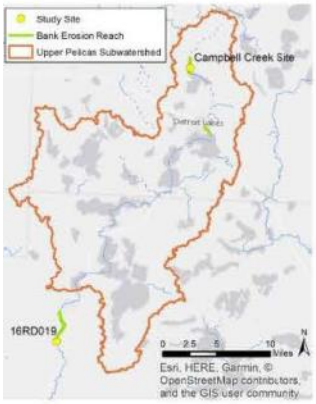


DISTRICT-WIDE PROJECTS

>>> RICE LAKE RESTORATION

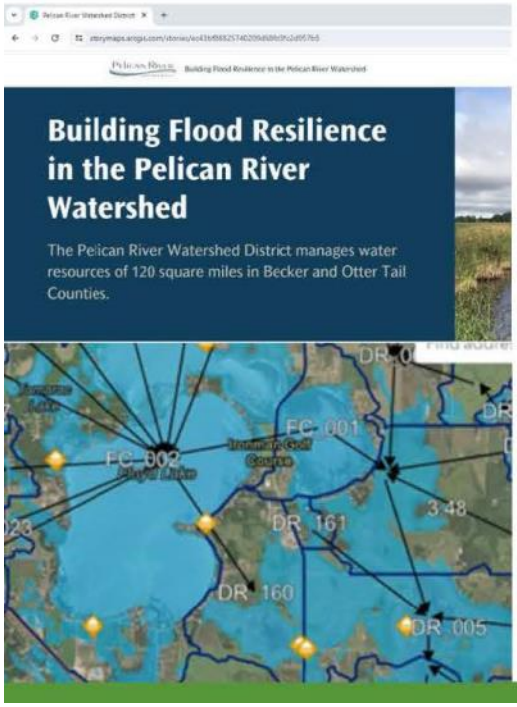
In the 1970's, the Rice Lake Wetland, was identified as the primary source and contributor of "legacy" phosphorus loading to Big Detroit. To address this issue, the wetland was restored in 2022 (see photo on the right with the construction of rock arch rapids to raise the wetland water level and to allow for fish passage). This wetland is located between Little Floyd Lake and HWY 34. 2023 monitoring results showed a decrease in phosphorus from the wetland to the Pelican River from previous years data.

Another downstream structure near Terry Street will be built in 2024 to further lower phosphorus levels to the Pelican River and downstream Detroit Lake.



CAMPBELL CREEK 319 PROJECT <<<

The District was awarded a federal 319 grant to address excessive sediment and phosphorus in the Campbell Creek sub-watershed area. In early 2024, the project area workplan was approved by the Environmental Protection Agency to construct: (1) 3,750 linear feet of streambank stabilization above and below Becker County HWY 149 using a variety of practices, (2) a multi-stage drainage and control structure near Campbell Lake, and (3) a grade stabilization project in a nearby farm field. The planning, design, and engineering work is starting this summer, with construction to occur in 2025 and 2026 for an estimated cost of $500,000. The grant will be matched using Otter Tail 1W1P grant and District funds.



>>> FEMA FLOOD MITIGATION GRANT

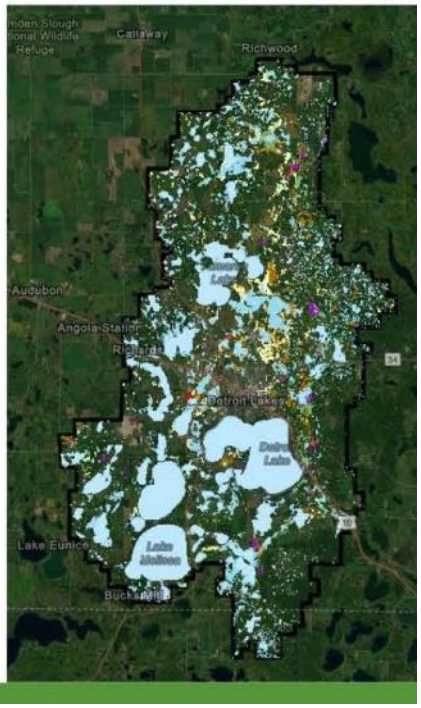
PRWD is completing the FEMA Flood Mitigation project in 2024. A Hydrologic & Hydraulic (H&H) model map was developed to identify flood prone areas. This information will assist with developing future projects to reduce flood risk.

Four flood prone areas were identified.

- Highway 21 at Rice Lake Road
- Pelican River at North Shore Drive
- Sucker Creek at Mountain Road
- East Munson Drive

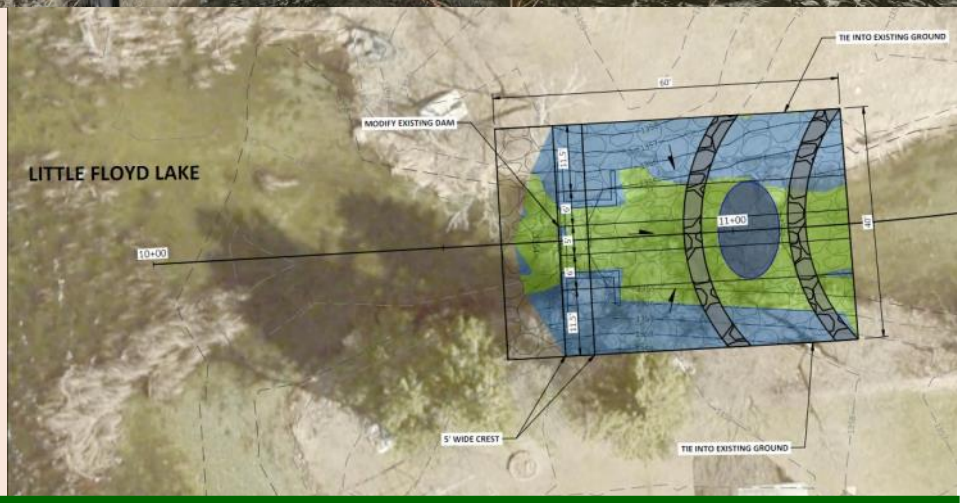
You can report observed flooding at the PRWD website under the resources tab under Special Studies.

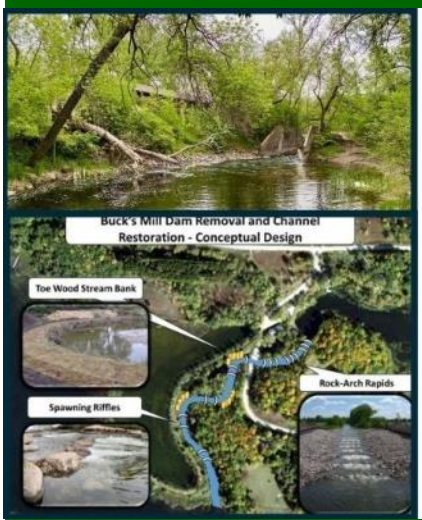
https://prwd.org/resources/fema-flooding-study/



Little Floyd Dam—Rock Arch fishway Installation

In 2023, the District was awarded a MN DNR Conservation Partners Legacy Grant to modify the current Little Floyd Lake dam into a rock arch fishway to provide a long-term fix to the aging dam/fish barrier which will improve the functionality of the outlet, provide easier dispersal for river species upstream and downstream, and provide spawning substrate for sturgeon and other fish species. Construction is scheduled for 2024.





>>> WHAT TO WATCH IN 2024

- **Little Floyd Lake Rock Arch Rapids -** In collaboration with the MN DNR, the current Little Floyd Lake dam will be constructed into a rock arch rapids to improve fish passage.
- **District Rules Revision -** PRWD will be updating and clarifying its Water Management Rules in 2024. Look out for stakeholder meetings in the summer of 2024 to add your input!
- **Willow Street Stormwater Management** - The feasibility study will provide measures to increase phosphorus removal of stormwater runoff to St. Clair Lake.
- **Bucks Mill Dam Modification** - in collaboration with the MN DNR, PRWD will undertake design and construction on the addition of a rock arch fishway to Buck's Mill Dam.

Education & Outreach

Education and Outreach activities continue to be a priority for Watershed District staff and we continue to expand areas of involvement in both the community and in our schools. In 2023, our monthly radio segment on "Hodge Podge" was moved from the third Friday of the month to the third Thursday. This outreach along with our website and Facebook page, help us communicate to the public all current District information in a timely manner.

Aquatic Invasive Species (AIS): Early in the year, Moses reached out to local STEM teachers regarding a classroom session on Aquatic Invasive species found in our area lakes, including research and treatment done by the District. It was determined that this topic would fit well with the science standards for 5th grade students. She first presented to 7th & 8th grade students at Holy Rosary School in February, and then in March presented to over 200 fifth graders at Rossman and Roosevelt school.

WaterFest: Moses & Kemper presented at this annual event, hosted by the City of Detroit Lakes, on April 21 at the DLCC to area fourth graders. Students received an introduction on what a watershed district roles and responsibilities, and then are shown how waters flows through the watershed with a model, which helps them understand how human behavior can effect water quality.

WaterFest—Frazee: The Frazee School District held their own fourth grade WaterFest and invited PRWD staff to present on May 22. The timing allowed our new summer interns, Kritzberger & Reding, to gain educating experience in the classroom.

Rossman WaterFest: Moses mentored (4) fourth grade students on stormwater practices in the District and they in turn presented to their classmates and parents on local stormwater best management practices.

Hamden Slough Field Trip: This event was the first field trip for 1st grade students and was possible because of an environmental grant from the District. Kemper taught the students using a water table model. Students are able to visit the site as first graders in the spring and again in the fall as second graders to observe the seasonal changes.

Envirothon: This event took place on May 3 at Detroit Mountain and involved high school students. Kemper served as a judge at the Wildlife station.

Lake Association Meetings: Kemper spoke with Buffalo-Rock-Rice Lake Association on June 24 on the topic of lake stewardship. Manager Kral addressed the Long Lake Association on July 15 on District happenings, and Guetter spoke at the Floyd Shores Point meeting on August 19.

Becker County Fair: On July 26-29, PRWD staff Moses, Kemper and summer interns manned the PRWD tables in the MN DNR building at the Fair. The heat was brutal the first two days, but cooled down slightly the last two days. A second button maker was purchased this year, and several hundred environmental buttons were created by local children.

Rotary Meeting: Guetter presented on October 31 on District projects and programs. She received many positive comments on District work.

Lake Handouts: These handouts are developed annually for the District's four largest Lake Management areas: (1) Detroit/Rice, (2) Floyd/Campbell, (3) Sallie/Melissa, and (4) Long. They are available for distribution at lake association meetings and contain information on monitoring results, upcoming aquatic invasive species treatments, shoreline permit requirements, District projects and grants, weather influences, and upcoming events.

Environmental Education

Environmental Education Grants continued in 2023 for the second consecutive year. Watershed District staff worked with Detroit Lakes Public School staff to ensure that students would get the most out of the experience in the outdoor classroom by matching state standards required for each grade with what is being taught at each station on site.

Photos on this page were taken while students were at the Cormorant Conservation Club, the Ike Fischer Farm, and the Sucker Creek Preserve. Stations set up on these sites include topics such as birding, trees and logging history, water bugs, aquatic invasive species, how to use a compass, pollinators, soils, water quality testing, etc.

The District is receiving excellent feedback from both teachers and government agency staff who have been involved with students during environmental field trips. The experience is invaluable for the children, and it is our hope that we are sparking a conservation fire in some of them.



The District also budgets for science education classroom supplies to assist teachers with needed funding, however, only one grant application was received in 2023, down from three in 2022. There are also grants available for service groups, but no applications were received in 2023.

And lastly, the pollinator area, which was planned in 2022 and planted during the winter/spring of 2023, at the new South Shore Park in Detroit Lakes, should be ready for students to visit within the next 2-3 year period. Watershed District staff continues to work with City of Detroit Lakes staff for signage at this site that will help students identify plants and pollinators as they stroll through the limestone walking path.

Grant Recipient	Grant Purpose	$ Amount
City of Detroit Lakes	Water Fest Contribution	$250.00
Holy Rosary Catholic School	Microscope slides	$321.74
Detroit Lakes Public School	Spring Environmental Field Trip: Hamden Slough & Ike Fischer Farm	$1,956.20
Detroit Lakes Public School	Fall Environmental Field Trip: Ike Fischer Farm & Cormorant Conservation Club	$812.25
Detroit Lakes Public School	Fall Environmental Field Trip: Sucker Creek Preserve	$660.00

Drainage Authority

Becker County Ditch Systems 11-12, 13 & 14

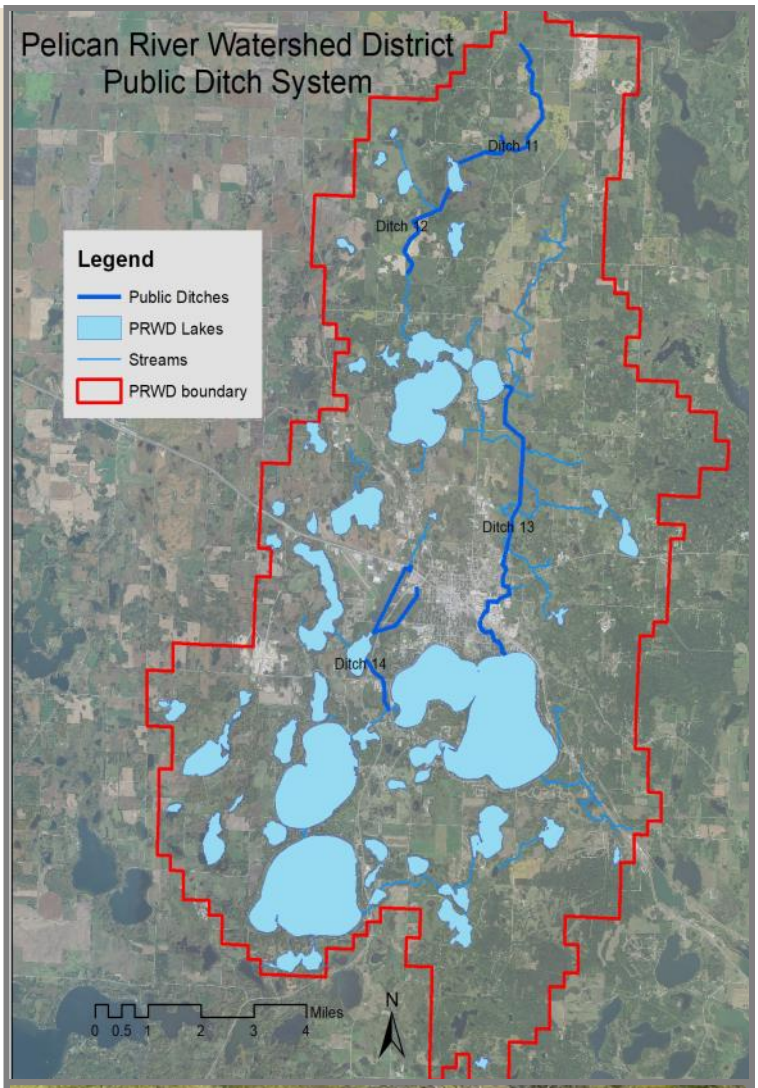
In the late 1990's, Becker County Commissioners transferred the drainage authority responsibilities of Becker County Ditch 11/12 (Campbell Lake/Creek area), 13 (Floyd Lake, Rice Lake, City of Detroit Lakes area), and 14 (St. Clair Lake, City of Detroit Lakes area) to the Pelican River Watershed District.

These drainage systems were constructed from 1913 to 1918 for agricultural improvements. The management of these systems follows MN Statute 103E and the costs associated with the drainage systems are paid for by the benefitting properties.

Most of the District's work as the Drainage Authority centers on beaver control and removing debris blockages from the drainage channel. In addition, these systems are governed by a MN Statue 103E and the MN Buffer Rule. The District is responsible for enforcement of the required buffers.

In 2023, there were no reports of beaver activity on Ditch 11-12. Late in the year, there was activity reported on Ditch 14 and trapping was started, however, due to weather conditions, it was delayed until early 2024.

As in the recent past, most of the beaver activity occurred on Ditch 13 with maintenance costs totaling $4560.



7/31/23	Ditch 13: Dam removal + 2 beaver trapped—8th St. Trailer Park	$300
10/9/23	Ditch 13: Dam removal—11th Ave. by Dog Park	$500
10/9/23	Ditch 13: Dam removal—Long Ave.	$600
10/13/23	Ditch 13: Dam removal + 8 beaver trapped—Rice Lake	$900
10/8/23	DDitch 13: am removal + 4 beaver trapped– Dillon Culverts	$500
10/8/23	Ditch 13: 2 beaver trapped—South of 8th St.	$200
10/8/23	Ditch 13: Dam removal + 3 beaver trapped—Lori Ave/Jackson Ave.	$300
11/2/23	Ditch 13: 8 beaver removed-Rice Lake Project	$800
11/7/23	Ditch 13: Dam removal + 4 beaver trapped—Jackson Ave.	$460

2023 Climate

First Quarter 2023 – Winter
Months: January – March

Average temperatures for the first quarter of 2023 were at or slightly above the historical averages for the highs and the lows In January and February, but substantially dropped 12°F below the
10-year average for both highs and lows in the month of March. The lowest recorded temperature was -24°F on February 2nd and 3rd, and the highest temperature during this period was 46°F on February 8th. Fluctuations are not uncommon in the first quarter of the year.

The first quarter started with below average precipitation, with total rainfall being 1.69", 0.36" less than historic average and snowfall being 40", 14.59" above average.

Second Quarter 2023 – Spring
Months: April – June

Second quarter temperatures were slightly below the historical average for the first third of the quarter, toward the last two thirds of the quarter the highs and lows were at or slightly above the historical average.
Average highs and lows for April were 45°F and 25°F, with the second quarter's lowest temp being 3°F on April 7th. May average highs and lows were 72°F and 48°F. June's average high was 80°F and average low was 60°F. June had the highest recorded temperature of the quarter with 91°F on the 20th.

Second quarter rainfall had a total of 1.09 inches falling in April, 2.63 inches, in May and 1.94 inches, in June. This was a grand total of 5.66 inches of rainfall in the second quarter. This was 3.91 inches less than the 10-year average total second quarter rainfall. We had a total of 5.00 inches of Snowfall only in April which is 1.43 inches more that the historical 10-year average of all 3 months.

Third Quarter 2023 – Summer
Months: July – September

Third quarter temperatures seemed to have trended closer to historical average temperatures. The average highs and lows for July were 79°F and 58°F. The hottest day in July was on the 19th with a reading of 91°F and the coolest days in July were on the 6th & the 11th with a reading of 46°F. The average highs and lows for the month of August were 79°F and 60°F. The highest temperature recorded for August this year was 90°F, which was on the 22nd. The lowest temperature for August was on the 20th, with a temperature reading of 52°F. In September the high was recorded at 95°F on the 2nd and the lowest was recorded at 43°F on the 17th.

Precipitation greatly varied between July through September. In July, rainfall was well below the historical average totaling only 1.14 inches (2.94 inches below the 10-year average monthly rainfall 4.08
inches). August also fell short of reaching the historical average, with just 2.93 inches, it fell just below the 10-year monthly rainfall average by 0.47 inches.

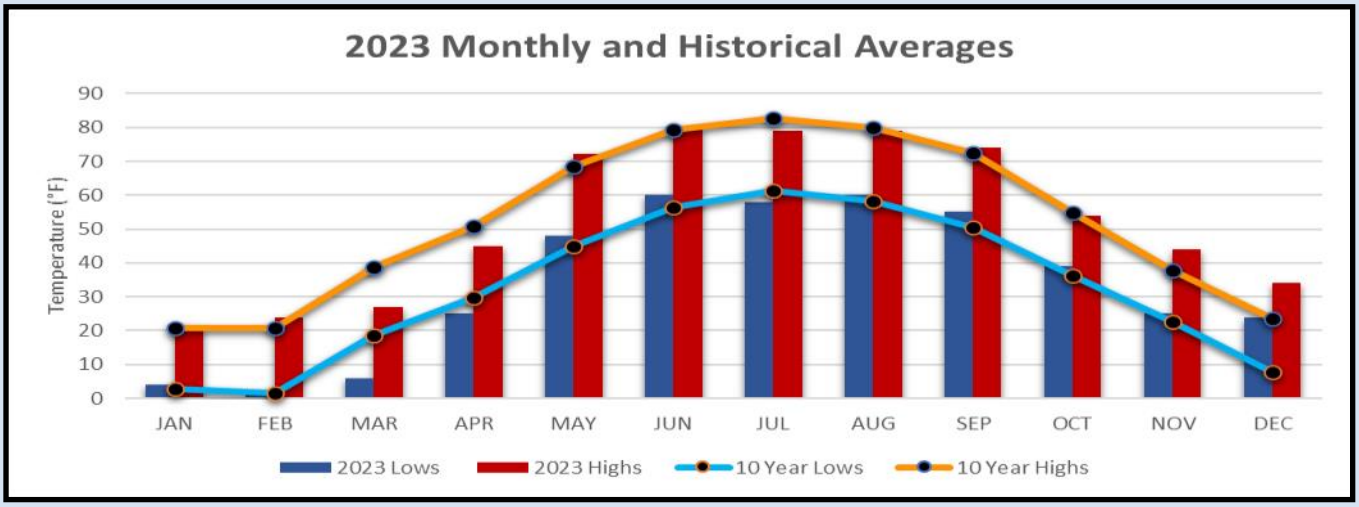
September was a much-needed soaker with a total of 4.49 inches, 1.50 inches above the ten-year monthly average of 2.99 inches.

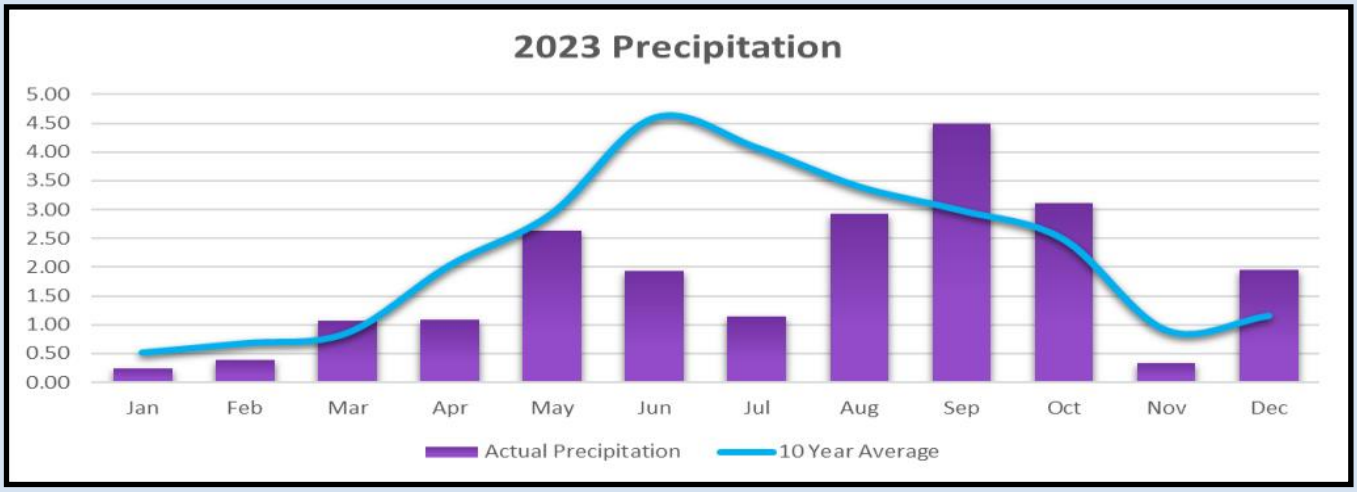
Fourth Quarter 2023 – Fall
Months: October – December

Fourth quarter high temperatures followed the historical average temperatures in the beginning of the quarter but then it started to increase and rise above the 10-year historical average towards the second half. For the month of October, the average high temperature for the year was 54°F which was 1 degree cooler than the 10-year historical average of 55°F. The warmest day was on October 1st with a temperature of 88°F. The average low for the month of October was 39°F, which is 3 degrees warmer than the 10-year historical average of 36°F; with the lowest temp for October 2023 being on the 29th, with a temperature of 17°F. In November, the average highs of 44°F were higher than the historical average high temps of 38°F by 6 degrees. The average low for November was 25°F, which was 2 degrees warmer than the historical average of 23°F. The highest temperature for November was 60°F on the 14th, and the lowest was 2°F on the 27th. During the month of December, the average highs were 34°F and the lows were 24°F. The historic average high and low were 24°F and 8°F, so it was quite a bit warmer. The highest temperature for December was 52°F on the 7th and the lowest was 5°F on the 18th.

October was the second wettest month of the year, with a total of 3.11 inches of rainfall which was well above the 10-year historical average of 2.48 inches. We received 1.70 inches of snow which was 0.11 inches less than the 10-year average of 1.81 inches. In November there was 0.34 inches of precipitation recorded, with 1.00 inches of snowfall which is well below the 10-year historical average of 4.47 inches of snowfall. During the month of December, we received 1.96 inches of precipitation and 3.16 inches of snowfall. This was above the historical average for precipitation (1.15 inches) but well below the average historical snowfall (13.28 inches).

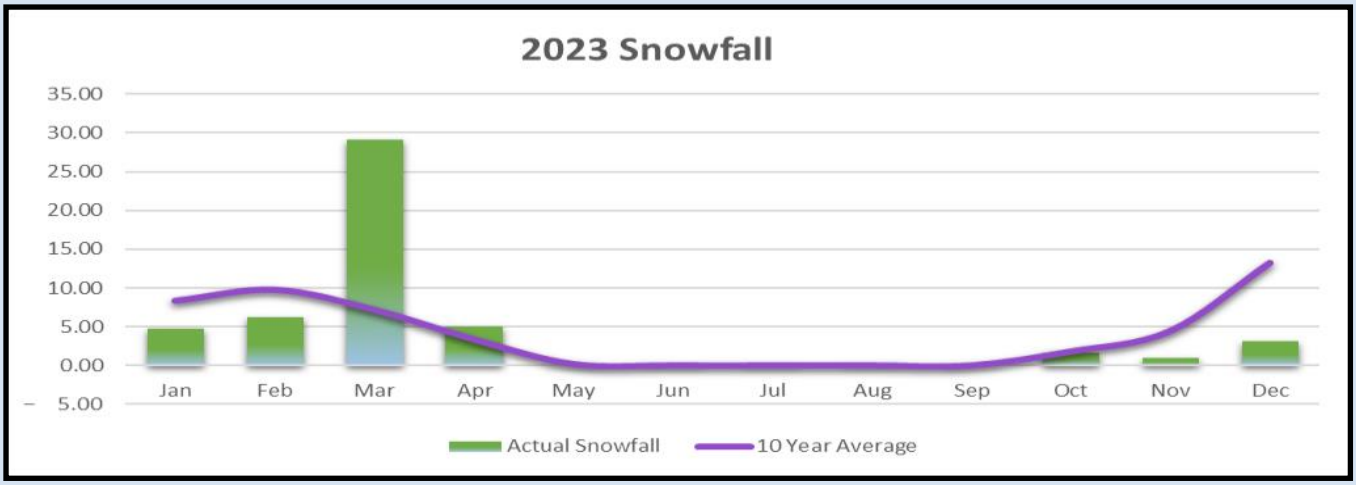
2023 Climate





Rainfall events in Detroit Lakes >0.5" April-October 2023

Date	Inches	Date	Inches	Date	Inches
4/21/2023	0.62	8/9/2023	1.47	10/4/2023	0.72
5/7/2023	1.00	9/6/2023	0.67	10/12/2023	1.48
6/25/2023	0.75	9/24/2023	2.60		
8/7/2023	0.57	9/30/2023	0.81		

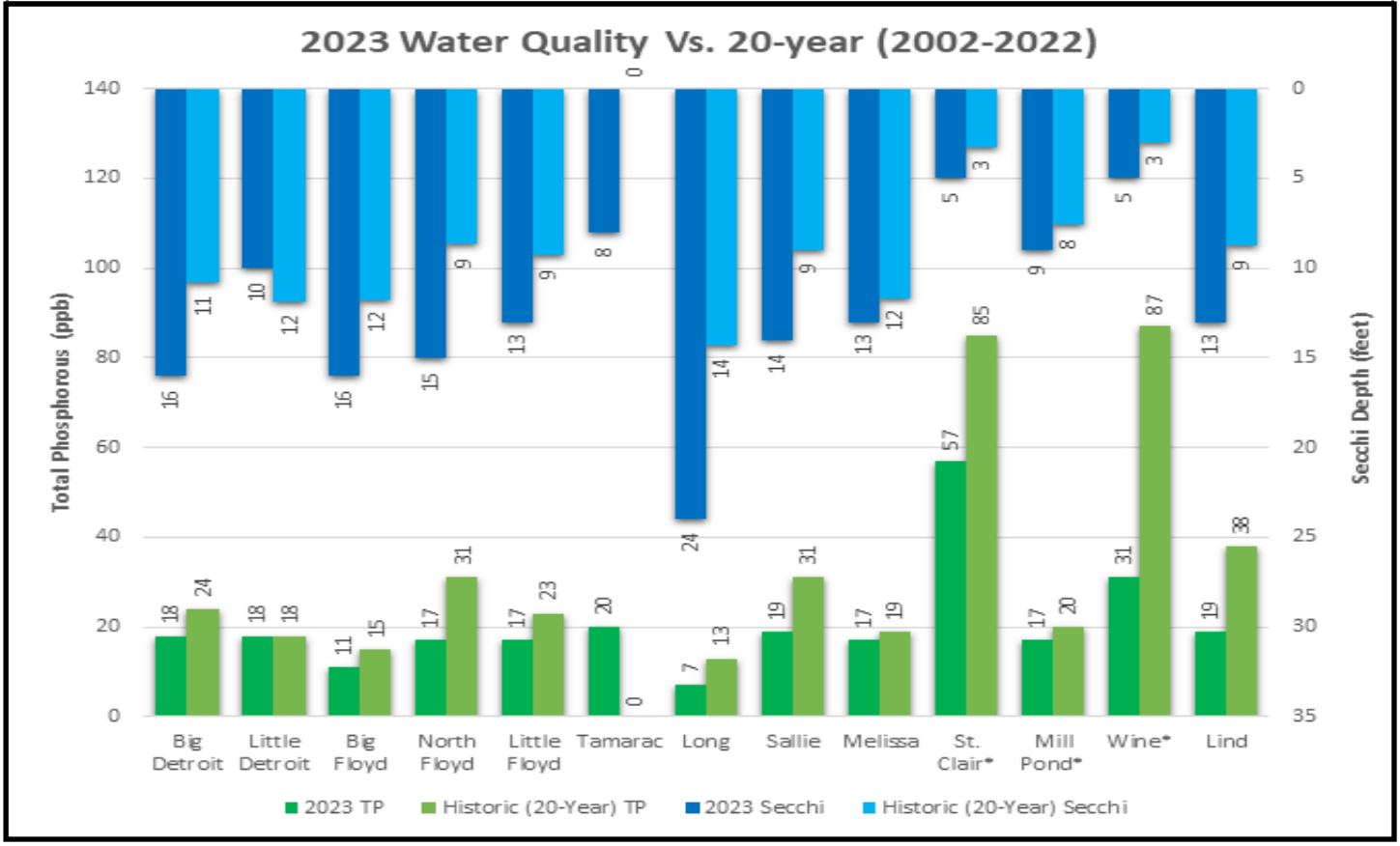


2023 Water Quality Summary

More detailed information can be found in the 2023 PRWD Monitoring Report located on our website at www.prwd.org

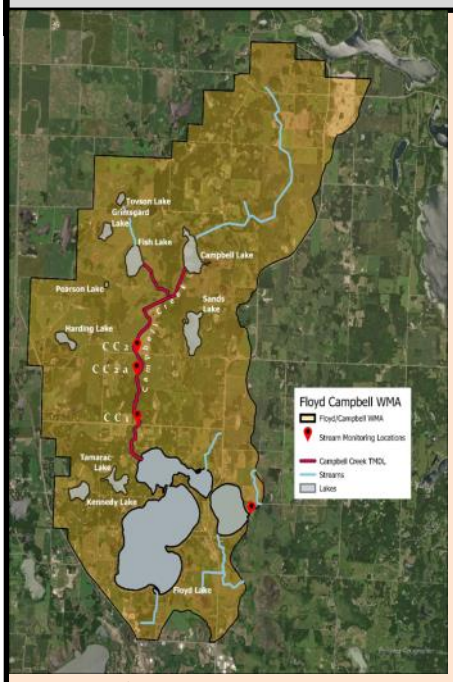
Water Management Area	Lake	2023 Average			20-Year Average (2002-2022)			MNPCA Lake Standards		
		TP (ppb)	Chl-a (ppb)	Secchi (feet)	TP (ppb)	Chl-a (ppb)	Secchi (feet)	TP (ppb)	Chl-a (ppb)	Secchi (feet)
Detroit/Rice	Big Detroit	18	3.95	16	24	6.68	11	<40	<14	>4.6
	Little Detroit	18	5.84	10	18	3.94	12	<40	<14	>4.6
Floyd/Campbell	Big Floyd	11	3.62	16	15	4.67	12	<40	<14	>4.6
	North Floyd	17	4.11	15	31	13.39	9	<40	<14	>4.6
	Little Floyd	17	3.62	13	23	8.76	9	<40	<14	>4.6
	Tamarac	20	5.93	8	--	--	--	<40	<14	>4.6
Long	Long	7	1.82	24	13	3.97	14	<40	<14	<4.6
Sallie/Melissa	Sallie	19	3.49	14	31	11.18	9	<40	<14	>4.6
	Melissa	17	3.18	13	19	6.31	12	<40	<14	>4.6
	St. Clair*	57	15.81	5	85	36.96	3	<60	<20	>3.3
	Mill Pond*	17	3.42	9	20	10.06	8	<60	<20	>3.3
Brandy/Wine	Wine*	31	5.51	5	87	22.81	3	<60	<20	>3.3
Small Lakes	Lind	19	4.95	13	38	12.45	9	<60	<20	>3.3

**Shallow Lake*



Floyd/Campbell Creek Water Management Area

2023 Activity Summary



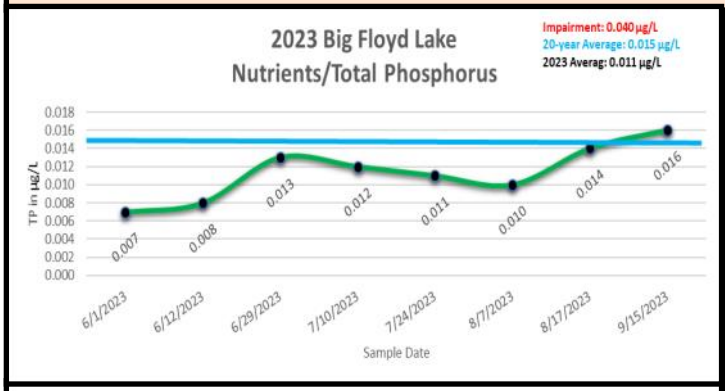
The Floyd/Campbell WMA

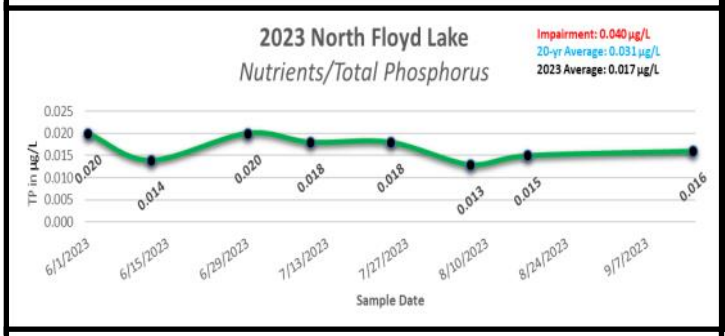
In 2023, the District conducted water quality sampling on the Floyd Chain of Lakes including Tamarac Lake.

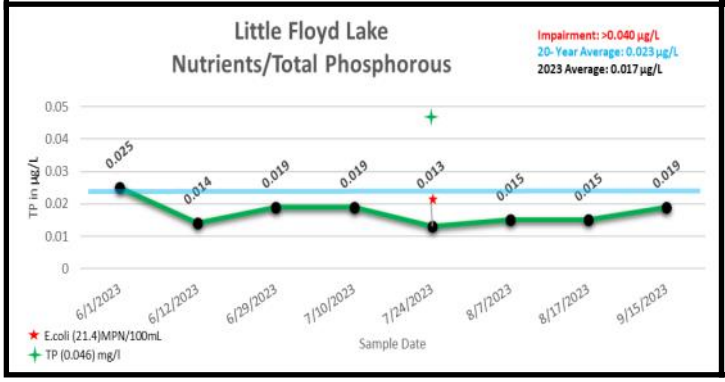
The 2023 average Total Phosphorus (TP) on Big Floyd Lake was 0.011 µg/L, which is an improvement from the 20-year average of 0.015 µg/L. North Floyd Lake's TP was 0.017 µg/L a great improvement from the 20-year average of 0.031 µg/L. Little Floyd 's average TP also saw improvement (0.017µg/L) from the 20-year average of 0.023 µg/L.

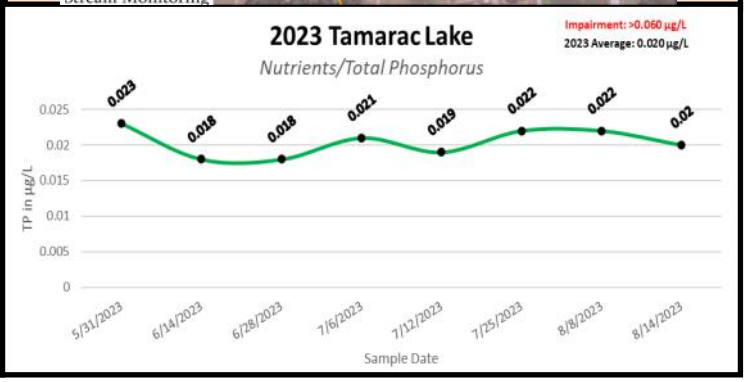
2023 was the first year of water quality monitoring on Tamarac Lake. Due to this we do not have a historical average to compare it to, however compared to the MPCA impairment standards Tamarac Lake appears to be overall healthy lake when looking at the 2023 average water quality results. TP was 20 µg/L which is great compared to the MPCA impairment standard (>60 µg/L).

Campbell Creek had a much-improved water quality year in 2023. A decrease in nutrient loads within Campbell Creek can be attributed to the lack of snowmelt and rainfall events that occurred from April – June. 2023 TP Nutrient loads (1,314lbs/year) at CC2 (Campbell Creek at 230th St) decreased by 729 lbs/year and the TSS load was 65 tons/yr a decrease by 135 tons/year from 2022. TP and TSS decreased from 6,132 lbs/yr (TP) and 1032 tons/yr (TSS) in 2022 to 1,405 lbs/yr (TP) and 251 tons/yr in 2023 at station CC1 (Campbell Creek at CSAH 149).



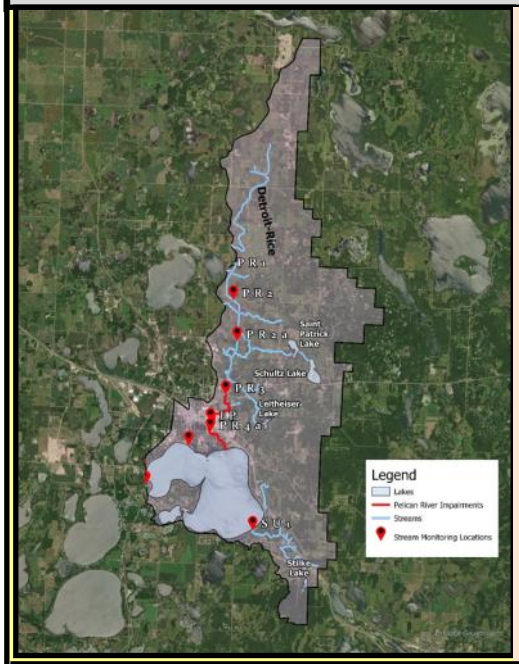






Detroit/Rice Water Management Area

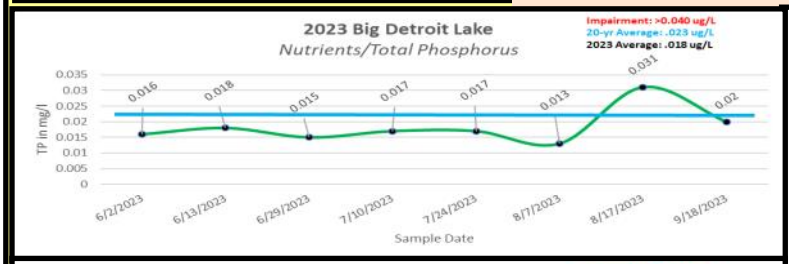
2023 Activity Summary

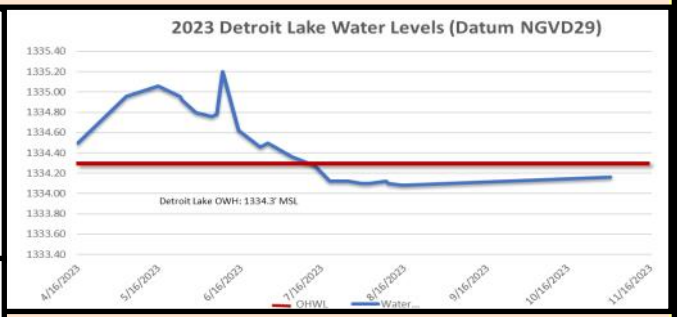


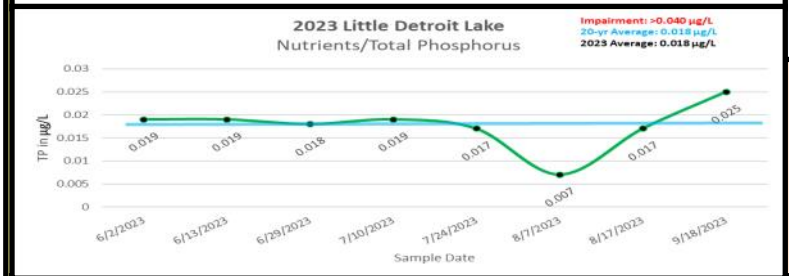
In 2023, the District conducted water quality sampling on Big and Little Detroit Lake as well as the Rice Lake stream system. The 2023 Average Total Phosphorus (TP) for Big Detroit was 0.018 ug/L, which was a slight improvement from the 20-year average of 0.023 ug/l. Little Detroit's 2023 TP average was the same as the 20-year average (0.018 ug/l).

Aquatic Invasive Species (AIS) herbicide treatments were also conducted on Big Detroit and Curfman to manage Flowering rush infestations. In 2023 , there was a total of 44.69 acres of Flowering Rush treated on Lake Detroit and Curfman. No Curly-leaf Pondweed (CLP) was treated in 2023 due to lack of presence during routine delineations in early spring. The MN DNR restricts CLP treatments to be conducted during early spring with cool water temperatures. CLP was later detected in areas in mid-June and PRWD mapped the areas (50 acres) for treatment in 2024.

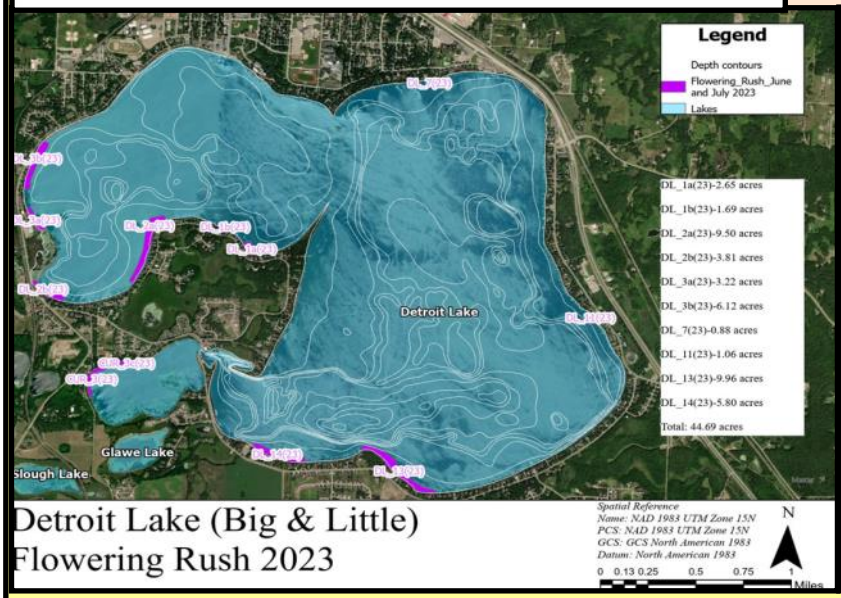
Water elevations were above the Ordinary High Water Level (OHWL) in the beginning of the monitoring season but dropped below towards the end of June and stayed below the OHWL the remainder of the season due to extended drought conditions. The last water level measurement on Detroit was taken on Nov. 1st just before lake ice –in. with an elevation reading of 1334.3 (NGVD 29)

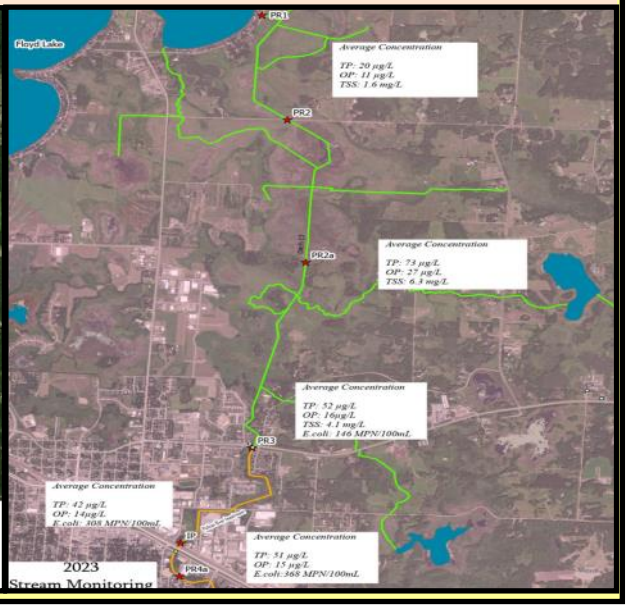






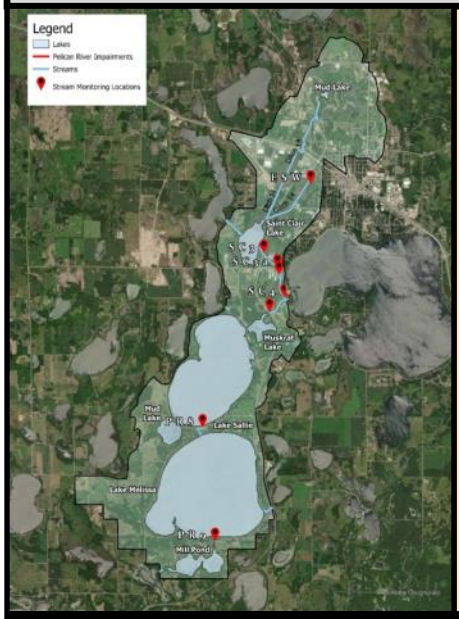
Due to the summer drought conditions, stormwater runoff was decreased and Ditch 13 (Pelican River from PR1—PR4a) saw an improvement in water quality conditions from the monitoring results. However, the E.coli levels remained elevated after storm events (>0.50 inches of rain).





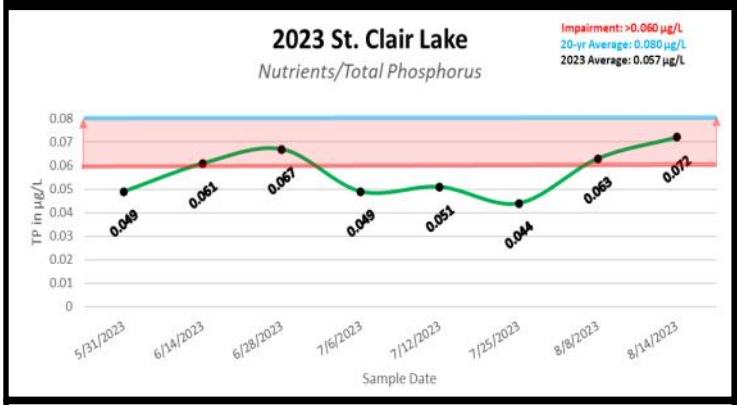
Sallie/Melissa Water Management Area

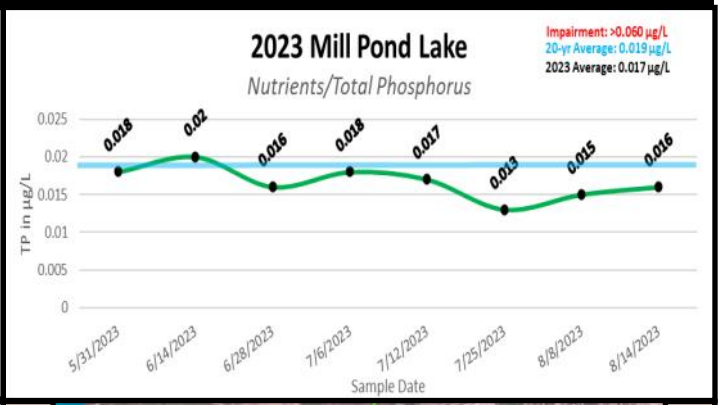
2023 Activity Summary

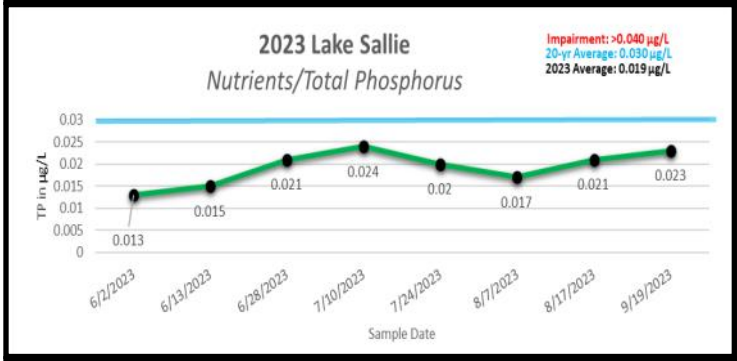


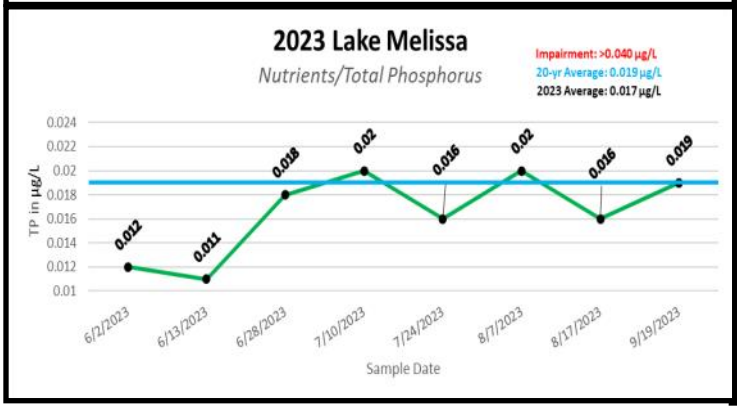
In 2023, the District continues to monitor water quality on Ditch 14, Pelican River, and St. Clair, Sallie, and Melissa, & Mill Pond lakes.

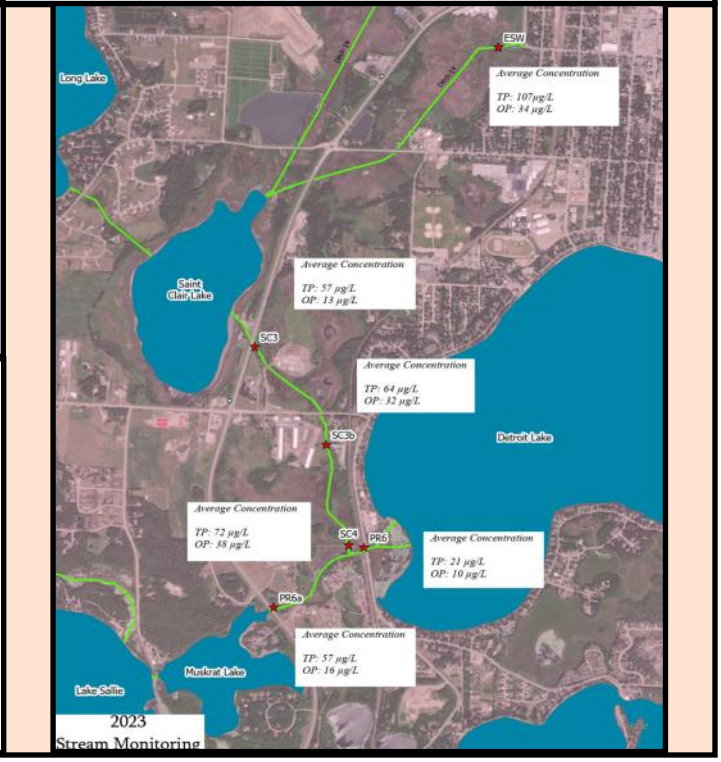
The average Total Phosphorus (TP) for St. Clair Lake was 0.057 ug/L which is better than the 20-yearaverage (0.080 ug/L), but very close to the MPCA impairment standard of >0.060ug/L. Lake Sallie's average TP was 0.019 µg/L , an improvement over the 20-year average of 0.030 µg/L . Lake Melissa's average TP was 0.017µg/L , which is slightly better than the 20-year average of 0.020 µg/L . The same results as Lake Melissa were seen in Mill Pond Lake, average TP was 0.017µg/L , and the 20-year average was 0.020 µg/L .





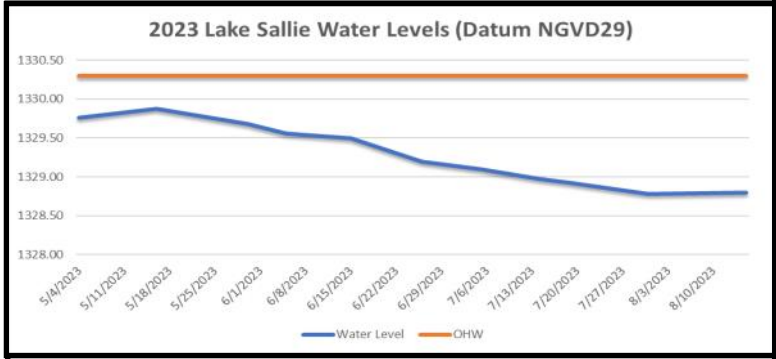


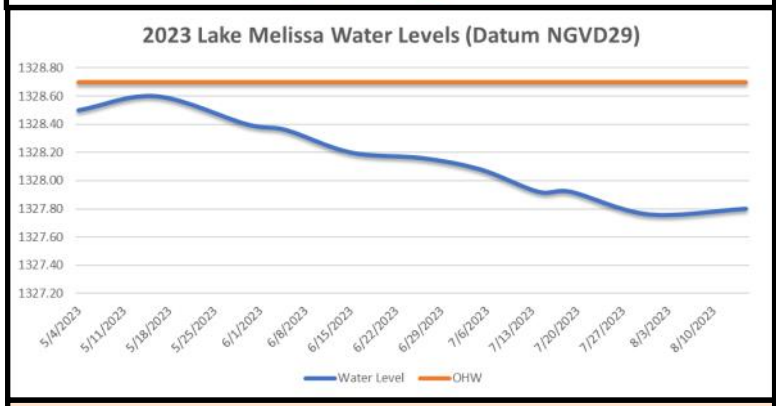




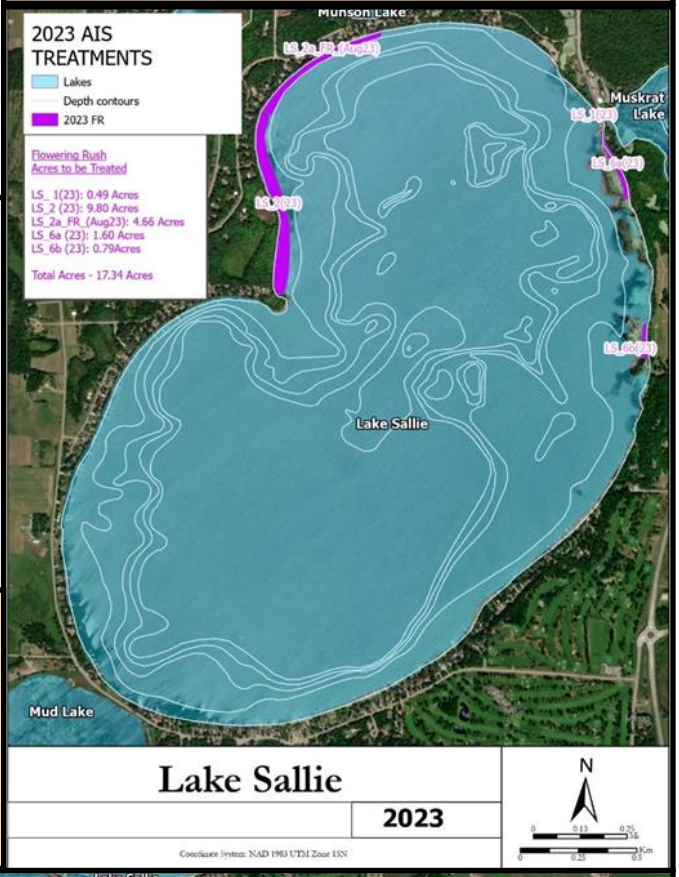
Sallie/Melissa Water Management Area

2023 Activity Summary

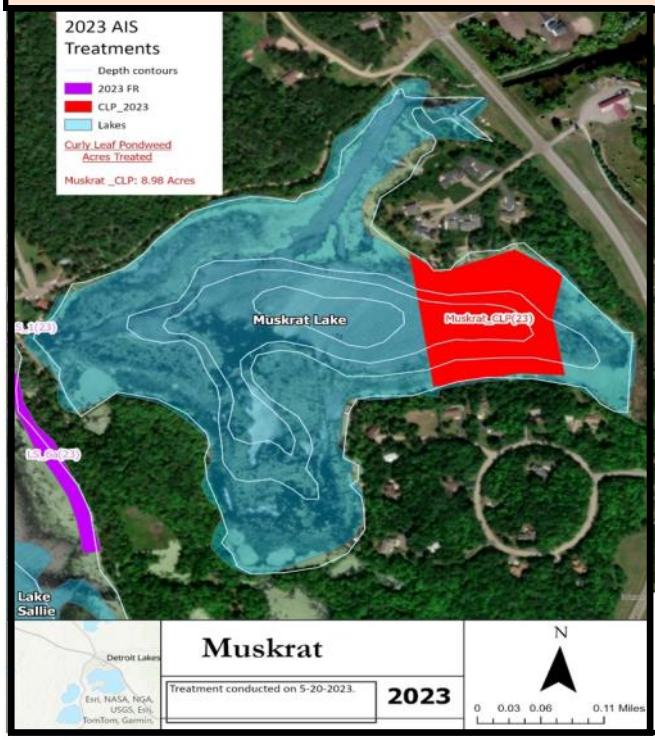


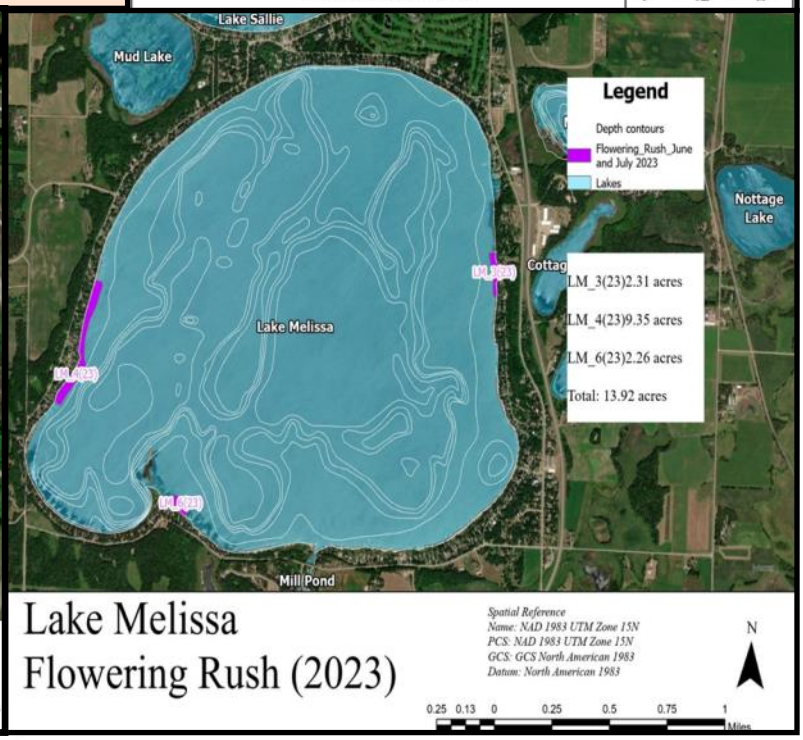


Water Levels for Lake Sallie and Melissa started close to their OHWLs but fell well below them from mid-May and through out the monitoring season.



AIS treatments of 8.89 acres of CLP was conducted on Muskrat 5/20/2023. There was no CLP treated on Sallie and Melissa in 2023. This was due to late season growth of CLP, but will be treated in 2024. Flowering Rush (FR) treatments were conducted on Melissa (13.92 acres) & Sallie (17.34 acres) on 6/27/23 & 8/8/2023.





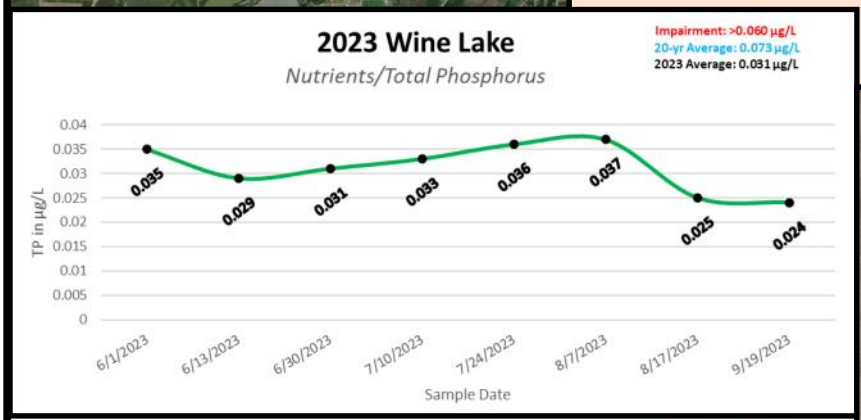
Brandy/Wine Water Management Area

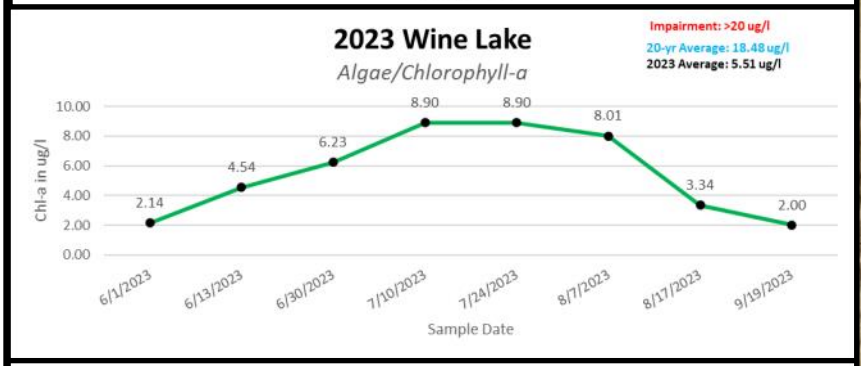
2023 Activity Summary

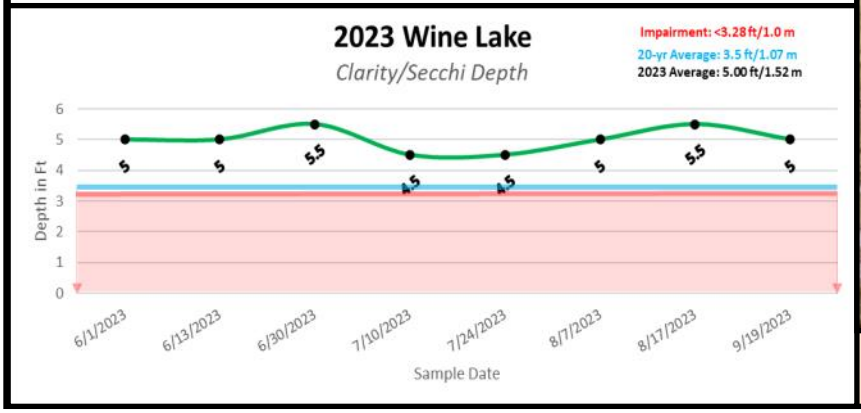
In 2023, Wine Lake experienced much-improved water quality. Total Phosphorus (TP) averaged 31 µg/L, a marked improvement over the historical (20 year) TP average of 73 µg/L / .

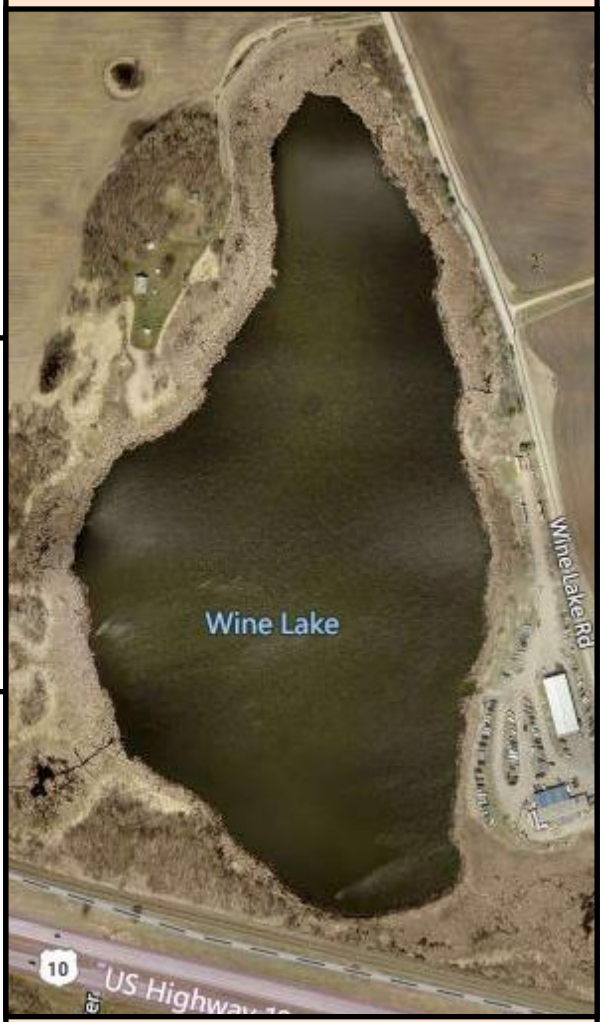
Chl-a levels were also much lower averaging 5.51 µg/L compared to the historic average of 18.48 µg/L.

Water clarity (secchi) followed the same improvement pattern with a annual average of 5 feet, 2.5 feet greater than the 20-year historic average of 3.5 feet.



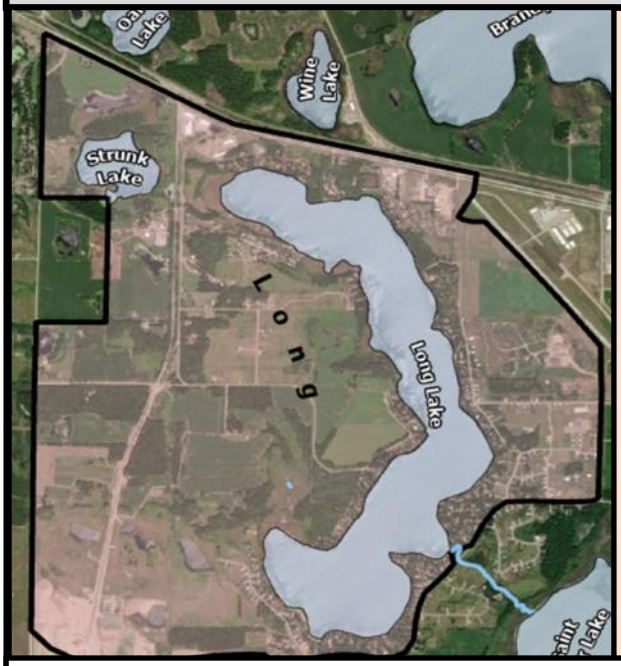






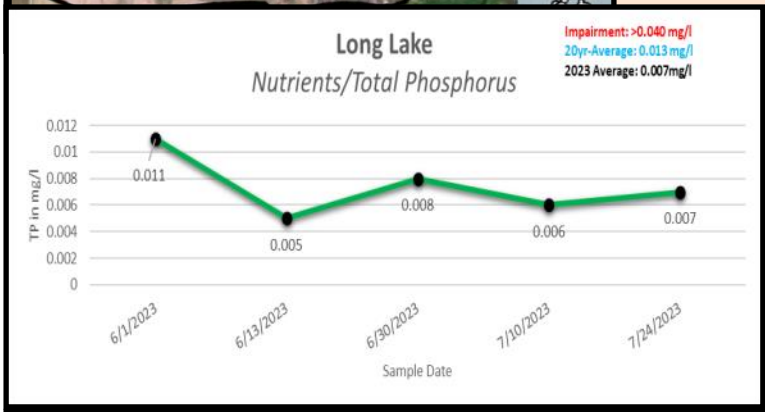
Long Water Management Area

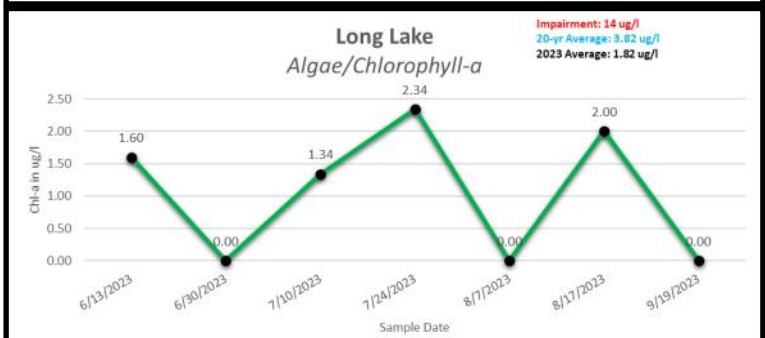
2023 Activity Summary

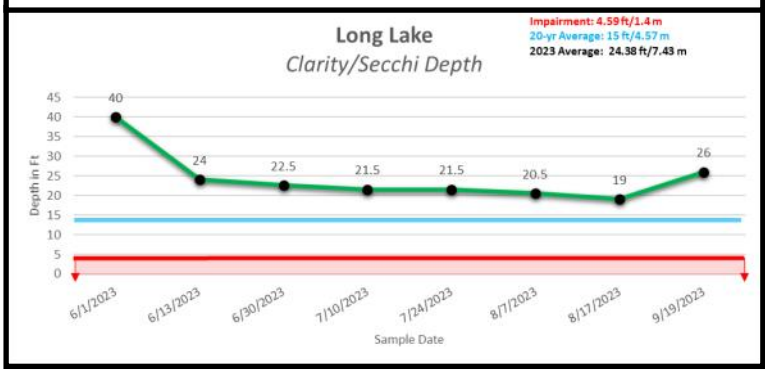


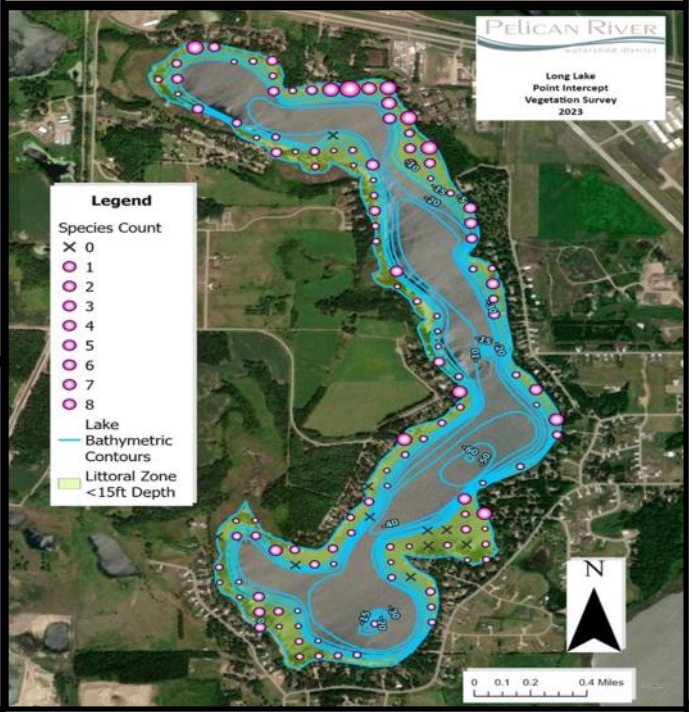
In 2023, Long Lake followed other area lakes with excellent water quality. Total Phosphorus (TP) average for 2023 was 7 µg/L compared with the 20-year average of 13 µg/L, CHL-A (algae) was 1.82 µg/L compared to the 20-year average of 3.82 µg/L,. Water clarity (secchi depth) averaged 24.38 feet, 9.4 feet better than the 20-year average of 15 feet. The lack of rainfall and stormwater runoff , emphasizes how sensitive lake water quality is affected by rainfall runoff from the surrounding watershed area.

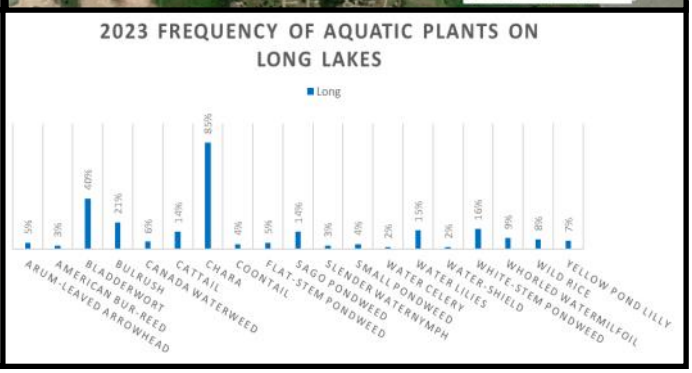
Long Lake Vegetation Survey. The first ever vegetation point-intercept survey of Long Lake (EQuIS# 03-0383-00-201) was conducted by the PRWD on July 20, 2023. There are 152 acres of the littoral zone (< 15 feet deep and where aquatic plants are likely to be found) for Long Lake. Of the 131 points sampled, 98% of the points had submersed native vegetation with a mean of 2.9 submersed native taxa per point.





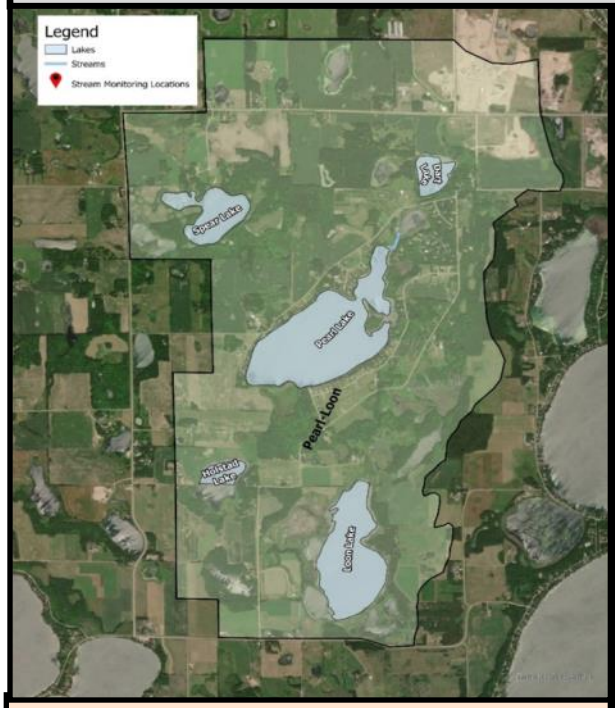


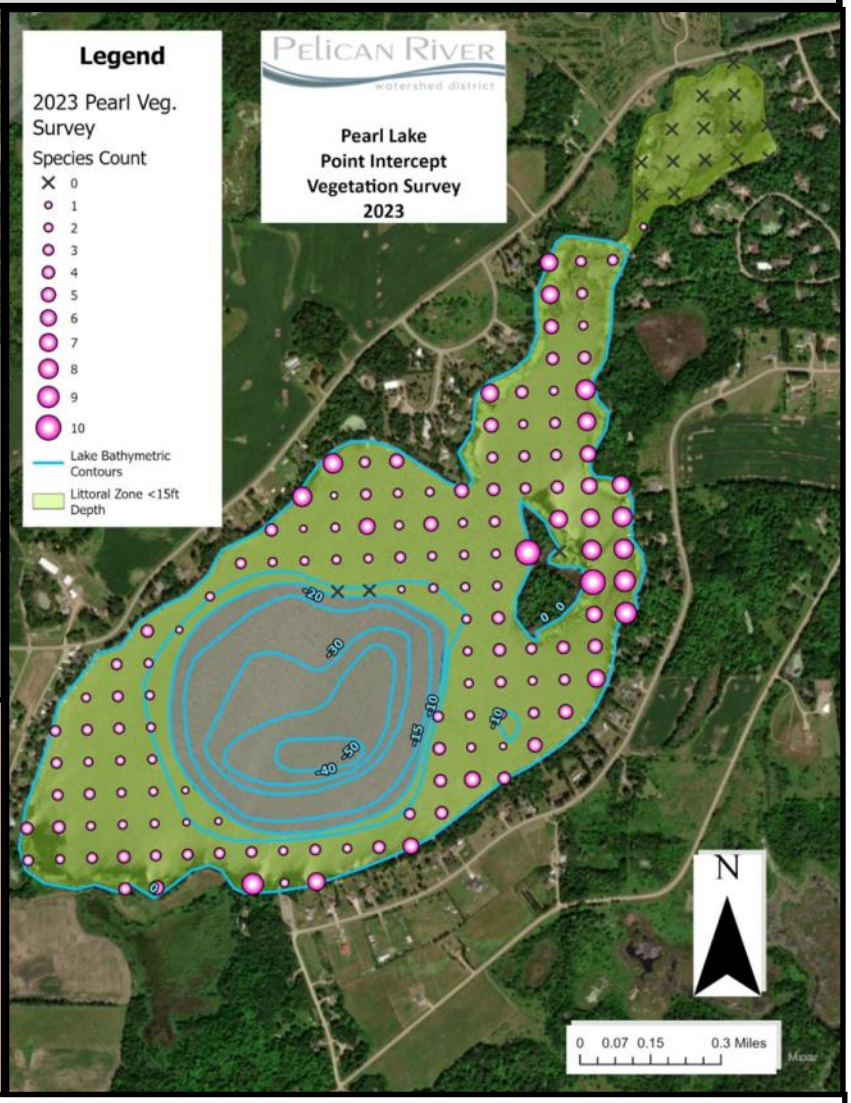




Pearl/Loon Water Management Area

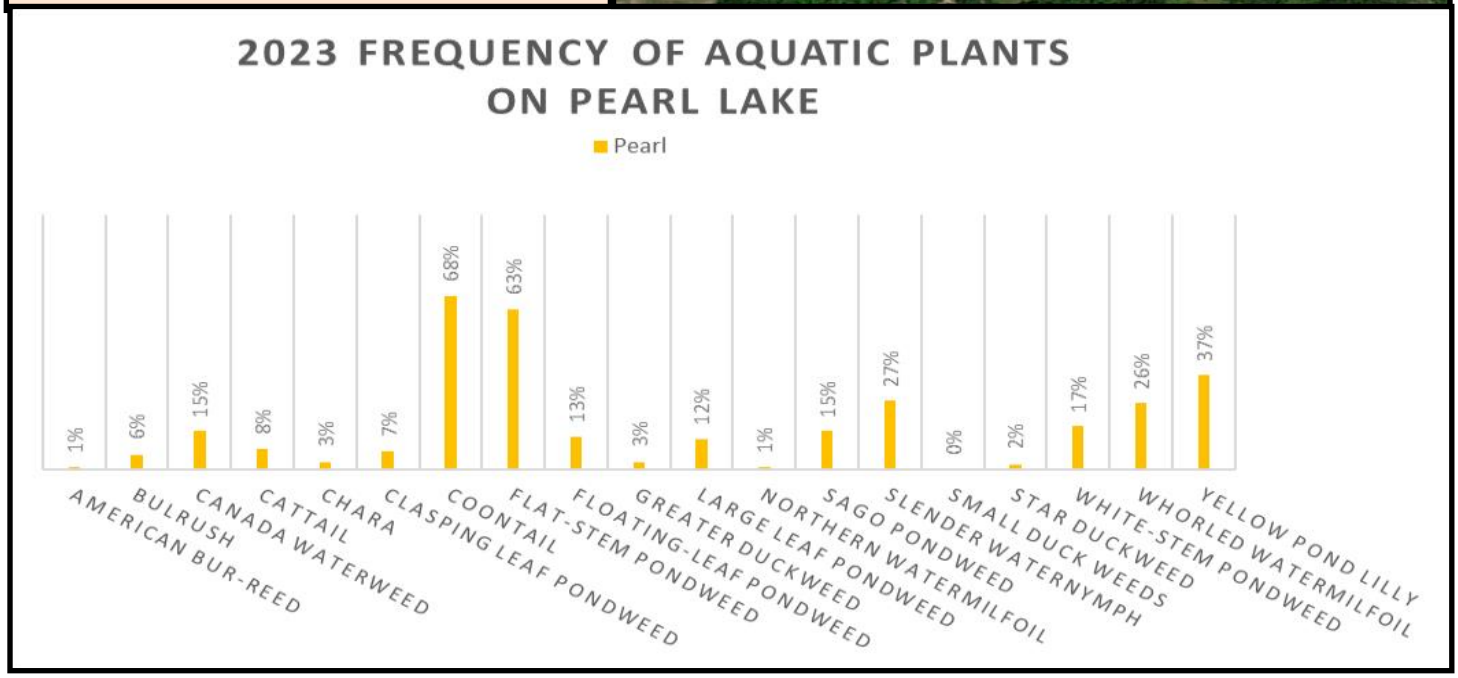
2023 Activity Summary





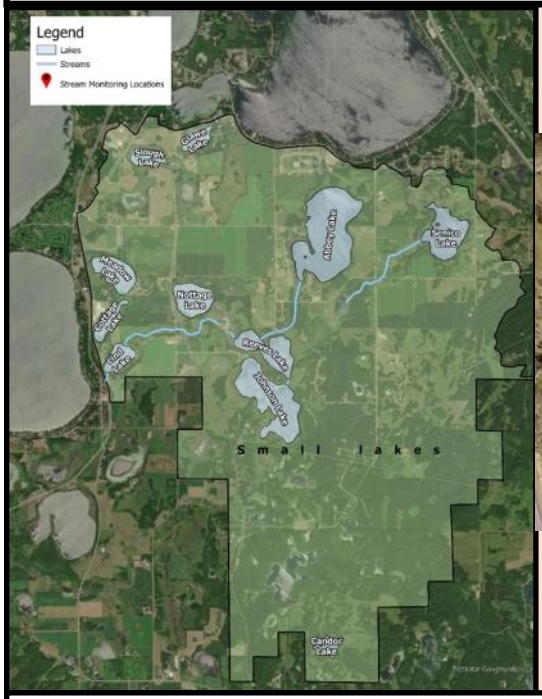
Vegetation Survey. A point-intercept vegetation survey of Pearl Lake (EQuIS# 03-0486-00-201) was conducted by PRWD occurred on July 18, 2023. There are 168.2 acres of the littoral zone (< 15 feet deep and where aquatic plants are likely to be found) for Pearl Lake.

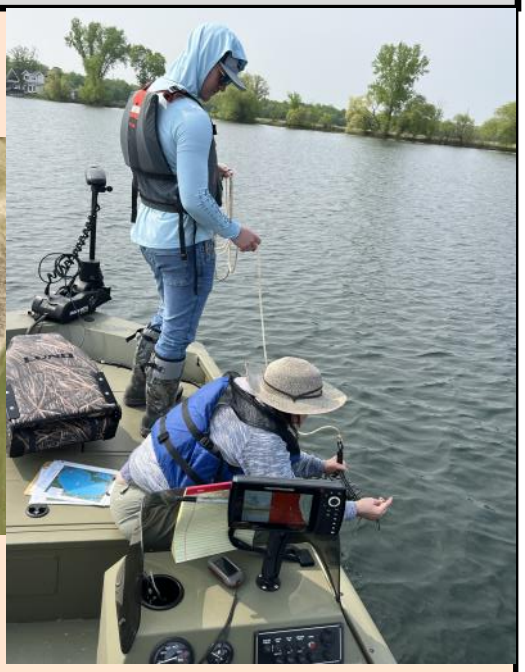
Of the 172 points sampled, 86% of the points had submersed native vegetation with a mean of 2.4 submersed native taxa per point.

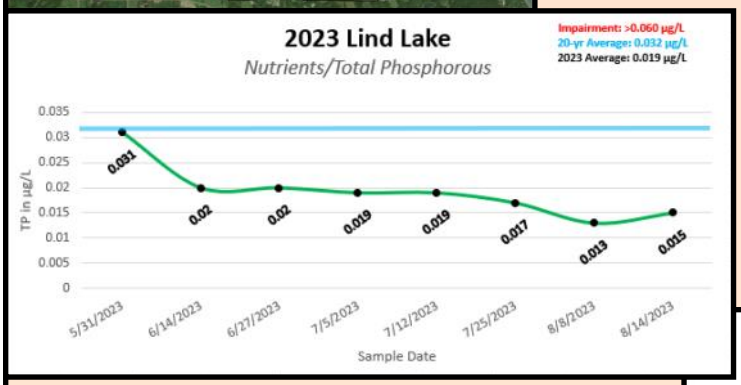


Small Lakes Water Management Area

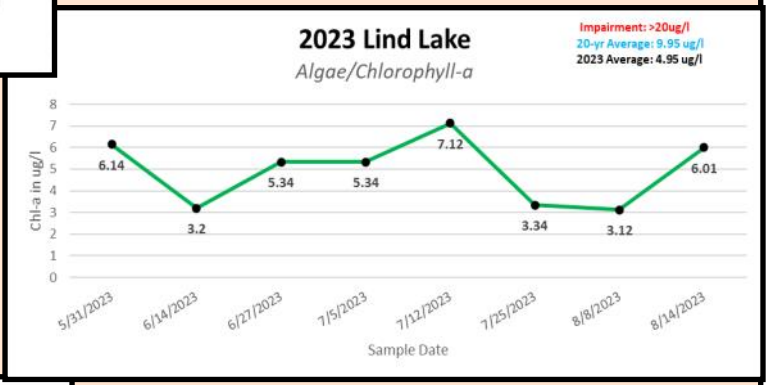
2023 Activity Summary



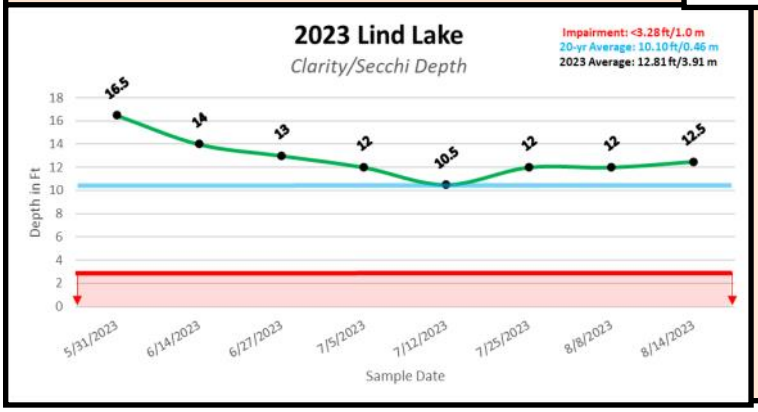




Lind Lake experienced “a good” water quality year in 2023. The TP averaged 19 µg/L, an improvement from the historic average of 32 µg/L.

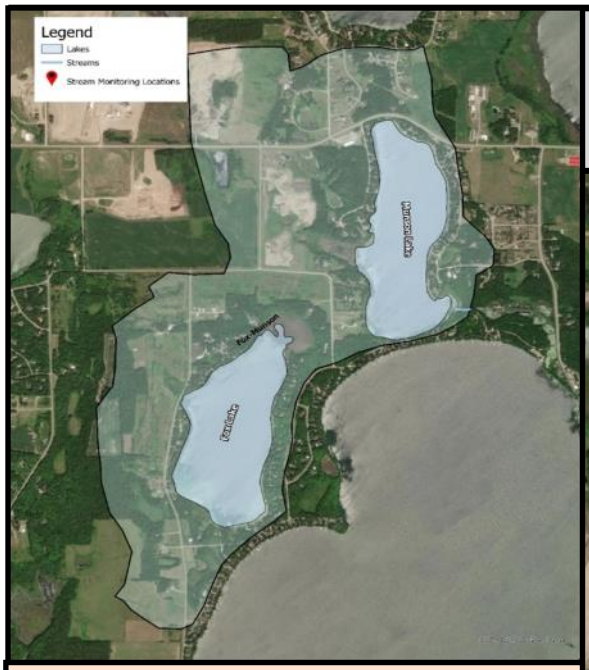


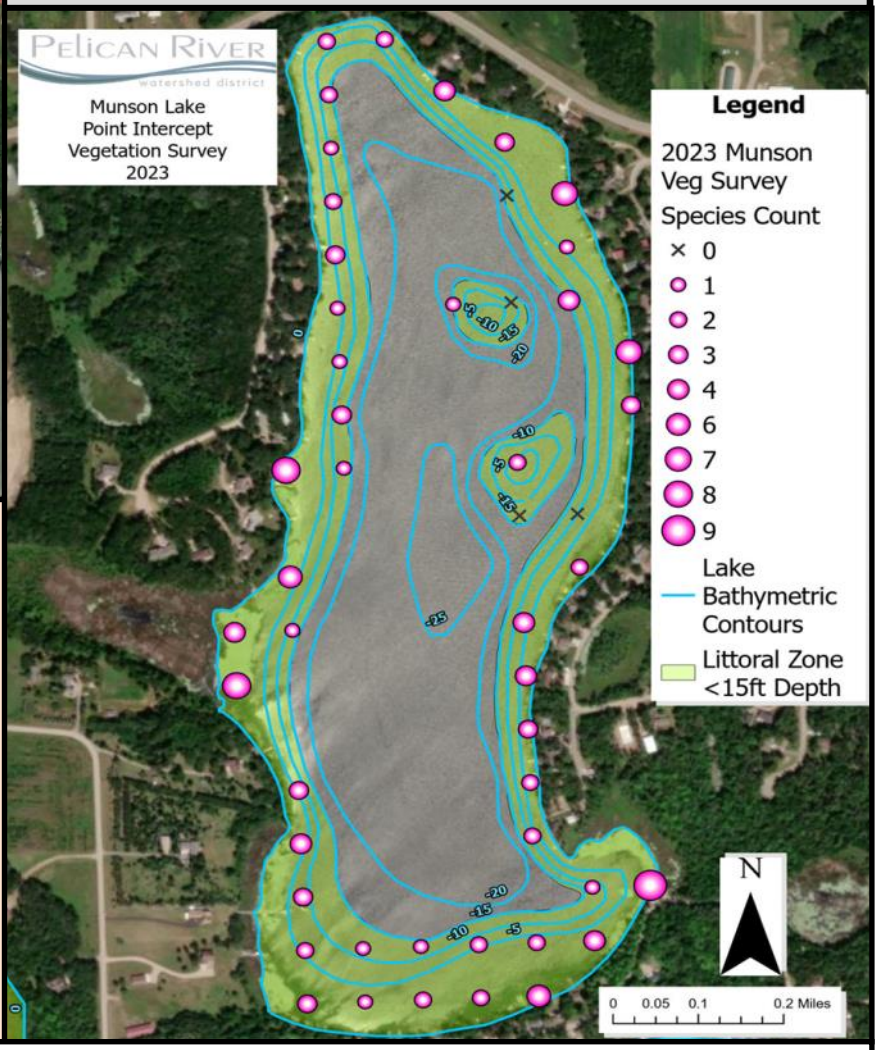
Chl-a was 4.95 µg/L also an improvement from the historic average of 9.94 µg/L.



Water clarity (secchi) average was 12.81 feet a little over 2 feet better than the 20-year historic average of 10.10 feet .

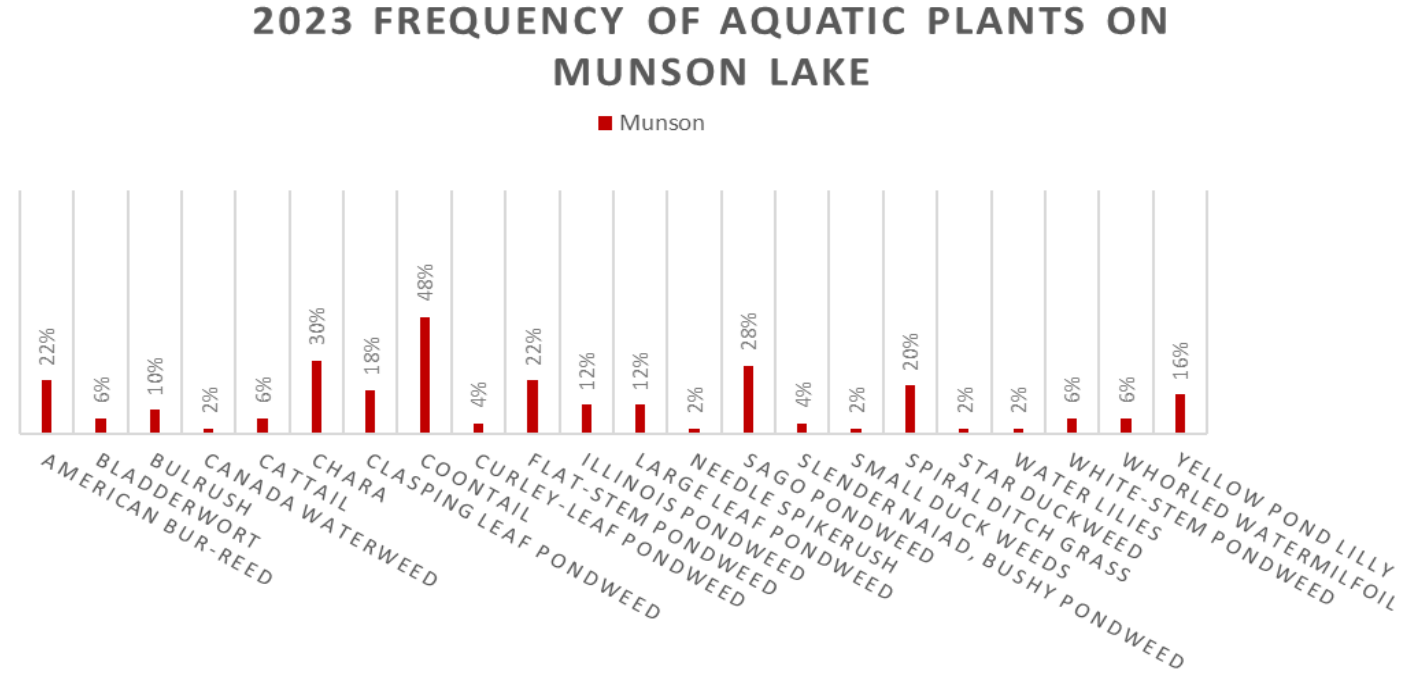
Munson/Fox Water Management Area
2023 Activity Summary





A vegetation point-intercept survey of Munson Lake (EQuIS# 03-0357-00-201) was conducted by PRWD on July 17th, 2023.

There are 48 acres of the littoral zone (< 15 feet deep and where aquatic plants are likely to be found) for Munson Lake. Of the 50 points sampled, 92% of the points had submersed native vegetation with a mean of 2.3 submersed native taxa per point.



Pelican River Watershed District
2023 Revenues Expenses

	General	Utility Stormwater	LMP-01	DCM-01	1B (Sal & Mel)	1C (Detroit & Curfman)	Ditch 11-12	Ditch 13	Ditch 14	Drainage Buffer Enforce
Income										
REVENUE	264,990.46	311,885.18	12,625.07	85,177.70	21,823.58	17,007.69	52.32	19,163.00	94.58	187.37
OTHER FINANCING SOURCES (USES)	60,473.93	-155,600.00	-7,500.00	14,000.00	-10,000.00	8,676.00	-1,000.00	-1,000.00	-1,000.00	6,797.00
Total Income	325,464.39	156,285.18	5,125.07	99,177.70	11,823.58	25,683.69	-947.68	18,163.00	-905.42	6,984.37
Expense										
Incentive Programs	0.00	4,000.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAPITAL OUTLAY	0.00	0.00	26,007.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Education & Outreach	1,045.98	1,648.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LEGAL DRAINAGE SYSTEM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4,560.00	0.00	0.00
PROGRAM ACTIVITIES	0.00	26,615.00	3,795.64	17,612.88	10,879.53	18,676.18	0.00	0.00	0.00	0.00
OPERATING EXPENSE	59,106.42	1,084.53	6.55	1,703.45	61.58	61.59	16.66	16.67	16.67	0.00
PAYROLL	246,153.71	43,751.69	0.00	58,745.14	0.00	0.00	0.00	0.00	0.00	0.00
CONTRACTED SERVICES	22,074.44	26,441.25	774.00	0.00	683.00	893.00	0.00	1,196.00	0.00	0.00
Total Expense	328,380.55	103,541.42	30,583.68	78,061.47	11,624.11	19,630.77	16.66	5,772.67	16.67	0.00

2024 Work Plan for Pelican River Watershed District Area and Pelican River sub-watershed Area

OTW 1W1P: Pelican River WD/Pelican River Watershed -Targeted Focus Areas

2023-2032 Otter Tail River 1W1P

Plan Partners: Becker County, Otter Tail County, Becker SWCD, East Otter Tail SWCD, West Otter Tail SWCD, Cormorant WD

Surface Waters

Includes all water on the surface such as lakes, streams, wetlands, and drainage systems.

Primary Issues: Untreated Stormwater; Excessive Nutrient Loading; Unstable Stream Channels; Excessive Erosion (wind/water), insufficient protection
Secondary Issues: High E.coli; Altered Hydrology (increased rate/quantity of water flows ; bank erosion, habitat impacts), destruction of habitat

Focus Restoration Goal: St. Clair Lake; Campbell Creek/Ditch 12 (reduce sediment 126 tons/year)
Focus Enhance Goal: Big & Little Detroit; Sallie
Focus Protection Goal: Floyd (Big/North), Little Floyd

Implementation Actions: Wetland Restoration/Creation; Stormwater Management; Shoreline/Streambank Stabilization; Ag Land management (soil health, water/sediment control structures); CRP/RIM/Forest Easements; In-lake treatments; Septic/Wastewater

Habitat Management and Protection

Includes habitat for wildlife, game, birds, and aquatic life (fish and macroinvertebrates), and sensitive species such as wild rice, cisco, and trout.

Primary Issue: Aquatic Invasive Species (All Lakes, Rivers, Wetlands within the basin)
Secondary Issues: Destruction of In-Lake & Riparian Habitat (development pressure/shoreline alterations/river sediment loads); Barriers (dams, perched culverts) to Fish Movement (Pelican & Otter Tail Rivers)

GOALS: Aquatic Connectivity Enhancement, AIS Prevention and Management
OTW Goals: modify dams with rock arch rapids; manage Flowering rush, Curly-leaf pondweed; prevent AIS introductions to waters, survey vegetation on lakes; address perched culverts to allow for fish passage; Promote & install shoreline restoration projects, acquire one conservation easement or AMA

Implementation Actions: AIS prevention, monitoring, adaptive management, rapid response, research, special studies; Land Protection (conservation easements, acquisition of forests, wetlands or other sensitive aquatic areas); riparian buffers and enhancement, shoreline management (shoreline restoration, removal of seawalls/retaining walls); incorporate fish spawning habitat into applicable projects; encourage wildlife and pollinator-friendly seed mixes and plantings in buffers or linear projects

Land Stewardship

Includes multiple benefits of managing the land for healthy soils, groundwater, surface water, and habitat quality.

Primary Issues: Fragmentation and loss of forests and grasslands by land use change impacts land resilience, habitat, and surface and groundwater quality.
Secondary Issues: Soil Quality Degradation – Organic matter depletion; Inadequate Habitat for Fish & Wildlife – Habitat Degradation & Habitat Continuity
Goals: Protection of outstanding resources • Fragmentation of forests and grasslands • Destruction of riparian habitat
Implementation Actions: Forest Management Plans, SFIA, 2c, Easements, Acquisitions

Groundwater

Includes all groundwater resources including aquifers, with a focus on drinking water

Primary Issues: Water Quality Degradation-Excess nutrients in groundwater; Groundwater contamination
Secondary Issues: Groundwater Quality, Groundwater sustainability is vulnerable to overuse and loss of recharge
Goals: Protect vulnerable Drinking Water Supply Areas and vulnerable aquifers.
Implementation Actions: managing nitrates, arsenic, well-sealing, wellhead protection, septic systems, and protection of Drinking Water Supply Management Areas.

Constructed Environmental Enhancements- Structural Practices

Stormwater Management (constructed treatments, retrofits, wet/dry basins, street cleaning, raingardens, other), 103E Drainage Systems, Wetland Restoration/Creation, Shoreline/Streambank Stabilization/Riparian buffers, Ag BMPs (sed basins, grade stabilization, filter strips), Bacteria Reduction (Ag Waste Storage or pit closures, livestock fencing & crossings) Well/Septic Systems; Technical Assistance/Engineering (site assessment; surveys, preliminary analysis/design, final design, construction supervision, installation, inspection, final sign-off.

	On-going and 2024 Targeted Activities	Financial Resources
Detroit Lake/Sallie **Rice Lake Nutrient Reduction Project (Phase 2 Construction)** **Nutrient Reduction (Phosphorus)** **Wetland Restoration**	• **Capital Improvement Project/Wetland Restoration.** (2024 – 25) Construct Phase 2 of the Rice Lake Wetland restoration project to reduce Rice Lake Wetland's release of phosphorus to the Pelican River and create new wildlife habitat; complete BWSR Grant Phase 2 workplan, project bidding, project construction, close-out Phase 1 and 2 grants.	• $400,000 Rice Lake construction (UTY- Grant Match) – 25% grant match (BWSR grant)
St. Clair Lake TMDL **Regional Urban Stormwater Management & Treatment**	• **Project Development/Technical Assistance** (24/25) Regional Stormwater Treatment Enhancement Study (Willow Pond treatment area) – Stantec - Underway • **Capital Improvement Project.** Apply for BWSR Clean Water Grant (Competitive) for Washington Mall Parking Lot Stormwater management/treatment improvements; explore augmenting with OT Funding for Construction. • Develop and implement a phosphorus load tracking and credit system for Lake St. Clair with MPCA	• Funding: OT $50,000; City of DL $50,000 Match
Floyd/Little Floyd Campbell Creek/Ditch 12 **Streambank and Ditch Stabilization**	• **Campbell Creek Watershed Restoration Program** MPCA 319 small watershed grant ($250 K, $100 K match for 2022-2025) • EPA approval of work plan; Develop and implement a **streambank stabilization plan** for Campbell Creek – Underway with Stanec; Explore OT Implementation and MN DNR for additional match); Explore two-stage management practice at outlet of Campbell Lake; Landowner meeting to explore additional water on Campbell Lake (landowner driven).	• $100,000 Match (UTY- Grant Match 40%); 319 Federal Grant ($250K)
District Lakes/Streams **Stormwater Management**	• Northern area of City – TBD in future	
Sallie **Ditch 14 Complex Nutrient Reduction**	• Continue to monitor phosphorus loadings between St. Clair Lake and Pelican River/Detroit outlet	
St. Clair & North Floyd **Internal Loading Management -Nutrient Reduction (Phosphorus)**	• Continue to monitor in lake phosphorus concentrations; continue to implement upstream WQ measures; Alum treatment if water quality conditions warrant.	
Pelican River (Hwy 10 – Detroit **E.Coli**	• Continue monitoring to pinpoint source. Explore potential bacteria sources (pipes, vortex, dog park, etc) with MPCA staff	
District-wide **Localized Flooding**	• Complete the FEMA grant for hydraulic modeling study to identify flood prone areas, potential damages, and critical infrastructure that may need updating. Review sub-watershed flow lines. Update Floodplain insurance maps.; $50,000 match (UTIL), Grant $150,000	• $50,000 (UTY) Match

	Planned Landscape Management – Non-Structural Practices **Ordinances/Rules, Soil Health (cover crops, reduced tillage, perennial crops, crop rotation, pasture management), Forest Stewardship Plans, Irrigation Mgmt.**	
	On-going and 2024 Targeted Activities	**Financial Resources**

Floyd/Little Floyd Campbell Creek/Ditch 12
Ag Land Management
WASCB
Soil Health
	• **Campbell Creek Watershed Restoration Program** MPCA 319 small watershed grant ($250 K, $100 K match for 2022-2025)
	  ○ Identify and target critical agricultural erosion and sediment transport areas in North and Little Floyd sub-watersheds. (Joel Okeson-Cost Share with Becker SWCD, Ag-BMP gully stabilization.)
	  ○ Collaborate with Becker SWCD to identify and target critical erosion areas and to promote the use the erosion control measures, such as perennial cover, conservation tillage, residue management, buffers, structural practices, and land protection easements.
		• $100,000 Match (UTY- Grant Match 40%); 319 Federal Grant ($250K)
		• OTW Funding via Becker SWCD for Land Management Practices

District-Wide **Maintain 103E Public Drainage Systems** Ditch 11/12 (Campbell Creek); Ditch 13 (Pelican River from Little Floyd to Detroit); Ditch 14 (Hwy 10 – St. Clair – Pelican River)	• Ensure proper ditch management (in accordance with MN 103E) and PRWD Drainage Management Policy (updated November 2017); • Conduct annual Inspections; remove beaver and blockages • Submit annual buffer compliance report to BWSR • Enforce MN Buffer Compliance Rule • Attend drainage system meetings/trainings • Review maintenance funds (11/12 & 14 – levied $10k/system in 2024; Ditch 13 Assessed $20k - 2023); • Advocate use of Drainage Work Group to address legislative or policy changes.	• $ 4,800 Ditch Buffer Enforcement (DBE) • $ 4,500 Beaver and blockage Removal (D 11-12,13,14) • $ 825 Drainage system meetings/trainings (DBE & Ditch 11/12, 13, 14)
District-Wide **Rule Permit Program and Enforcement**	• Update/Clarify District Rules (meetings, consultants, notice/publication) • Ensure Rules support the MPCA Stormwater Regulations and Manual, Becker County Shoreland Ordinance, the City of Detroit Lakes MS4 & Shoreland Ordinances, and Wellhead Protection Plan, • Update forms, program information, and project review fees as needed • Website Information – pictures, BMP's, templates • Provide continuous and consistent enforcement of District Rules & MN Buffer Law 103E • Shared employee (Colton Utecht) with Becker SWCD and Cormorant WD – See Project Development (Site visits & Technical Assistance) • Update MOU agreements with Becker County and the City of Detroit Lakes.	• $ 40,000 (GEN) Rules • $ 1,000 Permit materials/print and website – see Education/Outreach
District Planning Area **Forest Stewardship Plans**	• Aid with developing and implementing Forest Stewardship Plan within the District area in accordance with the Otter Tail One Watershed One Plan. • Attend technical meetings (Kemper)	

Habitat Protection and Management

AIS prevention, monitoring, adaptive management, rapid response, research, special studies; Land Protection (conservation easements, acquisition of forests, wetlands or other sensitive aquatic areas); riparian buffers and enhancement, shoreline management (shoreline restoration, removal of seawalls/retaining walls); incorporate fish spawning habitat into applicable projects; encourage wildlife and pollinator-friendly seed mixes and plantings in buffers or linear projects

	On-going and 2024 Targeted Activities	Financial Resources

Project 1B (Sallie/Melissa)
Project 1C (Detroit, Curfman)
Muskrat
AIS Adaptive Management
	• Conduct delineations and implement the flowering rush management plan to achieve less than 2% occurrence – Detroit (45 acres), Curfman (5 acres), Sallie (13 acres), Melissa Lakes (14 acres);
	• Conduct/continue curly-leaf pondweed delineations and treatments to reduce frequency of occurrence by 90% on Detroit (42 acres), Curfman (9 acres), Muskrat (8.8 acres), Sallie (25 acres), Melissa (12 acres), North Floyd (4 acres). Review Little Floyd Lake for CLP in 2024.
	• Provide CLP readiness response treatments on North Floyd Lake (4 acres) & potentially Little Floyd if needed.
	• Apply for cost-share grant funding for treatments (Becker County & Mn DNR, City of DL
	  ○ **MN DNR Grants for 2024 Treatments:** Awarded $2,250 – Sallie; applied for 2024 grant funding on North Floyd, Detroit but not awarded.
	  ○ **Becker County AIS grants (MN State funds):** apply for $4,000 on Detroit public access areas/marinas (CLP)
		• $35,000 for AIS plant management (1B)
		• $ 70,000 for AIS plant management (1C)
		• $2,000 Muskrat (LMP-01)
		• $5,000 North Floyd (LMP-01)
		• $30,000 Rapid Response, Research (LMP-01)
		• $9,000 POI and Delineations for Detroit, Curfman, Sallie, Melissa, Muskrat, North Floyd (LMP-01)

Habitat -District-Wide **AIS Prevention, Monitoring, Research, Special Studies**	• Annually review and update Readiness Response Plan for priority invasive species (Eurasian Water Milfoil, Starry Stonewort, Hydrilla). • Conduct research to identify alternative treatment practices for curly-leafed pondweed and Flowering Rush (if opportunity arises) - 2 year Research Study collaborating with Ryan Wersal- Mankato State to use Flurmioxazin on CLP. • Continue communications and develop a research partnership with University of Minnesota's Aquatic Invasive Species Center and other institutions (Assist Becker COLA with Regional Meeting MAISRC Research update (2025); • Classroom AIS Education _ see education section	• $2,000 Education (LMP-01) • $20,000 2024 - Research/$40,000 Study (LMP-01) • $30,000 Rapid Response, Research (LMP-01)
Habitat -Little Floyd-Ditch 13, Bucks Mill (Pelican River) **Fish Passage Projects**	• 2024 Construction of Little Floyd Lake fish passage improvements. • Apply for CWL grant with MN DNR for Buck's Mill Dam modification Project when ready	• MN DNR Grant $ 156,400 • $20,000 Match (Utility)
Habitat District-wide **Buffer and Shoreline Management**	• **Shoreline management** (shoreline restoration, removal of seawalls/retaining walls); encourage wildlife and pollinator-friendly seed mixes and plantings in buffers. Increase project reimbursement in 2024 ; $1,000-residence, $ 2,000 – condos/PUD's; $ 3,000 – Non-profit/schools, churches, business.	• $15,000 – Incentive Program - Cost Share Program
Habitat – District-wide **Land Protection**	• Assist Project Partners with promotion of targeted area conservation easements	

Project Development, Outreach, Education- Activities that support Workplan Goals and Outcomes

Education/Outreach: Environmental Education, Events, Publications, Local Media, Mailings, Public Engagement/Outreach, Meetings, School Outreach, Communications
Project Development: Peer-To-Peer, preliminary information gathering, landowner site visits & technical assistance, demonstration plots, workshops, targeted outreach, conservation marketing
GOAL: track by number of events, projects, people reached, adopted practices

	On-going and 2024 Targeted Activities	Financial Resources
EDUC/OUTREACH **Local Media, Mailings**	• Watershed information - Publish annual summaries, lake info sheets, data reports, Project "snapshots", press releases • Continually update Facebook page, and other social media outlets, Website, local ads • Monthly Hodge Podge radio • Contribute Information to Lake Association Newsletters, Otter Tail Snapshot (monthly release), County Tax mailings, and other organizations; • Develop an OT Watershed Outreach plan to promote consistent messaging and strategies with plan partners.	
EDUC/OUTREACH **Events, Workshops, Public Engagement, Meetings**	• Present at LGU board meetings, lake associations, COLA's, Service groups, Contractors, etc. • Maintain Otter Tail Citizen Advisory Committee • Publish information (monitoring data, studies, events, etc) on Websites and social media • Becker County Fair; BMP Workshops, landowner forums • Assist with other partners events (Raingarden workshops, Salt Applicators, Gathering Partners, Conservation Education) • OTW 1W1P– assist with public surveys when needed • Conduct public surveys as needed	• $ 2,500 Community Education (promotional items, advertise, print materials) (GEN) • $2,500 Events, Workshops (UTY)

EDUC/OUTREACH
Local Schools
	• Continue to assist with environment education (classroom, field trips, events) such as 4-H, FFA, Tamarac Fall Festival, Envirothon.
	• Promote education cost-share opportunities
	• Aquatic Invasive Species (AIS) Classroom Education (Middle School)
	• Maintain PRWD Education Grant Programs:
	  ○ Detroit Lakes Water Festival ($250)
	  ○ Sucker Creek Education Day ($600)
	  ○ Environmental Field Trips ($ 6,000)
	  ○ Mini-Grant Science Education Classroom Supplies ($2,500)
	  ○ Environmental Service Projects ($2,500)
	  ○ School Pollinator Gardens ($2,000)
	  ○ Miscellaneous ($ 1,150)
		• $ 15,000 Environmental Education Grant Program (UTY)

PROJECT DEVELOPMENT **Peer to Peer**	• Discuss project implementation and make local connections (Campbell Creek); Forest Stewardship plans; continued communication and cooperation between agencies; participate in group meetings • Encourage use of pollinator-friendly vegetation and trees on city property and linear road projects.	
PROJECT DEVELOPMENT **Site visits & Technical Assistance**	• Site visits for permits; shoreline repair/restoration, stormwater management • Participation in Drinking Water Protection Plan Development and Implementation Meeting; Forest Stewardship plans and options. • Ag BMPs – Campbell Creek Area; Use PTM or other tools to identify areas for potential phosphorous reduction (address soil erosion, wetland enhancement/protection) in Campbell Creek, Ditch 13 area and Pearl lake Sub-watershed – Review Red River Basin Data, Becker SWCD, and WRAPS. • Continue to assist with City shoreline projects – HWY 10 Overlook, South Shore Park, North Shore public access • Hold workshops with technical information and cost share for implementation	• OTW $8,000- Consult/cost share (UTY). • Collaborative Cost Share Program $10,000 (UTY)
PROJECT DEVELOPMENT **Demonstration Plots, Workshops, Targeted Outreach**	• Develop demonstration plots, hold workshops, present technical information, cost share for implementation, compliance letters, signage at project sites, targeted mailings	

Surface Water Monitoring & Data Collection – District Program See 2024 Annual Monitoring Plan for more details		
	On-going and 2024 Targeted Activities	**Financial Resources**
Lake & Stream Water Quality Monitoring	• Update the Annual Monitoring Plan; incorporate additional data for special projects, studies, project effectiveness as needed (E.coli, Chlorides, Erosion) • Complete Annual Monitoring Report (lake, stream, veg surveys, shoreline surveys, AIS, special projects); assess water quality, flow, and annual nutrient loading (phosphorus, sediment, e. Coli) • Flow measurements: Maintain HOBO's and water level gages at lake outlets and key stream locations; record water levels on a weekly basis during ice off season; replace gages or HOBO's as needed; collect flow rate data • Conduct Lake/Stream water sampling program (TP, OP, TSS, Chl-A, Chlorides, e. Coli) • Update Lake Management Plan data as needed on website • Conduct shoreline surveys on lakes with potential for increased development (sand blanket, rip rap, retaining walls, natural shoreline, number of boats, docks, lifts) – Detroit (Big, Little), Curfman, Long, Pearl, & Munson. Investigate using drone flyover. • Conduct point intercept surveys aquatic vegetation surveys (Big and Little Detroit, Curfman)	• $1,000 Industrial Park (UTY) • Veg surveys - $9,000 (LMP-01)
Resources/ Equipment	• Investigate monitoring using GIS technology: Field tablets, software licensing • Employ 2-3 summer interns to assist with Data Collection/Monitoring	• $ 10,000 Capital Outlay (LMP-01) • $ 5,000 equipment purchases & repairs (DCM-01) • $ 500 ESRI GIS software grant (LMP-01, UTY)

Operations/Administration Program		
	On-going and 2024 Targeted Activities	**Financial Resources**
District Operations	• Develop 2025 Annual Budgets, Levies, Assessments, Fees (Aug/Sept) • Develop 2024 Work Plan (OTWP PRWD), Monitoring Plan (PRWD), Education Plan (Jan-Feb) • Complete 2023 Annual Report; Financial Reporting (BWSR, MN DNR, MN State Auditor-Due June 30); Assess and evaluate progress against objectives. • Review and update HR functions- personnel policies; job descriptions, wage studies as needed • Complete Contract Renewals as needed –GIS software, QB's, Microsoft, Office Lease (Feb 2023- 26) • Provide project oversight- grants, reports, budgets, payroll • Maintain and upgrade office equipment; investigate software for Outreach documents. • Update Website information (Operations, Data, Projects, Permits, Programs, etc.) & Social media outlets • Internet/Email Upgrade • Renew insurance through LMCIT (Property, Workers Comp, Board/Staff bonding) • Explore new locations for boat and truck storage shed. • Advertise and select Engineering and Legal Services Firms.	• $10,000 LMCIT and MW Dues 2024 - (GEN) • $5,500 software support; (GEN) • $8,000 EQT • $ 3,500 website (GEN) • $ 2,000 Community Education (promotional items, adverting, print materials) (GEN) • Storage Shed Relocation
Fiscal Management	• Perform payroll and bookkeeping activities – payroll, liabilities, reports; monthly bills and financial statement; Annual Financial audit • Update audit contract (every 3 yrs. – current contract FY 22-24) • Update QB program and payroll • Staff time for OTW Implementation grant coordination, admin, reporting	• $ 7,550 Audit 2024 (GEN) • $ 1,470 QB and Enhanced Payroll (GEN)
Internal Governance Policies	• Review and Update Governance Policies/Procedures – Ongoing	
District Manager and Staff Education	• Continuing education for managers and staff – Minnesota Watersheds (MW) Annual Conference, MW's Summer Tour, PRWD Summer Project Tour. • Attend training/seminars/conferences/courses, regional meetings, and legislative events related to Water Management Activities. • Continue to attend and present at workshops and conferences.	• $ 900 Project Summer Tour (GEN) • $6,000 Manager MW Events (GEN)
OTW 1W1P Advisory Committees	• **OTW MOA Partnership:** each LGU approve OTWP Annual Work Plan/Budgets/Implementation Plan • **Policy Committee (Kral, Alt-Hansen):** One board member from each MOA entity; Meets 2X/yr or as needed; review, approve TAC recommendations/annual work plan; provide direction to TAC. • **Technical Advisory Committee (Guetter)**: One staff member from each MOA entity. Meets monthly or additionally as needed; reviews the status of available implementation funds from plan participants, identifies collaborative funding opportunities, provides input for the annual work plan submitted to BWSR, biennial review and confirmation of priority issues, evaluates and recommends response to emerging issues, prepares plan for policy committee approval. Include federal and state agencies as needed. Forest land stewardship plans (Kemper). **Stakeholder Advisory Committee**: Hold one OTW meeting annually; Targeted - Campbell Creek Stakeholders.	

District Goals Summary

Water Quality

Lakes: *Adaptively manage District lakes to protect, enhance and restore lake water quality and recreational utility as appropriate to each lake.*

- Reduce excess nutrient and sediment loading to lakes through BMPs, capital improvement projects and regulatory controls.
- Reduce rate and volume of stormwater runoff entering lakes to help meet water quality loading goals.
- Reduce internal phosphorus loading (from bottom sediments) to lakes.
- Monitor and reduce chloride loading to lakes.
- Acquire data necessary to better understand water quality trends and threats in order to most effectively implement water quality improvement practices.

Wetlands: *Protect, enhance and restore wetland water quality and function.*

- Restore hydrology of altered wetlands and surrounding areas that are contributing excess nutrients to downstream waters.
- Inventory wetland water quality and function.
- Protect high quality wetlands as identified in wetland inventory to be performed.
- Help implement requirements for wetland management

Rivers, streams and other waterways: *Protect, enhance and restore rivers, tributary streams and other waterways, such as ditches.*

- Inventory water quality and function of public drainage systems in the District in accordance with Minnesota State Statute 103E.
- Restore stream water quality and stream ecosystem health.
- Protect high quality stream reaches.

Groundwater: *Protect aquifers and maintain or improve groundwater quality, so that drinking water is safe.*

- Protect groundwater quality and ensure safe drinking water.
- Increase public awareness of groundwater protection issues and of the City of Detroit Lakes Wellhead Protection Plan.

Water Quantity

Water Levels: *Promote shoreline resilience to fluctuations in water levels of lakes, streams and drainage systems.*

- Monitor lake, stream and drainage system water levels.
- Promote shoreline that is resilient under fluctuating water levels through shoreline rehabilitation (e.g., with deep-rooted plants, soft-armor plantings, etc.

Localized Flooding: *Mitigate localized flooding issues and prevent flooding-related damages to property, public safety and water resources.*

- Gather baseline floodplain data.
- Mitigate current flooding and prevent future flooding.
- Prepare for emergency flood scenarios.

Groundwater *Ensure groundwater supply is sustainable.*

- Reduce groundwater withdrawal.
- Increase groundwater recharge.

Ecological Integrity

AIS: *Prevent establishment of new invasive species and manage invasive species that already exist in the watershed.*

- Manage priority invasive species using the best available methods and technology.
- Monitor for new invasive species.
- Stay current with new management strategies and aquatic invasive species research

Wildlife Habitat: *Protect, enhance and restore wildlife habitat.*

- Search for opportunities to partner on multi-benefit projects that will enhance water quality and create new wildlife habitat.

Fish Communities: *Maintain healthy fish communities.*

- Prioritize areas for aquatic habitat protection
- Protect, enhance, and restore fish habitat, especially when projects have multiple benefits that meet District objectives.