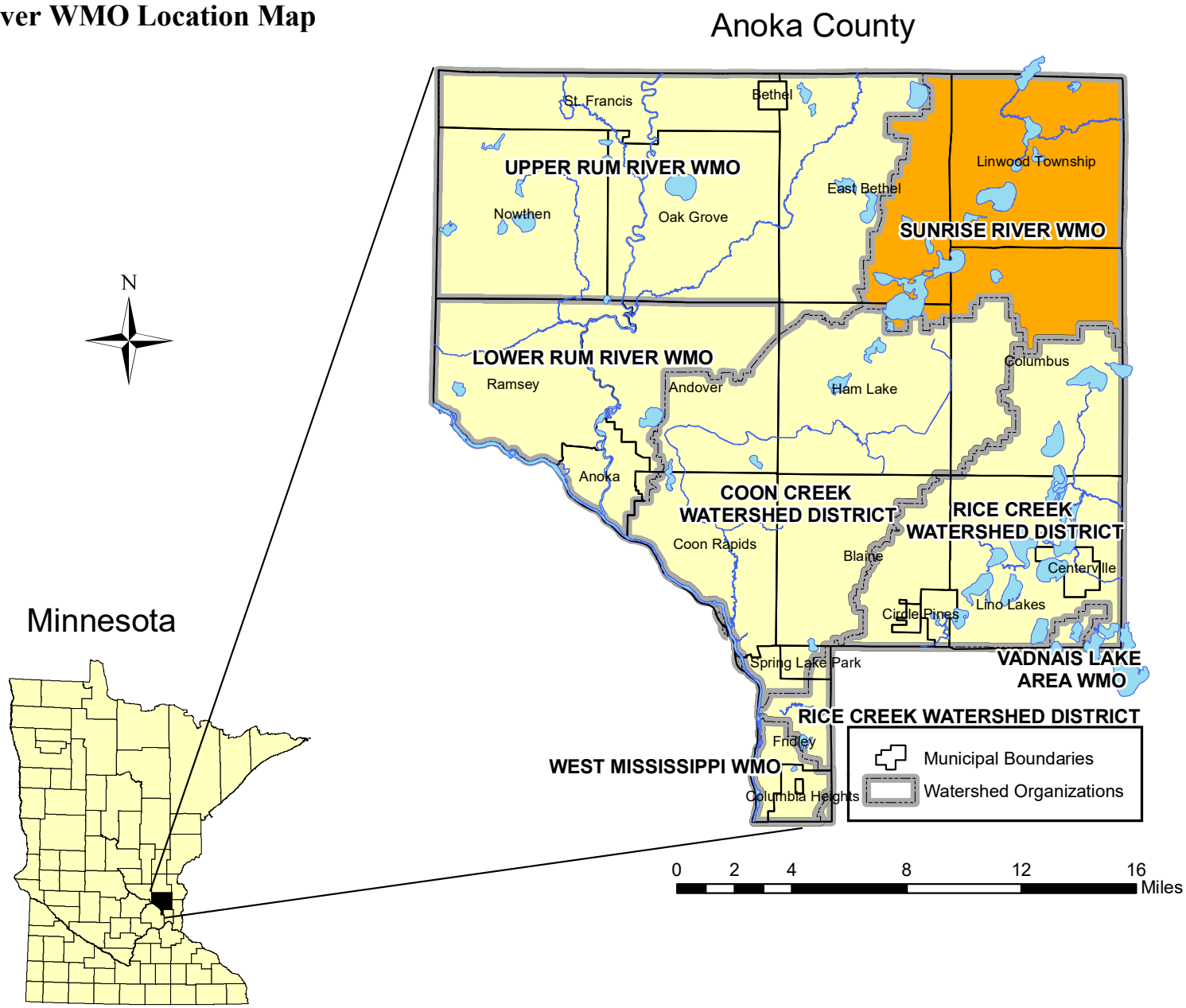
2020 Annual Report

Sunrise River Watershed Management Organization

East Bethel – Ham Lake – Linwood - Columbus

April 23, 2021

Sunrise River WMO Location Map



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I. Introduction to this Report

This report is intended for local and state oversight agencies, as well as interested citizens. At the local level, it is intended to provide member communities, their elected officials, and staff with an activity update. At the state level, this report meets the annual watershed management organization reporting requirements of Minnesota Rules 8410.0150. The report is intended to fulfill 2020 reporting requirements.

II. About the Sunrise River WMO

The Sunrise River Watershed Management Organization (SRWMO) is a special purpose unit of government that operates as a joint powers organization under Minnesota Statutes, Section 471.59. It is comprised of Linwood Township and portions of the Cities of Columbus, Ham Lake, and East Bethel. Board members are appointed by the member communities. Financing is from member communities. The SRWMO's direction is laid out in its watershed management plan and the member municipalities' local water plans.

The SRWMO area is rich in water and natural resources. Approximately 50% of the area is water and wetlands, including 19 lakes. Four are major recreational lakes (Coon, Linwood, Martin, and Typo). 19% of the SRWMO area is high quality natural communities that have undergone little human disturbance since pre-settlement times. Many of these areas have been designated by the State as sites of biodiversity significance or regionally significant ecological areas. 27 plant and animal species that are state endangered, threatened, special concern, or rare are known to occur in the SRWMO. These water and natural resources are at the heart of the character of these north Twin Cities metro communities.

Despite the overwhelming good quality of the natural resources, there are some areas of concern. Martin, Typo, and Linwood Lakes have been designated as "impaired" by the Minnesota Pollution Control Agency for excess nutrients. Several segments of the Sunrise River in Linwood Township are impaired for pH, turbidity, and the fish community. Coon

and Linwood Lakes are infested with two aquatic invasive species: curly leaf pondweed and Eurasian or hybrid water milfoil. Old, failing or improperly maintained septic systems likely have an impact on water quality. Many of these problems flow across community boundaries and cannot be effectively addressed by any one community alone. This is the reason for this joint powers watershed management organization.

SRWMO Watershed Management

The SRWMO is guided by its 10-year watershed management plan. The plan can be found on the SRWMO website (www.SRWMO.org).

The Sunrise River WMO Board of Managers considers its responsibilities to be overseeing the management of water resources in the watershed. The WMO serves the community by:

- Providing a forum to consider inter-community water problems.
- Collecting data and conducting resource monitoring to guide management.
- Facilitating water quality improvement projects, which often will be cooperative endeavors with others.
- Setting minimum standards for member community ordinances that consider local water resources issues. The SRWMO will not have its own permitting program.
- Providing a linkage between natural resources and land use planning decisions.
- Educating the public about water resources, and enabling or incentivizing individual action.
- Informing and engaging local elected officials about water problems, projects and the SRWMO.
- Ensuring expenditures result in corresponding benefits to the public.
- Avoiding duplication among government agencies and communities.

The SRWMO operates under the following philosophies:

- Water-related problems are community problems and not individual problems.
- Water resource management is a vital matter that cannot be effectively addressed by individual communities because watersheds cover multiple communities.
- Water resources should be managed on a watershed basis.
- Aquatic and terrestrial areas are integrally linked and cannot be effectively managed separately.

III. Activity Report

a. Current Board Members

CITY OF COLUMBUS

Timothy Melchior
8306 177th Lane
Columbus, MN 55025
651.210.6842
timothymelchior@gmail.com

Janet Hegland
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councilsjaneth@ci.columbus.mn.us

CITY OF HAM LAKE

Matt Downing (Treasurer)
16163 Lexington Ave NE
Ham Lake, MN 55304
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Matthewdowning108@gmail.com

Sandy Flaherty
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Cedar, MN 55011
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stevensandy6@q.com

CITY OF EAST BETHEL

Tim Harrington
2241 221st Ave NE
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Leon Mager (Vice Chair)
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Wyoming, MN 55092-8420
763.434.9652
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LINWOOD TOWNSHIP

Dan Babineau (Chair)
22275 Martin Lake Road NE
Stacy, MN 55079
763.390.9985
danb@microconsulting.com

Candice Kantor
5660 South Linwood Lake Drive NE
Stacy, MN 55092
989.289.3048
Cmholt77@gmail.com

Tim Peterson (Alternate)
23561 Fontana St NE
Stacy, MN 55079
651.233.4151
braveheart51@frontiernet.net

Current SRWMO Managers and contact information can be found at **www.SRWMO.org**

b. Day to Day Contact

The day to day contact person for the SRWMO who can answer questions about the organization is:

Jamie Schurbon, Watershed Projects Manager
Anoka Conservation District
1318 McKay Drive NE, suite 300
Ham Lake, MN 55304
763-434-2030 ext. 21

c. Employees and Consultants

The SRWMO does not employ staff, but does utilize consulting services and enters into cooperative agreements with other government agencies. A description of contracted services is listed below:

SRWMO consultants and partners during the reporting period:

Consultant/ Partner	Contact	Work Description
Anoka Conservation District	Jamie Schurbon Watershed Projects Manager 1318 McKay Drive NW, #300 Ham Lake, MN 55304 763-434-2030 ext. 12 jamie.schurbon@anokaswcd.org	1. **Water Monitoring** – Water quality and hydrology monitoring in lakes, streams and wetlands. 2. **Water Quality Improvement Projects** –Implementation of water quality improvement efforts, including administering the SRWMO water quality grant program. 3. **Education –** Promotion of SRWMO programs. 4. **Website -** Maintain SRWMO website. 5. **Reporting -** Assistance preparing this annual report and State Auditor reporting. 6. **Administration –** Serve as a limited, on-call administrator to address miscellaneous day-to-day operational issues. Reviews local water plans.
Cameron Blake	Cameron Blake 1316 Oak Street W Stillwater, MN 55082 (763) 753-2368 blake257@umn.edu	**Recording secretary** for meetings, plus miscellaneous administrative assistance.

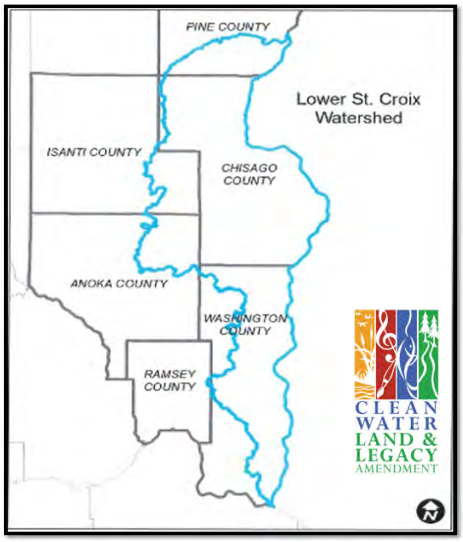
d. Highlighted Recent Projects and Accomplishments

Listed below from most to least recent

Coon and Martin Lake Stormwater Retrofits Project (2019-2021)

A State Watershed Based Implementation Funding grant has been secured to improve stormwater runoff before it reaches these valued lakes. In 2020 two stormwater pond projects and one rain garden were constructed. In 2021 additional rain gardens and lakeshore stabilizations are planned.

Lower St. Croix One Watershed, One Plan (2018-2020)



The Sunrise River WMO participated in regional watershed planning called One Watershed, One Plan (1W1P). The plan was completed in late 2020 and the SRWMO is now partnering on implementation. The process is in collaboration with 16 other entities including counties, watershed organizations, and soil and water conservation districts. It aims to identify the highest priority regional water resources and ensure they are managed collaboratively. The process complements local water plans. It does makes the area eligible for a new State funding program called Watershed Based Implementation Funding. The process is funded by a grant from the MN Board of Water and Soil Resources. A first implementation grant of $1.2M was awarded in early 2021.

Sunrise River Chain of Lakes Carp Project (2020-2022)

A State Clean Water Fund grant has been secured for carp management in the chain of lakes including Linwood, Martin and Typo. The project seeks to remove 11,000 carp resulting in water quality and habitat improvements. Work will include box netting and seining. Partners include the Anoka Conservation District, SRWMO, Martin Lakers Association and Linwood Lake Improvement Association.

Water Monitoring (ongoing)

The Sunrise River WMO annually conducts monitoring of 12 lakes, 2 streams, 3 wetlands and precipitation. The monitoring informs management and tracks progress toward goals.

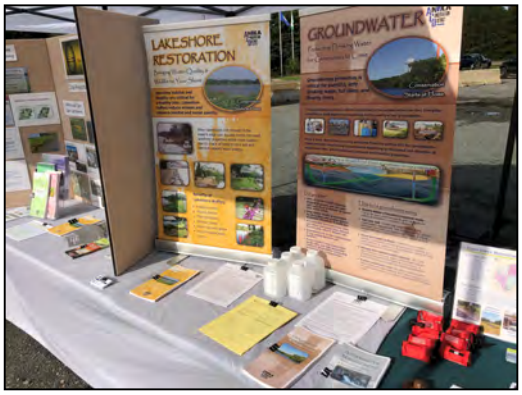
Workshops and Community Events (2015-ongoing)

The SRWMO, in collaboration with the Anoka County Water Resource Outreach Collaborative, annually hosts a display about water resources at community events. Periodically workshops are also completed. In 2020 no in-person events were held due to Covid-19.

2019 workshops and community events

	Interactions		
Event	Adult	Youth	Total
Conservation Planning Workshop by ACD, East Bethel	19	7	26
Well and septic maintenance training by ACD and U of M Extension, East Bethel	58	0	58
Smart Salting for Roads training for plow drivers by Fortin Consulting, Linwood	24	0	24
Columbus Fall Fest, SRWMO Display	146	56	202

East Bethel Booster Days (rained out)	0	0	0
Coon Lake Improvement Association member mtg, lakeshore stewardship presentation by Emily Johnson	85	2	87
Ham Lake SnowBowl, display about salting by ACD	53	0	53
Linwood Family Fun Days	66	38	104

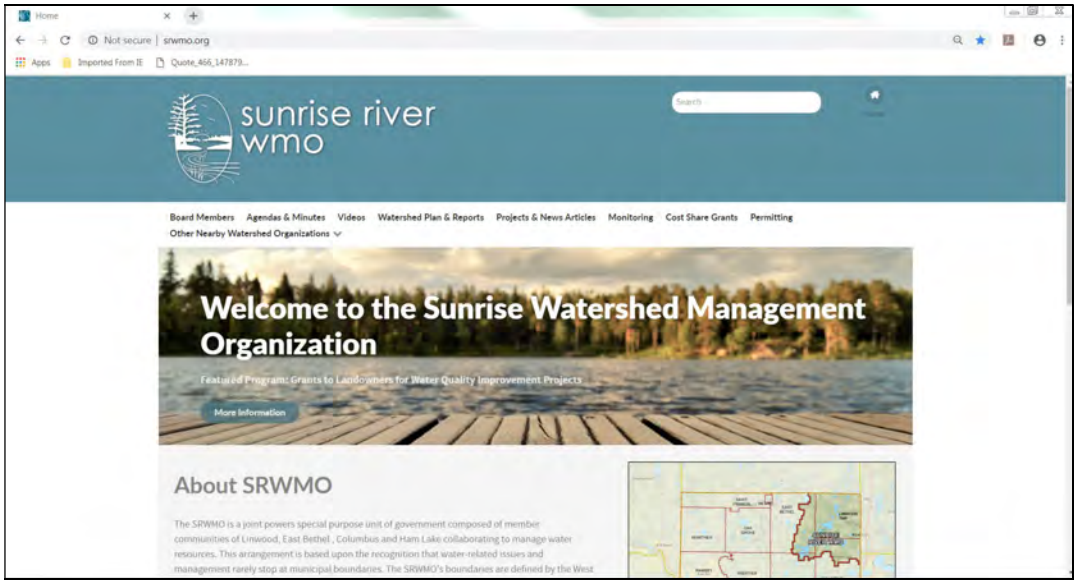


SRWMO display at Columbus Fall Fest 2019.

e. Public Outreach

The SRWMO does regular public outreach and education projects, but the SRWMO's website serves as the primary, continuous public outreach tool. Website contents include general information about the organization, meeting agendas and minutes, water monitoring results and profiles of WMO projects. The SRWMO ensures visibility of its website by asking member cities and townships to post the SRWMO website address in their newsletters. Links to the SRWMO website are also provided through each member community's website and the Anoka Conservation District website. The SRWMO website address is http://www.srwmo.org

Sunrise River WMO website homepage



Additional public outreach is accomplished through at least one annual newsletter article. The articles are distributed to member communities and lake assoications for distribution in their newsletters. Periodic larger articles are distributed as press releases to local newspapers. In 2020 the SRWMO's printed outreach included:

- Article about the SRWMO and a lakeshore stewardship video published in city newsletters.
- Six infographics distributed to lake associations in May, June, and August for their newsletters.
- One infographic about septic system maintenance in city newsletters.
- One article about septic system repair grants in city newsletters.

The SRWMO also conducted the outreach efforts listed in the previous section of this report.

SRWMO 2020 Written Outreach Pieces

Septic System Fix Up Grants Available
Sunrise River Watershed Management Organization, www.SRWMO.org

A properly functioning septic system provides effective treatment of wastewater, but if a system is neglected, it could cost thousands of dollars to repair and potentially contaminate local groundwater and surface water supplies, putting the health of your family and neighbors at risk.

Septic system fix up grants are available that can pay for 80-90% of the cost of fixing or replacing a septic system. Applicants must meet low income criteria. To apply or learn more, contact Aaron Diehl at the Anoka Conservation District (763-434-2030 ext. 16 or aaron.diehl@anokaswcd.org).

Sunrise River
Watershed Management Organization

The Sunrise River Watershed Management Organization and its partners are releasing a new video titled "Our Lakeshore Connection." The video explains the inner workings of lakes and what lakeshore owners can do on their own property to improve lake health.

To watch, visit the "videos" tab at www.SRWMO.org.

The SRWMO is partnering with the Anoka Conservation District to offer technical help and grants to homeowners wishing to do projects that benefit an area lake or stream, such as correct shoreline erosion or install native plant buffers. For more information contact Jamie Schurbon at 763-434-2030 ext. 21.

The SRWMO is a joint organization of the cities of East Bethel, Ham Lake, Columbus and Linwood Township for the purpose of managing local water issues. The SRWMO also participates in management of the larger Lower St. Croix Watershed (more info at www.lsc1w1p.org).

f. Water Quality Trends

The SRWMO has a long term water quality monitoring program that includes most larger stream and recreational lakes in the watershed. From 2000-2009 the SRWMO had a robust water monitoring program to establish a baseline of data; little water monitoring had been done previously. From 2010 to the present the amount of monitoring has moderated to a level sufficient to detect trends. Many waterbodies are monitored every 2-3 years. An important part of evaluating implementation of the watershed management plan is looking at water quality trends.

The SRWMO lakes have a range from poor to good water quality (table below). Three of the lakes (Martin, Typo and Linwood) are impaired for excess nutrients. Two of those lakes, Martin and Typo, have been a focus of SRWMO management and are improving (see figures below).

Water quality summary for monitored SRWMO lakes as of 2020*. Data shown are for the most recent year. Trends are based on a MANOVA with response variables of TP, chlorophyll-a and Secchi transparency.*

Lake	Letter Grade	Total phosphorus summer average (µg/L)	Chlorophyll-a summer average (µg/L)	Secchi transparency summer average (ft)	Year of most recent data	# years of monitored	Trend
Coon – East Bay	A	19.4	6.7	8.0	2018	22	Improving
Coon – West Bay	A	21.8	6.9	7.3	2018	13 (5 with TP and chlorophyll)	Insufficient data. No evidence of decline.
Boot	B	43.3	6.6	5.5	2019	2	Insufficient data
Linwood	C	34.4	20.2	4.2	2018	18	Stable
Typo	F	220.0	73.5	1.3	2020	20	Improving
Martin	C	56.8	31.4	3.0	2020	20	Improving
Fawn	A	17.1	4.0	13.7	2018	14	No change
Island	C	33.9	10.6	4.6	2011	9	NA

More detailed water quality data and analysis can be found in **Appendix B** and online. Additionally, all water quality data collected by the SRWMO is on the MN Pollution Control Agency's EQuIS database, which is accessible through their website.

g. Evaluation of Watershed Management Plan Implementation

The SRWMO Watershed Management Plan contains a schedule of tasks that the WMO should accomplish in order to realize its goals (see table on following page). The tables on the following pages compare work planned and work actually accomplished. Additionally, **Appendix B** contains a summary of progress toward all SRWMO plan goals. **Appendix C** contains member community annual reports to the SRWMO with their progress on watershed plan tasks.

2020-2021 SRWMO Watershed Plan tasks planned and accomplished.

#	Plan Action	Funding*	2020		2021		
			Planned	Done	Planned	Underway	Notes
Operating Tasks (as defined by JPA)							
1	Recording Secretary services - contractual	SRWMO	$1,400	✓	$1,449	planned	
2	Administrator services - contractual	SRWMO	$6,000	✓	$6,210	planned	
3	Fiscal mgmt assistance - E Bethel Finance Director & Treasurer	SRWMO	Provided by East Bethel, no cost to SRWMO				
4	Financial contributions calculation update	SRWMO	$320	in 2019			
5	Financial audits	SRWMO	$3,000	✓			
6	Liability Insurance	SRWMO	$1,850	✓	$1,550	planned	
7	Reports to BWSR, State Auditor	SRWMO	$1,100	✓	$1,139	planned	
8	Annual written communication to member communities	SRWMO	$600	✓	$621	planned	
9	Community ordinance reviews	SRWMO	$1,920	underway		underway	
10	Review/approve community local water plans	SRWMO		3/4 done	$2,240		
11	Seek bids for professional services	SRWMO			$100	planned	
Non-operating General							
12	Grant search and applications	SRWMO	$1,000	WBIF	$1,035	planned	
13	Undesignated reserve	SRWMO	$2,029	spent down		spent down	
14	Update Watershed Plan	SRWMO					
Communications with Member Communities							
15	Project reporting to member communities	SRWMO	✓	✓			Included in project costs and project manager duties
16	Annual board member reporting to member communities	SRWMO	✓	✓			Provided by SRWMO board members
17	Project tours	SRWMO	$1,660	postponed		planned	
Public Outreach							
18	Lake association and community newsletter content	SRWMO	$920	✓	$2,190	planned	
19	Newspaper press releases	SRWMO	Included in project costs and project manager duties				
20	Lakeshore restoration guidance materials	SRWMO					
21	Shoreland stewardship display	SRWMO	$2,520	✓			
22	Community event displays	SRWMO		postponed	Provided b	planned	Provided by SRWMO board members
23	Stakeholder event attendance	SRWMO		postponed	Provided b	planned	Provided by SRWMO board members
24	Workshops promotion	SRWMO					
25	Engage citizen leaders	SRWMO		✓		planned	Linwood Elem. School. Lake associations.
26	Websites	SRWMO	$700	✓	$725	planned	
27	Anoka Co Outreach Coordinator position	SRWMO		✓	$2,500	planned	
29	Advisory committees	SRWMO		✓		planned	Lake assocs. Municipalities.
30	Promote Well Water Wise	SRWMO			$50	planned	
Water Condition Monitoring							
31	Water condition monitoring	SRWMO	$8,541	✓	$16,446	planned	
Development Reviews							
32	Development reviews	MC**	$1,000	✓	$1,000	planned	Lincoln Estates in Linwood
Multi-partner Coordination							
33	Participate in 1W1P	SRWMO	$640	✓	$662	planned	

h. 2021 Work Plan

See table above.

i. Status of Local Ordinances, Water Plan Adoption and Implementation

All SRWMO member communities are required to have a Local Water Plan that is consistent with the SRWMO Watershed Management Plan. The WMOs have approval authority over these Local Water Plans. Whenever a WMO plan is updated the member municipalities have two years to update their Local Water Plans, ordinances, and other control measures to be consistent with the WMO Plan.

All local water plans have been approved except the City of Ham Lake. Ham Lake has had several draft plans and an approvable draft is anticipated soon. The following is the status of each city or township's local water plan:

To track member cities' progress on local plan implementation, the SRWMO requires a brief annual report from each city and provides a template for this report. In addition to serving as a reporting tool, the template serves as a "to do" list for our cities. These reports are provided as **Appendix C**.

j. Solicitations for Services

State rules require watershed management organizations to solicit bids for professional services at least once every two years. Most recently the SRWMO solicited bids in early 2020 for water monitoring and management work to occur in the same year. Requests for proposals were provided to the Anoka Conservation District and member communities' consulting engineering firms. One entity, the Anoka Conservation District, provided a proposal, and was selected.

k. Permits, Variances, and Enforcement Actions

The SRWMO does not issue permits, variances, or take enforcement actions. These responsibilities are held by the member municipalities, as outlined in each municipality's local water plan, ordinances, and policies.

IV. Financial and Audit Report

a. 2020 Financial Report

See Appendix A – 2020 Financial Report.

b. Financial Audit

Per MN Statutes, section 6.756 and the MN State Auditor's minimum revenue thresholds, the SRWMO has not been required to do annual audits, but an audit or agreed upon procedures engagement once every five years is required. An agreed upon procedures engagement was completed in 2020 for 2019 finances.

c. 2021 Budget

In 2020 the SRWMO Board approved the following 2021 budget.

			Linwood	East Bethel	Columbus	Ham Lake
		Cost	47.04%	29.99%	19.17%	3.80%
	NON-OPERATING EXPENSES (split by percentages)					
1	**Non-operating General**					
2	Grant Search and Applications	$1,035.00	$486.86	$310.40	$198.41	$39.33
3	**Multi-Partner Coordination**					
4	Participate in One Watershed, One Plan (1W1P)	$662.00	$311.40	$198.53	$126.91	$25.16
5	**Effectiveness Monitoring**					
6	Lake Water Quality	$3,963.54	$1,864.45	$1,188.67	$759.81	$150.61
7	**Diagnostic Monitoring**					
8	Lake Water Quality	$1,981.77	$932.22	$594.33	$379.91	$75.31
9	**Surveillance Monitoring**					
10	Lake Level Monitoring	$1,630.15	$766.82	$488.88	$312.50	$61.95
11	Secchi Transparency Lake Monitoring - volunteer coord.	$906.72	$426.52	$271.93	$173.82	$34.46
12	Lake Water Quality	$5,945.31	$2,796.67	$1,783.00	$1,139.72	$225.92
13	Reference Wetland Hydrology Monitoring	$2,018.01	$949.27	$605.20	$386.85	$76.68
14	**Water Quality Improvement Projects**					
15	Ag Conservation Planning Outreach	$1,120.00	$526.85	$335.89	$214.70	$42.56
16	SRWMO Cost Share Grant Fund	$0.00	$0.00	$0.00	$0.00	$0.00
17	Carp Management	$7,500.00	$3,528.00	$2,249.25	$1,437.75	$285.00
18	Ditch 20 Wetland Restoration Outreach	$320.00	$150.53	$95.97	$61.34	$12.16
19	**Education and Public Outreach**					
20	Newsletters	$2,190.00	$1,030.18	$656.78	$419.82	$83.22
21	Website	$724.50	$340.80	$217.28	$138.89	$27.53
22	Anoka Co Outreach Coordinator Position	$2,500.00	$1,176.00	$749.75	$479.25	$95.00
23	Promote Well Water Wise	$50.00	$23.52	$15.00	$9.59	$1.90
24	**Rollover Funds (used to maintain a flat budget of $50K, covering planned expenses over that amount in future years)**					
25	Rollover Funds	$1,644.00	$773.34	$493.04	$315.15	$62.47
26	**Undesignated reserve account spend down**					
27	Reduced request to communities	-$5,048.58	-$2,374.85	-$1,514.07	-$967.81	-$191.85
28	SUBTOTAL	$29,142.42	$13,708.59	$8,739.81	$5,586.60	$1,107.41

			Linwood	East Bethel	Columbus	Ham Lake
		Cost	25.00%	25.00%	25.00%	25.00%
	OPERATING EXPENSES (split equally four ways)					
27	**Operating Expenses**					
28	Recording Secretary services	$1,449.00	$362.25	$362.25	$362.25	$362.25
29	Liability Insurance	$1,550.00	$387.50	$387.50	$387.50	$387.50
30	Administrative fee charged to member communities, component activities/costs listed below					
31	On-call Administrative Assistance - ACD	$8,450.00	$2,112.50	$2,112.50	$2,112.50	$2,112.50
32	Annual Written Communication to Member Communities	$621.00	$155.25	$155.25	$155.25	$155.25
33	Annual Reports to BWSR, State Auditor	$1,139.00	$284.75	$284.75	$284.75	$284.75
34	Advertise Bids for Pro Services (req'd in odd yrs)	$100.00	$25.00	$25.00	$25.00	$25.00
35	Undesignated reserve acct spend down - reduced request to communities	-$1,965.18	-$491.30	-$491.30	-$491.30	-$491.30
36	SUBTOTAL	$11,343.82	$2,835.96	$2,835.96	$2,835.96	$2,835.96
37						
38	GRAND TOTAL	$40,486.24	$16,544.55	$11,575.77	$8,422.56	$3,943.37

Appendix A:

2020 Financial Report

SUNRISE RIVER WATERSHED MANAGEMENT ORGANIZATION

FINANCIAL REPORT
FOR YEAR ENDED DECEMBER 31, 2020

To the Chairperson, Dan Babineau, of Sunrise River Water Management Organization

The enclosed statement has been prepared after review of the organization's financial records for 2020. I have not audited the organization's records and do not express an opinion. The enclosed information fairly reflects the Sunrise River WMO's financial position for the stated year.

April 20, 2021

Prepared by:
Jamie Schurbon, Anoka Conservation District
1318 McKay Drive NE, suite 300
Ham Lake, MN 55304
763-434-2030

SUNRISE RIVER WATERSHED MANAGEMENT ORGANIZATION
9900 Nightingale Street NW
Oak Grove, MN 55011-9204

STATEMENT OF REVENUES AND EXPENSES

For: year beginning January 1, 2020 and ending December 31, 2020

Expenditures	**Amount**
Operating	
Insurance – MN Counties Intergovernmental Trust	$1,433.00
Secretarial services - Gail Gessner and Cameron Blake	$700.00
Legal - Kennedy and Graven	$162.00
Audit - Smith Schafer	$2,350.00
On-call admin assistance - Anoka Conservation District (ACD)	$6,000.00
Annual report to BWSR – ACD	$800.00
Annual financial report to State Auditor - ACD	$300.00
Annual summary for member communities	$600.00
Financial contributions calculation update - ACD	$320.00
Review member community ordinances - ACD	$1,920.00
SUBTOTAL	$14,585.00
Non-Operating	
Water monitoring and management - ACD 2020	$29,711.00
Water monitoring and management - ACD 2019 paid in 2020	$18,163.40
Cost share grant fund for water quality projects	$2,000.00
Carp barrier mainteannce - Dolphy's Automotive	$500.00
Other	$0.00
SUBTOTAL	$50,374.40
GRAND TOTAL	**$64,959.40**
Revenues	**Amount**
Linwood Twp	$19,735.34
City of Columbus	$9,700.53
City of Ham Lake	$2,691.50
City of East Bethel	$15,181.13
Insurance dividend	64.00
Other	0.00
Other	0.00
GRAND TOTAL	**$47,372.50**
Retained Cash Reserves	**($17,586.90)**
Total Cash Reserves	**$26,481.76**

SUNRISE RIVER WATERSHED MANAGEMENT ORGANIZATION

BALANCE SHEET

For the year beginning January 1, 2020 and ending December 31, 2020

Assets	
Cash	$26,481.76
Accounts Receivable	$0.00
Water quality project grant fund held at the Anoka Conservation District	$2,420.47
Other	$0.00
Other	$0.00
Total Assets	$28,902.23

Liabilities	
Accounts Payable	
Other	$0.00
Other	$0.00
Total Liabilities	$0.00

Appendix B:

2020 Progress Toward Plan Goals

SRWMO Goals Evaluation Template
Year: 2020

#	Goal	Related actions in the current year	Progress Description: Not applicable - No progress was planned by this time	Progress planned, but none achieved	Progress, but less than planned	Progress-ing as planned	Ahead of plan	✓ Goal Accomplished	Notes/Description
High Priority Issue Lake and Stream Water Quality									
G1	**Complete eight conservation plans by 2022 for landowners.** Highest priority properties are those with livestock/horses and sites within impaired waters' watershed. Work to be done by the BWSR/NRCS funded Watershed Conservation Planner housed at Chisago SWCD.	2 plans in progress and 1 completed by Watershed Conservation Planner Intiative				✓			__of eight conservation plans done
G2	**Implement projects in five conservation plans** produced by the BWSR/NRCS funded Watershed Conservation Planner housed at Chisago SWCD. Funding sources may include federal agriculture programs or other existing programs.		✓						__of five projects implemented
G3	**Create a new BMP incentives program to benefit lake water quality** that increases participation by increasing available funding and operating the program jointly with lake associations. The SRWMO will provide primary funding while the lake associations will, where willing, provide most promotion & outreach. Where lake associations do not participate the SRWMO will continue to directly offer cost share grants to homeowners.		✓						Program created: yes/no. # projects funded: ____.
G4	**20% or less of lakeshore will be mowed turf to the water's edge or retaining walls.** When most recently inventoried in 2004 lakes had 20% (Linwood Lake), 24% (Coon Lake), 27% (Martin Lake), 37% (Fawn Lake), 4% (Typo Lake). **Install at least two lakeshore buffer or stewardship projects per year** to work toward this goal.	1 installed at Coon Lake (Scheiderich)			✓				% mowed turf at each lake: ____. # lakeshore projects installed this year:__ and since 2020:__.
G5	**Manage carp in Typo, Martin, Linwood and Coon Lakes recreational lakes to 100/kg per hectare**, the threshold above which they are destructive to lake health. This is equivalent to 89 lbs/acre.	Multiple carp removals. Poorer success rate than past years.			✓				Describe lakes, carp biomass and progress toward goals.
G6	**Road deicing salt will be minimized** through training on effective, science-based deicing techniques.		✓						See specific accomplishments in chlorides section below.
G7	**Work toward 20% phosphorus reduction within the SRWMO** to help meet the multi-agency St. Croix Basin TMDL 20% reduction goal for the entire Sunrise River watershed.	Carp removals. 2 stormwater ponds and 1 rain garden. 4.51 lbs TP.				✓			Estimates pollutant reductions In SRWMO: ___ and elsewhere in watershed: (see St. Croix Basin Team
G8	**Achieve pollutant reductions needed to get Martin and Linwood Lakes off the impaired waters list and work toward the reductions needed for other waterbodies.** See plan text for more detail on targeted pollutant reductions management strategies.	Carp removals. Martin Lake has improving trend.				✓			Projects and pollutant reductions: ____
G9	**Maintain Coon Lake water quality** through projects that offset landscape pressures that might cause eutrophication.	1 rain garden. 1.25 lbs TP.				✓			Coon Lake projects and pollutant reductions: ___

#	Goal	Related actions in the current year	Progress Description: Not applicable - No progress was planned by this time	Progress planned, but none achieved	Progress, but less than planned	Progressing as planned	Progressing, ahead of plan	✓ Goal Accomplished	Notes/Description
High Priority - Water Monitoring									
G10	Monitor the effectiveness of installed water quality projects (**effectiveness monitoring**).	Typo and Martin Lakes monitored				✓			Planned water monitoring (see table in plan)
G11	Diagnose water quality problems to inform management (**diagnostic monitoring**).		✓						
G12	Detect changes or trends (**surveillance monitoring**).		✓						
High Priority - Funding									
G13	**SRWMO continues to have approximately 50% of its budget grant funded**.	1 CWF grant ($157K), 1 CWF grant ($148K), Lower St. Croix WBIF collaborative ($1.2M)					✓		__% grant funded to date.
G14	**Maintain average annual budgets of local funds from member communities <$50,000 from 2020-2025 and <$60,000 from 2026-2030.**	Have spent down reserve funds for budget <$50K					✓		Annual budget difference from target in current year: ___ and since 2020: ___.
G15	**Minimize budget variations amongst years.** This requires carrying a balance forward from lower expenditure years to pay for future higher expenditure years.					✓			
G16	**Always have the 10% match required** to secure non-competitive Watershed Based Funding from the State Clean Water Legacy Fund.	Undesignated reserve is 15-30% of annual average expenses.				✓			Match shortfalls, if any: ___
G17	**Never ask member communities for additional funding** above an approved annual budget to cover unforeseen circumstances.					✓			Special funding requests to cities, if any: ____
G18	**Solicit quotes for professional services** every two years.		✓						Years quotes solicited: ___
High Priority - Communications with Member Communities									
G19	**City councils know about SRWMO projects.**					✓			Describe outreach to
G20	**Annually deliver a written and in person report to city councils and town board.**					✓			Written reports: __ of 4 member communities.
G21	**SRWMO board meetings are posted on each member community's calendar.**					✓			__ of 4 communities' calendars.
High Priority - Outreach and Education									
G22	**Personal, relevant communications** for the key messages and timeline described in the plan text (section 7.5, goal 22).	8 infographics in lake assoc and city newsltrs				✓			Deviations from plan: ___
G23	**Diversify outreach methods**, using three different methods each year. Outreach methods shall be prioritized as follows: Highest priority and frequency: member community and lake association newsletters, SRWMO website, workshops, displays and personal interactions. Lower priority and frequency: signage in public places (especially for AIS prevention), direct mailings (for neighborhood-specific issues), social media (for current events items).					✓			Outreach methods used, and frequency: ___
G24	**Consistent messaging across time and space**, including consistency with neighboring jurisdictions.	Supporting Anoka Co Water Resources Outreach Collaborative				✓			Describe actions: ____

#	Goal	Related actions in the current year	Progress Description: Not applicable - No progress was planned by this time	Progress planned, but none achieved	Progress, but less than planned	Progressing as planned	Progressing, ahead of plan	✓ Goal Accomplished	Notes/Description
G25	**SRWMO becomes a regular contributor to lake association newsletters.**	newsletter contributions submitted 3x				✓			___ lake association newsletter contributions.
G26	**Promote every completed project** in the lake associations' newsletters, website, Facebook or similar.	Lake association presentations, written reports				✓			__ of __ completed projects promoted.
Medium Priority - Aquatic Invasive Species									
G27	**Identify new infestations** early.	County AIS program				✓			County AIS program
G28	**Contain or eradicate any small scale, newly discovered infestations**.	None found	✓						New infestations and actions: __
Medium Priority - Septic Systems									
G29	**Locate and fix** non-functioning septic systems.	1 ssts fixed at Martin and Fawn Lakes					✓		__ located and __ fixed.
G30	**Annually promote to financial assistance** available through Anoka County and Anoka Conservation District for fixing non-compliant septic systems. The SRWMO's target audience is shoreland residents. Support any efforts to increase available funding, which is far less than need.	Newsletter article yielding 2 applications				✓			Program promotion: ___
G31	**Secure grant funds to** (a) develop, and set up implementation of, point of sale septic system inspection requirements. These requirements currently do not exist in Ham Lake or Linwood; (b) inspect shoreland septic systems older than 10 years or without a certificate of compliance in the last 10 years; and (c) assist East Bethel with developing an automated SSTS maintenance tracking and reminder system.	(a) Linwood Township adopted and began implementing SSTS POS ordinance with ACD financial assistance				✓			Grants sought or secured: ___
Medium Priority - Development									
G32	**Identify any undesirable natural resource impacts of proposed developments and recommended alternatives** early in the planning process.	First ever development review by the SRWMO				✓			__ development reviews.
Medium Priority - Multi-Partner Coordination									
G33	**Every SRWMO water quality improvement project has support from affected stakeholders** including member communities, lake groups, adjacent water management entities, or others.	Lake groups and cities were collaborators on a Coon Lake rain garden, 2 Martin Lake ponds, and 3-lake carp mgmt				✓			Recent projects and their supporters: ___
G34	**Attend at least two stakeholder/partner events per year.** The most common example is lake association meetings.	Virtual Martin Lakers Assoc mtg. Others postponed due to Covid-19.			✓				Stakeholder events attended:___
G35	**Partner with Anoka County Parks on shoreline or stormwater demonstration projects.**		✓						Projects progress: ___
Medium Priority - Stormwater Management									
G36	**City stormwater regulations are consistent** with SRWMO Stormwater Standards.	City stormwater ordinance reviews underway.			✓				__ of 4 commmunities
G37	**City Stormwater regulations are all found in a single place.** Currently some may be distributed amongst local water plans, storm water pollution prevention plans, ordinances making it difficult for permitting staff and permittees to properly implement.	Cities are reviewing.			✓				Cities that have consolidated regulations: ____

#	Goal	Related actions in the current year	Progress Description: Not applicable - No progress was planned by this time	Progress planned, but none achieved	Progress, but less than planned	Progressing as planned	Progressing, ahead of plan	✓ Goal Accomplished	Notes/Description
Medium Priority - Groundwater									
G38	**Residents are advised to test private wells regularly for contaminants**.	Cities promote				✓			Describe outreach: ___
G39	**All irrigation systems will be "smart" by 2040**, providing water when needed based upon soil moisture and forecasted rain.		✓						
G40	**Five residential or one larger "smart" irrigation systems will be installed** during the 10-years of this Plan, partially using SRWMO incentive grants. Larger irrigation systems include sporting fields, homeowner associations, schools, or other campuses.	In Lower St. Croix 1W1P, but funding anticipated in later years	✓						__ of 5 residential and __ of 1 larger systems installed.
G41	**Prevent improper household hazardous waste disposal**.	Cities promote				✓			Household hazardous waste disposal options and promo
Medium Priority - Administrative Efficiencies									
G42	**SRWMO continues to spend <20% of its local funds on administration on average across years**. Administration, for this purpose, includes the following items for which the SRWMO has some control over costs: recording secretary, reporting, and administrative assistance.	28%			✓				__% of local funds spent on admin.
G43	**SRWMO will have a key contact perso**n that can be reached by the public or agencies.					✓			Key contact person: ____
G44	**SRWMO meetings are efficient and occur no more than eight times per year.**	6 mtgs				✓			__ meetings this year.
G45	**Board members include representatives from key stakeholder groups** including lake residents and local elected officials.	SRWMO board includes elected officials, lake group member, residents, and natural resources professionals					✓		Stakeholder groups represented on SRWMO Board: ____
G46	**Correct the SRWMO boundary.** Presently eight parcels that are part of the SRWMO are in an area that is discontinuous with the rest of the SRWMO. Corrections are needed with the Rice Creek Watershed District (RCWD) boundary. Starting in 2019 the RCWD is systematically examining hydrologic and political boundaries with the SRWMO. A petition to the state for boundary amendment is anticipated.	RCWD has initiated a process and the SRWMO has concurred				✓			Boundary correction done: yes/no
Medium Priority - Chlorides									
G47	**Increase municipal snow plow drivers with level 1 MPCA Smart Salting Certification from one to 100%** of member community plow drivers.	At 3 of 4 communities				✓			__% of municipal snow plow drivers with level 1 certification.
G48	**Increase the number of member communities with level 2 MPCA Smart Salting Certification from zero to four (100%).** This is an organizational certification that requires completing an organizational salt saving assessment using the online Winter Maintenance Assessment tool.	At least 1 of 4 communities			✓				__% of communities with level 1 certification.

#	Goal	Related actions in the current year	Progress Description: Not applicable - No progress was planned by this time	Progress planned, but none achieved	Progress, but less than planned	Progressing as planned	Progressing, ahead of plan	✓ Goal Accomplished	Notes/Description
G49	**Member communities' will have technology on board plow trucks** that helps ensure only the amount of deicing agent required to achieve safe roads.	undercertain							Describe: ___
Lower Priority - Ditching/Drainage									
G50	**Ditch maintenance activities, if any, will not have a negative water quality impact** on downstream streams and lakes.		✓						Describe: ___
G51	**Replace the deteriorating Linwood Lake outlet weir**, which is owned by the MN DNR. The structure is important to maintain lake levels.	Met w DNR and Co Hwy Dept which apparently owns structure. After assessment, no urgent work needed.				✓			Describe outreach to DNR: ___
Lower Priority - Climate Change									
G52	**Stormwater facilities should be designed to accommodate storm frequencies and intensities** in the most up-to-date climatological data: Atlas 14.					✓			__ of 4 communities using Atlas 14.
Lower Priority - Water Quantity									
G53	**Hydrological systems will be managed to keep current discharge rates and volumes**.					✓			__ of 4 with ordinances requiring pre- and post-
Lower Priority - Fisheries									
G54	**Reduce rough fish when they negatively affect water quality.**					✓			See accomplishments in water quality section above.
G55	**Maintain strong pan fish populations** that will control spawning success of common carp.					✓			Describe: __
G56	**Winter aeration systems will be used** where winterkills of game fish may occur. Loss of game fish affects recreational opportunities and lake water quality.					✓			Aeration in operation at: ___.
Lower Priority - Wildlife Habitat									
G57	**Private and public owners of biologically significant areas will protect, enhance and/or maintain ecological integrity.**					✓			Describe land protection or habitat maintenance: ___
G58	**Restore at least one wetland** in the SRWMO that benefits water quality and habitat.	One project along Ditch 20 being designed				✓			Wetlands restored: ___

Appendix C:

2020 Community Reports to the SRWMO

Sunrise River Watershed Management Organization

Member Community Annual Report

City or township: Columbus
Completed by: Ben Gutknecht
For year: 2020

Member Community Responsibilities Summary

This checklist includes actions required of member community in the SRWMO 4th Generation Watershed Management Plan, excluding items that don't warrant regular reporting. It must be submitted to the SRWMO annually by each city/township. In turn, the SRWMO includes this information in its required reporting to the State.

Member Community Action	Not Completed	Partially Completed	Completed	Notes
	Check ✓ appropriate box			
Local water plan approved by the SRWMO. As of 1/17/20 SRWMO records indicate: Linwood: Tabled. Township considering resolution to adopt SRWMO plan and may revise draft comp plan. Columbus: Approved East Bethel, Ham Lake: Approved contingent upon receipt of revised plan addressing SRWMO comments.			✓	
Provide a link on the community's website to the SRWMO website.			✓	https://www.ci.columbus.mn.us/index.asp?SEC=EB2B4D4C-9B78-4875-811A-D88E737EDC49&Type=B_BASIC
Provide space in community newsletters for ¼ page minimum SRWMO articles.		✓		

Member Community Action	Not Completed	Partially Completed	Completed	Notes
Add the SRWMO onto distribution lists for development sketch plan reviews. Consider, but not be bound by, SRWMO comments on development proposals.		✓		
Serve as the Local Governmental Units (LGU) administering MN Wetland Conservation Act in SRWMO.			✓	
Fulfill the duties of MS4 permits with the State (for permitted communities only). Among these duties the SRWMO's priorities are: (1) inspection and maintenance of existing stormwater treatment, (2) map stormwater conveyance and treatment systems, and (3) ensure new development and redevelopment has the required stormwater treatment (4) sweep streets with curb and gutter once annually in all areas, and twice annually in priority areas. Priority areas shall be areas that drain directly to water bodies and/or natural wetlands without pretreatment of storm water runoff.				N/A
Operate permitting programs. Adopt, implement, and enforce ordinances that meet or exceed the standards in Appendix B of the SRWMO Plan. Required ordinances include: • Septic system ordinance			✓	

Member Community Action	Not Completed	Partially Completed	Completed	Notes
• Stormwater ordinance • Wetland ordinance				
If municipal stormwater standards or rules are spread amongst local water plans, storm water pollution prevention plans, ordinances or other documents, condensed them into a single location.			✓	
Provide household hazardous waste disposal information on community websites, ultimately directing residents to the Anoka County Household Hazardous Waste Facility.			✓	
Provide Anoka County Well Water Wise private well testing program on community websites.			✓	
Obtain level 1 MPCA Smart Salting Certification for all snow plow drivers within two years of adoption of this plan or their hire date.			✓	
Obtain level 2 MPCA Smart Salting Certification (one certification per municipality) within two years of adoption of this plan. **Maintain level 2 MPCA Smart Salting Certification** by annually submitting Best Management Practices and Salt Savings report through the MPCA Winter Maintenance Assessment tool.	✓			

Member Community Action	Not Completed	Partially Completed	Completed	Notes
Public education about the SRWMO and water resources. Please describe efforts of your community in the last year.	Topics covered: ☒Hazardous waste disposal ☐ Water conservation ☒ Shoreline management ☐ Aquatic invasive species ☒ Habitat ☒ Water quality improvement ☒ Activities of the SRWMO ☐ Other: _____ Media used for public education: ☒Website ☐ Newsletters (# articles: ____) ☐ Workshops (# ____) ☐ Community events or displays (describe: _____) ☐ Presentations to elected officials ☐ Presentations to the public ☒ Other: Facebook/Social Media Audience reached: ~~# of households~~/**residents** (circle one): Facebook=200 | Social Media (Nextdoor App-840)			
Please list any other water quality improvement efforts.				
Other feedback for the SRWMO.				

Sunrise River Watershed Management Organization

Member Community Annual Report

City or township: East Bethel
Completed by: Kaci Fisher
For year: 2019

Member Community Responsibilities Summary

This checklist includes actions required of member community in the SRWMO 4th Generation Watershed Management Plan, excluding items that don't warrant regular reporting. It must be submitted to the SRWMO annually by each city/township. In turn, the SRWMO includes this information in its required reporting to the State.

Member Community Action	Not Completed	Partially Completed	Completed	Notes
	Check ✓ appropriate box			
Local water plan approved by the SRWMO. As of 1/17/20 SRWMO records indicate: Linwood: Tabled. Township considering resolution to adopt SRWMO plan and may revise draft comp plan. Columbus: Approved East Bethel, Ham Lake: Approved contingent upon receipt of revised plan addressing SRWMO comments.		✓		Working on addressing SRWMO comments
Provide a link on the community's website to the SRWMO website.			✓	
Provide space in community newsletters for ¼ page minimum SRWMO articles.		✓		Not in every newsletter
Add the SRWMO onto distribution lists for development sketch plan reviews. Consider, but not be bound by, SRWMO comments on development proposals.	✓			
Serve as the Local Governmental Units (LGU) administering MN Wetland Conservation Act in SRWMO.			✓	

Member Community Action	Not Completed	Partially Completed	Completed	Notes
Fulfill the duties of MS4 permits with the State (for permitted communities only). Among these duties the SRWMO's priorities are: (1) inspection and maintenance of existing stormwater treatment, (2) map stormwater conveyance and treatment systems, and (3) ensure new development and redevelopment has the required stormwater treatment (4) sweep streets with curb and gutter once annually in all areas, and twice annually in priority areas. Priority areas shall be areas that drain directly to water bodies and/or natural wetlands without pretreatment of storm water runoff.			✓	
Operate permitting programs. Adopt, implement, and enforce ordinances that meet or exceed the standards in Appendix B of the SRWMO Plan. Required ordinances include: • Septic system ordinance • Stormwater ordinance • Wetland ordinance			✓	
If municipal stormwater standards or rules are spread amongst local water plans, storm water pollution prevention plans, ordinances or other documents, condensed them into a single location.	✓			
Provide household hazardous waste disposal information on community websites, ultimately directing residents to the Anoka County Household Hazardous Waste Facility.			✓	
Provide Anoka County Well Water Wise private well testing program on community websites.	✓			
Obtain level 1 MPCA Smart Salting Certification for all snow plow drivers within two years of adoption of this plan or their hire date.			✓	
Obtain level 2 MPCA Smart Salting Certification (one certification per municipality) within two years of adoption of this plan. **Maintain level 2 MPCA Smart Salting Certification** by annually submitting Best Management Practices and Salt Savings report through the MPCA Winter Maintenance Assessment tool.	✓			

Member Community Action	Not Completed	Partially Completed	Completed	Notes
Public education about the SRWMO and water resources. Please describe efforts of your community in the last year.	Topics covered: ☒ Hazardous waste disposal ☐ Water conservation ☒ Shoreline management ☒ Aquatic invasive species ☐ Habitat ☐ Water quality improvement ☒ Activities of the SRWMO ☐ Other: _____ Media used for public education: ☒ Website ☒ Newsletters (# articles: _5___) ☐ Workshops (# ____) ☐ Community events or displays (describe: _____) ☐ Presentations to elected officials ☐ Presentations to the public ☐ Other: _____ Audience reached: # of households/residents (circle one): _12,000_____			
Please list any other water quality improvement efforts.				
Other feedback for the SRWMO.				

Sunrise River Watershed Management Organization

Member Community Annual Report

City or township: Ham Lake
Completed by: Tom Collins, Consulting Engineer
For year: 2020

Member Community Responsibilities Summary

This checklist includes actions required of member community in the SRWMO 4th Generation Watershed Management Plan, excluding items that don't warrant regular reporting. It must be submitted to the SRWMO annually by each city/township. In turn, the SRWMO includes this information in its required reporting to the State.

Member Community Action	Not Completed	Partially Completed	Completed	Notes
	Check ✓ appropriate box			
Local water plan approved by the SRWMO. As of 1/17/20 SRWMO records indicate: Linwood: Tabled. Township considering resolution to adopt SRWMO plan and may revise draft comp plan. Columbus: Approved East Bethel, Ham Lake: Approved contingent upon receipt of revised plan addressing SRWMO comments.			✓	Revised Plan submitted 12/21/20, which was on the 2/4/21 agenda for consideration of approval.
Provide a link on the community's website to the SRWMO website.			✓	
Provide space in community newsletters for ¼ page minimum SRWMO articles.			✓	
Add the SRWMO onto distribution lists for development sketch plan reviews. Consider, but not be bound by, SRWMO comments on development proposals.			✓	
Serve as the Local Governmental Units (LGU) administering MN Wetland Conservation Act in SRWMO.			✓	

Member Community Action	Not Completed	Partially Completed	Completed	Notes
Fulfill the duties of MS4 permits with the State (for permitted communities only). Among these duties the SRWMO's priorities are: (1) inspection and maintenance of existing stormwater treatment, (2) map stormwater conveyance and treatment systems, and (3) ensure new development and redevelopment has the required stormwater treatment (4) sweep streets with curb and gutter once annually in all areas, and twice annually in priority areas. Priority areas shall be areas that drain directly to water bodies and/or natural wetlands without pretreatment of storm water runoff.			✓	
Operate permitting programs. Adopt, implement, and enforce ordinances that meet or exceed the standards in Appendix B of the SRWMO Plan. Required ordinances include: • Septic system ordinance • Stormwater ordinance • Wetland ordinance			✓	
If municipal stormwater standards or rules are spread amongst local water plans, storm water pollution prevention plans, ordinances or other documents, condensed them into a single location.	✓			
Provide household hazardous waste disposal information on community websites, ultimately directing residents to the Anoka County Household Hazardous Waste Facility.			✓	
Provide Anoka County Well Water Wise private well testing program on community websites.			✓	
Obtain level 1 MPCA Smart Salting Certification for all snow plow drivers within two years of adoption of this plan or their hire date.			✓	
Obtain level 2 MPCA Smart Salting Certification (one certification per municipality) within two years of adoption of this plan. **Maintain level 2 MPCA Smart Salting Certification** by annually submitting Best Management Practices and Salt Savings report through the MPCA Winter Maintenance Assessment tool.			✓	

Member Community Action	Not Completed	Partially Completed	Completed	Notes
Public education about the SRWMO and water resources. Please describe efforts of your community in the last year.	Topics covered: ☒ Hazardous waste disposal ☒ Water conservation ☐ Shoreline management ☐ Aquatic invasive species ☐ Habitat ☐ Water quality improvement ☐ Activities of the SRWMO ☐ Other: _____ Media used for public education: ☒ Website ☒ Newsletters (# articles: 41) ☒ Workshops (# 1 – Annual SWPPP public hearing) ☐ Community events or displays (describe: _____) ☐ Presentations to elected officials ☐ Presentations to the public ☒ Other: Partnerships Audience reached: # of households/~~residents~~ (circle one): 6,500			
Please list any other water quality improvement efforts.				
Other feedback for the SRWMO.				

Sunrise River Watershed Management Organization

Member Community Annual Report

City or township: Linwood Township
Completed by: Sandy Lathrop
For year: 2020

Member Community Responsibilities Summary

This checklist includes actions required of member community in the SRWMO 4th Generation Watershed Management Plan, excluding items that don't warrant regular reporting. It must be submitted to the SRWMO annually by each city/township. In turn, the SRWMO includes this information in its required reporting to the State.

Member Community Action	Not Completed	Partially Completed	Completed	Notes
	Check ✓ appropriate box			
Local water plan approved by the SRWMO. As of 1/17/20 SRWMO records indicate: Linwood: Tabled. Township considering resolution to adopt SRWMO plan and may revise draft comp plan. Columbus: Approved East Bethel, Ham Lake: Approved contingent upon receipt of revised plan addressing SRWMO comments.			✓	
Provide a link on the community's website to the SRWMO website.			✓	
Provide space in community newsletters for ¼ page minimum SRWMO articles.	✓			Only did newsletter for recycling and Covid in 2020
Add the SRWMO onto distribution lists for development sketch plan reviews. Consider, but not be bound by, SRWMO comments on development proposals.			✓	
Serve as the Local Governmental Units (LGU) administering MN Wetland Conservation Act in SRWMO.			✓	

Member Community Action	Not Completed	Partially Completed	Completed	Notes
Fulfill the duties of MS4 permits with the State (for permitted communities only). Among these duties the SRWMO's priorities are: (1) inspection and maintenance of existing stormwater treatment, (2) map stormwater conveyance and treatment systems, and (3) ensure new development and redevelopment has the required stormwater treatment (4) sweep streets with curb and gutter once annually in all areas, and twice annually in priority areas. Priority areas shall be areas that drain directly to water bodies and/or natural wetlands without pretreatment of storm water runoff.			✓	
Operate permitting programs. Adopt, implement, and enforce ordinances that meet or exceed the standards in Appendix B of the SRWMO Plan. Required ordinances include: • Septic system ordinance • Stormwater ordinance • Wetland ordinance		✓		
If municipal stormwater standards or rules are spread amongst local water plans, storm water pollution prevention plans, ordinances or other documents, condensed them into a single location.	✓			
Provide household hazardous waste disposal information on community websites, ultimately directing residents to the Anoka County Household Hazardous Waste Facility.			✓	
Provide Anoka County Well Water Wise private well testing program on community websites.			✓	
Obtain level 1 MPCA Smart Salting Certification for all snow plow drivers within two years of adoption of this plan or their hire date.			✓	
Obtain level 2 MPCA Smart Salting Certification (one certification per municipality) within two years of adoption of this plan. **Maintain level 2 MPCA Smart Salting Certification** by annually submitting Best Management Practices and Salt Savings report through the MPCA Winter Maintenance Assessment tool.		✓		

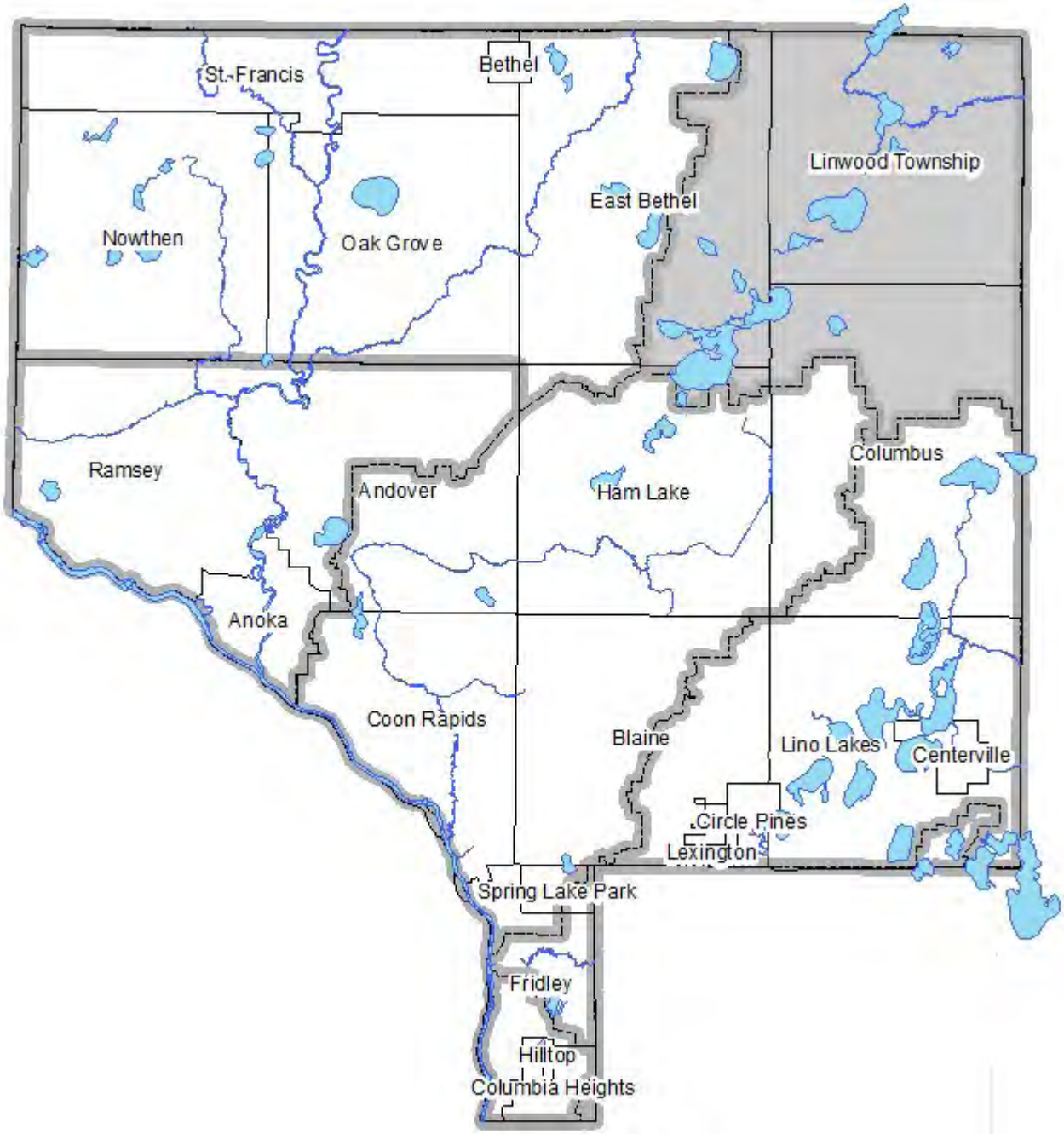
Member Community Action	Not Completed	Partially Completed	Completed	Notes
Public education about the SRWMO and water resources. Please describe efforts of your community in the last year.	Topics covered: ☒ Hazardous waste disposal ☐ Water conservation ☐ Shoreline management ☐ Aquatic invasive species ☐ Habitat ☐ Water quality improvement ☒ Activities of the SRWMO ☐ Other: _____ Media used for public education: ☒ Website ☐ Newsletters (# articles: ____) ☐ Workshops (# ____) ☐ Community events or displays (describe: _____) ☐ Presentations to elected officials ☐ Presentations to the public ☐ Other: _____ Audience reached: # of households/residents (circle one): _____			
Please list any other water quality improvement efforts.				
Other feedback for the SRWMO.	With COVID and staffing issues, some of the items did not get done.			

Appendix D:

2020 Water Monitoring and Management Work Results

Excerpt from the 2020 Water Almanac

Chapter 2: Sunrise River Watershed



Prepared by the Anoka Conservation District

Chapter 2: Sunrise River Watershed

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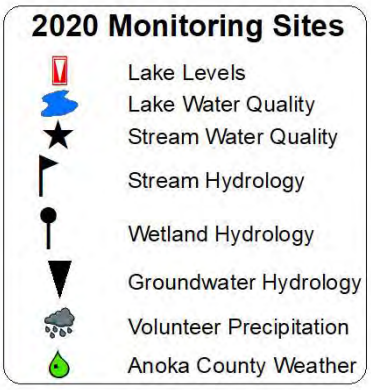
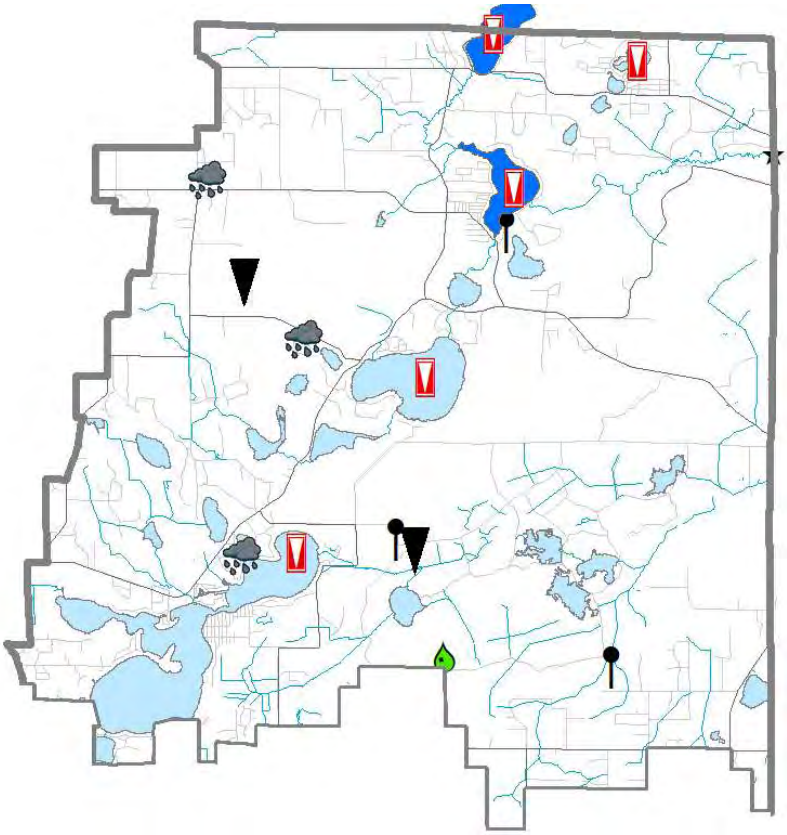
Recommendations 39





Lake Level Monitoring

Partners: SRWMO, ACD, MN DNR, local volunteers

Description: Weekly water level monitoring in lakes. The past five and twenty-five years of data for each lake are illustrated below, and all historical data are available on the Minnesota DNR website using the "LakeFinder" feature (www.dnr.mn.us.state\lakefind\index.html).

Purpose: To understand lake hydrology, including the impact of climate or other water budget changes. These data are useful for regulatory, building/development, and lake management decisions.

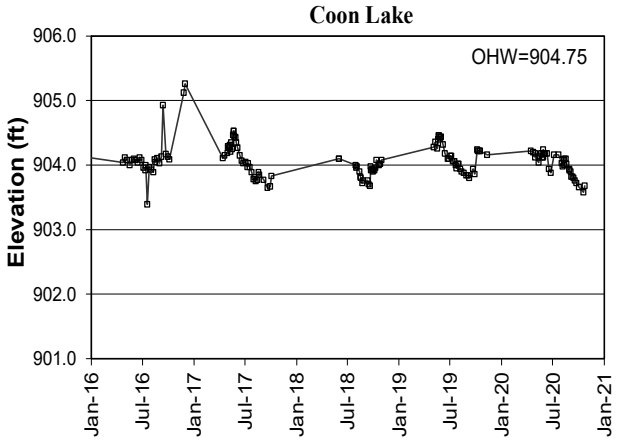
Locations: Coon, Fawn, Linwood, Martin, and Typo Lakes

Results: Lake gauges were installed by the Anoka Conservation District and surveyed by the MN DNR. In 2020, lake levels started near average and declined throughout the season. The rebound often seen in the fall was not observed. This is likely due to infrequent rain events throughout the season and the lowest annual total precipitation since 2012. All lakes recorded lower water levels on average than in 2019, and Coon Lake had its lowest average level since 2015.

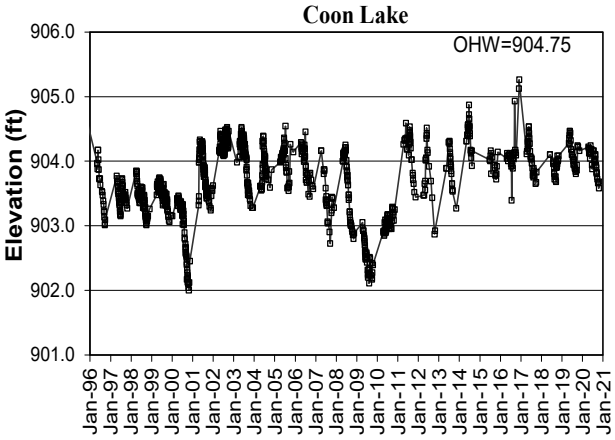
Lake levels fluctuated at a similar scale to previous years except for at Fawn Lake where levels fluctuated 1.33 ft. throughout the season. This was the largest range observed since 2014. The maximum elevation reached for the year (901.97) was the first seasonal reading taken for Fawn Lake in April, 2020 when lake levels were still elevated from the previous season. None of the lakes approached all-time highs or lows in 2020.

All lake level data can be downloaded from the MN DNR website's LakeFinder feature (https://www.dnr.state.mn.us/lakefind/index.html). Ordinary High Water Level (OHW), the elevation below which a DNR permit is needed to perform work, is listed for each lake on the corresponding graphs below.

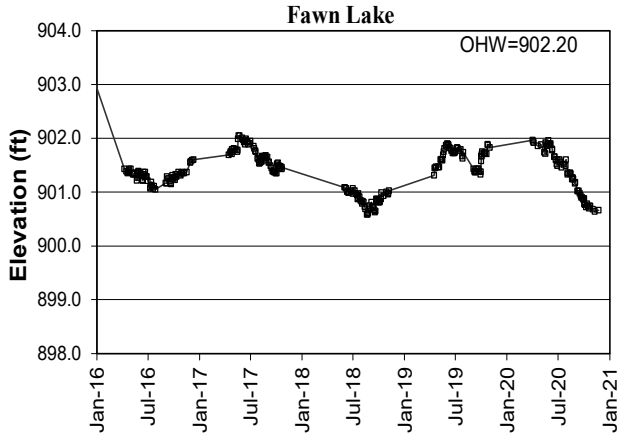
Coon Lake Levels – last 5 years



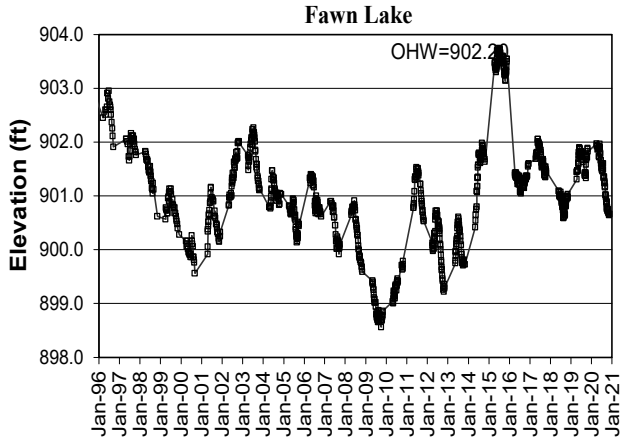
Coon Lake Levels – last 25 years



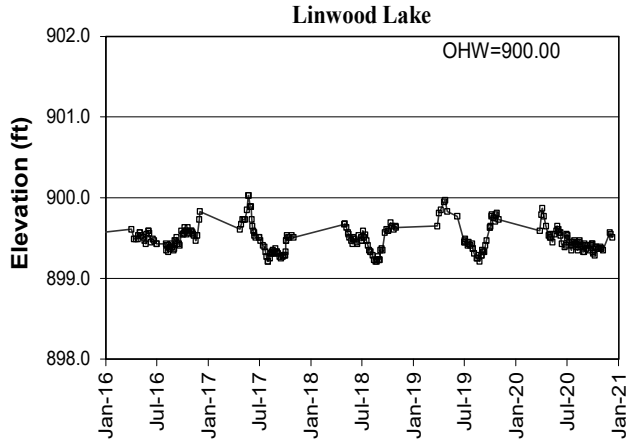
Fawn Lake Levels – last 5 years



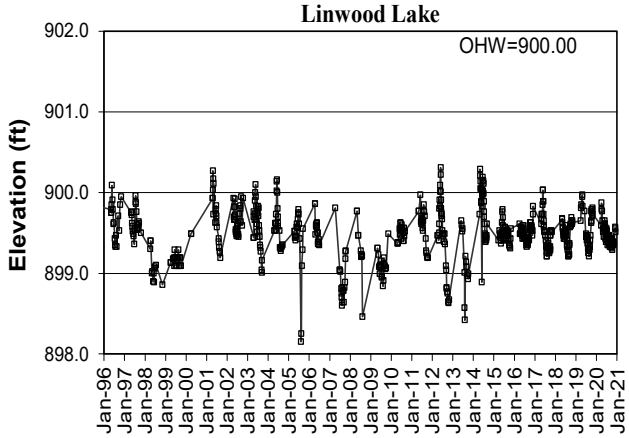
Fawn Lake Levels – last 25 years



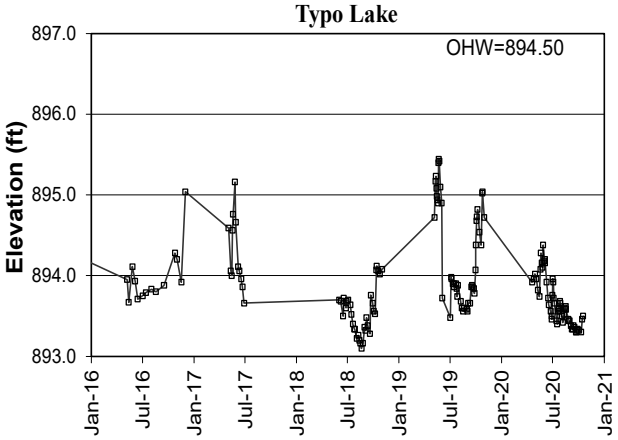
Linwood Lake Levels – last 5 years



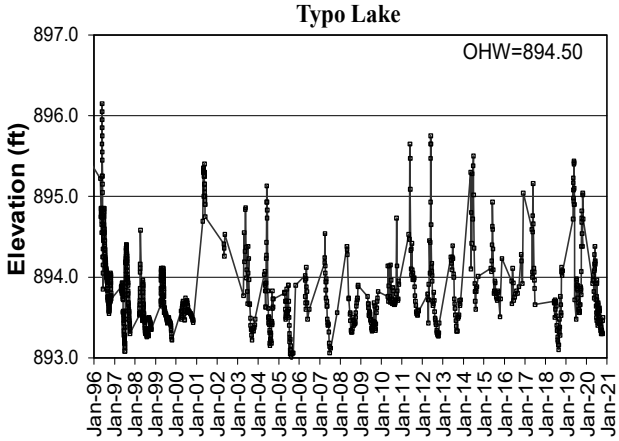
Linwood Lake Levels – last 25 years



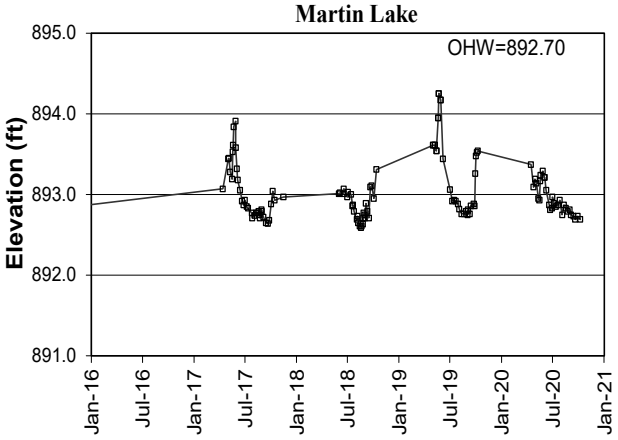
Typo Lake Levels – last 5 years



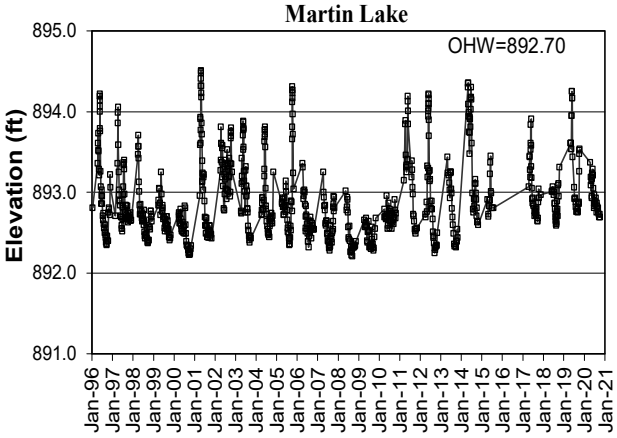
Typo Lake Levels – last 25 years



Martin Lake Levels – last 5 years



Martin Lake Levels – last 25 years



Lake	Year	Average	Min	Max
COON	2016	904.14	903.39	905.26
	2017	904.09	903.65	904.53
	2018	903.92	903.68	904.10
	2019	904.14	903.80	904.46
	2020	904.01	903.58	904.24

Lake	Year	Average	Min	Max
FAWN	2016	901.30	901.05	901.60
	2017	901.68	901.35	902.05
	2018	900.87	900.59	901.09
	2019	901.64	901.31	901.90
	2020	901.35	900.64	901.97

Lake	Year	Average	Min	Max
LINWOOD	2016	899.51	899.33	899.83
	2017	899.49	899.21	900.03
	2018	899.46	899.21	899.69
	2019	899.54	899.21	899.97
	2020	899.47	899.29	899.87

Lake	Year	Average	Min	Max
TYPO	2016	893.99	893.67	895.04
	2017	894.29	893.66	895.16
	2018	893.55	893.10	894.12
	2019	894.30	893.48	895.44
	2020	893.66	893.30	894.38

Lake	Year	Average	Min	Max
MARTIN	2015	892.96	892.70	893.45
	2017	893.03	892.64	893.91
	2018	892.85	892.59	893.31
	2019	893.32	892.75	894.25
	2020	892.95	892.69	893.37

Lake Water Quality

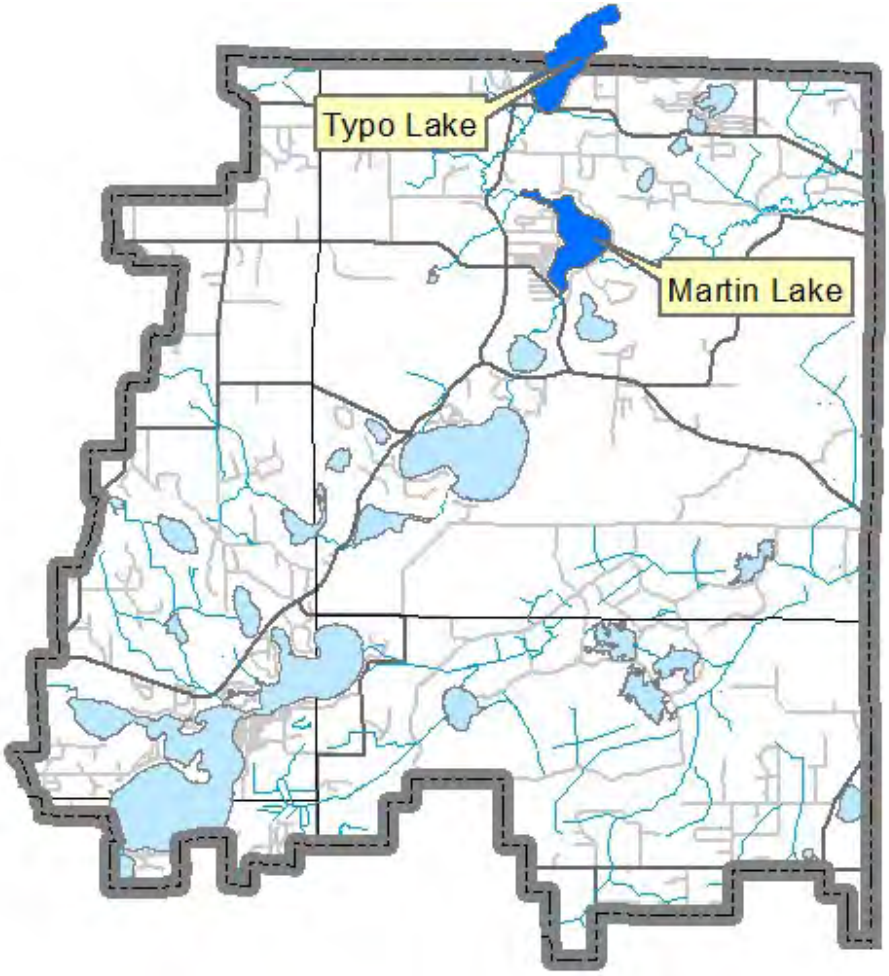
Description: May through September, every-other-week, monitoring is conducted for the following parameters: total phosphorus, chlorophyll-a, Secchi transparency, dissolved oxygen, turbidity, temperature, specific conductivity, pH, and salinity.

Purpose: To detect water quality trends and diagnose the cause of changes.

Locations: Typo, and Martin Lakes

Results: Detailed data for each lake are provided on the following pages, including summaries of historical conditions and trend analysis. Previous years' data are available from the Minnesota Pollution Control Agency (MPCA) (https://cf.pca.state.mn.us/water/watershedweb/wdip/search_more.cfm) or from ACD. Refer to Chapter 1 for additional information on lake dynamics and interpreting the data.

2020 Sunrise River Watershed Lake Water Quality Monitoring Sites



TYPO LAKE

LINWOOD TOWNSHIP, LAKE ID # 30-0009

Background

Typo Lake is located in northeast Anoka County and southeast Isanti County. It has a surface area of 290 acres and maximum depth of 6 feet (1.82 m), though most of the lake is about 3 feet deep. The lake has a mucky, loose, and unconsolidated bottom in some areas, while other areas have a sandy bottom. The public access is located at the south end of the lake along Fawn Lake Drive. The lake is used little for fishing or recreational boating because of the shallow depth and extremely poor water quality. The lake's shoreline is mostly undeveloped, with only 21 homes within 300 feet of the lakeshore. The lake's watershed of 11,520 acres is 3% residential, 33% agricultural, and 28% wetlands, with the remainder being forested or grassland. Typo Lake is on the MPCA's list of impaired waters for excess nutrients.

2020 Results

In 2020 Typo Lake had poor water quality compared to other lakes in this region (NCHF Ecoregion), receiving an overall F letter grade. Average total phosphorus (TP) was 220.0 µg/L, which was an increase from the 2019 average of 175.0 µg/L and the highest recorded average since 2009. While total phosphorus levels continue to far exceed the 60 µg/L state standard, average concentrations appear to be staying well below averages from a decade ago (353.0 µg/L in 2009).

Chlorophyll-a (Cl-a) levels in 2020 averaged 73.5 µg/L. This is similar to 2019 and other previous years. It is below the historical average for the lake of 110.3 µg/L but still many times higher than the State standard for Cl-a in shallow lakes of 20 µg/L.

Average Secchi transparency in 2020 was 1.3 feet, which is the third-highest average on record. In 2007 and 2009 a Secchi disk could be seen only 5-6 inches below the surface, on average. Transparency has improved throughout the last decade, but still remains poorer than the state standard for shallow lakes transparency of 1 meter (3.3 feet).

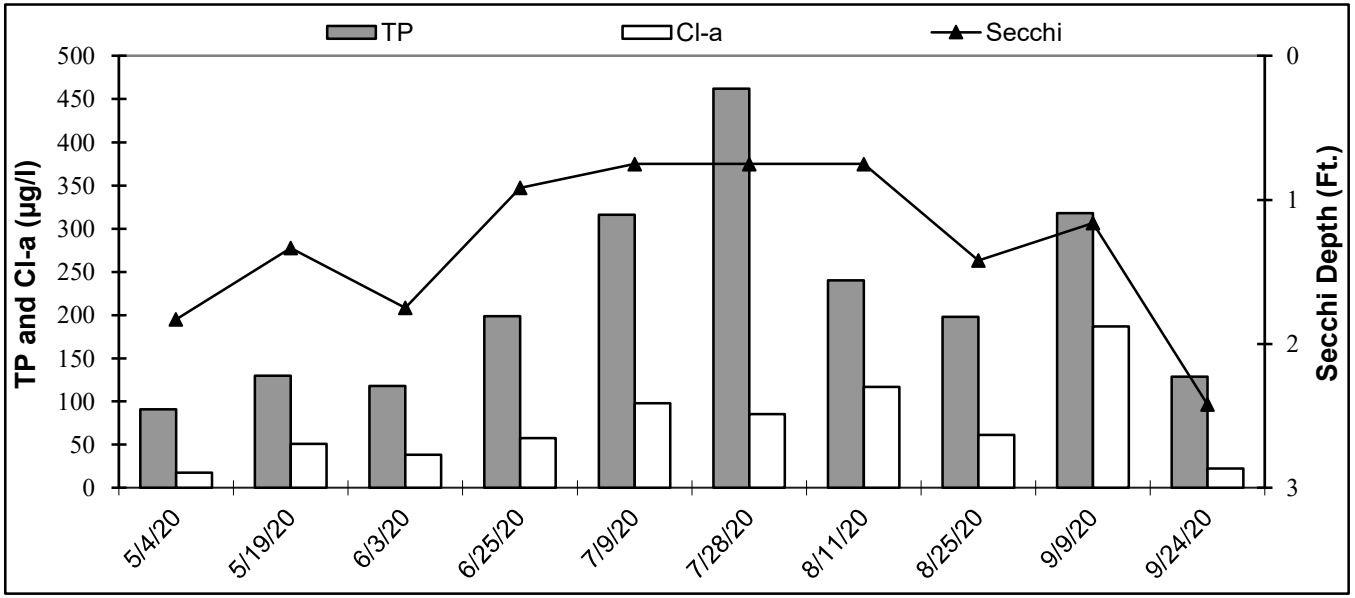
Trend Analysis

Twenty years of water quality monitoring have been conducted by the MPCA (1993, '94, and '95) and the Anoka Conservation District (1997-2001, '03, '05, '07, '09, '12, 2014-2020). Overall, water quality has improved from 1993 to 2020 (excluding high nutrient outlier years 2007 and 2009) in a statistically significant way (repeated measures MANOVA with response variables TP, Cl-a, and Secchi depth; $F_{2, 15}=8.87$, $p<0.01$). When we tested these response variables individually with one-way ANOVAs, TP and Secchi depth still show no significant change across this time period. Cl-a, however, is showing a statistically significant decline ($p<0.001$). A superficial look at graphs of these parameters suggests that total phosphorus is generally stable between 150 µg/L and 250 µg/L without a long-term trend. Secchi transparency in recent years is similar to averages from the early 1990s, an improvement from the late 1990s-2010. Transparency in the lake seems to be improving, though at this point is not statistically significant. The major driver of improved water quality is decreasing Cl-a concentrations.

Discussion

Typo Lake, along with Martin Lake downstream was the subject of a Total Maximum Daily Load (TMDL) study by the Anoka Conservation District, which was approved by the State and EPA in 2012. This study documented the sources of nutrients to the lake, the degree to which each is impacting the lake, and put forth lake rehabilitation strategies. Some factors impacting water quality in Typo Lake include rough fish, ditched wetland west of the lake, and lake sediments. Recent work has included installation of carp barriers (completed in 2016), carp removals (2017-2019, to be continued through 2022), and a feasibility study of ditched wetland restorations upstream of Typo Lake (2018). The feasibility study identified 4 potential projects along Ditch 20 upstream of Type Lake. It also recommends that dredging of Ditch 20 not occur. Current shoreline conditions on Typo Lake were inventoried during a 2019/2020 shoreline survey. This inventory will assist in identifying future lakeshore projects. Recent water quality monitoring results suggest these management approaches are improving conditions in these lakes, but reaching goals will require additional effort and time.

TYPO LAKE
LINWOOD TOWNSHIP, LAKE ID # 30-0009
2020 Results



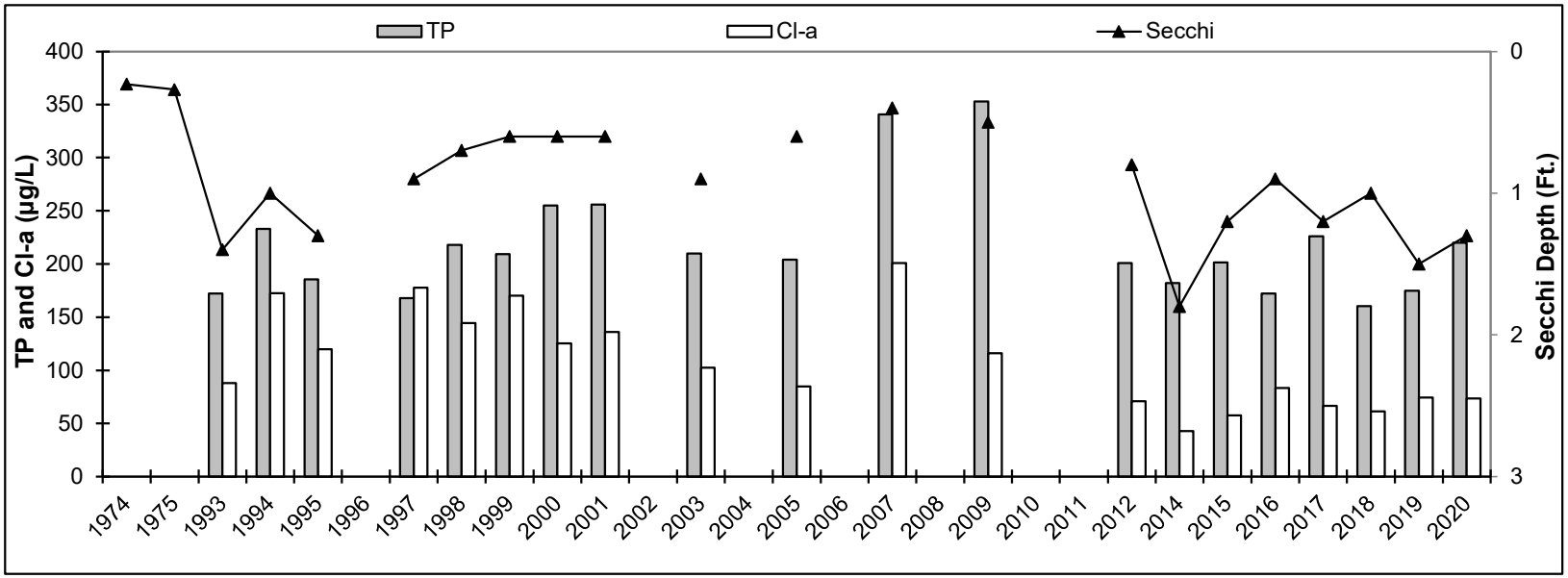
2020 Median Values

pH		8.61
Specific Conductivity	mS/cm	0.27
Turbidity	NTU	58.75
D.O.	mg/l	9.61
D.O.	%	105.53
Temp.	°F	73.59
Salinity	%	0.13
Cl-a	µg/L	59.35
T.P.	µg/l	198.5
Secchi	ft	1.25

Typo Lake		Date	5/4/2020	5/19/2020	6/3/2020	6/25/2020	7/9/2020	7/28/2020	8/11/2020	8/25/2020	9/9/2020	9/24/2020			
2020 Water Quality Data		Time	14:15	11:30	10:30	10:24	9:55	10:20	9:45	9:55	10:00	9:50			
	Units	R.L.*											Average	Min	Max
pH		0.1	8.79	8.61	8.58	8.43	8.07	8.88	9.14	9.13	8.53	8.61	8.68	8.07	9.14
Specific Conductivity	mS/cm	0.01	0.267	0.285	0.271	0.315	0.294	0.227	0.218	0.233	0.266	0.289	0.267	0.218	0.315
Turbidity	FNRU	1	35.00	57.20	65.70	72.40	109.00	106.00	12.1	43.60	60.30	20.40	64	12	109
D.O.	mg/l	0.01	10.99	10.80	11.23	8.41	5.72	6.75	12.22	9.91	7.60	9.30	9.29	5.72	12.22
D.O.	%	1	117.8	107.1	137.4	100.0	75.6	83.2	141.5	127.1	75.2	104.0	106.9	75.2	141.5
Temp.	°C	0.1	16.15	15.00	23.56	22.90	27.63	26.52	23.31	26.63	14.34	19.31	21.54	14.34	27.63
Temp.	°F	0.1	61.1	59.0	74.4	73.2	81.7	79.7	74.0	79.9	57.8	66.8	70.8	57.8	81.7
Salinity	%	0.01	0.13	0.13	0.13	0.15	0.14	0.11	0.11	0.11	0.12	0.14	0.1	0.1	0.2
Cl-a	µg/l	1	17.80	50.70	38.30	57.30	97.90	85.20	117.00	61.40	187.00	22.20	73.5	17.8	187.0
T.P.	mg/l	0.005	0.091	0.130	0.118	0.199	0.316	0.462	0.240	0.198	0.318	0.129	0.220	0.091	0.462
T.P.	µg/l	5	91	130	118	199	316	462	240	198	318	129	220	91	462
Secchi	ft	0.10	1.83	1.33	1.75	0.92	0.75	0.75	0.75	1.42	1.16	2.42	1.3	0.8	2.4
Secchi	m	0.10	0.56	0.41	0.53	0.28	0.23	0.23	0.23	0.43	0.35	0.74	0.4	0.2	0.7
Physical			2.0	1.0	3.0	2.0	3.0	3.00	3.00	2.0	3.0	2.0	2.4	1.0	3.0
Recreational			2.0	1.0	2.0	3.0	2.0	3.00	3.00	2.0	2.0	2.0	2.2	1.0	3.0

*reporting limit

Historic Annual Averages



Historical Report Card

Year	TP	Cl-a	Secchi	**Overall**
1974			F	**F**
1975			F	**F**
1993	F	F	F	**F**
1994	F	F	F	**F**
1995	F	F	F	**F**
1997	F	F	F	**F**
1998	F	F	F	**F**
1999	F	D	F	**F**
2000	F	F	F	**F**
2001	F	F	F	**F**
2003	F	F	F	**F**
2005	F	F	F	**F**
2007	F	F	F	**F**
2009	F	F	F	**F**
2012	F	D	F	**F**
2014	F	C	F	**D-**
2015	F	D	F	**F**
2016	F	F	F	**F**
2017	F	D	F	**F**
2018	F	D	F	**F**
2019	F	D	F	**F**
2020	F	D	F	**F**
State Standards	60 ug/L	20 ug/L	>3.3 ft	

Martin Lake

Linwood Township, Lake ID # 02-0034

Background

Martin Lake is located in northeast Anoka County. It has a surface area of 223 acres and maximum depth of 20 ft. The public access is located on the southern end of the lake. The lake is used moderately by recreational boaters and fishers, and would likely be used more if water quality improved. Martin Lake is almost entirely surrounded by private residences. The 5,402-acre watershed is 18% developed; the remaining 82% is vacant, agricultural, or wetlands. The non-native, invasive plant curly-leaf pondweed is present in Martin Lake but not at nuisance levels. Martin is on the MPCA's list of impaired waters for excess nutrients.

2020 Results

In 2020 Martin Lake had a C letter grade. During 2016-2018 the lake had a pattern of declining phosphorus levels, including a record low of 53.1µg/L in 2018. Total phosphorus levels were higher in 2019, but declined again in 2020 averaging 56.8 µg/L. Even though total phosphorus levels were higher in 2019, they were better than the average of 92.7 µg/L during 1997-2015. 2019 was the wettest year on record for the area, and increased runoff from the watershed may have played a role in higher 2019 phosphorus. Following that pattern, 2020 had below average rainfall, and we saw phosphorus levels in the lake recede.

In 2020, chlorophyll-a averaged 31.4 µg/L, a slight decrease increase from the 2019 average of 32.8 µg/L. Cl-a levels have been on a fairly steady incline since 2014 which had the lowest recorded average of 15.5 µg/L. While the 5-year (2016-2020) average (29.1 µg/L) has been much lower than the 2005-2009 average (108.3 µg/L), it remains above the impairment standard of 14 µg/L.

Average Secchi transparency was 3.0 feet in 2020, a slight decrease from 3.3 feet in 2019 but on par with the historical average of 2.9 feet for the lake. Secchi transparency remains about 30% below the State impairment threshold of 4.6 feet.

Trend Analysis

Twenty years of water quality data have been collected by the MPCA (1983), Metropolitan Council (1998, 2008), and the ACD (1997, 1999-2001, 2003, 2005, 2007, 2009, 2012-2020). Citizens monitored Secchi transparency 17 other years. Anecdotal notes from DNR fisheries data indicate poor water quality dating back to at least 1954. Although still poor, water quality in Martin Lake has shown an improvement from 1983 to 2020 that is statistically significant (repeated measures MANOVA with response variables TP, Cl-a, and Secchi depth; $F_{2, 16}=5.52$, $p < 0.05$). This is especially true for the last decade. Further examination of the data shows that while TP and Secchi transparency have not changed in the long-term since 1983, chlorophyll-a concentrations have shown a statistically significant decrease ($p < 0.01$) over this time. Water quality in Martin Lake declined through the late 1990s and reached its worst in 2007. In the nine years sampled since 2007, both TP and Secchi transparency have improved on a statistically significant basis ($p < 0.01$).

Discussion

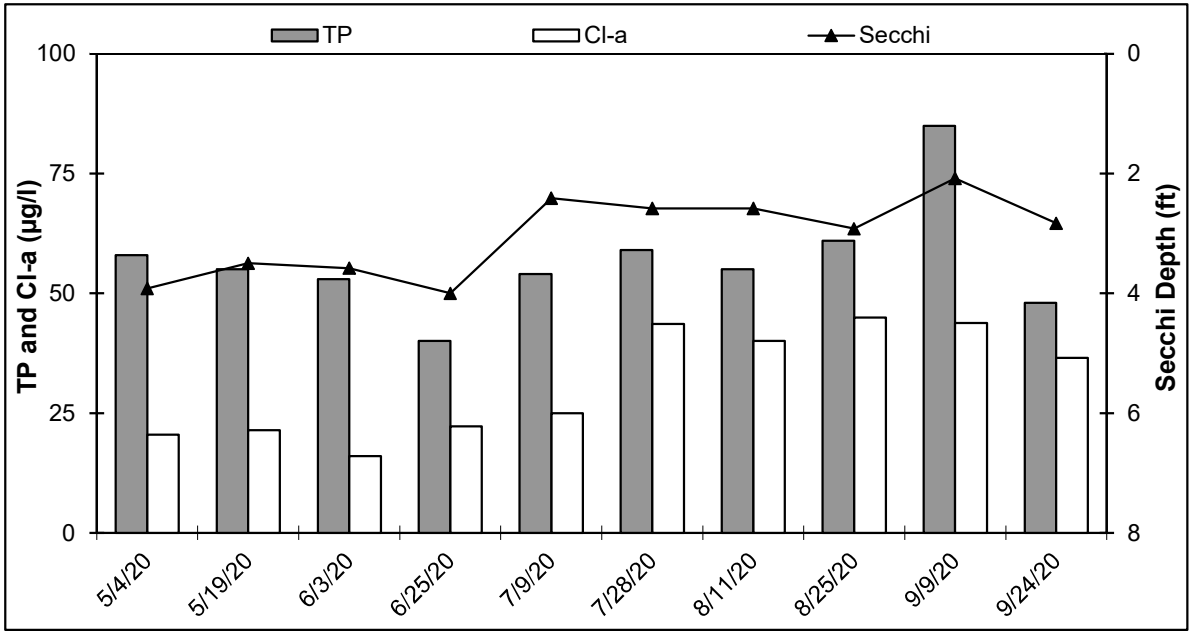
Martin Lake, along with Typo Lake upstream, was the subject of a TMDL study by the Anoka Conservation District that was approved by the State and EPA in 2012. This study documented the sources of nutrients to the lake, the degree to which each is impacting the lake, and put forward lake rehabilitation strategies. Water from Typo Lake and internal loading (carp, septic systems, sediments, etc.) are two of the largest negative impacts on Martin Lake water quality. Upstream of Typo Lake, a feasibility study was completed in early 2018 regarding restoration of ditched wetlands (Ditch 20). This study identified 4 potential projects and also recommends that dredging of Ditch 20 not occur.

Carp removals and restoration of two lake-adjacent stormwater ponds took place in 2020 and additional projects are planned in in the near future. Shoreline conditions on Martin Lake were inventoried during a 2019/2020 shoreline survey. This inventory will assist in identifying future lakeshore restoration projects. Recent water quality monitoring results suggest these management approaches are improving conditions in these lakes, but reaching goals will require additional effort and time.

MARTIN LAKE

LINWOOD TOWNSHIP, LAKE ID # 30-0009

2020 Results



2020 Median Values

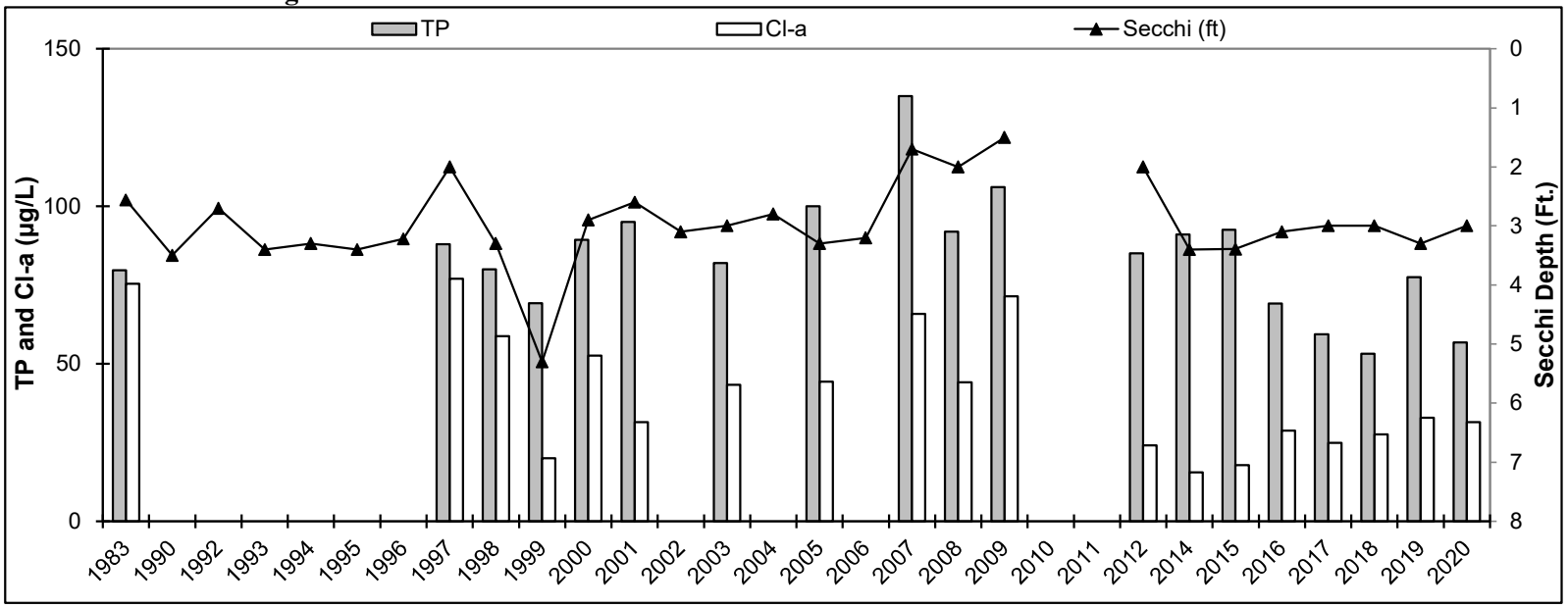
pH		8.56
Specific Conductivity	mS/cm	0.297
Turbidity	NTU	18.2
D.O.	mg/l	10.17
D.O.	%	121.35
Temp.	°F	73.85
Salinity	%	0.14
Cl-a	µg/L	30.7
T.P.	µg/l	55
Secchi	ft	2.8

Martin Lake
2020 Water Quality Data

	Units	R.L.*	5/4/2020	5/19/2020	6/3/2020	6/25/2020	7/9/2020	7/28/2020	8/11/2020	8/25/2020	9/9/2020	9/24/2020	Average	Min	Max
		Time:	13:42	12:00	12:00	11:00	10:30	10:55	10:30	10:20	10:30	10:15			
pH		0.1	8.92	8.45	8.41	8.61	8.50	8.62	8.47	8.87	8.21	8.86	8.59	8.21	8.92
Specific Conductivity	mS/cm	0.01	0.283	0.291	0.292	0.304	0.301	0.297	0.297	0.290	0.303	0.299	0.296	0.283	0.304
Turbidity	FNRU	1	8.30	7.20	13.30	4.80	25.10	19.10	33.60	18.20	34.90	17.50	16.34	4.80	34.90
D.O.	mg/l	0.01	11.42	10.01	13.30	10.27	8.24	10.07	9.67	11.48	8.27	12.60	10.53	8.24	13.30
D.O.	%	1	115.0	100.1	156.9	125.1	107.5	130.8	117.6	146.3	87.2	139.4	122.6	87.2	156.9
Temp.	°C	0.1	14.24	14.34	23.14	23.36	28.05	25.77	24.02	26.35	17.96	18.71	21.6	14.2	28.1
Temp.	°F	0.1	57.6	57.8	73.7	74.0	82.5	78.4	75.2	79.4	64.3	65.7	70.9	57.6	82.5
Salinity	%	0.01	0.13	0.14	0.14	0.15	0.14	0.14	0.14	0.14	0.14	0.15	0.14	0.13	0.15
Cl-a	ug/L	1	20.50	21.40	16.00	22.20	24.90	43.60	40.10	44.90	43.80	36.50	31.4	16.0	44.9
T.P.	mg/l	0.005	0.058	0.055	0.053	0.040	0.054	0.059	0.055	0.061	0.085	0.048	0.057	0.040	0.085
T.P.	ug/l	5	58	55	53	40	54	59	55	61	85	48	56.8	40	85
Secchi	ft	0.1	3.92	3.50	3.58	4.00	2.41	2.58	2.58	2.9	2.1	2.8	3.0	2.1	4.0
Secchi	m	0.1	1.19	1.07	1.09	1.22	0.73	0.79	0.79	0.89	0.63	0.86	0.9	0.6	1.2
Physical			2.0	2.0	2.0	1.0	1.0	3.0	2.0	2.0	2.0	2.0	1.9	1.0	3.0
Recreational			1.0	1.0	1.0	1.0	2.0	3.0	1.0	1.0	2.0	2.0	1.5	1.0	3.0

*reporting limit

Historic Annual Averages



Historical Report Card

Year	TP	Cl-a	Secchi	Overall
1996			D	**D**
1997	D	D	F	**D**
1998	D	D	D	**D**
1999	C	B	C	**C**
2000	D	C	D	**D**
2001	D	C	D	**D**
2002			D	**D**
2003	D	C	D	**D**
2004			D	**D**
2005	D	C	D	**D**
2006			D	**D**
2007	D	D	F	**D**
2008	D	C	F	**D**
2009	D	D	F	**D**
2012	D	C	F	**D**
2014	D	B	D	**C**
2015	D	B	D	**C**
2016	C	C	D	**C**
2017	C	C	D	**C**
2018	C	C	D	**C**
2019	C	C	D	**C**
2020	C	C	D	**C**
State Standards	40 ug/L	14 ug/L	>4.6 ft	

Stream Water Quality

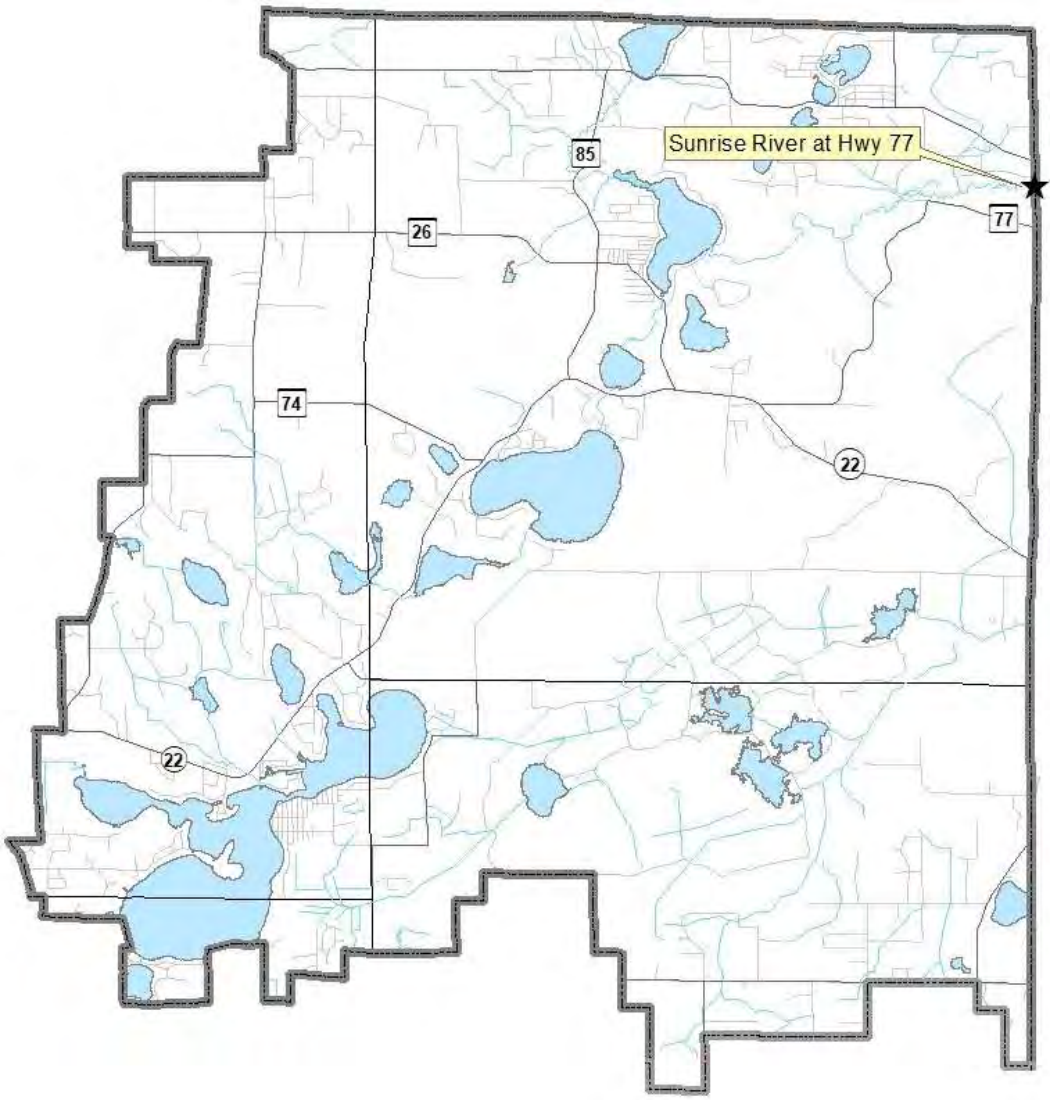
Description: In 2019 and 2020, the Sunrise River water quality monitoring site at Highway 77 was being monitored using funds from an MPCA Surface Water Assessment Grant (SWAG). Stream water quality was monitored on twelve occasions in 2020, including five grab samples. The selected site is at the furthest downstream limit of the Sunrise River Watershed Management Organization's jurisdictional area, and the Anoka County border. Parameters monitored include water level, pH, specific conductivity, turbidity, chlorides, transparency, dissolved oxygen, total phosphorus, and total suspended solids.

Purpose: To detect water quality trends and problems, and diagnose the source of problems.

Location: Sunrise River at Hwy 77

Results: Results are presented on the following pages.

2020 Sunrise River Watershed Stream Water Quality Monitoring Sites



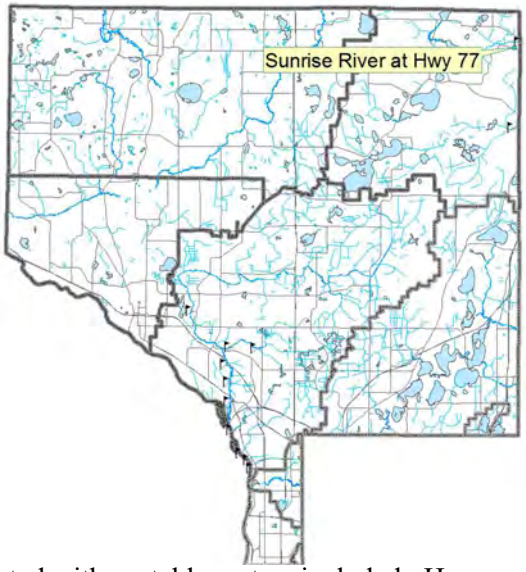
Stream Water Quality Monitoring

SUNRISE RIVER WEST BRANCH AT HWY 77

Near Fawn Lake Dr. NE, Linwood Township

STORET SiteID = S001-424

Years Monitored
2001, 2003, 2006, 2012, 2015, 2018-2020



Background
This monitoring site is near the downstream extent of the Sunrise River Watershed in Anoka County, at the Chisago County border. Upstream, this river drains through Rice, Boot, Linwood, Island, Martin, and Typo Lakes. The Sunrise River Watershed Management Organization historically monitors this site because it is where the river leaves their jurisdiction. Additionally, monitoring is considered important because this portion of the river is impaired for aquatic life with turbidity identified as a stressor. This site is included in the MN Pollution Control Agency's Cycle II Monitoring for the Lower St. Croix Watershed which began in 2019 and will run through 2020. A TMDL study was completed in 2013.

Methods
The river was monitored on 12 occasions in 2020. All monitoring during 2020 was completed during baseflow conditions. Parameters tested with portable meters included pH, specific conductivity, turbidity, temperature, dissolved oxygen, and salinity. Parameters tested by water quality grab samples sent to a state-certified lab included total phosphorus, chlorides, and total suspended solids. Grab samples were taken and analyzed by a laboratory at the beginning of each month monitored.

Summarized Results
Summarized water quality monitoring findings and management implications include:

- Specific conductivity was below the county median of 0.420 mS/cm. The median specific conductivity was 0.322 mS/cm. The median specific conductivity for all years at this site is 0.315 mS/cm. For management considerations see chlorides.
- Chlorides were measured at this site in all years, except 2015. In 2020, the median chloride concentration was 19.5 mg/L, a slight increase from 2019. The median for all years at this site is 16.5 mg/L and the countywide median is 13.29 mg/L which are both well below the state standard of 230 mg/L
  Management discussion: Road deicing salts are a concern region-wide. Chlorides are measurable in area streams year-round, including in the Sunrise River. While chloride levels may be low compared to state standards, excessive salt use should be avoided.
- Suspended solids and turbidity levels were similar in 2020 compared to other years monitored. The median for all years at this site is 17 mg/L TSS. These levels are higher than most other Anoka County streams, but still below the state standard of 30 mg/L TSS.
  Management discussion: Efforts to reduce suspended material in upstream lakes will likely help decrease turbidity and suspended solids throughout the Sunrise River.
- Phosphorus has fluctuated above and below the water quality standard for the Central River Nutrient Region of ≤100 µg/L. The 2020 median for TP was 67.0 ug/L, which was lower than previous years (2018 median of 101.5 ug/L). The median TP for all years at this site is 87 µg/L.
  Management discussion: Management in upstream lakes will help reduce phosphorus in the river.
- pH was within the range considered normal and healthy for streams in this area. The median pH was 7.56.
- Dissolved oxygen (DO) was typically within the range considered normal and healthy.

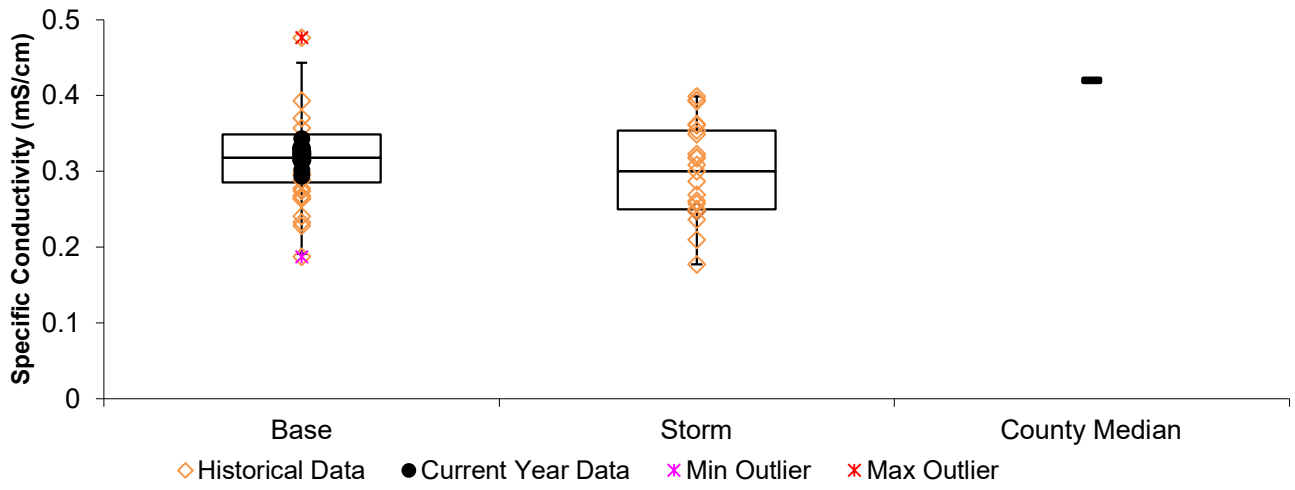
Below the data are presented and discussed for each parameter in greater detail. Management recommendations will be included at the conclusion of this report.

Specific conductivity

Specific conductivity and chlorides are measures of dissolved pollutants. Dissolved pollutant sources include urban road runoff, industrial chemicals, and others. Metals, hydrocarbons, and road salts are often of concern in a suburban environment. Specific conductivity is the broadest measure of dissolved pollutants we use. It measures electrical conductivity of water standardized for temperature; pure water with no dissolved constituents has zero specific conductivity.

Specific conductivity was acceptably low in the West Branch of the Sunrise River. Median specific conductivity for 2020 was 0.322 mS/cm. This is lower than the 2019 median which included some of the highest specific conductivity readings on record. The 2020 median for the site was also lower than the median for Anoka County streams (0.420 mS/cm). Specific conductivity has historically been lower during storms, suggesting that stormwater runoff contains fewer dissolved pollutants than the surficial water table that feeds the river during baseflow. Increased specific conductivity levels during baseflow conditions has been observed in many Anoka County streams. This has led to the determination that the largest contributor to rising specific conductivity levels is road deicing salts that have infiltrated into the shallow aquifer.

Specific conductivity during baseflow and storm conditions. Orange diamonds are historical data from previous years and black circles are 2020 readings. Box plots show the median (middle line), 25th and 75th percentile (ends of box), and 10th and 90th percentiles (floating outer lines).

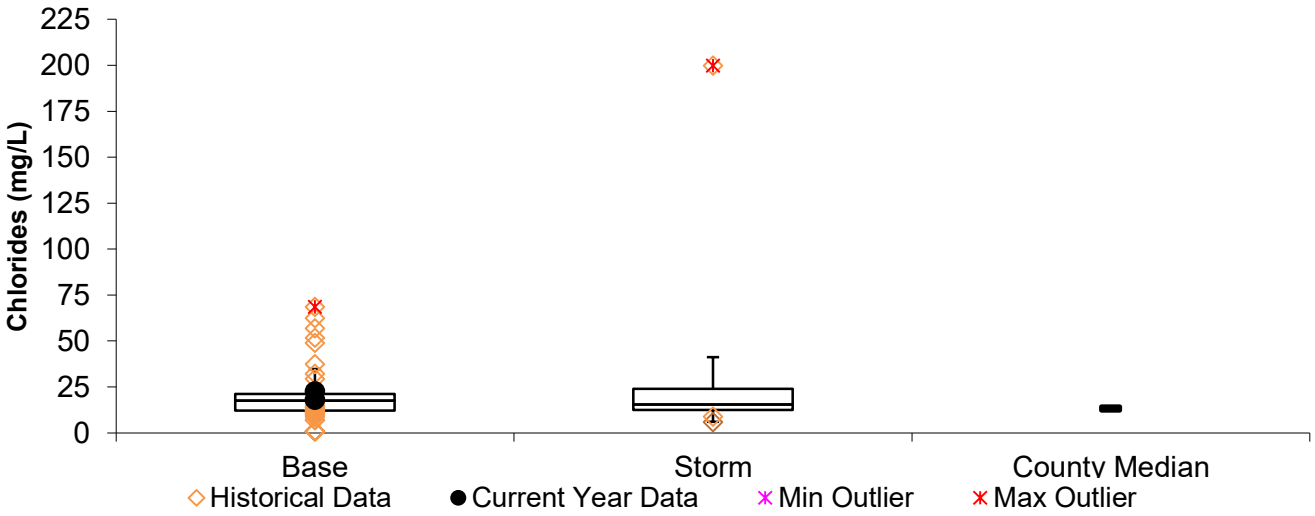


Chlorides

Chlorides are the measure of chloride salts, the most common of which are road de-icing chemicals and those used in water softening. Chlorides can also be present in other pollutant types, such as wastewater. These pollutants are of concern because of the effect they can have on the stream's biological community. Specific Conductivity data, reported above, is commonly used as an indicator for chlorides, with higher specific conductivity generally corresponding to higher chlorides.

Chloride concentrations in the West Branch of the Sunrise River are higher than the median for Anoka County (13.29 mg/L). In 2020 the median chloride concentration was 19.5 mg/L, slightly more than in 2019 but well below the state standard of 230 mg/L. A waterbody is considered impaired if two or more samples exceed the state standard in a three-year period. Only a couple of storm samples have been collected at this site for chlorides, but they have followed the pattern seen in specific conductivity with higher readings during baseflow conditions and further supports the finding that road deicing salts seeping into the shallow aquifer are a primary cause of higher baseflow chloride and specific conductivity readings.

Chlorides during baseflow and storm conditions. Orange diamonds are historical data from previous years and black circles are 2020 readings. Box plots show the median (middle line), 25th and 75th percentile (ends of box), and 10th and 90th percentiles (floating outer lines).



Turbidity and Total Suspended Solids (TSS)

Turbidity and total suspended solids (TSS) are two different measurements of solid material suspended in the water. Turbidity is measured by the refraction of a light beam passed through a water sample. It is most sensitive to large particles. Total suspended solids are measured by filtering solids from a water sample and weighing the filtered material. The amount of suspended material is important because it affects transparency and aquatic life, and because many other pollutants are attached to particles. Many stormwater treatment practices such as street sweeping, sumps, and stormwater settling ponds target sediment and attached pollutants.

It is important to note that suspended solids can come from sources within the river itself or outside of the river from the contributing watershed. Sources from the watershed include soil erosion, road sanding, and others. In-stream sources of TSS include riverbank erosion and movement of the river bottom. Finally, algae from the river and upstream lakes contribute to suspended solids.

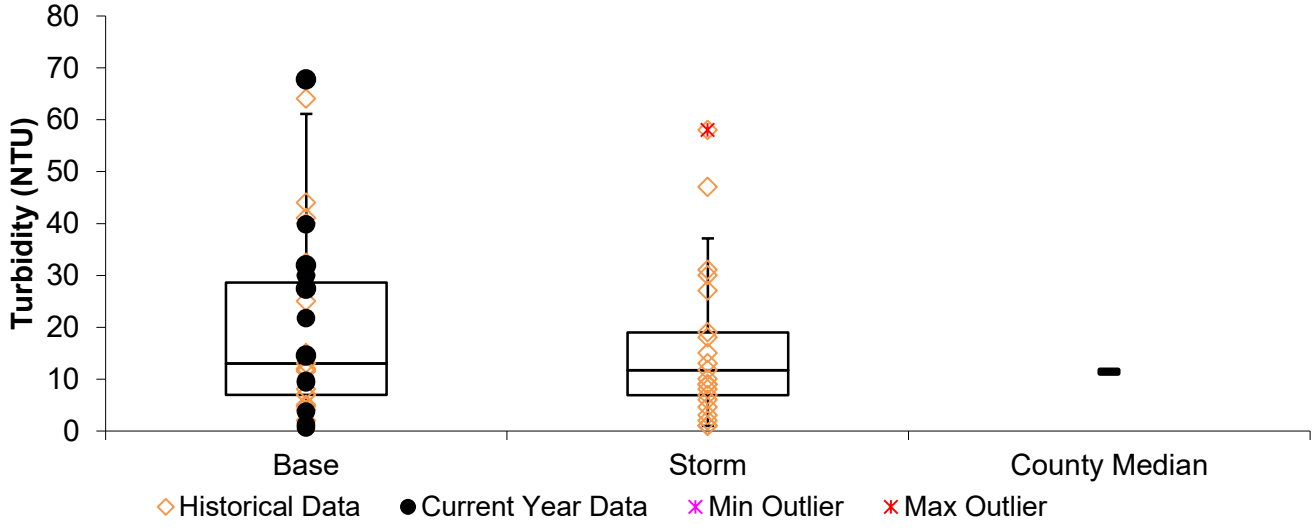
Turbidity is no longer used to determine if a stream is impaired. Instead, total suspended solids is used. Turbidity is still a helpful and easy to measure parameter. Generally, turbidity below 25 NTU is acceptable; previously this was the State's standard. When that standard was in place a stream was impaired if it exceeded this value on three occasions and at least 10% of all sampling events. Including all years of data, the West Branch of the Sunrise River has exceeded 25 NTU on 19 of 72 sampling occasions (26%). Turbidity increased in 2020, with five of twelve samples surpassing the state standard (42%).

The most obvious source of turbidity is algae from upstream lakes. Three upstream lakes are impaired for excess nutrients and high algae. They include Linwood, Martin, and Typo Lakes. The river sampling site is 3 miles downstream from Martin Lake. The area between the lake and sampling site is wide floodplain fringe and forest with little human impact that would not be expected to add much sediment to the river. Therefore, efforts to reduce suspended material in the river should focus on the upstream lakes. It is also worth noting that this section of the river has unconsolidated bottom material which can re-suspend and contribute to turbidity.

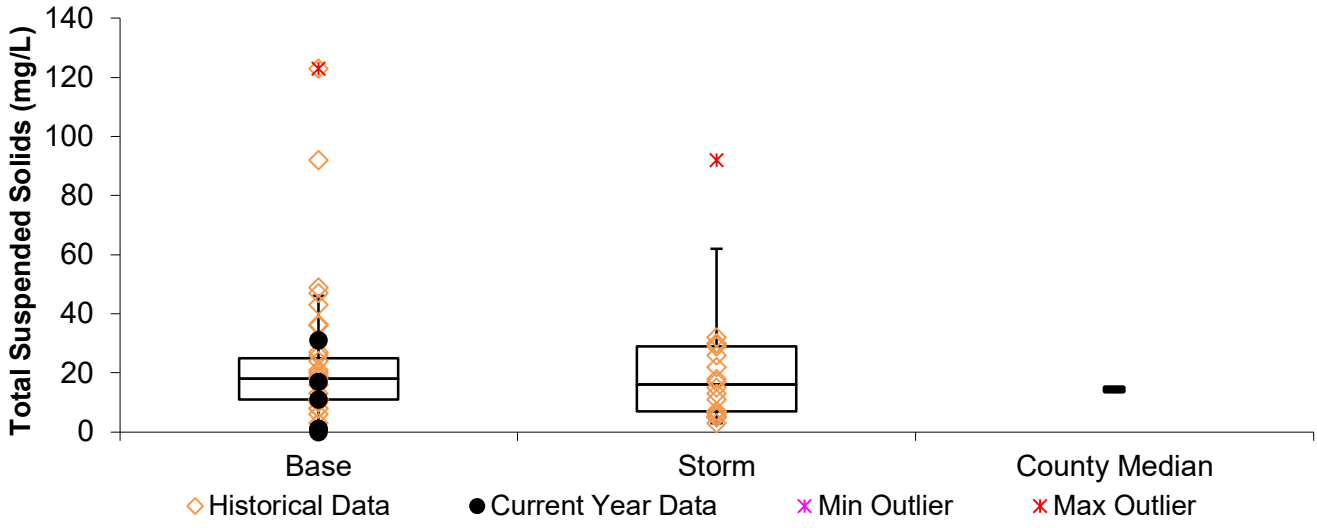
Total suspended solids in the West Branch of the Sunrise River has exceeded the State standard for this region. The standard is no more than 10% of samples exceeding 30 mg/L during April 1-September 30. Over all years monitored the West Branch exceeded the standard on 17% of sampling occasions (10 of 57).

In 2020 total suspended solid concentrations increased compared to 2019 with one sample exceeding 30 mg/L. In 2020, all samples were taken during baseflow. Other years of sampling included storm events. Higher concentrations of suspended solids may be from any combination of turbulence mobilizing sediment during higher stream flows, flushing of upstream lakes, and/or overland stormwater flow. Overland flow is relatively low in this subwatershed, which is largely forested and wetland.

Turbidity during baseflow and storm conditions Orange diamonds are historical data from previous years and black circles are 2020 readings. Box plots show the median (middle line), 25th and 75th percentile (ends of box), and 10th and 90th percentiles (floating outer lines).



Total suspended solids during baseflow and storm conditions Orange diamonds are historical data from previous years and black circles are 2020 readings. Box plots show the median (middle line), 25th and 75th percentile (ends of box), and 10th and 90th percentiles (floating outer lines).

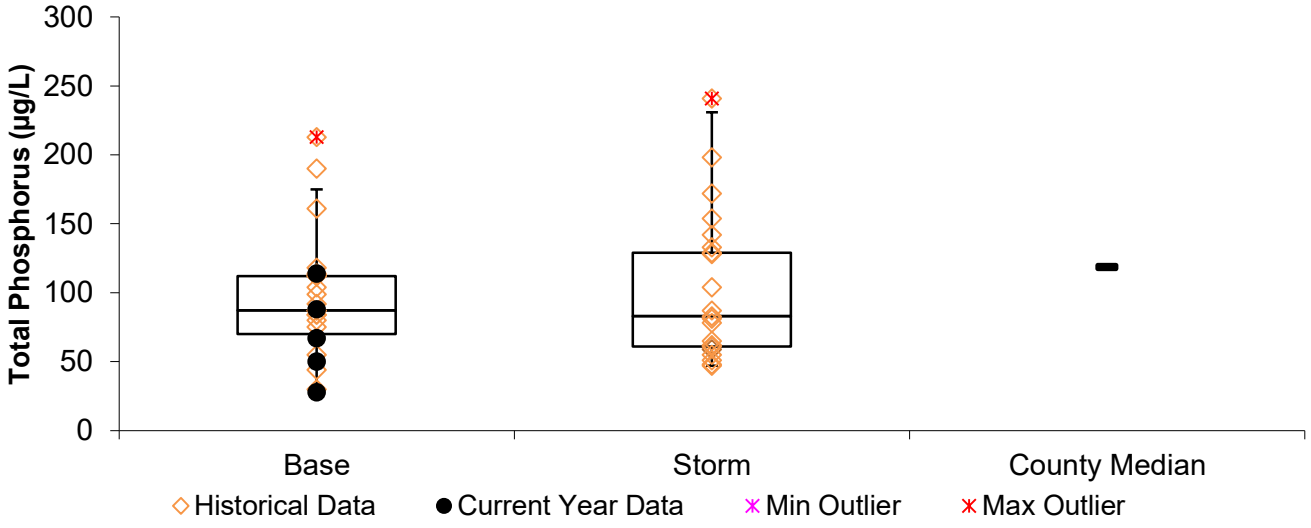


Total Phosphorus

The nutrient phosphorus is one of the most common pollutants in our region and can be associated with urban runoff, agricultural runoff, wastewater, and many other sources. Total phosphorus (TP) in the West Branch of the Sunrise River often exceeds the state standard of 100 µg/L. In 2020 the median phosphorus concentration was 67 ug/L but did exceed the state standard during one of the five sampling events. There was a decrease from the 2019 median of 72.0 ug/L, and a match of one exceedance of 100 µg/L. The median phosphorus concentration in the West Branch of the Sunrise River across all years monitored is 87.0 µg/L. Over all years sampled, 22 of 58 samples (38%) have exceeded the standard of 100 µg/L. These phosphorus concentrations are common for the area. There has generally not been a large difference between storm and baseflow TP concentrations during historical monitoring. All 2019 and 2020 sampling occurred during baseflow conditions.

In the case of the West Branch of the Sunrise River phosphorus levels are, at least in part, reflective of conditions of Martin Lake located 3 miles upstream from the sampling site. Martin Lake is impaired for excess phosphorus, with a summertime average of 79.2 µg/L over the last 10 years. Water quality improvements to Martin Lake will benefit the river downstream. Recent upstream projects including carp barriers, carp harvests, and stormwater retrofits, coincide with improved conditions in upstream lakes, but those benefits are not yet apparent in the West Branch of the Sunrise River.

Total phosphorus during baseflow and storm conditions. Orange diamonds are historical data from previous years and black circles are 2020 readings. Box plots show the median (middle line), 25th and 75th percentile (ends of box), and 10th and 90th percentiles (floating outer lines).



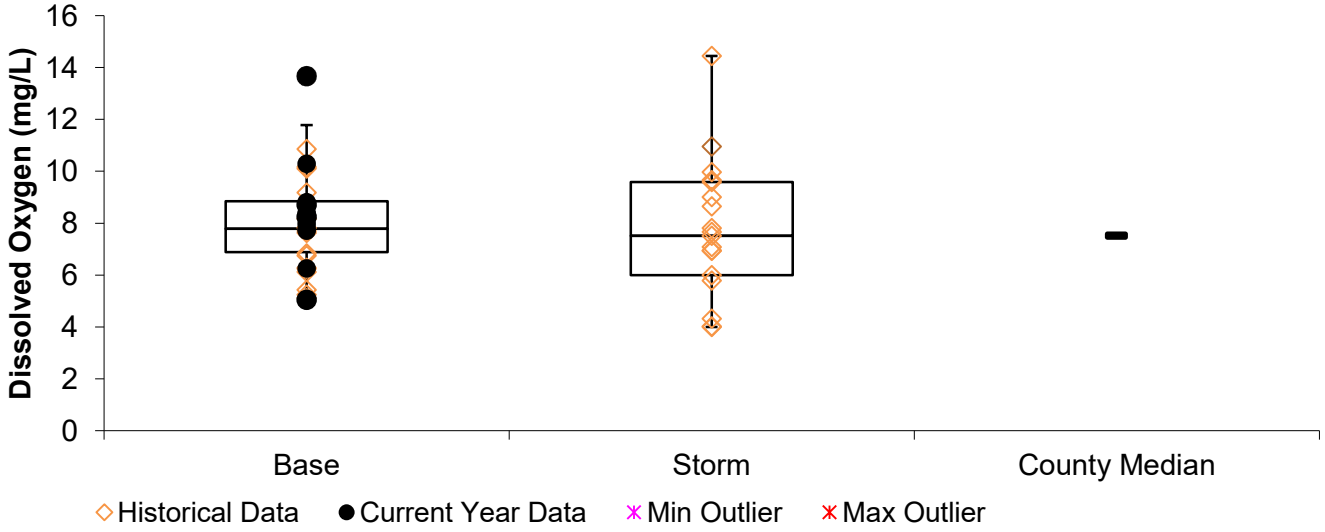
Dissolved Oxygen

Dissolved oxygen is necessary for aquatic life, including fish. Organic pollution causes oxygen consumption when it decomposes. If oxygen levels fall below 5 mg/L aquatic life begins to suffer, therefore the State water quality standard is a daily minimum of 5 mg/L. The stream is impaired if 10% of observations are below this level in the last 10 years. Dissolved oxygen levels are typically lowest in the early morning because of decomposition consuming oxygen at night without offsetting oxygen production by photosynthesis, which occurs during the day.

For the West Branch of the Sunrise River there are two datasets to consider. First, spot measurements were taken with the other water quality monitoring described in this report. Dissolved oxygen has been found at less than 5 mg/L on three out of 52 occasions. All were during storm events in prior years, occurring in 2003, 2012 and 2015. In 2020, there was one case in early July, where DO hit 5.05 mg/L, narrowly avoiding the daily minimum of 5 mg/L.

The second data set is around-the-clock DO measurements collected for eight days in by the MPCA in 2012. They found that DO dipped below 5 mg/L every morning. The river has been designated as impaired for poor fish and invertebrate communities. Although it is not listed as impaired for DO specifically, low DO concentration occurring each morning in this stream is a likely stressor on these organisms.

Dissolved oxygen results during baseflow and storm conditions Orange diamonds are historical data from previous years and black circles are 2020 readings. Box plots show the median (middle line), 25th and 75th percentile (ends of box), and 10th and 90th percentiles (floating outer lines).

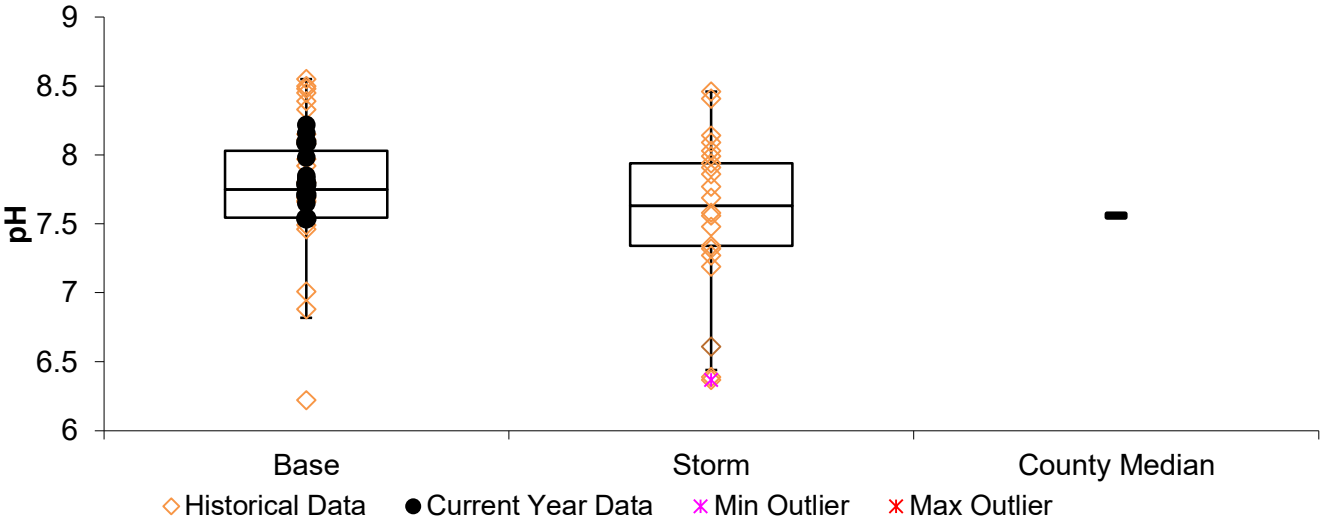


pH

pH refers to the acidity of the water. The MPCA's water quality standard is for pH to be between 6.5 and 8.5. The West Branch of the Sunrise River is regularly within this range (see figure below). It often has slightly higher pH than other streams because of the impact of algal production in upstream lakes.

It is interesting to note that pH is generally lower during storms than during baseflow. This is because the pH of rain is typically lower (more acidic). While acid rain is a longstanding problem in some areas, its effect on this aquatic system is small. In 2018, there was one occurrence of sub-standard pH in October when pH was 5.66. This is not overly concerning. pH was within the normal range (7.54 to 8.22) for all samples in 2020.

pH results during baseflow and storm conditions Orange diamonds are historical data from previous years and black circles are 2020 readings. Box plots show the median (middle line), 25th and 75th percentile (ends of box), and 10th and 90th percentiles (floating outer lines).



Recommendations

Water quality in the West Branch of the Sunrise River is poorer than ideal. A Total Maximum Daily Load (TMDL) study was completed in 2013 to determine impairments of this river. The study found that aquatic life in this river was struggling with turbidity identified as the main stressor. Low dissolved oxygen may also be a stressor contributing to aquatic life impairment. At this time, it appears that algae and nutrients in upstream lakes are a primary source of problems. Dissolved oxygen is not low in the lakes, however, and low nighttime levels in the river may be related to decomposition occurring in the large wetland floodplain. Future water quality management should be targeted at upstream lakes. Ongoing and upcoming projects include stormwater retrofits at Martin Lake and common carp management in the chain of lakes.

Wetland Hydrology

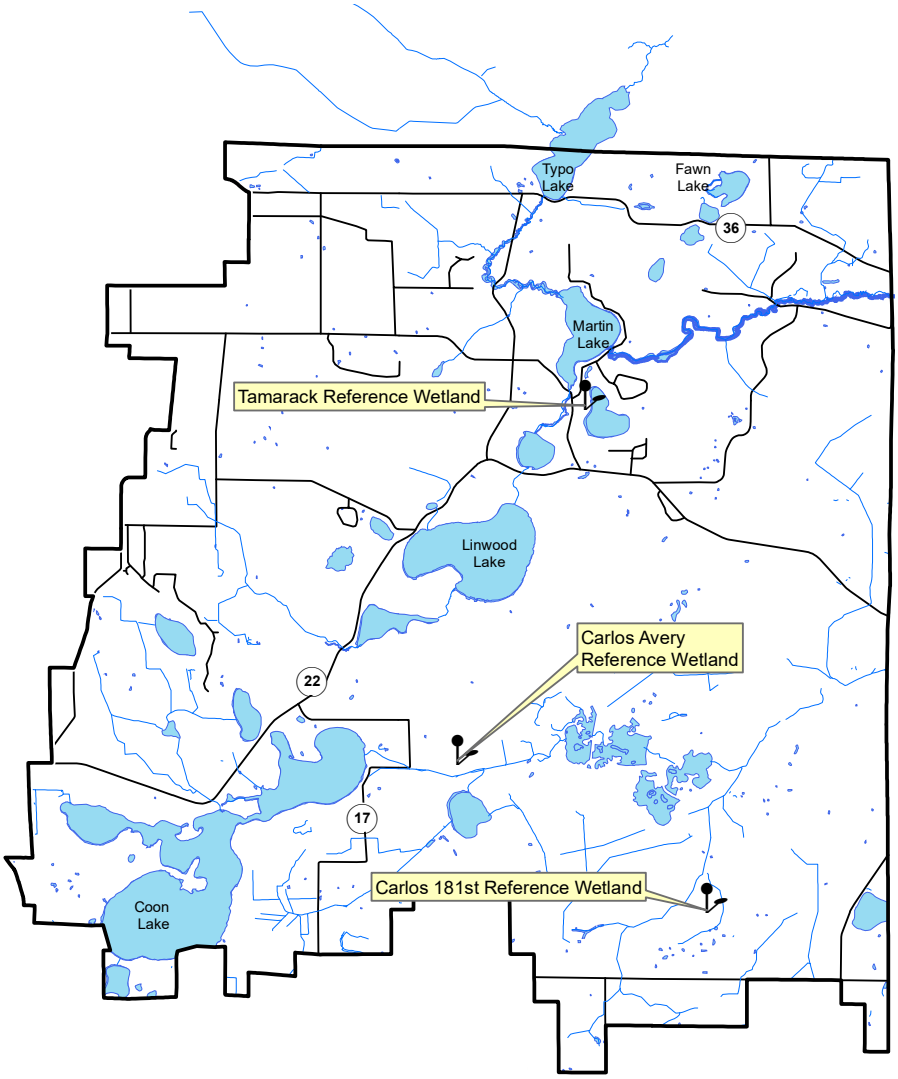
Description: Continuous groundwater level monitoring at a wetland boundary. Countywide, the ACD maintains a network of 23 wetland hydrology monitoring stations.

Purpose: To provide understanding of wetland hydrology, including the impacts of climate and land use. These data aid in delineation of nearby wetlands by documenting hydrologic trends including the timing, frequency, and duration of saturation.

Locations: Carlos Avery Reference Wetland, Carlos Avery Wildlife Management Area, City of Columbus
Carlos 181st Reference Wetland, Carlos Avery Wildlife Management Area, City of Columbus
Tamarack Reference Wetland, Linwood Township

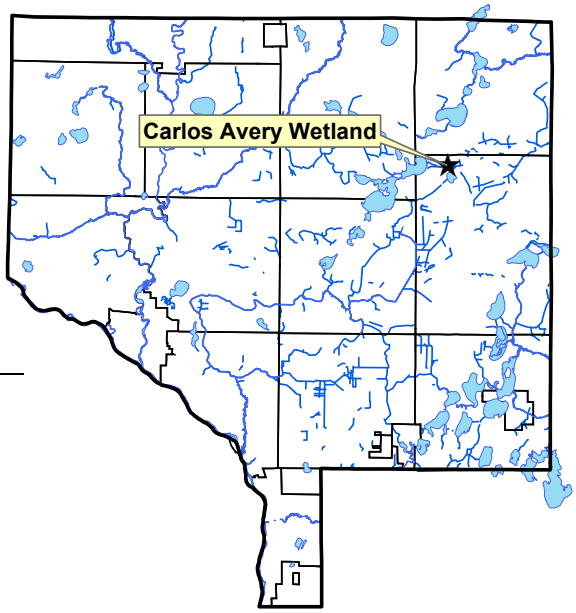
Results: See the following pages.

2020 Sunrise River Watershed Wetland Hydrology Monitoring Sites



CARLOS AVERY REFERENCE WETLAND

Carlos Avery Wildlife Management Area, City of Columbus



Site Information

Monitored Since: 1997

Wetland Type: 3

Wetland Size: >300 acres

Isolated Basin? No

Connected to a Ditch? Yes

Soils at Well Location:

Horizon	Depth	Color	Texture	Redox
Oa	0-4	N2/0	Organic	-
Bg	4-25	10yr 5/2	Sandy Loam	25% 10yr 5/6 with organic streaking

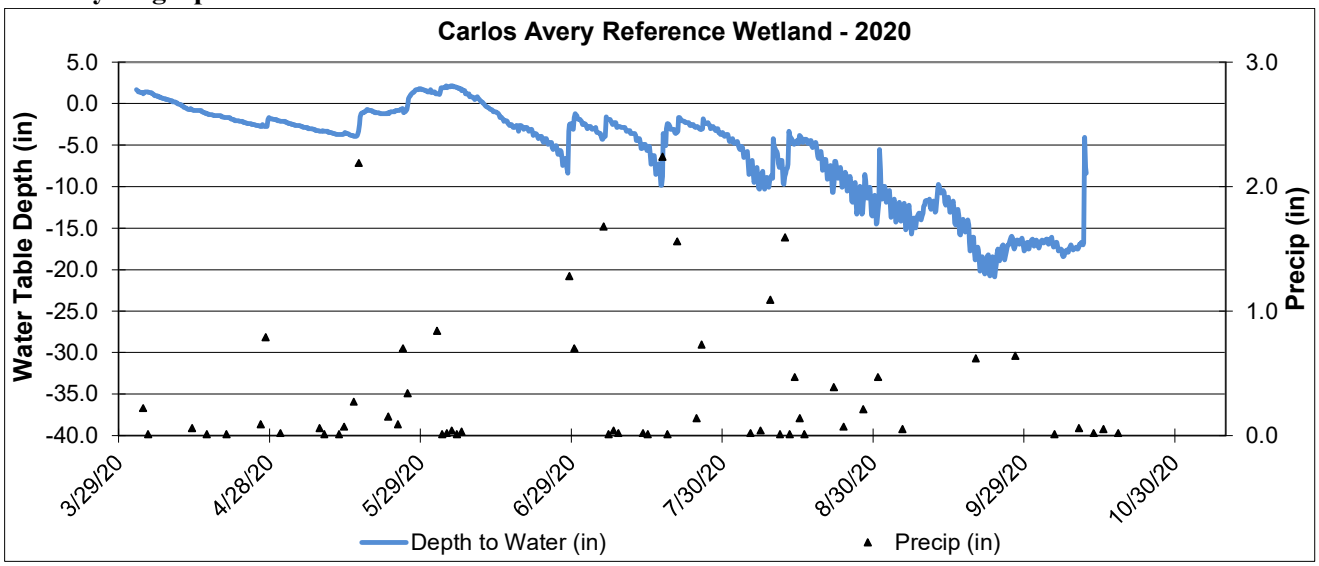
Surrounding Soils: Lino loamy fine sand

Vegetation at Well Location:

Scientific	Common	% Coverage
Phalaris arundinacea	Reed Canary Grass	80
Carex Spp	Sedge undiff.	40
Quercus macrocarpa	Bur Oak	40
Sagitaria latifolia	Broad-leaf Arrowhead	20
Cornus stolonifera	Red-osier Dogwood	20

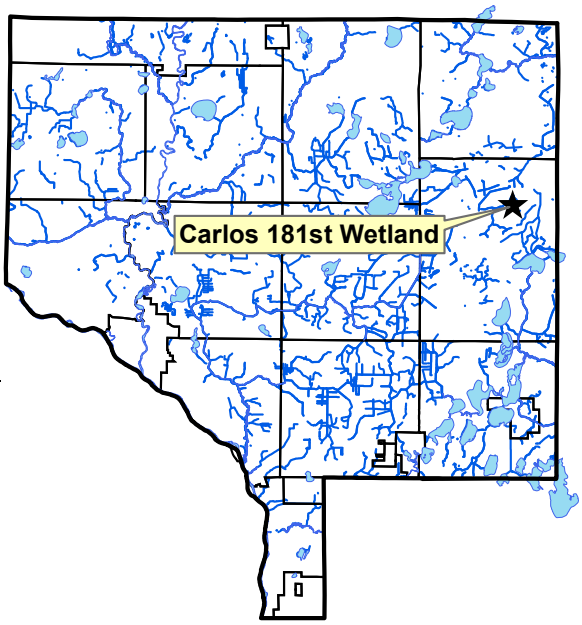
Other Notes: This is a broad, expansive wetland within a state-owned wildlife management area. Cattails dominate within the wetland.

2020 Hydrograph



CARLOS 181ST REFERENCE WETLAND

Carlos Avery Wildlife Management Area, City of Columbus



Site Information

Monitored Since: 2006

Wetland Type: 2-3

Wetland Size: 3.9 acres (approx.)

Isolated Basin? Yes

Connected to a Ditch? Roadside swale only

Soils at Well Location:

Horizon	Depth	Color	Texture	Redox
Oa	0-3	N2/0	Sapric	-
A	3-10	N2/0	Mucky Fine Sandy Loam	-
Bg1	10-14	10yr 3/1	Fine Sandy Loam	-
Bg2	14-27	5Y 4/3	Fine Sandy Loam	-
Bg3	27-40	5y 4/2	Fine Sandy Loam	-

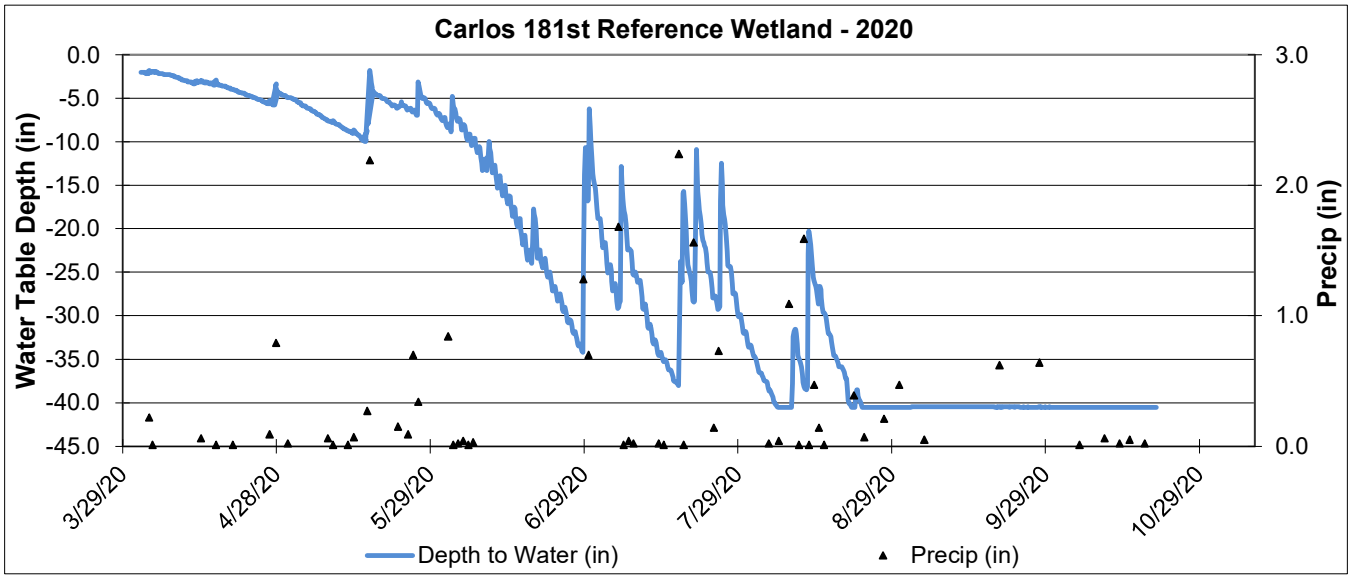
Surrounding Soils: Soderville fine sand

Vegetation at Well Location:

Scientific	Common	% Coverage
Phalaris arundinacea	Reed Canary Grass	100
Rhamnus frangula (S)	Glossy Buckthorn	40
Ulmus american (S)	American Elm	15
Populus tremulodies (T)	Quaking Aspen	10
Acer saccharum (T)	Silver Maple	10

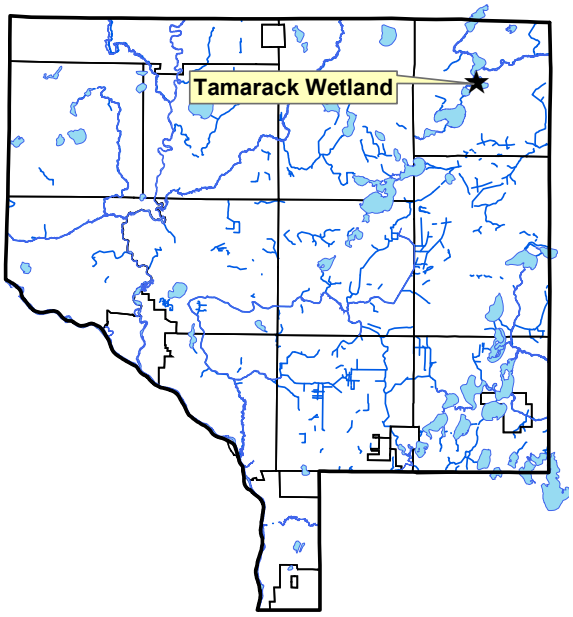
Other Notes: The site is owned and managed by the MN DNR. Access is from 181st Avenue.

2020 Hydrograph



TAMARACK REFERENCE WETLAND

Martin-Island-Linwood Regional Park, Linwood Township



Site Information

Monitored Since: 1999

Wetland Type: 6

Wetland Size: 1.9 acres (approx.)

Isolated Basin? Yes

Connected to a Ditch? No

Soils at Well Location:

Horizon	Depth	Color	Texture	Redox
A	0-6	N2/0	Mucky Sandy Loam	-
A2	6-21	10yr 2/1	Sandy Loam	-
AB	21-29	10yr3/2	Sandy Loam	-
Bg	29-40	2.5y5/3	Medium Sand	-

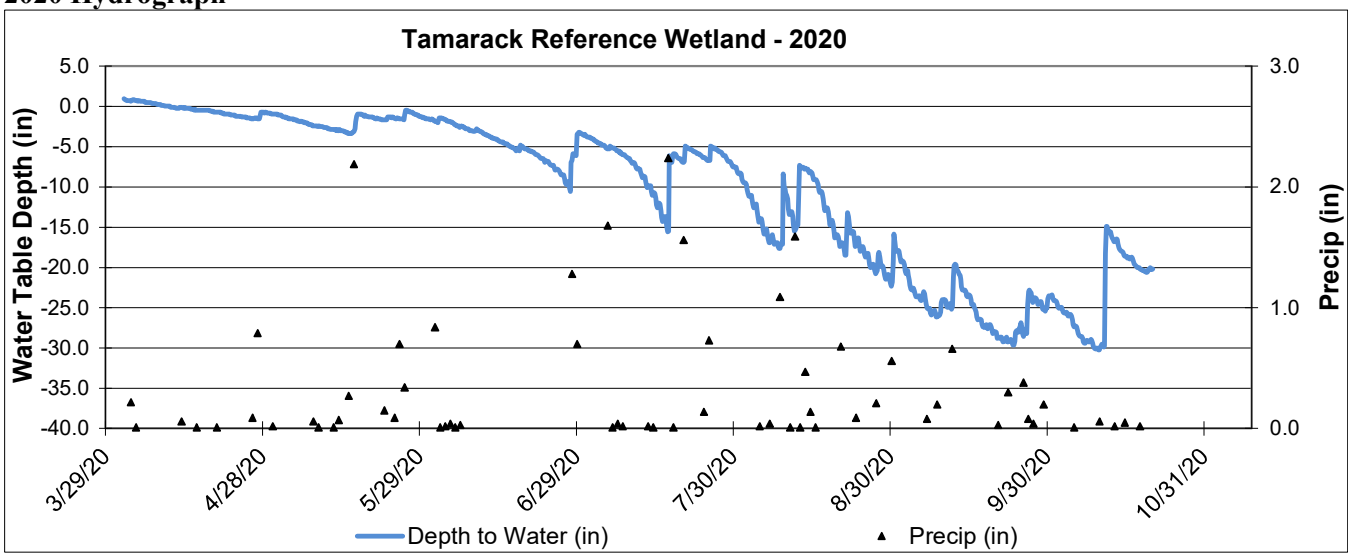
Surrounding Soils: Sartell fine sand

Vegetation at Well Location:

Scientific	Common	% Coverage
Rhamnus frangula	Common Buckthorn	70
Betula alleghaniensis	Yellow Birch	40
Impatiens capensis	Jewelweed	40
Phalaris arundinacea	Reed Canary Grass	40

Other Notes: The site is owned and managed by Anoka County Parks.

2020 Hydrograph



Water Quality Grant Fund

Description: The Sunrise River Watershed Management Organization (SRWMO) offers cost share grants to encourage projects that will benefit lake and stream water quality. These projects include lakeshore restorations, rain gardens, erosion correction, and others. These grants, administered by the ACD, offer cost sharing of the materials needed for a project. The landowner is responsible for some expenses. The ACD assists interested landowners with design, materials acquisition, installation, and maintenance.

Purpose: To improve water quality in area lakes, streams, and rivers.

Locations: Throughout the watershed.

Results: Projects reported in the year they are installed.

SRWMO Cost Share Fund Summary

2005 SRWMO Contribution	+	$1,000.00
2006 SRWMO Contribution	+	$1,000.00
2006 Expense - Coon Lake, Rogers Property Project	-	$ 570.57
2007 – no expenses or contributions		$ 0.00
2008 SRWMO Contribution	+	$2,000.00
2008 Expense - Martin Lake, Moos Property Project	-	$1,091.26
2009 SRWMO Contribution	+	$2,000.00
2010 SRWMO Contribution	+	$1,840.00
2011 SRWMO Contribution	+	$2,000.00
2012 SRWMO Contribution	+	$2,000.00
2012 Expense – Linwood Lake, Gustafson Property Project	-	$ 29.43
2012 Expense – Transfer to Martin-Typo Lakes Carp Barriers	-	$4,300.00
2013 – no expenses or contributions		$ 0.00
2014 SRWMO Contribution	+	$2,000.00
2015 SRWMO Contribution		$ 0.00
2016 SRWMO Contribution		$ 0.00
2016 Expense – Voss Rain Garden	-	$1,229.31
2017 Expense – Voss Rain Garden Plants	-	$ 654.50
2017 SRWMO Contribution	+	$1,000.00
2018 Surplus Funds Returned from ACD to SRWMO Gen Fund	-	$2,000.00
2018 Expense – Gunnink Coon Lakeshore	-	$1,148.40
2019 SRWMO Contribution		$ 0.00
2020 SRWMO Contribution	+	$2,000.00
2020 Expense – Scheiderich Coon Lakeshore Restoration	-	$3,395.86
2021 Expense – Encumbered for Linwood Elementary rain garden	-	$1,030.00
Fund Balance		**$1,390.47**

Sunrise River Chain of Lakes Carp Removal Project

Description: Martin and Typo Lakes fail to meet state water quality standards due to excessive phosphorus, which fuels algae blooms. As a result, the lakes are often strongly green or brown, and the game fishery is depressed. Carp are a major cause of poor water quality in these lakes, diminishing their value for swimming, boating, and fishing. Efforts to manage and reduce carp are being undertaken to improve water quality, habitat, and the fishery.

Carp management efforts in 2020 were preceded by several actions. In 2015-2016 carp barriers were installed at four strategic locations near the inlets and outlets of both lakes to prevent carp migration, overwintering, and spawning. In 2017-2020 carp were actively removed from the lakes using an MN DNR Conservation Partners Legacy grant. Additionally, a detailed assessment of the carp population, age structure, and spawning history is being completed. A long-term management plan for carp was prepared in 2019.

A grant to continue removing carp was secured for 2020-2022 from the MN Board of Water and Soil Resources Clean Water Fund. The project goal is to remove carp down to a goal of 100 kg/ha. This is being accomplished through a variety of techniques including box netting and seining.

Purpose: To improve water quality in Typo and Martin Lakes, as well as downstream waterways.

Location: Sunrise River Chain of Lakes including Linwood, Island, Martin, and Typo Lakes.

Results: In 2020 the following work was completed:

- 739 carp were removed from Martin Lake. 5,967 carp have now been removed from this lake since 2018.
- 30 carp were removed from Linwood Lake. This was the first year of efforts at this lake. The spring seine that captured these carp had a number of radio-tagged carp in the net indicating a large catch until the net had to be lifted over obstacles.
- Planned carp removals for 2021 which will include Linwood, Martin and Typo Lakes.
- Presented results at the annual Martin Lakers Association meeting.

ACD staff, volunteers and Carp Solutions staff with carp removed from Martin Lake (left image) by box net (right). Carp were removed with box traps.

Coon and Martin Lakes Stormwater Retrofits Project

Description: Installation of projects to treat stormwater that is otherwise discharged into Coon or Martin Lakes with little or no treatment. Projects were identified and ranked in stormwater assessment studies.

Purpose: To improve lake water quality.

Location: Coon and Martin Lakes.

Results: Outreach to owners priority project locations was conducted. Of more than a dozen approached, three were interested in construction. Those projects were designed, bid and constructed. Two stormwater pond renovations will reduce 3.31 lbs of phosphorus and 2,240 pounds of sediment loading to Martin Lake. One rain garden will reduce 1.25 lbs of phosphorus and 379 pounds of sediment loading to Martin Lake.

Project funding is from a 2019 State Watershed Based Implementation Funding grant to the Sunrise River WMO. Funding remains to install additional projects in 2021.

Photos of stormwater retrofit projects constructed in 2021.

Stormwater pond rehabilitation—Martin Lake

Stormwater pond rehabilitation—Martin Lake

Rain garden —Coon Lake

Booth/Display for Community Events

Description: Design a professional display with input from the SRWMO board.

Purpose: Highlight the SRWMO, projects and the types of natural resources found in the watershed.

Location: Watershed-wide

Results: ACD developed a professional display to be used at community events which showcases the SRWMO and the work being done in the watershed. Unfortunately, community events were cancelled in 2020 due to Covid-19, but the display is ready for subsequent use.

Secchi Transparency Lake Monitoring (Volunteer Coordination)

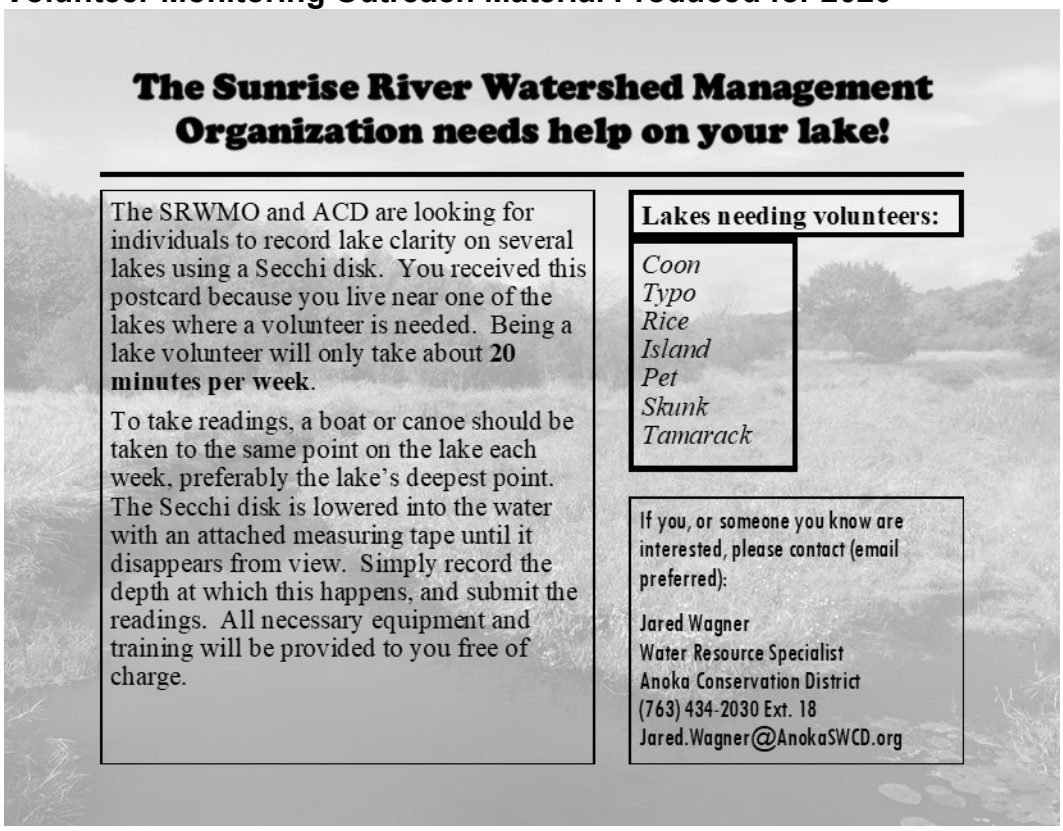
Description: Recruit local residents to participate in the State's volunteer Secchi monitoring program on lakes in the Sunrise Watershed.

Purpose: Get new volunteers enrolled in in the Citizen Monitoring Program.

Location: Coon, Typo, Rice, Island, Pet, Skunk, and Tamarack Lakes.

Results: ACD developed outreach material and conducted a targeted mailing based around 7 lakes in the watershed that are not currently enrolled in the Citizen Monitoring Program. Two new Secchi volunteers were established on Island and Typo Lake for the 2020 season, and both volunteers plan on participating through 2021. Additional outreach to secure volunteers at the remaining lakes is planned for 2021.

Volunteer Monitoring Outreach Material Produced for 2020



The Sunrise River Watershed Management Organization needs help on your lake!

The SRWMO and ACD are looking for individuals to record lake clarity on several lakes using a Secchi disk. You received this postcard because you live near one of the lakes where a volunteer is needed. Being a lake volunteer will only take about **20 minutes per week**.

To take readings, a boat or canoe should be taken to the same point on the lake each week, preferably the lake's deepest point. The Secchi disk is lowered into the water with an attached measuring tape until it disappears from view. Simply record the depth at which this happens, and submit the readings. All necessary equipment and training will be provided to you free of charge.

Lakes needing volunteers:

Coon
Typo
Rice
Island
Pet
Skunk
Tamarack

If you, or someone you know are interested, please contact (email preferred):

Jared Wagner
Water Resource Specialist
Anoka Conservation District
(763) 434-2030 Ext. 18
Jared.Wagner@AnokaSWCD.org

Annual Education Publications

Description: An annual newsletter article about the SRWMO is required by MN Rules 8410.010 subpart 4, and included in the SRWMO Watershed Management Plan.

Purpose: To improve citizen awareness of the SRWMO, its programs, accomplishments and water quality issues.

Location: Watershed-wide

Results: In 2020 the SRWMO contracted with the ACD to prepare its annual education publications. Materials, shown below, were prepared for community newsletters, lake association newsletters and the local newspaper.

Articles for community newsletters

Sunrise River
Watershed Management Organization

The Sunrise River Watershed Management Organization and its partners are releasing a new video titled "Our Lakeshore Connection." The video explains the inner workings of lakes and what lakeshore owners can do on their own property to improve lake health.

To watch, visit the "videos" tab at www.SRWMO.org.

The SRWMO is partnering with the Anoka Conservation District to offer technical help and grants to homeowners wishing to do projects that benefit an area lake or stream, such as correct shoreline erosion or install native plant buffers. For more information contact Jamie Schurbon at 763-434-2030 ext. 21.

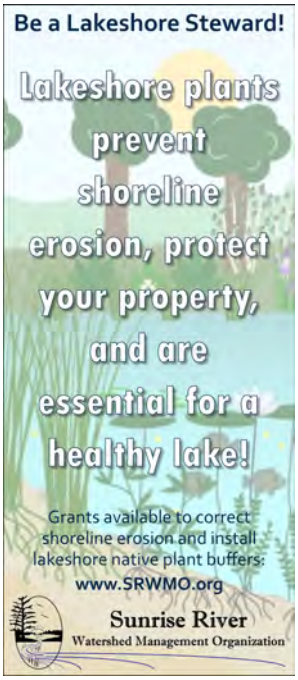
The SRWMO is a joint organization of the cities of East Bethel, Ham Lake, Columbus and Linwood Township for the purpose of managing local water issues. The SRWMO also participates in management of the larger Lower St. Croix Watershed (more info at www.lsc1w1p.org).

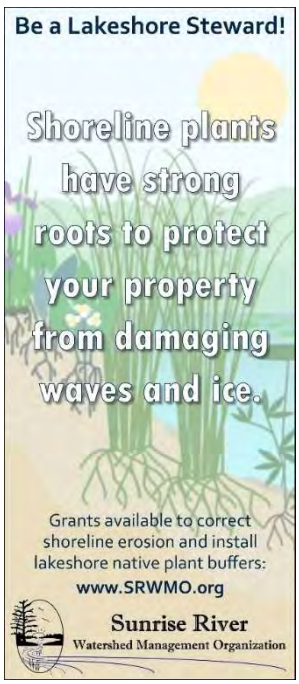
Septic System Fix Up Grants Available
Sunrise River Watershed Management Organization, www.SRWMO.org

A properly functioning septic system provides effective treatment of wastewater, but if a system is neglected, it could cost thousands of dollars to repair and potentially contaminate local groundwater and surface water supplies, putting the health of your family and neighbors at risk.

Septic system fix up grants are available that can pay for 80-90% of the cost of fixing or replacing a septic system. Applicants must meet low income criteria. To apply or learn more, contact Aaron Diehl at the Anoka Conservation District (763-434-2030 ext. 16 or aaron.diehl@anokaswcd.org).

Infographic series for lake association newsletters





Article for local newspapers

Who Owns the Water?

While paddling, my youngest son asked, "who owns the river?" As he has come to understand the world, everything is owned by someone. And that someone gets to say who else can enjoy it. And they may defend that thing from others. So who owns the water?

I emphatically replied, "you do!" And followed with the clarification, "not just you, but everyone. Can you believe all of this is partly yours?"

A lot of questions followed including "so I can go anywhere I want on the river?" Yes, pretty much. "What about lakes?" Yes, you are part owner of lakes too. You are completely welcome to enjoy them. "Can I do anything I want on the river?"

That last question is a little trickier, or perhaps a trick hoping I'll keep rolling with "yes" answers. The answer involves the word youngsters dread most: Sharing. Our waters are a shared resource. We care for them together. While we do have agencies that manage natural resources, they are in some large part trying guiding the rest of us "owners." Managing water is tricky because the waterbody can't be managed on its own. Lands drain to and affect the water.

It would seem that shoreline owners are the most important stewards of lakes and rivers based on proximity. Their actions can indeed make the shared resource better for all, or consume or degrade it. It's easy to find examples. We paddled past a shoreline full of trees and wildflowers along the bank – an owner that used what could have been manicured yard to add to the wildness and quietness of river.

I'm also reminded of another kid question, "where does the water go after it enters the gutter at the side of the street." Sometimes it goes to a stormwater pond or other place designed to at least partially clean it up, and then on to a river, stream or wetland. Or, sometimes it just goes straight to the waterbody. There are rural equivalents where water that starts far away reaches a lake or stream.

It turns out, we'll all shoreline owners in a sense. No matter where we live, water runs off to rivers, lakes, and groundwater. Responsible use of chemicals and fertilizers, preventing erosion, and improving habitat all add to, or detract from, our waters. Collectively, small actions make a big difference.

Many towns closely identify as being proudly in proximity to a waterbody. City of Forest Lake. Linwood Township (which contains Linwood Lake). Sunrise (on the Sunrise River). North Branch (on the North Branch of the Sunrise River). Cambridge (welcome signage says "City on the Rum River"). Taylors Falls. St. Croix Falls. You get the idea.

We identify with our waters. The quality and cleanliness of a waterbody is a mirror of our lands that drain to it. Seemingly accepting the lesson faster than most of us adults, during a brief stop on our paddling trip the youngest member of our group tossed some trash he found into his kayak. "If this is my river, I'd rather it be clean."

SRWMO Website

Description: The Sunrise River Watershed Management Organization (SRWMO) contracts the Anoka Conservation District (ACD) to maintain a website about the SRWMO and the Sunrise River watershed.

Purpose: To increase awareness of the SRWMO and its programs. The website also provides tools and information that helps users better understand water resources issues in the area. The website serves as the SRWMO's alternative to a state-mandated newsletter.

Location: www.SRWMO.org

Results: In 2020 routine SRWMO website updates were performed. The new website includes:

- Directory of board members,
- Meeting minutes and agendas,
- Watershed management plan and annual reports,
- Descriptions of work that the organization is directing,
- Highlighted projects,
- Informational videos,
- Maps of the URRWMO.

The website is regularly updated throughout the year.

SRMWO Website Homepage

Grant Searches and Applications

Description: The Anoka Conservation District (ACD) partners with the SRWMO for the preparation of grant applications. Several projects in the SRWMO Watershed Management Plan need outside funding in order to be accomplished.

Purpose: To provide funding for high priority local projects that benefit water resources.

Results: In 2020 the SRWMO pursued several grants and positioned itself for others. They included:

1. **A MPCA grant for $25,447 was secured to fix up failing septic systems** for low-income homeowners. The Anoka Conservation District holds this grant, which must be used county-wide. In the SRWMO since 2018 this program fixed septic systems at Martin, Fawn, and Coon Lakes.
2. **Lower St. Croix 1W1P Watershed Based Funding for $1,236,531.** This non-competitive State grant funds projects in the SRWMO Watershed Management Plan, the Lower St. Croix One Watershed One Plan (1W1P) and a few other eligible plans. The SRWMO participated in developing the grant work plan that includes funding for subwatershed assessments studies (Linwood Lake is a candidate in the work plan), internal loading analysis (Martin & Linwood Lakes), wetland restoration (Ditch 20 draining to Typo Lake) and public outreach programming serving the SRWMO area. Exact project sites and funding amounts are still being determined.

Since 2014, the following grants have been secured for SRWMO projects though the assistance of the Anoka Conservation District:

2014 Martin and Typo Lake Carp Barriers, site 2	MN DNR CLP	$ 35,770
2014 Martin and Typo Lake Carp Barriers, sites 1,3,4	MN DNR CLP	$399,983
2014 Coon Lake Area Stormwater Retrofits	BWSR CWF	$ 42,987
2015 Ditch 20 Wetland Restoration Feasibility Study	BWSR CWF	$ 72,400
2017 Martin and Typo Lake Carp Harvests	MN DNR CLP	$ 99,000
2017 Septic System Fix Up Fund*	MPCA	$ 23,040
2018 Watershed Based Funding	BWSR WBF	$156,750
2018 Septic System Fix Up Fund*	MPCA	$ 27,055
2019 Septic System Fix Up Fund*	MPCA	$ 40,000
2019-20 Surface Water Monitoring Grant, Sunrise R	MPCA	$ 5,102
2019 Sunrise River Chain of Lakes Carp Mgmt	BWSR CWF	$148,000
2020 Septic System Fix Up Fund*	MPCA	$ 25,447
2020 Lower St. Croix Watershed Based Funding	BWSR WBIF	$ TBD
	TOTAL	$1,075,534

*Septic system fix up funds are available county-wide. Only the amount used in the SRWMO is reported.

SRWMO Annual Report to BWSR and State Auditor

Description: The Sunrise River Watershed Management Organization (SRWMO) is required by law to submit an annual report to the Minnesota Board of Water and Soil Resources (BWSR), the state agency with oversight authority. This report consists of an up-to-date listing of SRWMO Board members, activities related to implementing the SRWMO Watershed Management Plan, the status of municipal water plans, financial summaries, and other work results. The SRWMO bolsters the content of this report beyond the statutory requirements so that it also serves as a comprehensive annual report to SRWMO member communities. The report is due annually 120 days after the end of the SRWMO's fiscal year (April 30th).

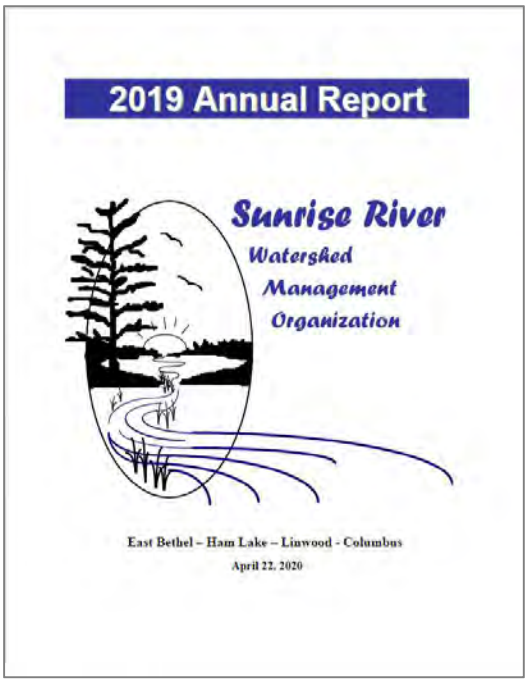
The SRWMO must also submit an annual financial report to the State Auditor. They accept unaudited financial reports for financial districts with annual revenues less than $185,000.

Purpose: To document progress toward implementing the SRWMO Watershed Management Plan and to provide transparency of government operations.

Locations: Watershed-wide

Results: Anoka Conservation District (ACD) assisted the SRWMO with preparation of the annual Sunrise River WMO Annual Report. ACD drafted the report and cover letter. After SRWMO Board review the final draft was forwarded to BWSR. A sufficient number of copies of the report were sent to each member community to ensure that each city council person and town board member would receive a copy. The report is available to the public on the SRWMO website.

Cover



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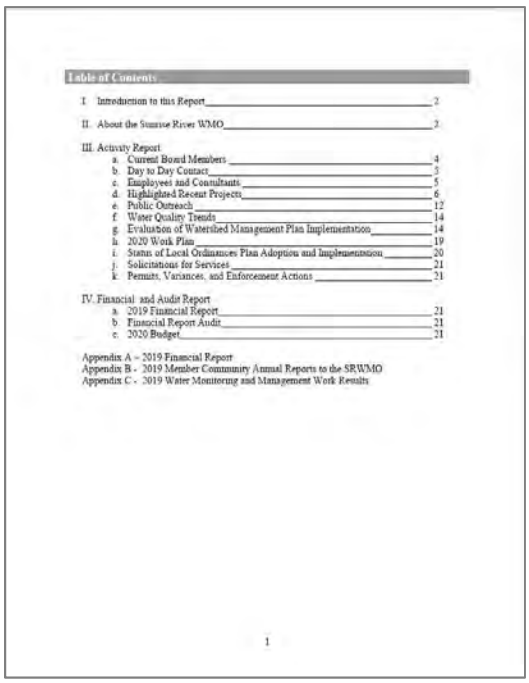

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On-call Administrative Services

Description: The Anoka Conservation District Watershed Projects Manager provides limited, on-call administrative assistance to the SRWMO. Tasks are limited to those defined in a contractual agreement.

Purpose: To ensure day-to-day operations of the SRWMO are attended to between regular meetings.

Results: In 2020 administrative assistance provided to the SRWMO by the Anoka Conservation District included:

- Prepared board meeting packets. Facilitated meetings and meeting planning. Set up and hosted online meetings when necessary.
- Recruited a new Recording Secretary. Took meeting minutes during the interim. Reviewed each month's minutes.
- Prepared a draft 2021 budget for the SRWMO and subsequent revisions.
- Ordered and facilitated an audit-like agreed upon procedures review with an auditor.
- Prepared financial management policies for board approval, as recommended by the auditor.
- Addressed financial and budgeting concerns from Ham Lake, including multiple meetings.
- Provided Columbus with data for several different cost-splitting scenarios amongst member communities.
- Responded to a public information request for SRWMO finances from a company who apparently develops and sells marketing lists.
- Worked with the East Bethel Finance Director to update the SRWMO's ledger and incorporate tracking of an undesignated reserve fund.
- Brought two cost share grant applications to the SRWMO board for consideration – a Coon Lakeshore restoration and rain garden at Linwood Elementary School.
- Reviewed community ordinances for consistency with SRWMO standards. Follow-up continues in order to bring ordinances up to speed.
- Reviewed and provided recommended SRWMO actions on community local water plans.
- Reviewed a jurisdictional boundary adjustment proposal from the Rice Creek Watershed District.
- Created a new template for city reporting to the SRWMO. Solicited and received annual reports.
- Completed a risk assessment process with the SRWMO's insurer.
- Met with the DNR and County Highway Department to lobby for repair of the Linwood Lake outlet – a task in the SRMWO Plan.
- Fielded questions from board members on a variety of issues affecting the SRWMO.
- Represented the SRWMO at staff level meetings of the Lower St. Croix One Watershed One Plan. Reported back to the SRWMO board, including facilitating discussion about implementation organizational arrangements (JPC vs JPE).
- Fielded permitting questions from the county highway department and builders.

Recommendations

- **Implement the SRWMO Watershed Management Plan that was approved in 2019.** The plan reflects the latest science and includes schedules for various projects.
- **Request Watershed Based Funding from the Lower St. Croix One Watershed, One Plan group.** Highest priority projects for which there is funding include a Linwood Lake subwatershed assessment study, wetland restoration at Ditch 20, and internal loading study for Linwood or Martin Lake.
- **Continue carp removals at Martin and Typo Lakes and begin carp management at Linwood Lake.** A State Clean Water Fund grant will support this work in 2020-2022.
- **Collaborate with the Anoka County Outreach Coordinator.** Modest SRWMO funding can serve as match for WBIF or other funding which results in more work in the SRWMO.
- **Continue installation of stormwater retrofits around Coon and Martin Lakes** where completed studies have identified and ranked projects. The grant expires in Dec. 2021.
- **Update the SRWMO joint powers agreement** to address out of date material and the lack of a dispute resolution mechanism.
- **Continue prioritizing strategic water quality monitoring** to assess baseline conditions, diagnose problems and determine the effectiveness of new water quality projects. The data help with strategically implementing grant funds and local funds to provide the largest water quality benefit possible at the lowest cost.
- **Promote Septic System Fix-up Grants to landowners,** particularly in shoreland areas.
- **Bolster lakeshore landscaping education efforts.** The SRWMO Watershed Management Plan sets a goal of three lakeshore restorations per year. Lakeshores were mapped in 2019 and 2020 by the Anoka Conservation District so that future outreach can be targeted.
- **Replenish the SRWMO's cost share grant fund.** After two funded projects in 2020, approx. $1,300 remains.