

**BLACK DOG**

**Watershed Management Organization**

**2023 ANNUAL ACTIVITY REPORT**

Prepared for  
Black Dog Watershed  
Management Commission

May 2024

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## **2023 BOARD MEMBERS**

The Black Dog Watershed Management Organization (WMO) was established by a joint powers agreement. The member cities appoint Board Members (and alternates) to serve three-year terms. The 2023 Black Dog WMO Board Members and the city/cities they represent are listed below:

<b>Board Members:</b>	<b>Term Ending</b>
1. Curtis Enestvedt (Chair) Representing the City of Burnsville	November 2026
2. Mike Hughes (Vice-Chair) Representing the City of Burnsville	November 2026
3. Scott Thureen (Secretary/Treasurer) Representing the City of Lakeville	November 2026
4. Todd Christopherson [Appointed in November 2023] Lynette Dunsworth [Resigned in October 2023] Representing the City of Burnsville	November 2026
5. Rollie Greeno Representing the Cities of Apple Valley and Eagan	November 2026

<b>Alternate Board Members:</b>	<b>Term Ending</b>
1. Cyndi Bergloff [Appointed in November 2023] Representing City of Burnsville	November 2025
2. Greg Helms Representing the Cities of Apple Valley and Eagan	November 2026
3. Vacant as of December 2023 Natalie Walker [Resigned in April 2023] Representing the City of Lakeville	November 2026

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## **CONSULTANTS**

In accordance with Minnesota Statutes, Section 103B.227, Subdivision 5, the Black Dog Watershed Management Commission solicited interest proposals for engineering consulting, legal services, and auditor services in January 2022. As the statutes require the solicitation to occur every two years, the Black Dog Watershed Management Commission will solicit proposals again in 2024. During 2023, services for the Black Dog Watershed Management Commission Board were provided from the following consultants:

Engineering:	Barr Engineering Co. Karen Chandler 4300 MarketPointe Dr. Minneapolis, MN 55435 Phone: (952) 832-2600
Legal:	Campbell, Knutson Attorneys at Law Cole Birkeland Eagandale Office Center 1380 Corporate Center Drive Eagan, MN 55121 Phone: (651) 452-5000
Auditor:	MMKR: Certified Public Accountants James Eichten 5353 Wayzata Boulevard Suite 410 Minneapolis, MN 55416 Phone: (952) 545-0424

The Black Dog WMO currently does not employ any staff. Administrative support is provided by the City of Burnsville.

Administrator	City of Burnsville Daryl Jacobson 13713 Frontier Ct. Burnsville, MN 55337 Phone: (952) 895-4574
Website:	<a href="http://www.blackdogwmo.org">www.blackdogwmo.org</a>

## **PERMITS AND VARIANCES**

The Black Dog WMO does not have a permit program.

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### **WETLAND BANKING**

The Black Dog WMO does not have a wetland banking program.

### **STATUS OF LOCAL PLAN ADOPTION AND IMPLEMENTATION**

The Black Dog WMO adopted the 2022 Watershed Management Plan in November 2022. The member cities are required to update their official controls and/or local water management plans as needed to conform to the 2022 Black Dog WMO Plan, per Minnesota Statute 103B.235. Each of the member cities updated their local water management plans concurrent with updates to their respective 2040 Comprehensive Plans. No additional edits are required to conform to the 2022 Watershed Management Plan. Approval of local water management plans is summarized in the following table.

<b>City</b>	<b>Date of Black Dog WMO Approval</b>	<b>Date of City Adoption</b>
Apple Valley	July 18, 2018	November 29, 2018
Burnsville	September 20, 2017	November 6, 2017
Eagan	December 19, 2018	March 2, 2020
Lakeville	February 20, 2019	October 7, 2019

## 2023 Black Dog WMO Activities

- Developed a document/template to track progress made towards the measurable goals included in the 2022 Black Dog WMO Watershed Management Plan. The tracking document will be updated and appended to the 2024 BDWMO annual report.
- Developed a new report template for presenting the results of detailed (management level) monitoring of strategic waterbodies. Monitoring of Keller Lake conducted in 2023 will be document in the new report format in spring 2024.
- Participated in the Metropolitan Council's Citizen-Assisted Monitoring Program (CAMP) for the following strategic water bodies:
  - Crystal Lake
  - Keller Lake
  - Orchard Lake
  - Lac Lavon

*Note that Kinglsey Lake was not monitored through CAMP in 2023 due to access issues resulting from low water levels. Completed water quality trend analyses on these lakes using the information gathered through CAMP and the more detailed Black Dog WMO monitoring on Keller Lake.*

- Performed detailed (management level) monitoring on Keller Lake, as recommended in the 2022 Black Dog WMO Watershed Management Plan. Water quality monitoring consisted of collecting samples on 11 occasions—ice-out (April) and then May through September, twice per month. On each monitoring occasion, a composite surface sample of 0-2 meters was collected for laboratory analyses. No additional samples at depth were collected because Keller Lake is not much deeper than 2 meters. Samples were analyzed for total phosphorus, chlorophyll-*a*, and chloride. Phytoplankton counts were performed on every other sample, resulting in six phytoplankton counts between May-September. Secchi disc readings were also taken during each sampling event. Field measurements of turbidity, temperature, dissolved oxygen, pH, redox potential, and specific conductivity were also taken during each sampling event. Burnsville and Apple Valley coordinated to conduct aquatic vegetation point intercept surveys on Keller Lake in June and August. Work included field work, lab work, QA/QC of lab data (including coordination with lab), entering data into EQuIS database, and submitting data to the MPCA (per guidance in the Black Dog WMO Plan). A report summarizing the water quality monitoring results will be completed in 2024, presented to the BDWMO commissioners, and posted on the Black Dog WMO website.
- Prepared the 2022 Lac Lavon technical memo summarizing the more detailed (management level) monitoring results and presented the technical memo at the April 19, 2023 Commission meeting.
- Prepared the 2022 Orchard Lake habitat monitoring report and presented the report at the April 19, 2023 Commission meeting. *Note: 2022 was the final year of current habitat monitoring*

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*program; beginning with the 2023 monitoring cycle, habitat monitoring will be limited to aquatic vegetation surveys typically performed by member cities and results will be incorporated into management level monitoring reports.*

- Developed a watershed annual report/newsletter to share 2022 accomplishments with member communities and stakeholders. The newsletter was posted to the Black Dog WMO website, distributed through member communities, and was incorporated into the 2022 annual activity report submitted to the Minnesota Board of Water and Soil Resources).
- Conducted an annual evaluation of Black Dog WMO programs and documented the results in an annual activity report. The 2022 annual activity report includes the 2022 watershed annual report/newsletter (see above item) and meets all State reporting requirements. The 2022 annual activity report was posted to the Black Dog WMO website and submitted to the Minnesota Board of Water and Soil Resources (BWSR).
- Partnered with the Dakota County SWCD by providing funding and support to install 19 water quality improvement projects through the Landscaping for Clean Water program for Black Dog WMO residents, consistent with SWCD cost share policies. Projects included 10 rainwater gardens, 8 native plant gardens, and 1 shoreline improvement project.
- Partnered with the Dakota County SWCD to fund Landscaping for Clean Water workshops. The workshops include three programs—Introduction to Clean Water Class, Design Course, and Maintenance Workshop. Programming in 2023 included a combination of in-person classes, virtual real-time courses, and pre-recorded videos. One in-person and four virtual Introduction to Clean Water Class offerings were held in the spring (March through May) followed by four in-person Design Course classes. A total of 62 residents of the Black Dog WMO participated in the Introduction classes and 41 Black Dog WMO residents took part in the Design Course classes. Project materials for participants were made available online and an “Office Hours” program was used to provide virtual consultations to Design Course class participants. A total of 20 participants took advantage of these virtual consultations with staff in 2023. In 2023, one Maintenance class was taught in the spring focused on maintenance for all seasons. A total of 17 people registered for the Maintenance class. New for 2023, Landscaping for Clean Water offered an additional class for residents with shoreline areas; a total of 29 people participated in the shoreline class.
- Completed the 2022 Annual Finance Statement—statute changes allow the Black Dog WMO to perform audits every five years, rather than every year. The last audit was prepared in 2020 for year 2019. The next audit needs to be prepared in 2025 for year 2024.
- Convened a local technical advisory committee (including staff of member cities, Dakota County, and Dakota County SWCD) meeting in October 2023 to discuss alignment of local capital improvement programs with Black Dog WMO Watershed Management Plan implementation and potential grant programs and identify potential project opportunities for BWSR watershed-based implementation funding program grant dollars.

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- Formulated and approved the year 2024 Work Plan and Budget.
  - Reviewed and responded to any issues and opportunities brought to the attention of the Black Dog WMO.
  - Maintained and updated the Black Dog WMO website.
  - Continued implementing plan to accrue funds in 1) a Capital Improvement Fund, to be used for future Black Dog WMO internal load reduction projects stemming from TMDLs for lakes with intercommunity shoreline (Crystal Lake, Keller Lake, and Lac Lavon) and 2) a General Fund Reserve to be used for the Black Dog WMO Watershed Management Plan ten-year update.

*\*\*Table 1 shows the Status of Implementation Tasks from the Black Dog WMO 2022-2032 Watershed Management Plan\*\**

## 2023 Black Dog WMO Expenditures

	<b><u>BUDGET</u></b>	<b><u>ACTUAL</u></b>
<b><u>General Engineering Support</u></b>	\$43,000	\$32,570
<p>Consulting services for engineering support, such as to prepare for and attend meetings; review/respond to issues and opportunities; assist with BWSR watershed-based implementation funding grant process; apply for grants; review/comment on proposed projects, EAWs, revisions to local water management plans, comprehensive plans, and other plans; communications/meetings with agencies and member cities; track and report on impaired waters and TMDL issues, and other tasks.</p>		
<b><u>Special Projects – General Fund:</u></b>		
<b>Keller Lake Management Level Monitoring</b>	\$19,100	\$14,562
<p>Funding to conduct “management level” monitoring of the lake’s water quality, per guidance in the Black Dog WMO Plan.</p>		
<b>Dakota County SWCD—Landscaping for Clean Water Program Support</b>	\$13,500	\$14,250
<p>Funds to partner with the Dakota County SWCD Landscaping for Clean Water program for Black Dog WMO residents.</p>		
<b>Reporting on 2022 Lac Lavon Management Level Monitoring</b>	\$4,700	\$4,324
<p>Prepare the 2022 Lac Lavon technical memo summarizing the monitoring results and a presentation for a Commission meeting.</p>		
<b><u>Special Projects – Capital Improvement Fund:</u></b>	\$0	\$0
<b><u>Special Projects – General Fund Reserve:</u></b>	\$0	\$0
<b><u>Insurance:</u></b>	\$2,500	\$2,599
<b><u>Legal and Audit:</u></b>	\$5,000	\$2,923
<p>Consulting fees for legal services.</p>		
<b><u>Administrative Services:</u></b>	\$24,000	\$23,184
<p>City of Burnsville charges for providing administrative services to the Commission, including staff time, printing and postage. This also includes City accounting staff time to prepare the annual finance statement in years when an audit not required.</p>		
<b><u>Public Education:</u></b>	\$25,700	\$21,184
<p>Cost to produce and distribute the annual activity report and watershed annual report, funding support for the Dakota County</p>		



SWCD Landscaping for Clean Water workshop support, and costs to maintain and redesign the Black Dog WMO website.

<b><u>Water Quality Monitoring:</u></b>	\$15,200	\$9,767
Cost associated with water quality monitoring programs, including the habitat monitoring program, Metropolitan Council's CAMP, and analysis of water quality data.		
<b><u>Conference / Publications:</u></b>	\$500	\$0
Commissioner training and education materials.		
<b><u>Contingency:</u></b>	\$5,000	\$0
Funding for unexpected expenses and/or new program opportunities approved by the Commission		
<b>Expenditure Total:</b>	<b>\$146,200</b>	<b>\$125,362</b>

<b>2023 Black Dog WMO Revenues</b>
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	<b><u>BUDGET</u></b>	<b><u>ACTUAL</u></b>
<b><u>Interest</u></b>	\$40	\$24,677
<b><u>Member City Contributions (Fees)</u></b>	\$131,000	\$131,000
<b><u>Member City Contributions—Capital Improvement Fund</u></b>	\$12,500	\$12,500
<b><u>Grants</u></b>	\$0	\$0
<b><u>Fund Balance Utilized</u></b>	\$2,660	\$0
<b>Revenue Total:</b>	<b>\$143,540</b>	<b>\$168,177</b>

<b>2023 Black Dog WMO Planned Changes in Fund Balance</b>
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	<b><u>BUDGET</u></b>	<b><u>ACTUAL</u></b>
<b><u>Capital Improvement Fund:</u></b>	\$12,500	\$12,500
This fund serves as a savings account for future internal load reduction projects stemming from TMDLs.		
<b><u>General Fund Reserve:</u></b>	(\$15,160)	\$30,316
This fund serves as a savings account for the Black Dog WMO watershed plan ten-year update.		
<b>Planned Changes in Fund Balance Total:</b>	<b>(\$2,660)</b>	<b>\$42,816</b>

## 2024 Black Dog WMO Work Plan

1. Participate in Metropolitan Council's Citizen Assisted Water Quality Monitoring Program (CAMP) for the following strategic water bodies:

- Crystal Lake
- Keller Lake
- Orchard Lake
- Lac Lavon

Complete water quality trend analyses on these lakes using the information gathered through CAMP and the more detailed monitoring on Orchard Lake. *Note that Kinglsey Lake is not scheduled for CAMP monitoring in 2024 due to access issues resulting from persisting low water levels.*

2. Perform more detailed (management level) 2024 monitoring on Orchard Lake as recommended in the updated 2022 Black Dog WMO Watershed Management Plan. The 2024 monitoring includes water quality monitoring and aquatic vegetation surveys of Orchard Lake. The water quality monitoring will consist of collecting samples on 11 occasions—ice-out (April) and then May through September, twice per month. On each monitoring occasion, analytical samples will be collected at eight depths at the deepest spot in the lake (in the main basin)—a surface sample, plus seven samples at one-meter intervals from three to eight meters. The samples will be analyzed for total phosphorus, chlorophyll-a, and chloride. Surface samples will be collected for phytoplankton counts every other sampling event, or once per month April-September, for a total of 6 phytoplankton count samples. In addition, Secchi disc readings will be taken. Field measurements of temperature, dissolved oxygen, pH, redox potential, and specific conductivity will be taken at one meter intervals at the monitoring location. Turbidity field measurements will also be taken on the surface water sample at the monitoring location. The City of Lakeville will conduct two aquatic vegetation point intercept surveys on Orchard Lake—typically one in June and one in August. In 2024, the work includes field work, lab work, QA/QC of lab data (including coordination with lab), entering data into EQUIS database, and submitting data to the MPCA (per guidance in the BDWMO Plan). In 2025, work will include preparing the summary report of the monitoring results and preparing a presentation for a Commission meeting.
3. Prepare the 2023 Keller Lake report summarizing the more detailed (management level) monitoring results in a new format/template (developed in 2023) and a presentation for a Commission meeting.
4. Assess and document progress made towards goals adopted in the 2022-2032 Black Dog WMO Watershed Management Plan. Progress documentation will be incorporated into the 2024 annual activity report and the 2024 watershed annual report/newsletter (i.e., reports prepared in early 2025).
5. Conduct an annual evaluation of the watershed programs and report the results to member communities via a watershed annual report/newsletter. Develop an annual activity report based on this information that is submitted to the Minnesota Board of Water and Soil Resources (and incorporating the annual report/newsletter).

6. Hold at least one meeting with staff from member cities, Dakota County, and Dakota County SWCD to align the Black Dog WMO implementation schedule with member city capital improvement programs, as needed, and establish a work plan for the coming year. This meeting may occur as a watershed-based implementation funding “convene” meeting related to distribution of FY24-25 BWSR grant funds.
7. Partner with the Dakota County SWCD by providing funding and technical support to install up to 18 water quality improvement projects (e.g., raingardens, native plantings and shoreline stabilization projects) through the Landscaping for Clean Water program for Black Dog WMO residents, consistent with SWCD cost share policies.
8. Partner with the Dakota County SWCD to fund Landscaping for Clean Water workshops. The workshops include three programs—Introduction to Clean Water Class, Design Course, and Maintenance Workshop. Programs are expected to be hosted in person in 2024 although some classes may be virtual. The virtual Design Course classes will consist of a series of pre-recorded videos. Project materials for participants will be available online and an “Office Hours” program will be used to provide virtual consultations to Design Course class participants. The Maintenance Workshop classes focus on maintenance for a given season (Spring, Summer and Fall) allowing for season specific information on how to maintain and promote the health, performance, and beauty of their garden. A class specific to shorelines may also be offered.
9. Complete the 2023 annual finance statement—statute changes allow the Black Dog WMO to perform audits every five years, rather than every year. As the last audit was prepared for year 2019, the next audit needs to be prepared in 2025 for year 2024. In the other years, an annual finance statement is prepared.
10. As budget allows, prepare up to two educational pieces/presentations for the Commission regarding new technology (e.g., new stormwater best management practices, new lake treatment technologies, etc.) and/or aquatic invasive species.
11. Apply for grants and/or assist member cities with grant applications.
12. Assist with BWSR watershed-based implementation funding (see also item 6 above).
13. Formulate and approve the year 2025 Work Plan and Budget.
14. Review and respond to any issues and opportunities brought to the attention of the Black Dog WMO.
15. Maintain and update web site.
16. Respond to requests to partner with member communities and Dakota County on educational outreach programs.

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17. Keep abreast of changes to the TMDL program, including additions to/removals from the impaired waters list and the listing criteria.
  18. Review revisions to local water management and comprehensive plans as needed. No reviews are expected in 2024, as all member cities' plans have been reviewed and approved.
  19. Continue implementing plan to accrue funds in a Capital Improvement Fund for the BDWMO watershed plan ten-year update and future projects including BDWMO internal load reduction projects stemming from TMDLs for lakes with intercommunity shoreline (Crystal Lake, Keller Lake, and Lac Lavon).

**—See Attached Watershed Annual Report for information on the 2024 Budget—**

**Table 1: Status of Implementation Tasks from 2022-2032 Black Dog WMO Watershed Management Plan—through December 31, 2023**

Activity ID	Implementation Activity Name	Implementation Activity Description	Original Date from 2022 Plan	Status/Accomplishments	Next Steps
<b>Administrative and Engineering</b>					
AE-1	General Administration	Administration includes services of a contracted administrator as well as recording services. The BDWMO administrator will lead budgeting, preparing agendas and meeting packets, facilitating meeting discussions, correspondence, fielding questions or requests from agencies or residents, annual work planning, and other miscellaneous administration tasks not specifically addressed via other activities in this table.	Ongoing	Black Dog WMO continues to perform these actions as needed/requested.	Continue to perform as needed/requested.
AE-2	Legal, audit, and insurance	Task includes maintaining contracted services for legal, audit, and insurance needs.	Ongoing	Black Dog WMO continues to perform these actions as needed/requested.	Continue to perform as needed/requested; a full audit will be performed following 2024.
AE-3	Annual Report to BWSR	Annual Report to BWSR Annual reporting to the MN Board of Water and Soil Resources required by MN Rules 8410.0150.	Annually	Submitted annually; per revised statute, the Black Dog WMO is required to perform an audit every 5 years, rather than annually. In the other years, the Black Dog WMO will prepare an annual finance statement. In 2020, the Black Dog WMO prepared an audit for year 2019; the next audit will need to be prepared in 2025 for year 2024.	Continue to complete annually; prepare next audit in 2025; prepare annual finance statements in intervening years.
AE-4	Biennial progress review	BDWMO staff will assess the level of progress achieved on each of the BDWMO's adopted goals at least biennially. The assessment will consider measurable aspects of each goal, outputs of relevant implementation activities, and qualitative assessment, where appropriate.	Every other year	Not complete.	Complete as part of 2024 annual report.

**Table 1: Status of Implementation Tasks from 2022-2032 Black Dog WMO Watershed Management Plan—through December 31, 2023**

Activity ID	Implementation Activity Name	Implementation Activity Description	Original Date from 2022 Plan	Status/Accomplishments	Next Steps
AE-5	Grant review and application	BDWMO staff will annually review grant opportunities and prepare applications, as appropriate, to fund BDWMO and/or member city projects. Important grant sources include the MDNR, MPCA, BWSR, and federal sources.	Ongoing	Black Dog WMO continues to perform these actions as needed/requested.	Continue to apply for grants or assist member cities in their grant applications, as appropriate/requested, including participation in allocation of watershed-based implementation funding.
AE-6	Review and revise Joint Powers Agreement (JPA)	The BDWMO operates under a joint powers agreement signed by the member cities. The current agreement will expire January 1, 2030 and will need to be renewed or updated prior to expiration. See Section 12 subd. 1 of JPA.	2029	Not complete.	Update in 2029.
AE-7	Review funding mechanisms and member city dues	The BDWMO commissioners will review whether the current funding structure is sufficient to support implementation, is appropriate relative to tax burden, and if changes are necessary	2027	Not complete.	Perform in 2027.
AE-8	General Engineering	BDWMO engages its engineering consultant to provide technical assistance, review, analyses, or other services as needed to accomplish implementation tasks not otherwise identified within this table. This includes review of updates to City official controls, proposed changes to intercommunity stormwater systems, and specific projects as requested by member cities.	Ongoing	Black Dog WMO continues to perform these actions as needed/requested.	Continue to perform as needed/requested.
AE-9	Review of Local Water Management Plans	BDWMO staff will review, comment upon and recommend approval of local water management plans. BDWMO Board of Commissioners has the authority to approve local water management plans per MN Rules 8410.	2028	Black Dog WMO approved current member city plans between 2017 and 2019.	Review local water management plans as they are updated ahead of Comprehensive Plans.
AE-10	BDWMO Watershed Management Plan Update	Approximately 2-3 years before expiration of this plan, the BDWMO will begin the Plan update process. The BDWMO may initiate Plan amendments to revise implementation schedules or other Plan content, as needed.	2030	Black Dog WMO adopted the current Plan in 2022.	Perform amendments, as needed; begin Plan update in 2030.
<b>Education and Public Outreach</b>					

**Table 1: Status of Implementation Tasks from 2022-2032 Black Dog WMO Watershed Management Plan—through December 31, 2023**

Activity ID	Implementation Activity Name	Implementation Activity Description	Original Date from 2022 Plan	Status/Accomplishments	Next Steps
ED-1	Website Administration	The BDWMO maintains a website. BDWMO staff and/or partners will post relevant news, meeting dates, permit applications, studies/planning documents, and links to partner websites.	Ongoing	Website is hosted by Dakota SWCD and regularly updated as new material is available. Dakota SWCD redesigned the website in 2021.	Continue to maintain and update website.
ED-2	Prepare and publish annual report (newsletter)	BDWMO staff will prepare an annual newsletter targeted to a public audience. The newsletter will be published on the BDWMO website.	Annually	Completed, published, and submitted annually	Complete annually.
ED-3	Coordination with Dakota SCWD and member cities for K-12 programming	BDWMO staff will coordinate with and/or provide financial support to member cities and Dakota SWCD to develop K-12 educational programming and present material at schools within the watershed.	Ongoing	Not complete.	BDWMO will support efforts initiated by member cities, Dakota County, and/or Dakota SWCD.
ED-4	Coordinate with member cities to develop and distribute educational information	BDWMO staff will coordinate with member cities and Dakota SWCD staff to distribute educational information related to priority issues via partner social media, websites, newsletters, and other media. Topics include, but are not limited to: <ul style="list-style-type: none"> <li>- wetland protection and buffers</li> <li>- water conservation</li> <li>- invasive species prevention</li> <li>- winter salt use best practices</li> </ul>	Ongoing	Provided watershed annual report to member cities and posted to Black Dog WMO website; maintained website (see above);	Continue providing watershed annual report to member cities.

**Table 1: Status of Implementation Tasks from 2022-2032 Black Dog WMO Watershed Management Plan—through December 31, 2023**

Activity ID	Implementation Activity Name	Implementation Activity Description	Original Date from 2022 Plan	Status/Accomplishments	Next Steps
ED-5	Sponsor workshops to support resident/ landowner stewardship practices	The BDWMO will provide financial support to fund training/workshops to support landowner natural resource stewardship activities (e.g., Dakota SWCD's Landscaping for Clean Water or similar programs)	Ongoing	<p>Since 2009, Black Dog WMO has partnered with the Dakota SWCD to fund Landscaping for Clean Water workshops in the Black Dog WMO area. In 2023, Black Dog WMO provided funding for workshops in four program areas:</p> <ol style="list-style-type: none"> <li>1. Introduction to Clean Water Class – one in-person and four live virtual classes were held.</li> <li>2. Design Course – four in-person courses were held; project materials for participants were available online and an "Office Hours" program provided virtual consultations to class participants.</li> <li>3. Maintenance Workshop – one maintenance courses were provided covering maintenance in all seasons.</li> <li>4. Shoreline Course – one new course tailored to shoreline property owners was held in 2023.</li> </ol>	Continue partnering with Dakota SWCD to fund workshops.
ED-6	Coordinate with partners to identify and support volunteer efforts	BDWMO staff will work with member cities to identify and facilitate opportunities for volunteers to participate in water quality monitoring, resource clean up, and other education opportunities	Ongoing	Black Dog WMO continues to work with member city and Dakota SWCD staff to identify and advertise volunteer opportunities.	Continue to perform as opportunities allow.
<b>Monitoring</b>					



**Table 1: Status of Implementation Tasks from 2022-2032 Black Dog WMO Watershed Management Plan—through December 31, 2023**

Activity ID	Implementation Activity Name	Implementation Activity Description	Original Date from 2022 Plan	Status/Accomplishments	Next Steps
MN-1	Management level monitoring of strategic waterbodies and reporting	The BDWMO funds management level monitoring of its five strategic waterbodies on a 5-year rotating basis: Crystal Lake, Keller Lake, Kingsley Lake, Lac Lavon, and Orchard Lake. Monitoring includes water chemistry (including chloride), aquatic vegetation, and phytoplankton. BDWMO staff assesses monitoring results for trends and develops a monitoring report for each lake.	Ongoing (strategic waterbodies are monitored on a 5-year cycle)	Black Dog WMO monitors strategic waterbodies on the following schedule (reports are published the following year): <ul style="list-style-type: none"> <li>- Keller Lake: 2023, 2028</li> <li>- Orchard Lake: 2024, 2029</li> <li>- Crystal Lake: 2025, 2030</li> <li>- Lac Lavon: 2026, 2031</li> <li>- Kingsley Lake: 2027, 2032</li> </ul>	Perform management level monitoring of Orchard Lake in 2024.
MN-2	CAMP monitoring of strategic waterbodies	The BDWMO works with member cities to financially support annual water quality monitoring of strategic waterbodies through the Metropolitan Council's Citizen Assisted Monitoring Program (CAMP)	Ongoing	CAMP monitoring completed annually; trend analysis completed annually.	Continue annual CAMP monitoring and trend analyses of monitoring data.
MN-3	Chloride monitoring of strategic waterbodies	The BDWMO works with member cities to fund annual chloride monitoring of strategic waterbodies if not included in CAMP monitoring (see item MN-2).	Ongoing	Black Dog WMO collects chloride data as part of management level monitoring.	Continue to collect chloride data as part of management level monitoring.
MN-4	Identification of reference lakes for water quality and ecological health benchmarks	BDWMO staff will work with member cities to identify potential reference lakes to assess/develop ecological health benchmarks for strategic waterbodies	2023	Not complete.	Defer until further removed from drought conditions and additional years of new monitoring program are completed.
MN-5	Review of ecological health monitoring strategy	BDWMO staff will work with member cities and other partners to review and revise, as needed, ecological health monitoring parameters.	2024, 2030	Not complete	Defer until further removed from drought conditions and additional years of new monitoring program are completed.
<b>Projects and Programs – Watershed-wide</b>					

**Table 1: Status of Implementation Tasks from 2022-2032 Black Dog WMO Watershed Management Plan—through December 31, 2023**

Activity ID	Implementation Activity Name	Implementation Activity Description	Original Date from 2022 Plan	Status/Accomplishments	Next Steps										
PP-1	Implement small and medium-scale stormwater BMPs	Provide financial support and/or technical assistance for projects including shoreline restoration, erosion control, and stormwater management. The BDWMO will fund cost-share grants for small-scale projects. Funding for medium-scale projects will be sought through other grant sources. Project funding and technical assistance will be administered through the Dakota County SWCD or City cost share programs.	Ongoing	<p>Since 2009, Black Dog WMO has partnered with the Dakota County SWCD by providing funding and support to install water quality improvement projects through the Landscaping for Clean Water Program for Black Dog WMO residents. Projects have included rainwater gardens, native gardens, shoreline improvements, and a bioretention site.</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Number of projects</th> </tr> </thead> <tbody> <tr> <td>2009-2021</td> <td>175</td> </tr> <tr> <td>2022</td> <td>9</td> </tr> <tr> <td>2023</td> <td>19</td> </tr> <tr> <td>Total</td> <td>203</td> </tr> </tbody> </table>	Year	Number of projects	2009-2021	175	2022	9	2023	19	Total	203	Continue partnering with Dakota SWCD to fund water quality improvement projects.
Year	Number of projects														
2009-2021	175														
2022	9														
2023	19														
Total	203														
PP-2	Groundwater protection planning and technical assistance	BDWMO staff will coordinate with MDNR, MDH, Dakota County, and other agencies in an advisory capacity to address groundwater quality and quantity issues.	As needed	No coordinated activities occurred in 2023.	Continue to coordinate with partners, as needed.										
PP-3	Chloride education and outreach for landowners	Develop or obtain chloride educational materials for property owner and service companies; perform site visit outreach to promote lower salt use practices in areas of high-density land use	2023 - 2026	Not complete.	Develop scope for chloride education efforts with partners.										
<b>Projects and Programs – Crystal Lake Watershed</b>															
CL-1	Crystal Lake watershed stormwater quality BMPs	Construct BMPs to improve stormwater quality within the Crystal Lake watershed. Priority opportunities include Crystal Beach Park and impervious areas (parking lots, roads) adjacent to Crystal Lake shoreline.	As opportunities arise	None currently planned.	Continue to look for project opportunities.										

**Table 1: Status of Implementation Tasks from 2022-2032 Black Dog WMO Watershed Management Plan—through December 31, 2023**

Activity ID	Implementation Activity Name	Implementation Activity Description	Original Date from 2022 Plan	Status/Accomplishments	Next Steps
CL-2	Crystal Lake shoreline native buffers	Create or restore native buffer along degraded portions of Crystal Lake shoreline, prioritizing conversion of turf grass to native plants at Crystal Beach Park, continued buckthorn removal, and buffer management (e.g., Crystal Lake West Park). See City of Burnsville Natural Resources Master Plan (2022).	As opportunities arise	City of Burnsville is allocated approximately \$30,000 towards shoreline improvements from 2023 through 2027 (see Burnsville Natural Resources Master Plan).	Provide technical or other support to the City of Burnsville, as needed.
CL-3	Crystal Lake aquatic plant management	Aquatic plant (macrophyte) management to control curlyleaf pondweed, Eurasian watermilfoil, or other AIS (littoral areas or whole lake treatments) and establish and/or promote native aquatic vegetation.	As opportunities arise	None currently planned by Black Dog WMO. The City of Burnsville plans to harvest invasives over 43 acres.	Continue to work with partners to identify project opportunities.
<b>Projects and Programs – Keller Lake Watershed</b>					
KL-1	Keller Lake watershed stormwater quality BMPs	Implement stormwater quality improvement BMPs identified in the Keller Lake subwatershed assessment (City of Apple Valley, 2017) and/or similar studies, prioritizing areas that are currently untreated. Planned opportunities include: - KL-1a: Improvements to Whitney Pond in the City of Apple Valley (2024) - KL-1b: Improvements to stormwater pond by Arby's in the City of Apple Valley (2025)	2024 (Whitney Pond Improvements)  2025 (Arby's Pond Improvements)	The City of Apple Valley is finalizing designs and pursuing funding sources to construct improvements to Whitney Pond (including WBIF).	Assist the City of Apple Valley in utilizing WBIF funds for construction, as needed.
KL-2	Keller Lake shoreline native buffers	Create or restore native buffer along degraded portions of Keller Lake shoreline.	As opportunities arise	None currently planned by Black Dog WMO.	Continue to work with partners to identify project opportunities.
KL-3	Keller Lake aquatic plant management	Aquatic plant (macrophyte) management to control curlyleaf pondweed, Eurasian watermilfoil, or other AIS, and activities to reestablish and promote native plant community consistent with the MDNR-approved Keller Lake aquatic plant management plan. Performed annually by the City of Burnsville.	As opportunities arise	None currently planned by Black Dog WMO.	Continue to work with partners to identify project opportunities.
<b>Projects and Programs – Kingsley Lake Watershed</b>					
KG-1	Kingsley Lake watershed stormwater quality BMPs	Construct BMPs to improve stormwater quality within the Kingsley Lake watershed. Priority opportunities include direct discharges adjacent to Highway 5 with little or no existing treatment.	As opportunities arise	None currently planned by Black Dog WMO.	Continue to work with partners to identify project opportunities.

**Table 1: Status of Implementation Tasks from 2022-2032 Black Dog WMO Watershed Management Plan—through December 31, 2023**

Activity ID	Implementation Activity Name	Implementation Activity Description	Original Date from 2022 Plan	Status/Accomplishments	Next Steps
KG-2	Kingsley Lake shoreline native buffers	Create or restore native buffer along degraded portions of Kingsley Lake shoreline.	As opportunities arise	None currently planned by Black Dog WMO.	Continue to work with partners to identify project opportunities.
KG-3	Kingsley Lake aquatic plant management	Aquatic plant (macrophyte) management to control curlyleaf pondweed, Eurasian watermilfoil, or other AIS (littoral areas or whole lake treatments) and establish and/or promote native aquatic vegetation.	As opportunities arise	None currently planned by Black Dog WMO.	Continue to work with partners to identify project opportunities.
<b>Projects and Programs – Lac Lavon Watershed</b>					
LL-1	Lac Lavon watershed stormwater quality BMPs	Construct BMPs to improve stormwater quality within the Lac Lavon watershed. Priority opportunities include direct discharges with no existing treatment. - LL-1a: water quality BMPs in coordination with Lac Lavon Park parking lot improvements in the City of Apple Valley (2023)	2023 (Lac Lavon Park Improvements)	The City of Apple Valley constructed stormwater treatment as part of parking lot improvements in Lac Lavon park in 2023.	Continue to work with partners to identify project opportunities.
LL-2	Lac Lavon shoreline native buffers	Create or restore native buffer along degraded portions of Lac Lavon shoreline. Activities include invasive species management on shoreline (buckthorn and purple loosestrife).	As opportunities arise	None currently planned by Black Dog WMO.	Continue to work with partners to identify project opportunities.
LL-3	Lac Lavon aquatic plant management	Aquatic plant (macrophyte) management to control curlyleaf pondweed, Eurasian watermilfoil, or other AIS (littoral areas or whole lake treatments) and establish and/or promote native aquatic vegetation.	As opportunities arise	None currently planned by Black Dog WMO.	Continue to work with partners to identify project opportunities.
<b>Projects and Programs – Orchard Lake Watershed</b>					
OL-1	Orchard Lake watershed stormwater quality BMPs	Construct BMPs to improve stormwater quality within the Orchard Lake watershed. Priority opportunities include direct discharges with no existing treatment.	As opportunities arise	None currently planned by Black Dog WMO.	Continue to work with partners to identify project opportunities.
OL-2	Orchard Lake shoreline native buffers	Create or restore native buffer along degraded portions of Orchard Lake shoreline (shoreline mostly privately owned).	As opportunities arise	None currently planned by Black Dog WMO.	Continue to work with partners to identify project opportunities.

**Table 1: Status of Implementation Tasks from 2022-2032 Black Dog WMO Watershed Management Plan—through December 31, 2023**

Activity ID	Implementation Activity Name	Implementation Activity Description	Original Date from 2022 Plan	Status/Accomplishments	Next Steps
OL-3	Orchard Lake aquatic plant management	Aquatic plant (macrophyte) management to control curlyleaf pondweed, Eurasian watermilfoil, or other AIS (littoral areas or whole lake treatments) and establish and/or promote native aquatic vegetation.	As opportunities arise	None currently planned by Black Dog WMO.	Continue to work with partners to identify project opportunities.

Activities and accomplishments performed prior to adoption of the 2022 BDWMO Watershed Management Plan are described in the 2022 Annual Report (and earlier annual reports).

# **2023 Watershed Annual Report**

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### Our Vision:

*Water resources and related ecosystems are managed to sustain their long-term health and public value to contribute to the well-being of the communities within the watershed.*

### Evaluating our Success

The BDWMO watershed management plan calls for the organization and its member cities to identify outcome-based goals for specific water bodies found within the watershed and to meet annually to discuss progress toward these goals. The BDWMO uses the following methods to track progress toward goals:

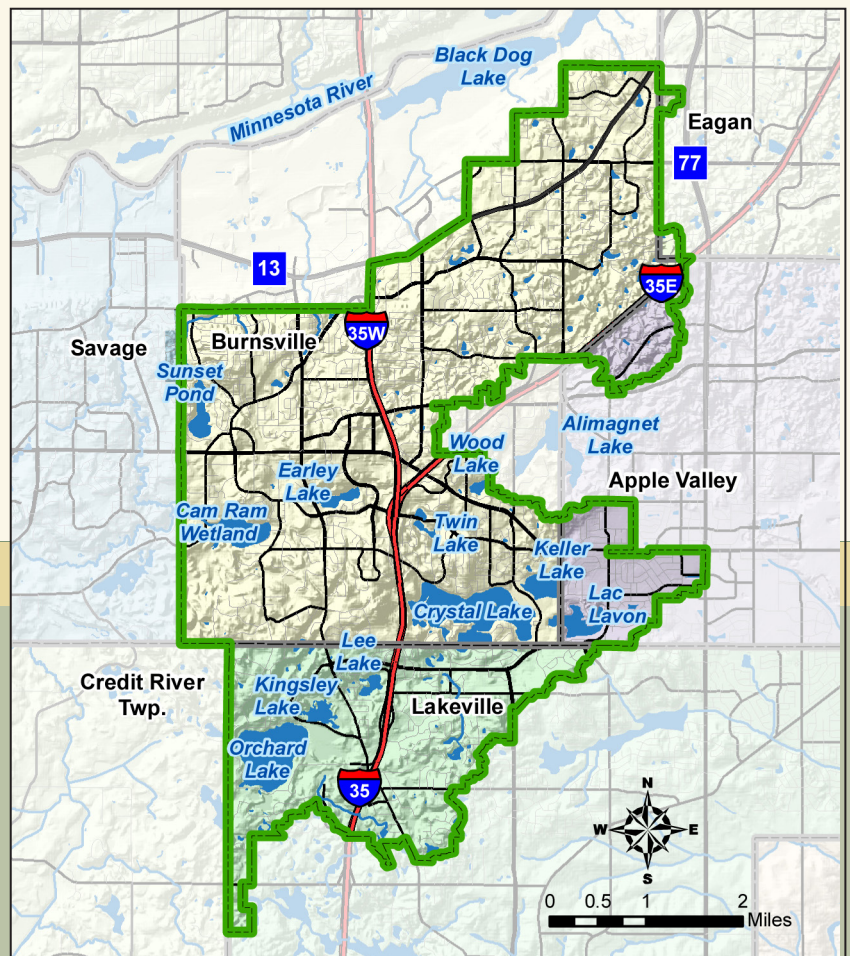
- **Trend Analysis**—The BDWMO collects water quality information and calculates trends to track the health of its strategic waterbodies.
- **BDWMO Goal Tracking**—The BDWMO identified metrics and outcomes associated with each goal included in its watershed management plan. At least biennially, the BDWMO evaluates those metrics to assess progress towards plan goals.

This annual report outlines BDWMO and member city actions relevant to BDWMO goals, progress toward water quality goals in 2023, and plans for 2024 and beyond.

### What is the Black Dog Watershed Management Organization?

The Black Dog Watershed Management Organization (BDWMO) actively manages surface water, such as that found in lakes, streams, and wetlands, located in the Black Dog and Credit River watersheds within Dakota County. To effectively manage surface water, the BDWMO develops and implements plans that address water quality, responds to drainage issues that cross multiple municipal boundaries, and assists cities within the watershed to manage surface water runoff. The BDWMO is represented by commissioners who are appointed by the cities within the watershed, which include Burnsville, Lakeville, Apple Valley, and Eagan.

The total area of the Black Dog watershed is 17,500 acres; 70 percent of the watershed lies within the city of Burnsville, 21 percent of the area is within the city of Lakeville, 8 percent is within the city of Apple Valley, and 1 percent is within the city of Eagan.



### In this Issue

- Developing a Framework to Track Progress ..... page 2
- Landscaping for Clean Water Projects ..... page 3
- Local Technical Advisory Committee Meets to Plan for Grant Funds ..... page 3
- Local grant dollars for Keller Lake ..... page 4
- New Additions to BDWMO Management Level Monitoring ..... page 4
- 2023 Monitoring Results ..... pages 5–7
- 2024 Income & Expenditures ..... page 8



# Progress Toward Healthier Water

## Developing a Framework to Track Progress Towards Goals

In late 2022, the BDWMO adopted its 2022-2032 Watershed Management Plan—a plan that establishes the vision, policies, and activities for protecting, restoring, and managing the surface water resources within the boundaries of the BDWMO for a 10-year period.

The plan includes 18 goals (Goal A through Goal R) that address a broad range of priority issues, including:

- Water quality
- Water quantity and flooding
- Wetland management
- Shoreland, habitat, and open space management
- Groundwater
- Administration
- Education and public involvement

Minnesota Rules 8410.0150 Sub. 3(E) requires that watershed management organizations like the BDWMO evaluate progress towards goals at least every two years. To support this evaluation, the BDWMO developed “scorecards” to identify metrics or criteria associated with each goal and track progress.

## Scorecard Design

Goal tracking scorecards include the following information:

**Goal**—as defined in the watershed management plan.

**Metrics/Measures**—the criteria, actions, or outcomes used to evaluate progress towards each goal. For water quality goals, metrics include numeric criteria. For most other goals, metrics include a combination of actions, outcomes, or conditions achieved or maintained.

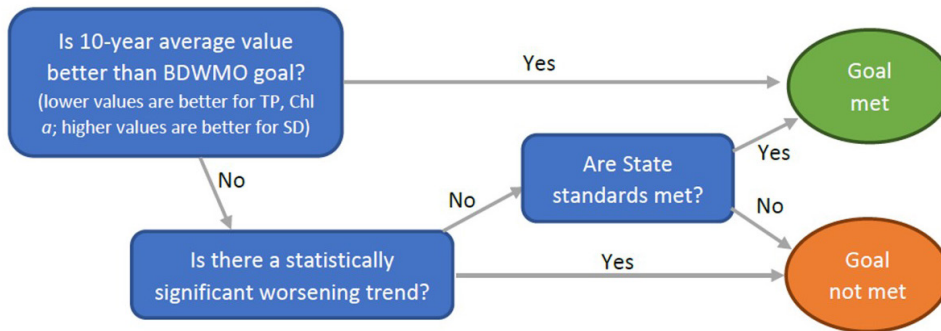
**Status**—a narrative or tabular summary of whether the appropriate metrics have or have not been met and whether the goal has been achieved. Possible outcomes include:

- Achieved
- Mostly Met
- Progress Made



**Implementation Actions**—actions defined in the watershed management plan that are most directly tied to achieving the goal.

### Example 1: Metric/Measures



This flowchart shows how the BDWMO assesses progress towards in-lake water quality goals (Goal A) for strategic waterbodies, using a combination of 10-year average observed data and trend analysis.

### Example 2: Goal Status/Tracking

Member City/Partner	2024		Cumulative 2023 – Present		Notes
	Volunteer Events	Small-scale BMPs supported <sup>1</sup>	Volunteer Events	Small-scale BMPs supported <sup>1</sup>	
Apple Valley					
Burnsville					
Eagan					
Lakeville					
Dakota SWCD		..1		..1	
Dakota County		--		--	

(1) Including Landscaping for Clean Water projects; projects are listed according to physical location.

This table tracks volunteer events and implementation of small-scale stormwater best management practices (BMPs) to assess progress towards a public education and involvement goal (Goal R).

## Landscaping for Clean Water—Clean Water Starts at Home

In 2023, Landscaping for Clean Water programming was held in-person and provided in virtual formats. One in-person and four virtual Introduction to Clean Water classes were held in the spring and followed with four in-person Design courses. Virtual learning options of both courses were also made available. A total of 62 residents of the BDWMO participated in the Introduction classes either in-person or virtually.

A total of 158 participants took part in the Design classes in-person or through pre-recorded videos; 36 of whom were BDWMO residents. Project materials for participants were made available online and an “Office Hours” program was used to provide virtual consultations to Design class participants. A total of 20 participants took advantage of these virtual consultations with staff in 2023. Participants were thankful for the additional one-on-one design assistance.

New for 2023, the Landscaping for Clean Water program offered an additional class for residents with shoreline areas to protect or enhance with native plantings. A total of 29 residents participated in the shoreline class.

19 projects were installed in the BDWMO in 2023—10 raingardens, 8 native gardens, and 1 shoreline project.

In 2023, one Maintenance workshop was taught in the spring. Each workshop focused on garden maintenance across all seasons and providing participants with seasonal information on how to maintain and promote the health, performance, and beauty of their garden. A total of 17 people registered for the 2023 Maintenance workshops.

The 2024 Landscaping for Clean Water program will be held in-person with virtual options also available. For more information and to get signed up, visit:

<https://dakotaswcd.org/services/landscaping-for-clean-water-2024/>



### PROJECT

This project involved the installation of a 360 square foot native shoreline planting in Apple Valley.

### COST

The project materials cost was estimated at \$457.

### FUNDING

The landowners received a \$250 Landscaping for Clean Water grant as well as technical assistance provided by the Dakota County Soil and Water Conservation District.

Landscaping for Clean Water is one type of cost-sharing program offered by the Dakota County SWCD. For more information, call 651-480-7777 or go to <https://dakotaswcd.org/services/landscaping-for-clean-water/>.

## Local Technical Advisory Committee Meets to Plan for Grant Funds

In October 2023, the BDWMO Administrator and engineer convened a meeting of the local Technical Advisory Committee (local TAC). The local TAC included staff from the following BDWMO partners:

- City of Burnsville
- City of Apple Valley
- City of Lakeville
- Dakota County (Groundwater group)
- Dakota County Soil and Water Conservation District

The local TAC met to discuss how to best align partner implementation activities and capital improvement programs

with BDWMO plan implementation and coordinate to use available watershed-based implementation funding (WBIF). WBIF is a dedicated source of grant funding to address primarily water quality issues administered through the Minnesota Board of Water and Soil Resources (BWSR). Local TAC participants shared information about planned projects that address common goals and potential future opportunities including education efforts and capital improvements. Moving forward, the local TAC plans to meet annually in the first quarter to coordinate implementation efforts.

### Local Grant Dollars Help Fund Water Quality Improvement Studies and Educational Guidebook

Local grant funding has been instrumental in supporting initiatives aimed at improving water quality in Keller Lake, a shared goal of the Cities of Burnsville and Apple Valley and the BDWMO. Recently, the City of Apple Valley successfully secured a Watershed Based Implementation Fund (WBIF) grant, enabling the completion of two feasibility studies for pond enhancement projects and the development of an educational guidebook for residents.

The feasibility studies focused on evaluating potential projects to expand two ponds within the Keller Lake watershed: Whitney Pond and “Arby’s Pond.” These projects were initially identified in a comprehensive water quality study conducted in 2017 (Keller Lake Subwatershed Assessment, by Barr Engineering Co.). The feasibility studies provided insight into project design concepts and associated costs, serving as valuable tools for leveraging additional grant funding. Public engagement, particularly for the Whitney Pond expansion, played a crucial role in refining the project’s final design. Currently, the City has secured a \$313,169 Clean Water Fund grant for the Whitney Pond project and plans to seek additional funding to ensure project completion. The pond expansion project is anticipated to start as early as late 2024. Detailed information regarding the project can be found on the City of Apple Valley website by searching for “Whitney Pond.”

Additionally, residents of the Keller Lake watershed have received copies of the “Backyard Watershed: A Clean



*Attendees at the August 17, 2023, Open House about the potential Whitney Pond expansion project*

Water Companion,” a guidebook funded by the grant. This resource equips residents with seasonal best practices, information on available grant resources, and guidance on understanding and appreciating the local watershed. The guidebook is designed in a template format, facilitating its adaptation and utilization by other organizations in their respective watersheds.

### New Additions to BDWMO Management Level Monitoring

2023 saw some changes to the BDWMO’s management level water quality monitoring program as methods prescribed in the 2022-2032 watershed management plan took effect. Management level monitoring, previously performed only on deep lakes—Crystal Lake, Orchard Lake, and Lac Lavon—on a 3-year rotation, will now be performed on all strategic waterbodies, including Keller Lake and Kingsley Lake, on a 5-year rotation. In 2023, the BDWMO performed management level monitoring on Keller Lake for the first time.

Other changes to the management level monitoring program include the addition of chloride monitoring and phytoplankton sampling:

**Chloride monitoring**—Chloride concentrations in area lakes have increased since the early 1990s due to increased use of road salt in winter. Because high chloride concentrations can harm fish and plant life, the MPCA has established maximum and chronic chloride standards. There is little existing information about chloride concentrations in

BDWMO strategic waterbodies. Beginning in 2023, the BDWMO will analyze water quality samples collected as part of its ongoing management level monitoring for chlorides to assess baseline conditions and allow tracking of trends in the future.

**Phytoplankton monitoring**—Phytoplankton, or algae, are small aquatic plants naturally present in lakes. Phytoplankton derive energy from the sun through photosynthesis and provide food for several types of aquatic organisms, including zooplankton (microscopic animals), which are, in turn, eaten by fish. Excess phytoplankton can reduce water clarity while low numbers of phytoplankton can negatively impact zooplankton, and consequently, fish populations. Starting in 2023, the BDWMO added phytoplankton monitoring to its ongoing management level monitoring to help interpret water quality data and better understand the ecological health of its strategic waterbodies.

See page 5 for water quality monitoring results. See [www.blackdogwmo.org](http://www.blackdogwmo.org) for the full report.

# 2023 Monitoring Results

## Water Quality Monitoring Program

The BDWMO and member cities continued to monitor several of their lakes during 2023 through the Metropolitan Council's Citizen-Assisted Monitoring Program (CAMP) to detect any water quality changes that would require management action by the WMO. In addition, the BDWMO conducted more detailed "management-level" monitoring on Keller Lake which included monitoring of phytoplankton (see page 7). The monitoring focused on three water quality indicators—total phosphorus and chlorophyll-a concentrations, plus Secchi disc transparency. All three variables correlate strongly to the open-water nuisance conditions of lakes (i.e., algal blooms).

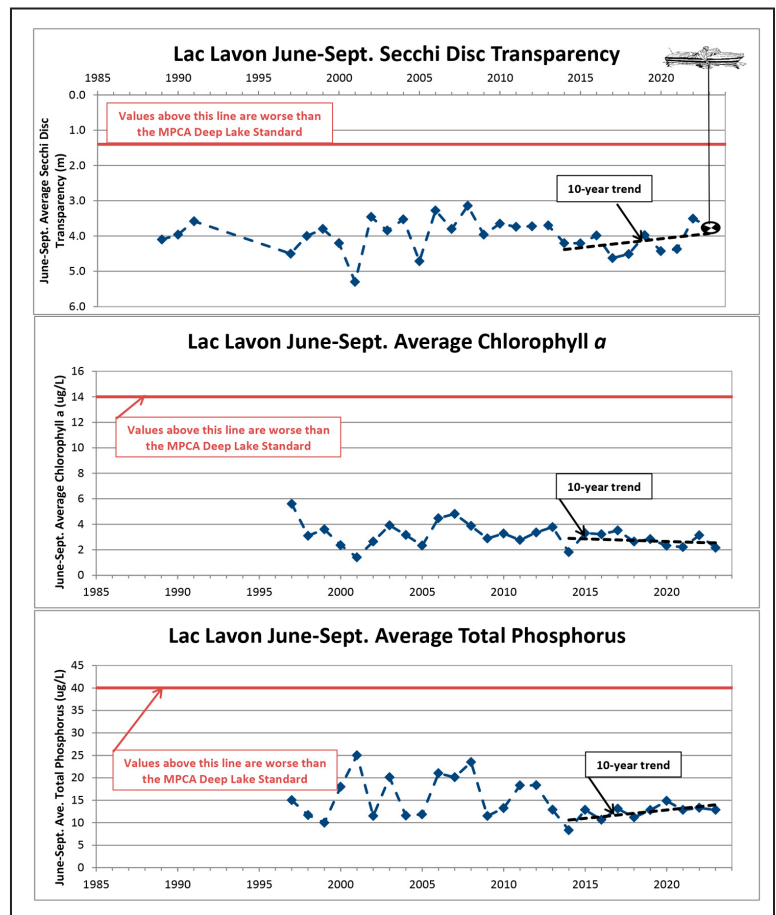
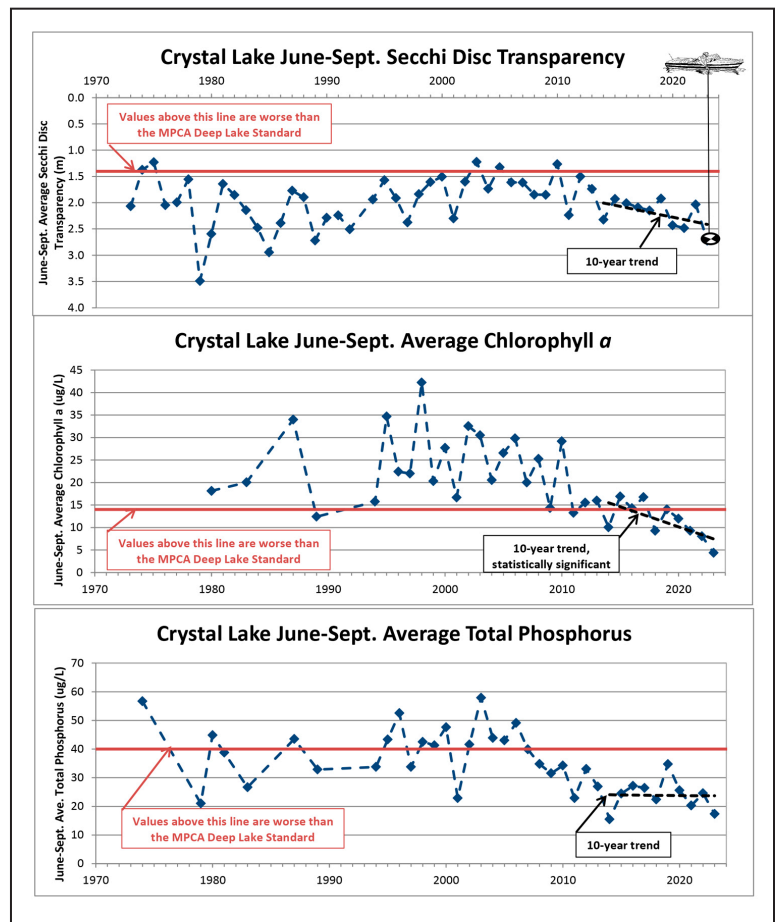
Long-term monitoring is important because lakes can change from year to year. Only when several years of data are compiled do trends become apparent. The MPCA periodically evaluates water quality data from the most recent ten-year period to determine if a lake exceeds applicable water quality standards. The BDWMO has adopted the same time convention for conducting its annual trend analyses. Graphs on this page and subsequent pages show historic trends in water quality.

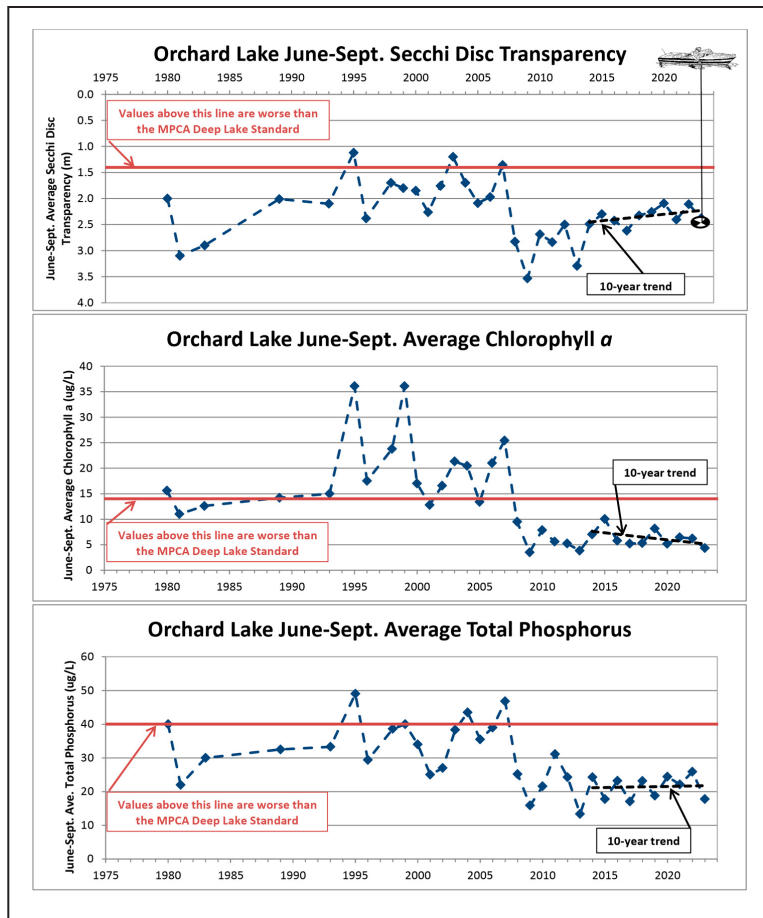
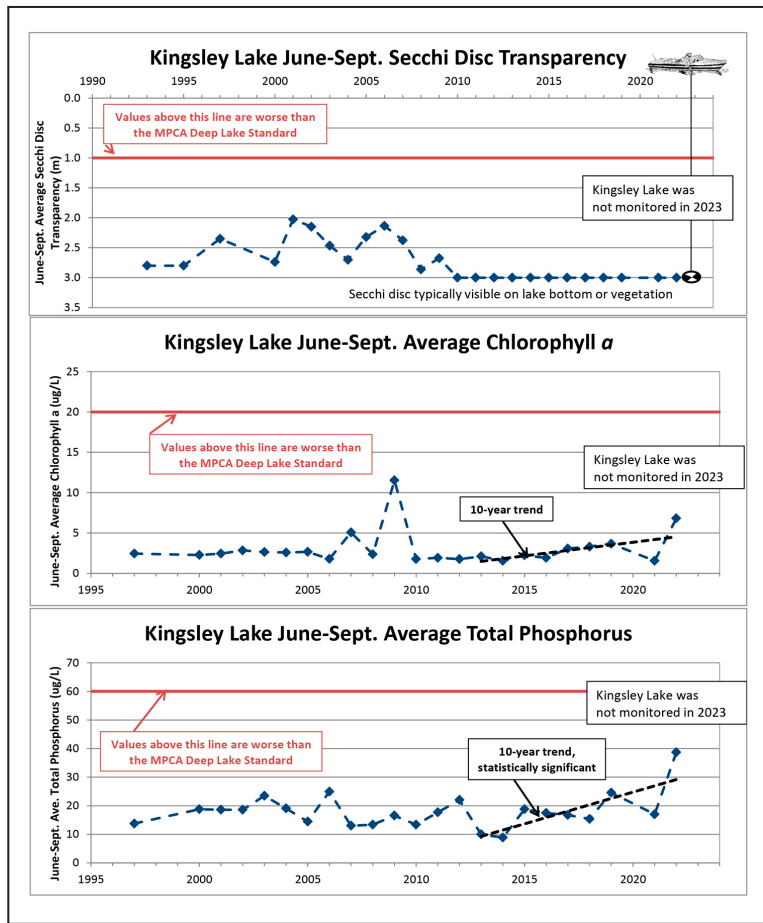
### Crystal Lake (Burnsville & Lakeville)

**Water Quality Monitoring**—Crystal Lake continued to experience good water quality in 2023. The 2023 summer-average Secchi disc transparency was 2.7 meters (8.9 feet), which is better than the MPCA deep-lake water quality standard of 1.4 meters. The 2023 summer average of total phosphorus (24 µg/L) was better than the deep lake standard (40 µg/L). The summer average of chlorophyll-a (4 µg/L) was also better than the deep lake standard (14 µg/L), and was the best on record for Crystal Lake. There was a statistically significant trend of improving water quality in summer averages of chlorophyll-a for the period 2014-2023; there were not statistically significant trends in summer averages of Secchi disc transparency or total phosphorus. The BDWMO will continue to monitor the water quality of Crystal Lake in 2024.

### Lac Lavon (Apple Valley & Burnsville)

**Water Quality Monitoring**—Lac Lavon continued to experience excellent water quality in 2023. The 2023 summer-average Secchi disc transparency was 3.7 meters (12 feet), and is much better than the MPCA deep-lake water quality standard of 1.4 meters. The 2023 summer averages of total phosphorus (13 µg/L) and chlorophyll-a (2 µg/L) further indicate excellent water quality for Lac Lavon. There were no statistically significant trends in summer averages of water quality for the most recent 10-year period of 2014-2023. The BDWMO will continue to monitor the water quality of Lac Lavon in 2024.





## Kingsley Lake (Lakeville)

**Water Quality Monitoring**—Water quality monitoring was not performed on Kingsley Lake in 2023, due to low water levels which made accessing open water difficult. The following discussion is based on data through 2022. Water quality monitoring data from 2022 show continued good water quality in Kingsley Lake. Water is often clear enough that the Secchi disc used to measure transparency can still be seen when resting on the bottom of the lake.\* The 2022 summer average of total phosphorus (39 µg/L) was the worst on record, and double the 2021 summer average, but still much better than the shallow lake standard (60 µg/L). However, there is a statistically significant trend of degrading total phosphorus concentration for the 10-year period of 2013–2022. chlorophyll-*a* (7 µg/L) concentrations were the worst they have been since 2009, but also still much better than the shallow lake standard (20 µg/L). The 2022 summer averages of total phosphorus and chlorophyll-*a* were better than the MPCA’s shallow lake standards, and have consistently been better than the water quality standards since 1997. Water quality was not monitored in Kingsley Lake in 2020. The BDWMO will continue to monitor the water quality of Kingsley Lake in 2024 if water levels allow. \*Secchi disc readings in Kingsley Lake are difficult because lake vegetation obscures the Secchi disc, giving false measurements; therefore, there is no trend line in the graph at left.

## Orchard Lake (Lakeville)

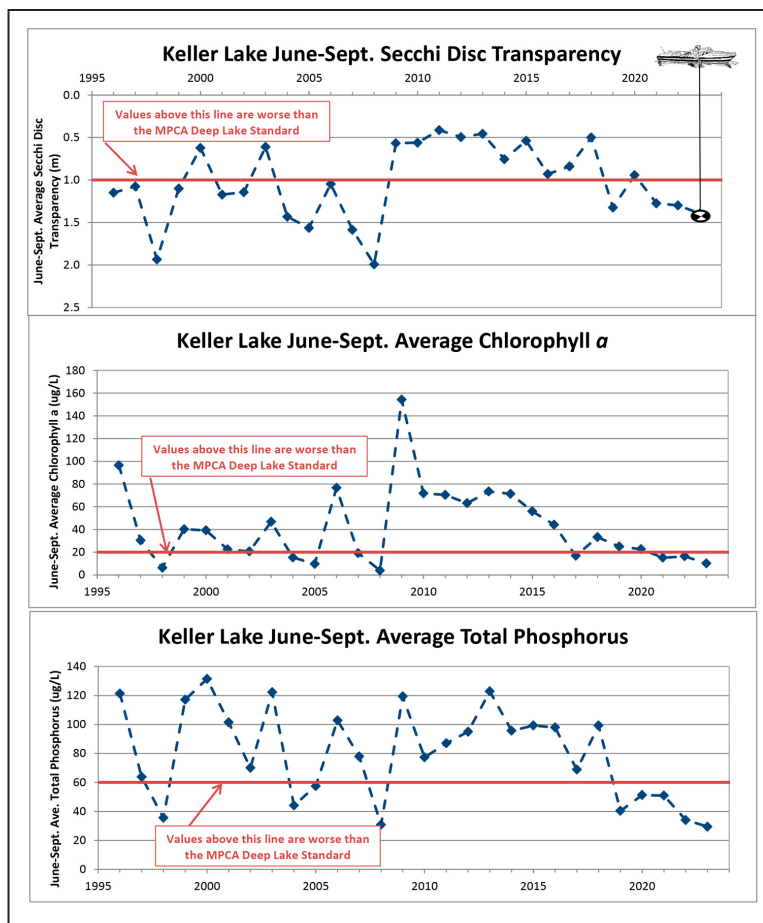
**Water Quality Monitoring**—Orchard Lake’s water quality in 2023 was similar to other recent years. The 2023 summer average Secchi disc transparency was 2.4 meters (7.9 feet), which is better than the MPCA deep-lake water quality standard of 1.4 meters. The 2023 summer-averages of total phosphorus (18 µg/L) and chlorophyll-*a* (4 µg/L) were better than the MPCA’s deep-lake water quality standards as well; the 2023 summer average chlorophyll-*a* was the 3rd best on record for the lake. There were no statistically significant trends in summer averages of water quality parameters for the most recent 10-year period. Summer averages of water quality in Orchard Lake have been consistently better than the water quality standards for the last sixteen years (2008-2023). The BDWMO will perform “management level” monitoring of Orchard Lake in 2024, including chloride and phytoplankton monitoring in addition to monitoring for phosphorus, chlorophyll, and water clarity.

# 2023 Monitoring Results

## Keller Lake (Burnsville & Apple Valley)

**Water Quality Monitoring**—An alum and sodium aluminate treatment was conducted on Keller Lake in Spring 2019 and Spring 2021, resulting in improved water quality in recent years. The 2023 Secchi disc transparency summer average was 1.4 meters (4.6 feet), which is better than the MPCA's shallow lake standard of 1.0 meter (3.3 feet), and the best it has been since 2008. The summer-average total phosphorus (29 µg/L) was also better than the MPCA's shallow lake standard of 60 µg/L, and the best on record for Keller Lake. Summer averages of total phosphorus had been consistently worse than the MPCA standard every year for the period 2009-2018, before the alum and sodium aluminate treatment of the lake. The 2023 summer-average of chlorophyll-a (10 µg/L) was also better than the MPCA's shallow lake standard of 20 µg/L, and the best it has been since 2008.

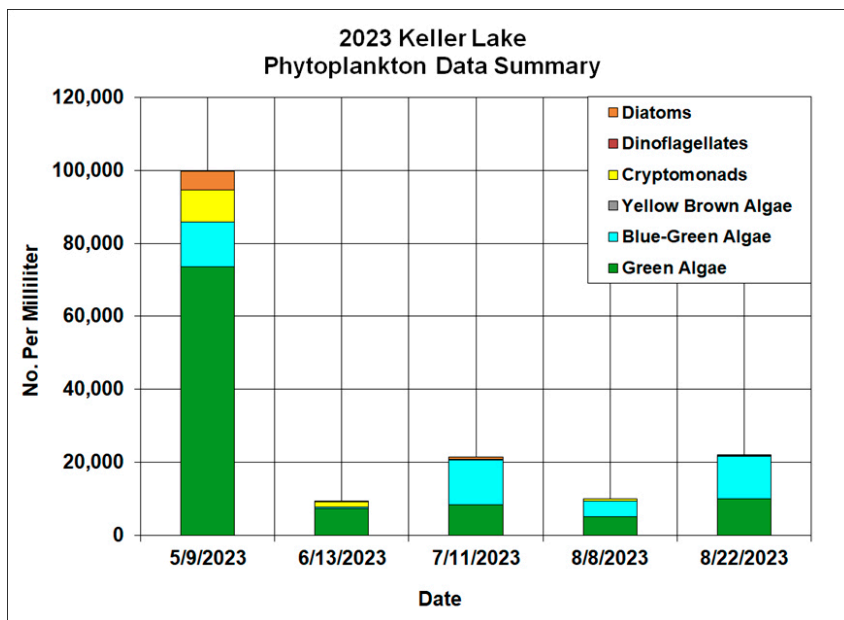
Trend analyses were not completed for Keller Lake because of the alum and sodium aluminate treatments that were conducted in 2019 and 2021. The three-lake TMDL study and implementation plan identifies the water quality improvement measures needed to continue to achieve the BDWMO and MPCA goals for the lake. The BDWMO will continue to monitor the water quality of Keller Lake in 2024.



## Keller Lake 2023 Phytoplankton Monitoring

Samples of phytoplankton, microscopic aquatic plants, were collected from Keller Lake to evaluate water quality and the quality of food available to zooplankton (microscopic animals). Phytoplankton numbers were high in May and declined to low to moderate levels from June through September, reflecting the lake's good water quality. Green algae, a good source of food for the lake's zooplankton, were present throughout the monitoring period (see figure at right) although their percentage of the overall phytoplankton community declined later in the summer.

Blue-green algae, which are associated with water quality problems and can be a source of health concerns (if certain species are present in significant numbers), were present from May through August and dominant in July and late August. Not all blue-green algae produce toxins and laboratory testing is necessary to determine the presence and concentration of algal toxins in lake water.





# BLACK DOG

Watershed Management Organization

www.blackdogwmo.org

## WANTED: Lakeville Alternate Commissioner

The City of Lakeville is seeking an alternate commissioner to represent the City on the Black Dog Watershed Management Commission through 2025. Alternates serve as an acting member but vote only during the absence of a regular commissioner. The Commission meets the third Wednesday of each month. The position is open to Lakeville residents ages 18 and older who live within the Black Dog Watershed. Those interested in this volunteer position should send a letter of interest to the Lakeville City Engineer Zach Johnson. The City will interview interested qualifying candidates.

Email Zach Johnson at:  
**[zjohnson@lakevillemn.gov](mailto:zjohnson@lakevillemn.gov)**

## Board of Commissioners

### Representing Burnsville:

- Curtis Enestvedt, Chair  
(serving since 2014)
- Mike Hughes, Vice Chair  
(serving since 2008)
- Todd Christopherson, Commissioner  
(serving since 2023)
- Cyndi Bergloff, Alternate  
(serving since 2023)

### Representing Apple Valley and Eagan:

- Rollie Greeno, Commissioner  
(serving since 2018)
- Greg Helms, Alternate  
(serving since 2011)

### Representing Lakeville:

- Scott Thureen, Secretary/Treasurer  
(serving since 2008)
- Alternate — Open position

### Engineering Consultant:

Greg Williams, P.E., Barr Engineering Co.

### Legal Consultant:

Cole Birkeland, Campbell Knutson, P.A.

**For more information,  
 please contact:**

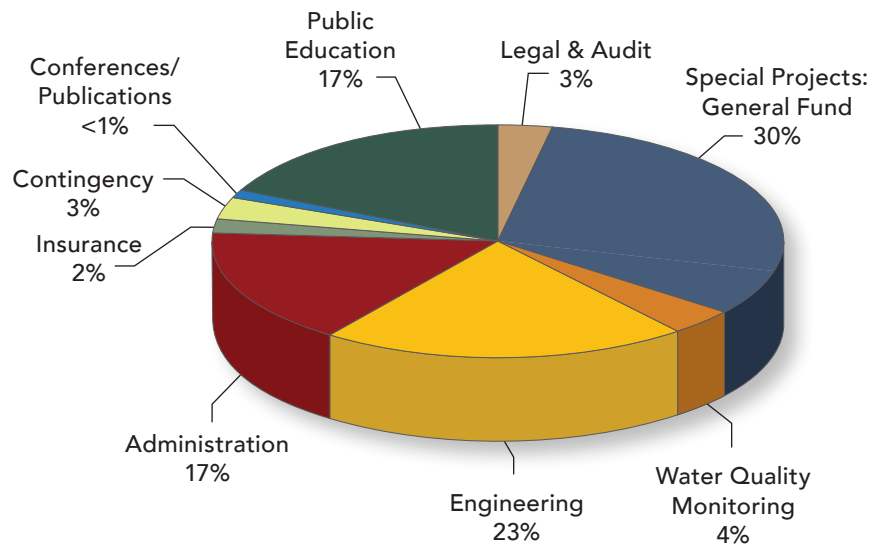
**Daryl Jacobson, Administrator  
 Black Dog WMO**

City of Burnsville  
 13713 Frontier Court | Burnsville, MN 55337  
 Phone: 952-895-4574  
[Daryl.Jacobson@burnsvillemn.gov](mailto:Daryl.Jacobson@burnsvillemn.gov)

## 2024 Budget

Engineering .....	\$34,000
Legal and Audit .....	\$5,000
Administrative Services .....	\$24,000
Public Education .....	\$24,000
Insurance .....	\$2,000
Special Projects – General Fund .....	\$43,800
Conference/Publications .....	\$500
Water Quality Monitoring .....	\$6,000
Contingency .....	\$5,000

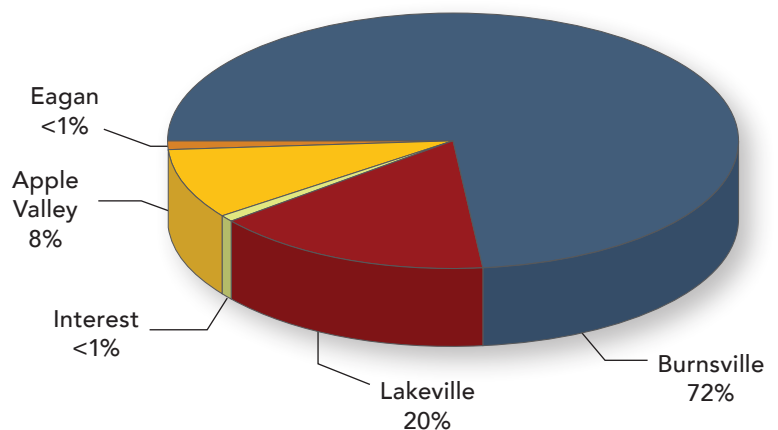
**Total Expenditures ..... \$144,800**



## 2024 Income

Member Contributions .....	\$143,500
Interest .....	\$500

**Total Income ..... \$144,000**



## Regular board meetings...

are held at 5:00 p.m. on the third Wednesday of the month at the Burnsville Maintenance Facility at 13713 Frontier Court.

## **2023 Water Quality Data**



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The Black Dog WMO funds the water quality monitoring of its water bodies designated as “strategic” by the Black Dog WMO. In 2023, the strategic water bodies included:

1. Crystal Lake
2. Keller Lake
3. Kingsley Lake
4. Lac Lavon
5. Orchard Lake

Water quality data for the strategic water bodies is presented on the following pages. First are a series of figures that summarize the historical summer average (June 1 through September 30) total phosphorus, chlorophyll *a*, and Secchi disc transparency data. The figures include trend lines based on data from the past 10 years and note if the trend is statistically significant. The linear best-fits were determined using a “least squares” regression analysis of the summer average data from 2014-2023 and assessed for significance at a 95% confidence level. Trend analyses were not performed for Keller Lake because of the alum treatment that was conducted in spring 2019 and fall 2021.

Second are a series of tables that show the results of the water quality monitoring for each data collection date in 2023, including CAMP data and data collected by the Black Dog WMO Engineer. The 2023 CAMP data provided by the Metropolitan Council were final data (i.e., Metropolitan Council laboratory had finished their review of the data) at the time this report was prepared. Kingsley Lake was not monitored via CAMP in 2023 due to access issues caused by low water levels.

Water quality monitoring data is also available for other “non-strategic” water bodies in the Black Dog WMO. In 2023, the member cities funded participation in the CAMP program for the following non-strategic water bodies:

- Earley Lake (City of Burnsville)
- Twin Lake (City of Burnsville)
- Sunset Pond (City of Burnsville)
- Wood Pond (City of Burnsville)
- Lee Lake (City of Lakeville)

Results of the 2023 water quality monitoring of non-strategic water bodies is available from the Metropolitan Council’s CAMP program at: [Advanced Search \(state.mn.us\)](https://www.mn.gov/AdvancedSearch).

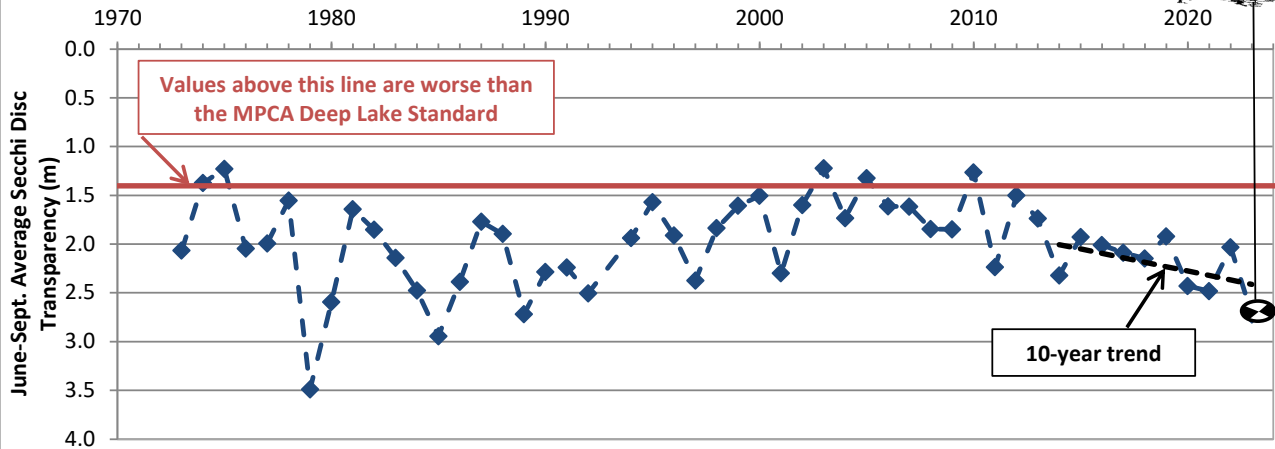
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## Historical Water Quality Data—Figures

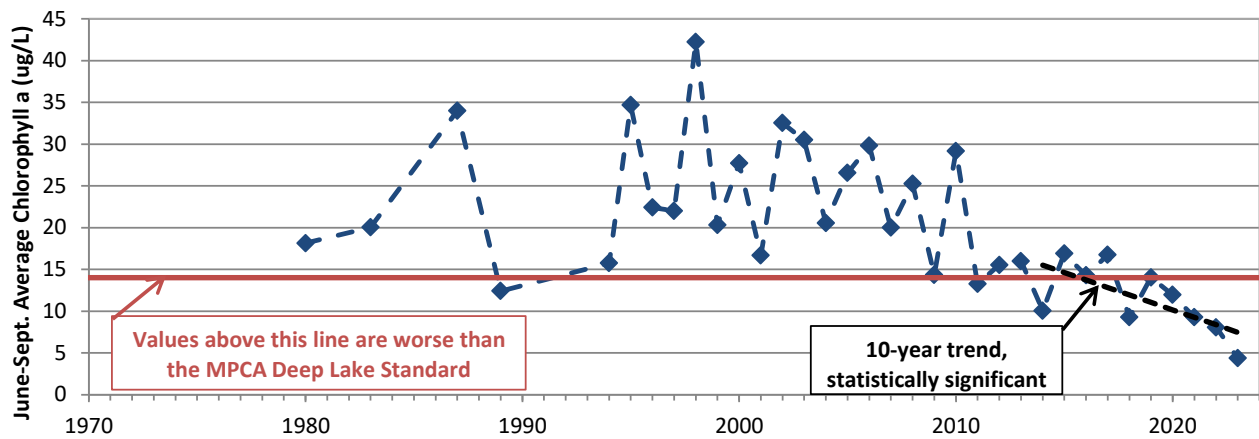
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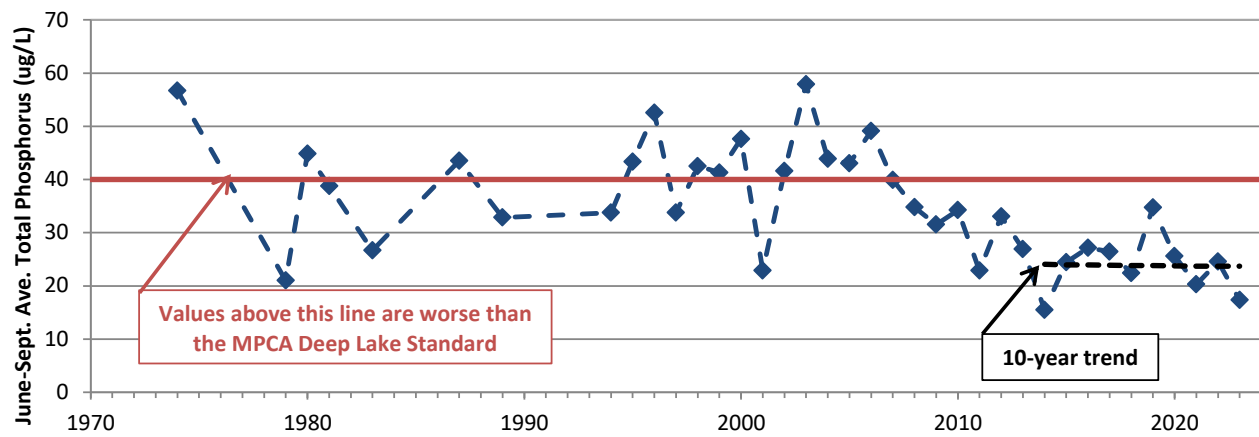
### Crystal Lake June-Sept. Secchi Disc Transparency

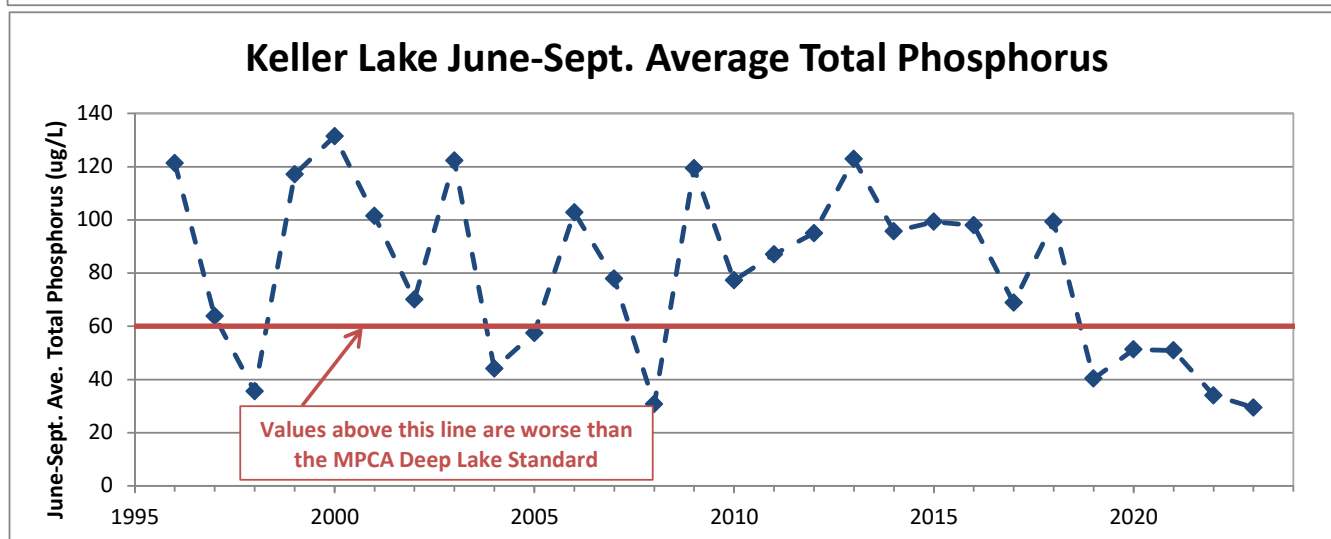
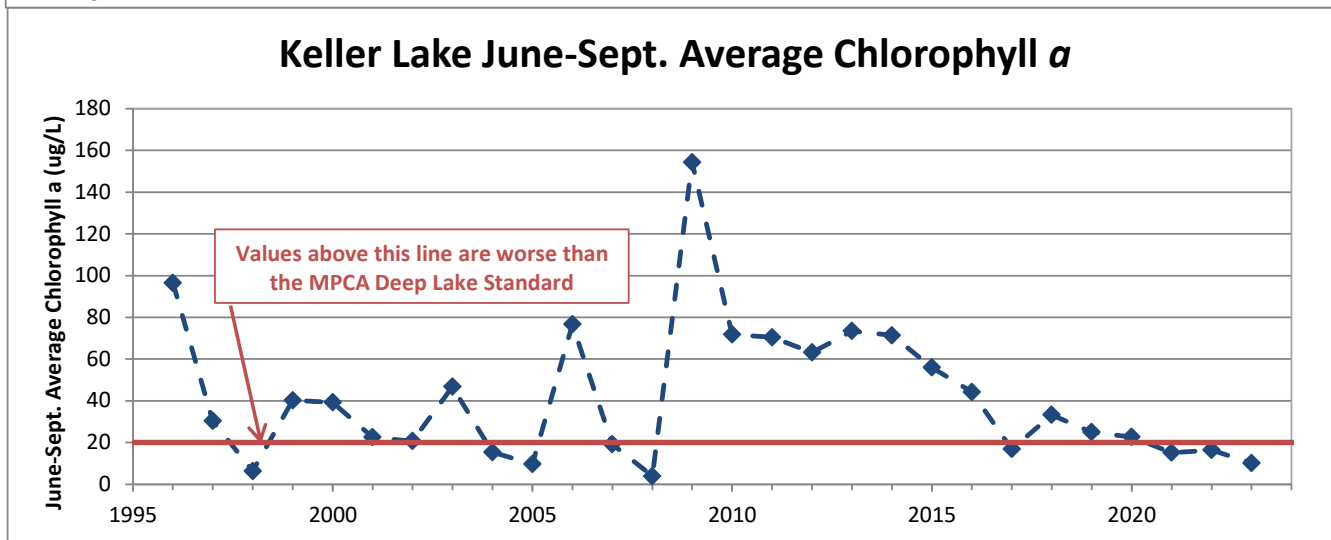
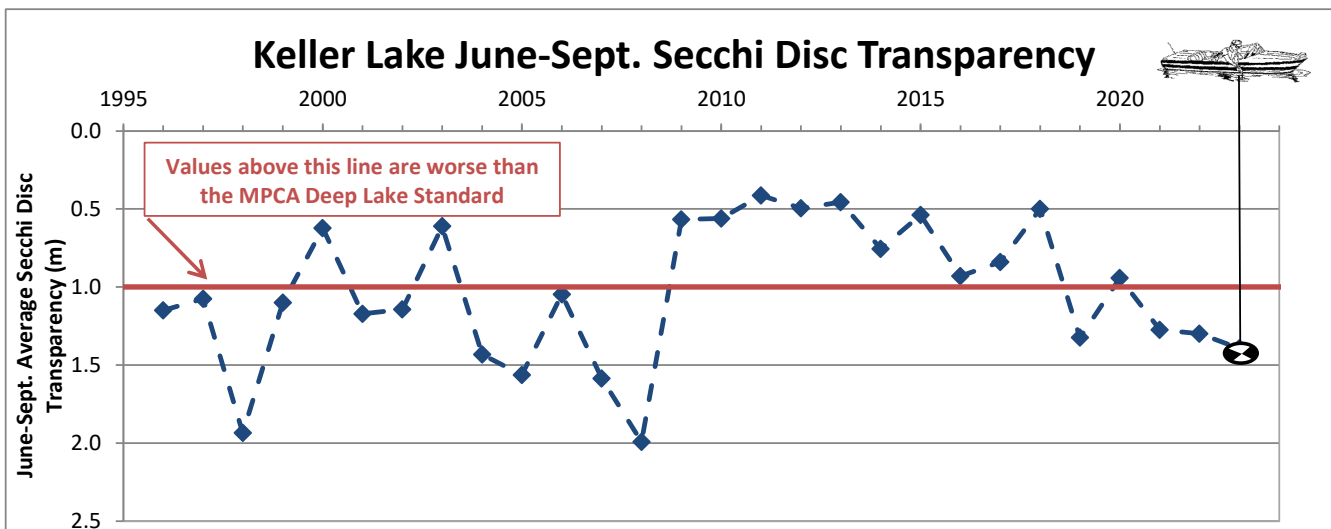


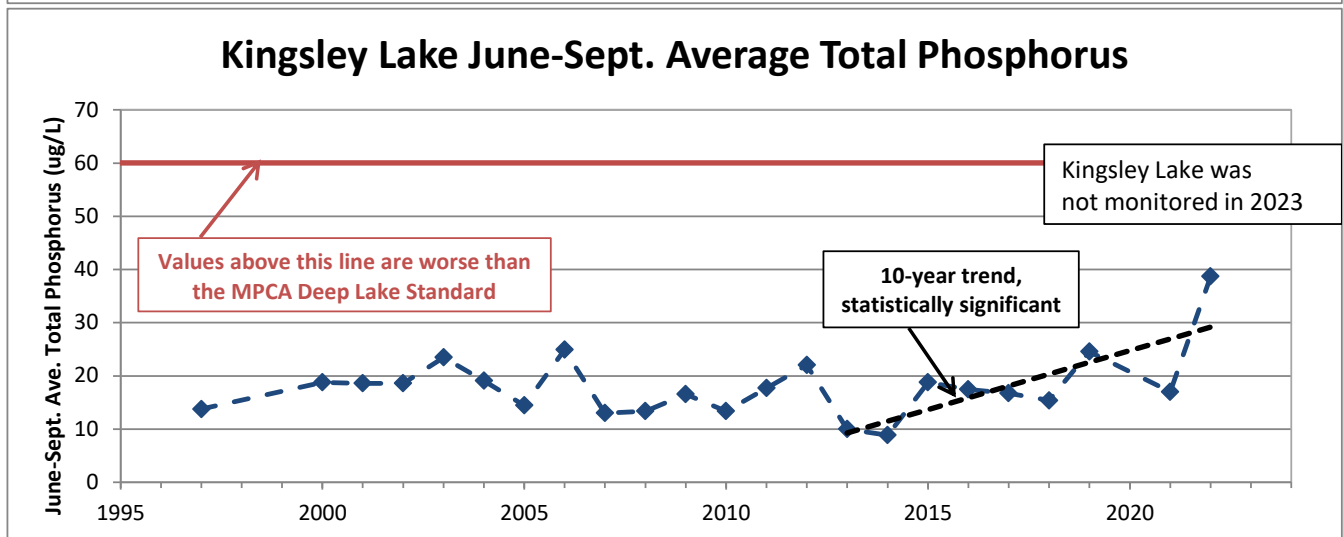
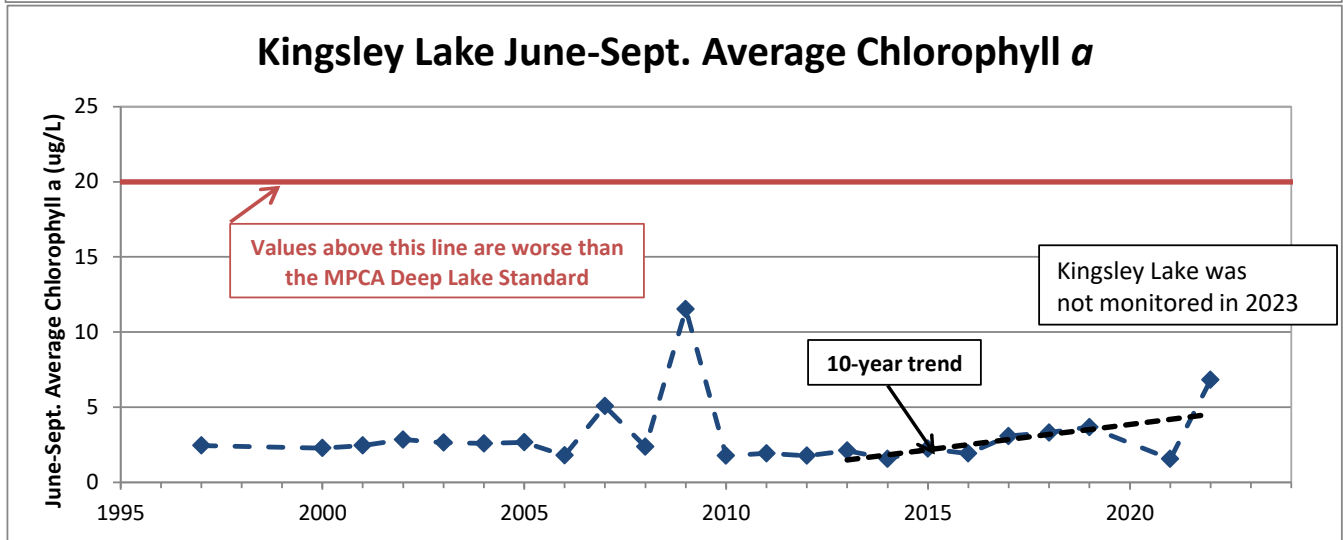
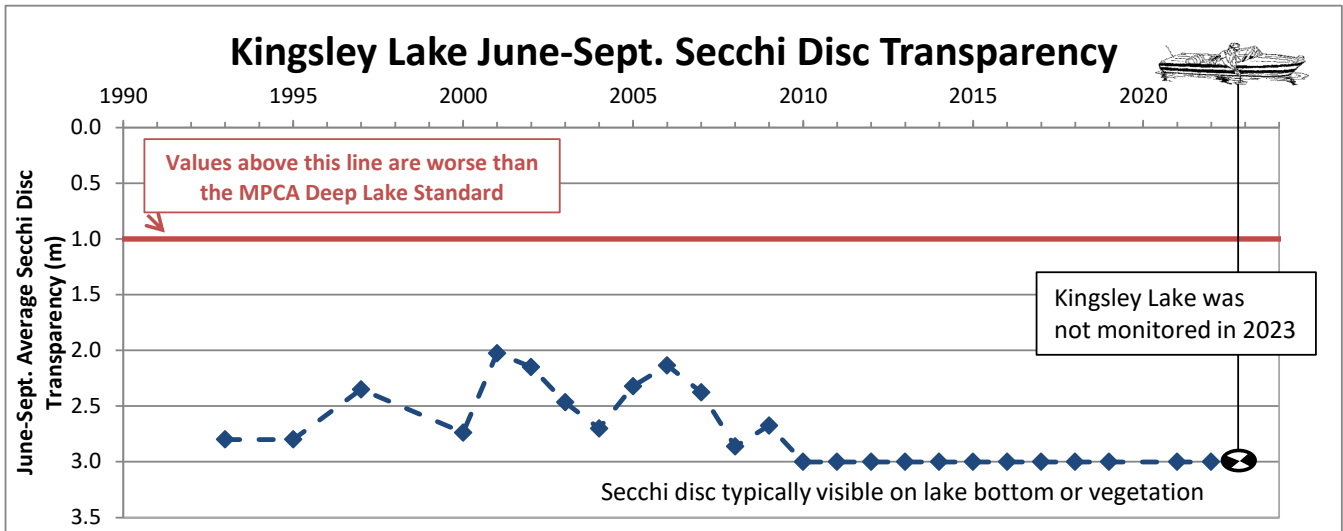
### Crystal Lake June-Sept. Average Chlorophyll *a*



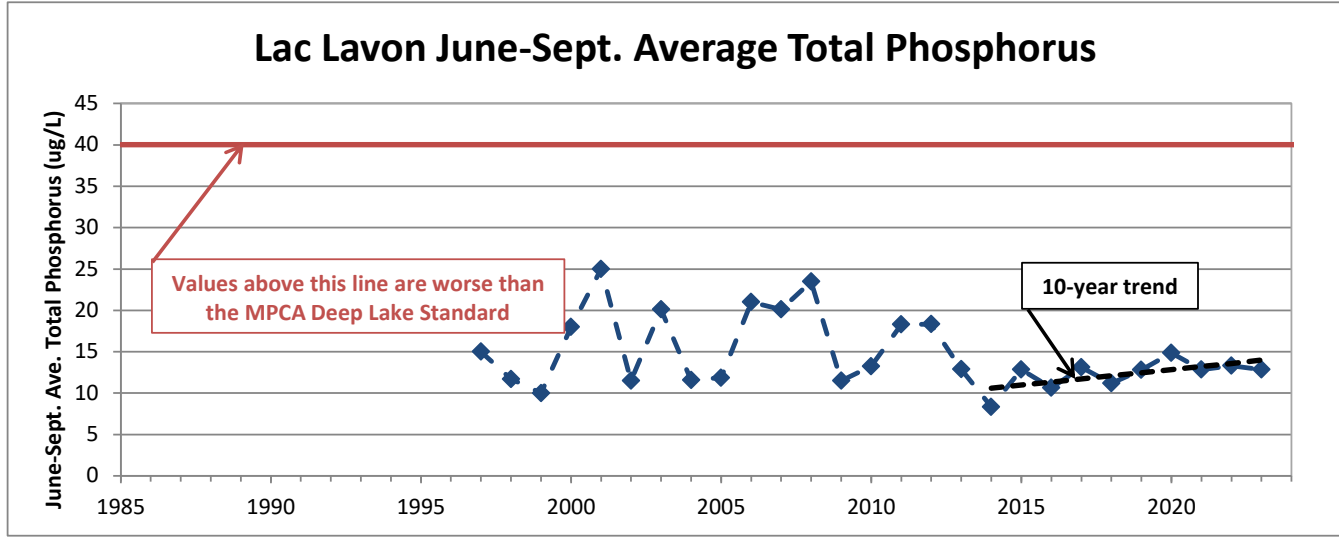
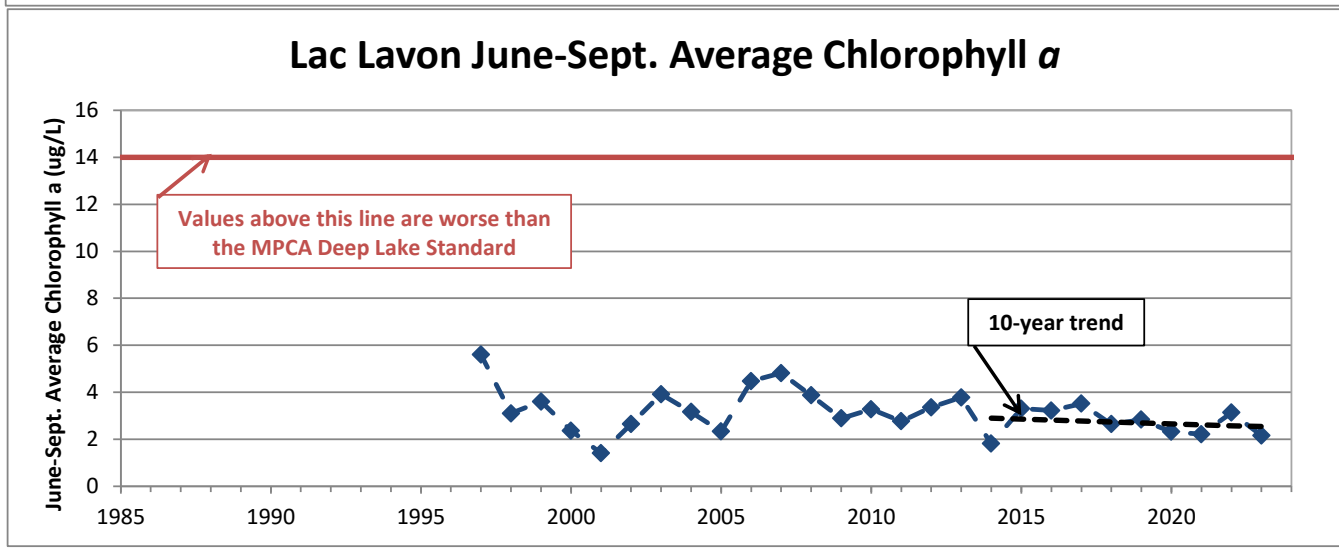
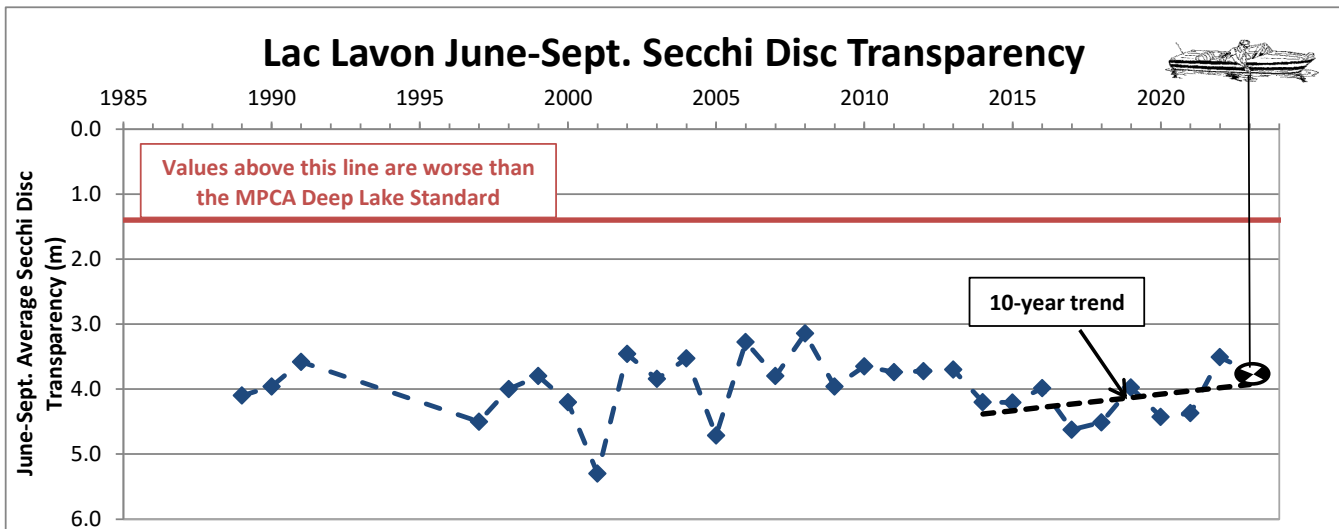
### Crystal Lake June-Sept. Average Total Phosphorus



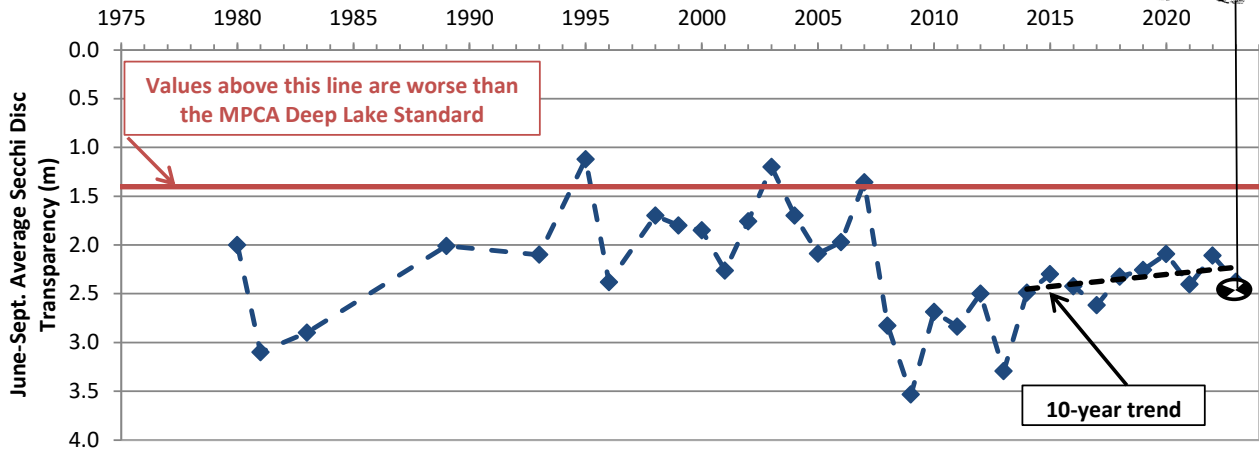




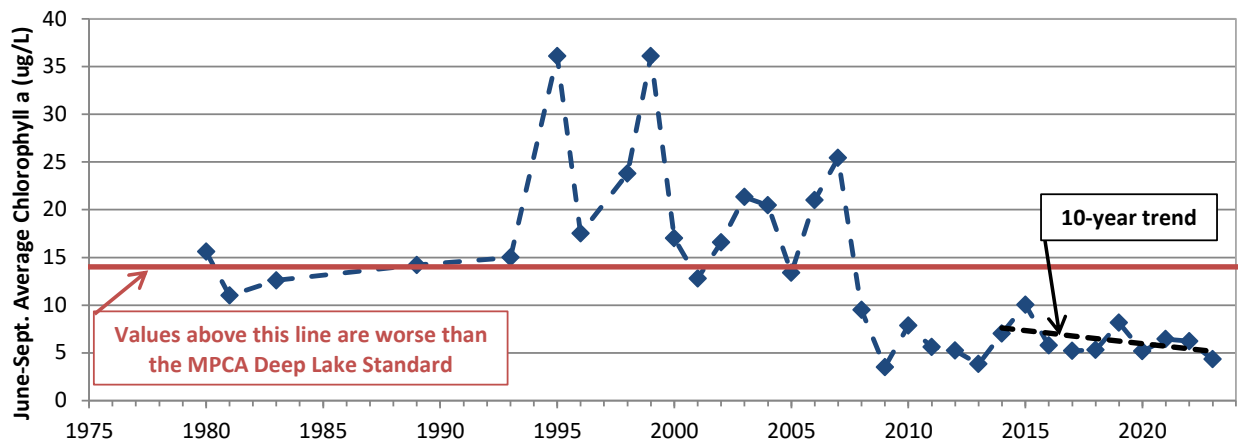




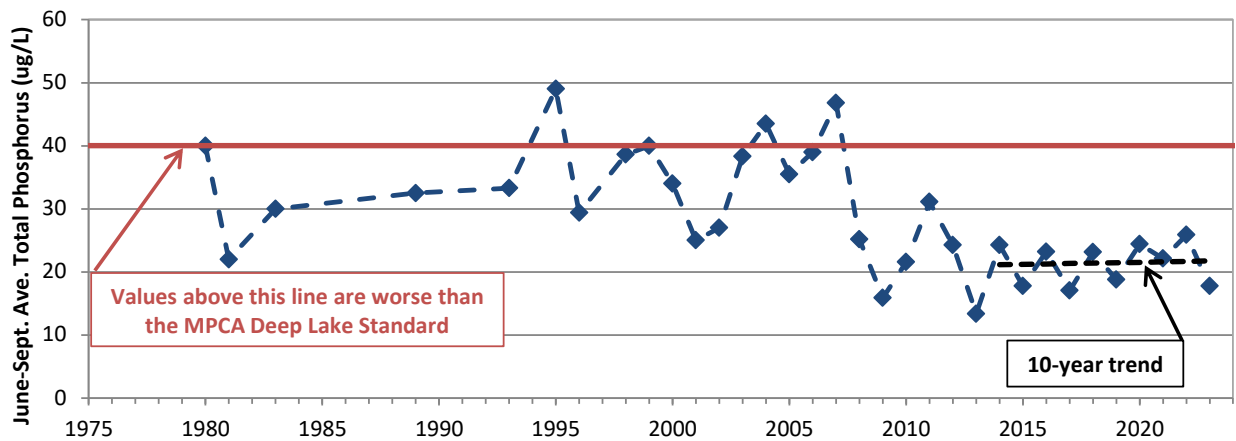
## Orchard Lake June-Sept. Secchi Disc Transparency



## Orchard Lake June-Sept. Average Chlorophyll *a*



## Orchard Lake June-Sept. Average Total Phosphorus



## 2023 Water Quality Data—Tables

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**Table 1: Crystal Lake 2023 Water Quality Data  
Citizen-Assisted Monitoring Program**

Sample Date	Sample Depth (m)	Secchi Disc Transparency (m)	Chlorophyll-a, Pheophytin Corrected (µg/L)	Total Phosphorus (µg/L)	Nitrogen, Total Kjeldahl (mg/L)	Temperature (°C)
5/7/2023	0	2.1	3.5	24	--	15.9
5/21/2023	0	2.7	2.4	22	--	19.7
6/1/2023	0	4.2	2.7	10	--	23.2
6/13/2023	0	4.2	2.7	<10	--	23.0
7/2/2023	0	3.0	3.2	13	--	26.0
7/14/2023	0	2.5	4.5	15	--	24.2
7/28/2023	0	2.5	2.9	22	--	28.3
8/10/2023	0	1.9	5.6	18	--	26.7
8/27/2023	0	2.0	7.2	18	--	24.0
9/10/2023	0	2.3	8.0	26	--	20.5
9/24/2023	0	1.9	2.7	24	--	19.6
10/9/2023	0	1.5	14	32	--	16.0

Notes

**Table 2: Keller Lake 2023 Water Quality Data  
Citizen-Assisted Monitoring Program**

Sample Date	Sample Depth (m)	Secchi Disc Transparency (m)	Chlorophyll-a, Pheophytin Corrected (µg/L)	Total Phosphorus (µg/L)	Nitrogen, Total Kjeldahl (mg/L)	Temperature (°C)
5/5/2023	0	1.0	12	38	--	14.1
5/17/2023	0	2.1	2.6	17	0.65	19.6
6/2/2023	0	2.0	12	22	0.63	26.0
6/17/2023	0	1.8	5.0	18	--	26.0
7/6/2023	0	1.8	7.5	20	--	25.8
7/27/2023	0	1.8	4.8	14	--	31.6
8/9/2023	0	1.15	3.6	22	--	26.6
9/12/2023	0	0.9	9.9	46	--	21.0
9/22/2023	0	1.1	12	40	--	22.0
10/20/2023	0	1.6	11	36	--	13.3

Notes

**Table 3: Kingsley Lake 2023 Water Quality Data, Citizen-Assisted Monitoring Program**

Sample Date	Sample Depth (m)	Secchi Disc Transparency (m)	Chlorophyll-a, Pheophytin Corrected (µg/L)	Total Phosphorus (µg/L)	Nitrogen, Total Kjeldahl (mg/L)	Temperature (°C)
--	--	--	--	--	--	--
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Notes

Kingsley Lake was not monitored via CAMP in 2023 due to low waters preventing access

**Table 4: Lac Lavon 2023 Water Quality Data  
Citizen-Assisted Monitoring Program**

Sample Date	Sample Depth (m)	Secchi Disc Transparency (m)	Chlorophyll-a, Pheophytin Corrected (µg/L)	Total Phosphorus (µg/L)	Nitrogen, Total Kjeldahl (mg/L)	Temperature (°C)
4/26/2023	0	1.8	8.2	17	0.38	9.8
5/3/2023	0	1.7	6.8	18	--	12.7
5/23/2023	0	3.5	10	<10	--	22.5
6/3/2023	0	5.4	1.3	10	0.43	25.5
6/17/2023	0	3.0	2.4	13	--	24.8
6/27/2023	0	2.6	2.9	<10	0.47	26.4
7/30/2023	0	3.5	1.6	13	--	27.8
8/13/2023	0	4.3	2.1	13	--	25.9
8/25/2023	0	4.0	1.3	16	--	28.6
9/19/2023	0	3.3	3.5	15	--	21.7
10/7/2023	0	2.6	3.7	18	--	18.4
10/20/2023	0	3.5	3.2	12	--	14.8

Notes

< 10 Indicates result is below the method detection limit.



**Table 5: Orchard Lake 2023 Water Quality Data  
Citizen-Assisted Monitoring Program**

Sample Date	Sample Depth (m)	Secchi Disc Transparency (m)	Chlorophyll-a, Pheophytin Corrected (µg/L)	Total Phosphorus (µg/L)	Nitrogen, Total Kjeldahl (mg/L)	Temperature (°C)
5/6/2023	0	1.5	5.3	22	--	13.1
5/20/2023	0	2.5	2.4	24	--	16.3
6/2/2023	0	2.4	3.5	20	--	26.0
6/16/2023	0	2.8	2.4	19	--	23.6
6/27/2023	0	3.6	2.1	11	--	25.4
7/15/2023	0	2.4	3.5	17	--	24.0
7/24/2023	0	2.3	3.2	14	--	26.7
8/12/2023	0	2.1	4.3	19	--	26.1
8/30/2023	0	2.1	4.0	17	--	25.9
9/17/2023	0	1.8	7.5	15	--	20.6
9/27/2023	0	1.9	8.5	28	--	19.9

Notes

**Table 6**  
**Keller Lake 2023 Water Quality Measured by Barr Engineering**  
**BDWMO**

Parameter		Chloride	Chlorophyll a, pheophytin-adjusted	Phosphorus, total, as P	Depth	Secchi disc	Dissolved oxygen	pH	Redox (oxidation potential)	Specific conductance @ 25 °C	Temperature	Turbidity
Units		mg/l	ug/l	mg/l	m	m	mg/l	pH units	mV	umhos/cm	deg C	NTU
Location	Date	Depth										
KELLER LAKE	4/26/2023	0 - 2 m	<b>168</b>	<b>27.3 J</b>	<b>0.058</b>	<b>2.4</b>	<b>1.3</b>	--	--	--	--	<b>3.3</b>
KELLER LAKE	4/26/2023	1 ft	--	--	--	--	<b>12.3</b>	<b>8.58</b>	<b>219.3</b>	<b>570</b>	<b>8.5</b>	--
KELLER LAKE	4/26/2023	2 ft	--	--	--	--	<b>12.7</b>	<b>8.59</b>	<b>217.8</b>	<b>569</b>	<b>8.5</b>	--
KELLER LAKE	4/26/2023	3 ft	--	--	--	--	<b>12.7</b>	<b>8.60</b>	<b>217.9</b>	<b>569</b>	<b>8.5</b>	--
KELLER LAKE	4/26/2023	4 ft	--	--	--	--	<b>12.7</b>	<b>8.61</b>	<b>216.5</b>	<b>569</b>	<b>8.5</b>	--
KELLER LAKE	4/26/2023	5 ft	--	--	--	--	<b>12.7</b>	<b>8.59</b>	<b>215.3</b>	<b>569</b>	<b>8.5</b>	--
KELLER LAKE	4/26/2023	6 ft	--	--	--	--	<b>12.6</b>	<b>8.45</b>	<b>216.2</b>	<b>569</b>	<b>8.4</b>	--
KELLER LAKE	4/26/2023	7 ft	--	--	--	--	<b>11.7</b>	<b>8.10</b>	<b>213.0</b>	<b>582</b>	<b>7.9</b>	--
KELLER LAKE	5/09/2023	0 - 2 m	<b>149</b>	<b>16.7</b>	<b>0.037</b>	<b>2.4</b>	<b>0.9</b>	--	--	--	--	<b>3.9</b>
KELLER LAKE	5/09/2023	0 ft	--	--	--	--	<b>12.1</b>	<b>8.80</b>	<b>98.7</b>	<b>565</b>	<b>18.3</b>	--
KELLER LAKE	5/09/2023	1 ft	--	--	--	--	<b>12.4</b>	<b>8.83</b>	<b>97.7</b>	<b>565</b>	<b>18.3</b>	--
KELLER LAKE	5/09/2023	2 ft	--	--	--	--	<b>12.6</b>	<b>8.83</b>	<b>97.5</b>	<b>565</b>	<b>18.3</b>	--
KELLER LAKE	5/09/2023	3 ft	--	--	--	--	<b>12.6</b>	<b>8.83</b>	<b>97.3</b>	<b>565</b>	<b>18.3</b>	--
KELLER LAKE	5/09/2023	4 ft	--	--	--	--	<b>12.7</b>	<b>8.83</b>	<b>97.1</b>	<b>565</b>	<b>18.3</b>	--
KELLER LAKE	5/09/2023	5 ft	--	--	--	--	<b>13.0</b>	<b>8.92</b>	<b>98.0</b>	<b>566</b>	<b>16.7</b>	--
KELLER LAKE	5/09/2023	6 ft	--	--	--	--	<b>13.1</b>	<b>8.89</b>	<b>98.9</b>	<b>576</b>	<b>15.0</b>	--
KELLER LAKE	5/09/2023	7 ft	--	--	--	--	<b>13.8</b>	<b>8.16</b>	<b>116.2</b>	<b>595</b>	<b>14.9</b>	--
KELLER LAKE	5/23/2023	0 - 2 m	<b>145</b>	<b>1.48</b>	<b>0.024</b>	<b>2.3</b>	<b>1.8</b>	--	--	--	--	<b>2.5</b>
KELLER LAKE	5/23/2023	0 ft	--	--	--	--	<b>10.31</b>	<b>8.86</b>	<b>96.1</b>	<b>619</b>	<b>21.1</b>	--
KELLER LAKE	5/23/2023	1 ft	--	--	--	--	<b>10.51</b>	<b>8.87</b>	<b>96.1</b>	<b>620</b>	<b>20.9</b>	--
KELLER LAKE	5/23/2023	2 ft	--	--	--	--	<b>10.5</b>	<b>8.85</b>	<b>96.1</b>	<b>619</b>	<b>20.7</b>	--
KELLER LAKE	5/23/2023	3 ft	--	--	--	--	<b>10.61</b>	<b>8.88</b>	<b>95.7</b>	<b>618</b>	<b>20.6</b>	--
KELLER LAKE	5/23/2023	4 ft	--	--	--	--	<b>10.58</b>	<b>8.91</b>	<b>95.1</b>	<b>619</b>	<b>20.5</b>	--
KELLER LAKE	5/23/2023	5 ft	--	--	--	--	<b>9.87</b>	<b>8.68</b>	<b>99.2</b>	<b>619</b>	<b>20.3</b>	--
KELLER LAKE	5/23/2023	6 ft	--	--	--	--	<b>8.68</b>	<b>8.45</b>	<b>107.5</b>	<b>621</b>	<b>20.1</b>	--
KELLER LAKE	6/13/2023	0 - 1.5 m	<b>157</b>	<b>5.93</b>	<b>0.027</b>	<b>2.1</b>	<b>&gt; 2.1</b>	--	--	--	--	--
KELLER LAKE	6/13/2023	0 ft	--	--	--	--	<b>7.1</b>	<b>8.34</b>	<b>132.6</b>	<b>564</b>	<b>22.7</b>	--
KELLER LAKE	6/13/2023	1 ft	--	--	--	--	<b>7.1</b>	<b>8.34</b>	<b>133.0</b>	<b>565</b>	<b>22.7</b>	--
KELLER LAKE	6/13/2023	2 ft	--	--	--	--	<b>7.3</b>	<b>8.42</b>	<b>129.0</b>	<b>564</b>	<b>22.7</b>	--
KELLER LAKE	6/13/2023	3 ft	--	--	--	--	<b>7.5</b>	<b>8.60</b>	<b>125.9</b>	<b>562</b>	<b>22.6</b>	--
KELLER LAKE	6/13/2023	4 ft	--	--	--	--	<b>7.9</b>	<b>8.77</b>	<b>120.4</b>	<b>561</b>	<b>22.6</b>	--
KELLER LAKE	6/13/2023	5 ft	--	--	--	--	<b>8.0</b>	<b>8.80</b>	<b>118.4</b>	<b>561</b>	<b>22.6</b>	--
KELLER LAKE	6/13/2023	6 ft	--	--	--	--	<b>8.0</b>	<b>8.80</b>	<b>117.5</b>	<b>561</b>	<b>22.6</b>	--

**Table 6**  
**Keller Lake 2023 Water Quality Measured by Barr Engineering**  
**BDWMO**

Parameter		Chloride	Chlorophyll a, pheophytin-adjusted	Phosphorus, total, as P	Depth	Secchi disc	Dissolved oxygen	pH	Redox (oxidation potential)	Specific conductance @ 25 °C	Temperature	Turbidity
Units		mg/l	ug/l	mg/l	m	m	mg/l	pH units	mV	umhos/cm	deg C	NTU
Location	Date	Depth										
KELLER LAKE	6/26/2023	0 - 1.5 m	<b>155</b>	<b>9.49</b>	<b>0.027</b>	<b>2.1</b>	<b>1.3</b>	--	--	--	--	<b>3.5</b>
KELLER LAKE	6/26/2023	0 ft	--	--	--	--	<b>6.1</b>	<b>8.0</b>	<b>99.0</b>	<b>542</b>	<b>24.7</b>	--
KELLER LAKE	6/26/2023	1 ft	--	--	--	--	<b>6.0</b>	<b>7.9</b>	<b>97.6</b>	<b>541</b>	<b>24.7</b>	--
KELLER LAKE	6/26/2023	2 ft	--	--	--	--	<b>5.8</b>	<b>7.9</b>	<b>96.7</b>	<b>540</b>	<b>24.7</b>	--
KELLER LAKE	6/26/2023	3 ft	--	--	--	--	<b>5.7</b>	<b>7.9</b>	<b>96.8</b>	<b>538</b>	<b>24.7</b>	--
KELLER LAKE	6/26/2023	4 ft	--	--	--	--	<b>5.7</b>	<b>7.9</b>	<b>96.4</b>	<b>539</b>	<b>24.7</b>	--
KELLER LAKE	6/26/2023	5 ft	--	--	--	--	<b>5.5</b>	<b>7.8</b>	<b>96.9</b>	<b>528</b>	<b>24.6</b>	--
KELLER LAKE	6/26/2023	6 ft	--	--	--	--	<b>5.5</b>	<b>7.8</b>	<b>96.5</b>	<b>530</b>	<b>24.6</b>	--
KELLER LAKE	7/11/2023	0 - 1.5 m	<b>163</b>	<b>14.2</b>	<b>0.025</b>	<b>2.0</b>	<b>1.3</b>	--	--	--	--	<b>2.4</b>
KELLER LAKE	7/11/2023	0 ft	--	--	--	--	<b>8.7</b>	<b>8.69</b>	<b>83.8</b>	<b>667</b>	<b>23.9</b>	--
KELLER LAKE	7/11/2023	1 ft	--	--	--	--	<b>8.6</b>	<b>8.60</b>	<b>87.7</b>	<b>668</b>	<b>24.0</b>	--
KELLER LAKE	7/11/2023	2 ft	--	--	--	--	<b>8.5</b>	<b>8.61</b>	<b>89.6</b>	<b>668</b>	<b>24.0</b>	--
KELLER LAKE	7/11/2023	3 ft	--	--	--	--	<b>8.4</b>	<b>8.61</b>	<b>90.8</b>	<b>668</b>	<b>24.0</b>	--
KELLER LAKE	7/11/2023	4 ft	--	--	--	--	<b>8.3</b>	<b>8.61</b>	<b>91.5</b>	<b>668</b>	<b>24.0</b>	--
KELLER LAKE	7/11/2023	5 ft	--	--	--	--	<b>8.2</b>	<b>8.60</b>	<b>92.5</b>	<b>668</b>	<b>24.0</b>	--
KELLER LAKE	7/11/2023	6 ft	--	--	--	--	<b>8.2</b>	<b>8.60</b>	<b>92.4</b>	<b>668</b>	<b>24.0</b>	--
KELLER LAKE	7/27/2023	0 - 1.5 m	<b>174</b>	<b>7.12</b>	<b>0.026</b>	<b>1.8</b>	<b>1.5</b>	--	--	--	--	<b>5.3</b>
KELLER LAKE	7/27/2023	0 ft	--	--	--	--	<b>8.0</b>	<b>8.71</b>	<b>28.4</b>	<b>645</b>	<b>28.8</b>	--
KELLER LAKE	7/27/2023	1 ft	--	--	--	--	<b>8.0</b>	<b>8.70</b>	<b>28.1</b>	<b>644</b>	<b>28.8</b>	--
KELLER LAKE	7/27/2023	2 ft	--	--	--	--	<b>7.8</b>	<b>8.62</b>	<b>29.0</b>	<b>644</b>	<b>28.8</b>	--
KELLER LAKE	7/27/2023	3 ft	--	--	--	--	<b>7.7</b>	<b>8.55</b>	<b>30.5</b>	<b>645</b>	<b>28.7</b>	--
KELLER LAKE	7/27/2023	4 ft	--	--	--	--	<b>6.8</b>	<b>8.22</b>	<b>36.3</b>	<b>641</b>	<b>28.1</b>	--
KELLER LAKE	7/27/2023	5 ft	--	--	--	--	<b>4.7</b>	<b>7.67</b>	<b>30.3</b>	<b>619</b>	<b>27.6</b>	--
KELLER LAKE	7/27/2023	6 ft	--	--	--	--	<b>2.6</b>	<b>7.30</b>	<b>57.4</b>	<b>624</b>	<b>27.4</b>	--
KELLER LAKE	8/08/2023	0 - 1.5 m	<b>166</b>	<b>15.1</b>	<b>0.036</b>	<b>1.6</b>	<b>&gt; 1.6</b>	--	--	--	--	<b>4.0</b>
KELLER LAKE	8/08/2023	0 ft	--	--	--	--	<b>7.0</b>	<b>7.47</b>	<b>105.5</b>	<b>629</b>	<b>25.3</b>	--
KELLER LAKE	8/08/2023	1 ft	--	--	--	--	<b>6.5</b>	<b>7.35</b>	<b>109.0</b>	<b>629</b>	<b>25.3</b>	--
KELLER LAKE	8/08/2023	2 ft	--	--	--	--	<b>6.3</b>	<b>7.35</b>	<b>110.5</b>	<b>629</b>	<b>25.3</b>	--
KELLER LAKE	8/08/2023	3 ft	--	--	--	--	<b>6.2</b>	<b>7.34</b>	<b>112.1</b>	<b>629</b>	<b>25.3</b>	--
KELLER LAKE	8/08/2023	4 ft	--	--	--	--	<b>6.1</b>	<b>7.34</b>	<b>112.4</b>	<b>629</b>	<b>25.3</b>	--
KELLER LAKE	8/08/2023	5 ft	--	--	--	--	<b>6.0</b>	<b>7.33</b>	<b>114.4</b>	<b>629</b>	<b>25.3</b>	--
KELLER LAKE	8/22/2023	0 - 1.5 m	<b>161</b>	<b>19.8</b>	<b>0.037</b>	<b>1.8</b>	<b>0.8</b>	--	--	--	--	<b>8.7</b>
KELLER LAKE	8/22/2023	0 ft	--	--	--	--	<b>8.5</b>	<b>8.66</b>	<b>106.9</b>	<b>567</b>	<b>24.1</b>	--
KELLER LAKE	8/22/2023	1 ft	--	--	--	--	<b>8.5</b>	<b>8.66</b>	<b>107.0</b>	<b>567</b>	<b>24.1</b>	--
KELLER LAKE	8/22/2023	2 ft	--	--	--	--	<b>8.7</b>	<b>8.70</b>	<b>108.9</b>	<b>567</b>	<b>24.0</b>	--
KELLER LAKE	8/22/2023	3 ft	--	--	--	--	<b>8.6</b>	<b>8.70</b>	<b>109.2</b>	<b>567</b>	<b>24.0</b>	--
KELLER LAKE	8/22/2023	4 ft	--	--	--	--	<b>8.6</b>	<b>8.71</b>	<b>109.2</b>	<b>567</b>	<b>24.0</b>	--
KELLER LAKE	8/22/2023	5 ft	--	--	--	--	<b>8.5</b>	<b>8.63</b>	<b>110.5</b>	<b>567</b>	<b>24.0</b>	--

**Table 6**  
**Keller Lake 2023 Water Quality Measured by Barr Engineering**  
**BDWMO**

Parameter		Chloride	Chlorophyll a, pheophytin-adjusted	Phosphorus, total, as P	Depth	Secchi disc	Dissolved oxygen	pH	Redox (oxidation potential)	Specific conductance @ 25 °C	Temperature	Turbidity
Units		mg/l	ug/l	mg/l	m	m	mg/l	pH units	mV	umhos/cm	deg C	NTU
Location	Date	Depth										
KELLER LAKE	9/06/2023	0 - 1.5 m	<b>191</b>	<b>19.4</b>	<b>0.041</b>	<b>1.7</b>	<b>0.85</b>	--	--	--	--	<b>8.9</b>
KELLER LAKE	9/06/2023	0 ft	--	--	--	--	<b>8.8</b>	<b>9.2</b>	<b>52.6</b>	<b>583</b>	<b>24.9</b>	--
KELLER LAKE	9/06/2023	1 ft	--	--	--	--	<b>8.8</b>	<b>9.2</b>	<b>53.0</b>	<b>583</b>	<b>24.9</b>	--
KELLER LAKE	9/06/2023	2 ft	--	--	--	--	<b>8.7</b>	<b>9.2</b>	<b>53.5</b>	<b>584</b>	<b>25.0</b>	--
KELLER LAKE	9/06/2023	3 ft	--	--	--	--	<b>8.7</b>	<b>9.2</b>	<b>55.1</b>	<b>584</b>	<b>25.0</b>	--
KELLER LAKE	9/06/2023	4 ft	--	--	--	--	<b>8.7</b>	<b>9.2</b>	<b>56.5</b>	<b>584</b>	<b>25.0</b>	--
KELLER LAKE	9/06/2023	5 ft	--	--	--	--	<b>8.7</b>	<b>9.2</b>	<b>57.2</b>	<b>584</b>	<b>25.0</b>	--
KELLER LAKE	9/18/2023	0 - 1 m	<b>185</b>	<b>17.5</b>	<b>0.040</b>	<b>1.6</b>	<b>0.9</b>	--	--	--	--	<b>6.9</b>
KELLER LAKE	9/18/2023	0 m	--	--	--	--	<b>9.2</b>	<b>9.5</b>	<b>132.5</b>	<b>698</b>	<b>20.2</b>	--
KELLER LAKE	9/18/2023	1 ft	--	--	--	--	<b>10.2</b>	<b>9.6</b>	<b>136.6</b>	<b>693</b>	<b>20.1</b>	--
KELLER LAKE	9/18/2023	2 ft	--	--	--	--	<b>10.5</b>	<b>9.6</b>	<b>135.8</b>	<b>700</b>	<b>19.5</b>	--
KELLER LAKE	9/18/2023	3 ft	--	--	--	--	<b>10.6</b>	<b>9.6</b>	<b>135.9</b>	<b>702</b>	<b>19.1</b>	--
KELLER LAKE	9/18/2023	4 ft	--	--	--	--	<b>10.6</b>	<b>9.6</b>	<b>135.7</b>	<b>701</b>	<b>19.1</b>	--
KELLER LAKE	9/18/2023	5 ft	--	--	--	--	<b>10.6</b>	<b>9.6</b>	<b>135.4</b>	<b>701</b>	<b>19.0</b>	--

# **2023 Annual Finance Statement**

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BLACK DOG WATERSHED  
MANAGEMENT ORGANIZATION

Financial Statements  
as of December 31, 2023

Unaudited  
Prepared by the City of Burnsville

Contents:

Statement of Net Position

Statement of Activities

Balance Sheet - Governmental Funds

Statement of Revenue, Expenditures, and Changes in Fund Balances - Governmental Funds

Statement of Revenue, Expenditures, and Changes in Fund Balances - Budget and Actual - General Fund

Statement of Revenue, Expenditures, and Changes in Fund Balances - Budget and Actual - Capital Improvement Fund

BLACK DOG WATERSHED  
MANAGEMENT ORGANIZATION

Statement of Net Position  
as of December 31, 2023

	Governmental Activities
	2023
Assets	
Cash and investments	563,723.96
Accounts receivable	-
Due from other governmental units	-
Prepays	-
Capital assets	
Buildings	37,600.00
Equipment	110,138.00
Less accumulated depreciation	(137,398.00)
Total capital assets, net of accumulated depreciation	10,340.00
Total assets	574,063.96
Liabilities	
Accounts payable	7,129.38
Due to other governmental units	27,999.01
Unearned revenue	-
Total liabilities	35,128.39
Net position	
Net investment in capital assets	10,340.00
Restricted for capital improvements	115,989.27
Unrestricted	412,606.30
Total net position	538,935.57
Total liabilities and net position	574,063.96



BLACK DOG WATERSHED  
MANAGEMENT ORGANIZATION

Statement of Activities  
Year Ended December 31, 2023

	Governmental Activities
	2023
Expenses	
General government	
System operations	78,071.10
Administrative services	47,290.51
Depreciation	940.00
Total program expenses	126,301.61
Revenues	
General government	
Charges for services	
Management fees	143,500.00
Grants	
State of MN Board of Water and Soil Resources	-
General revenues	
Interest earnings	24,677.48
Total revenues	168,177.48
Change in net position	41,875.87
Net position	
Beginning of year	497,059.70
End of year	538,935.57

BLACK DOG WATERSHED  
MANAGEMENT ORGANIZATION

Balance Sheet  
Governmental Funds  
Year Ended December 31, 2023

	General Fund	Capital Improvement Fund	Total Governmental Funds 2023
<b>Assets</b>			
Cash and investments	447,734.69	115,989.27	563,723.96
Accounts receivable	0.00	0.00	0.00
Due from other governmental units	0.00	0.00	0.00
Total assets	447,734.69	115,989.27	563,723.96
<b>Liabilities</b>			
Accounts payable	7,129.38	0.00	7,129.38
Due to other governmental units	27,999.01	0.00	27,999.01
Unearned revenue	0.00	0.00	0.00
Total liabilities	35,128.39	0.00	35,128.39
<b>Fund balances</b>			
Restricted for capital improvements	0.00	115,989.27	115,989.27
Assigned for subsequent year's budget deficit	13,300.00	0.00	13,300.00
Unassigned	399,306.30	0.00	399,306.30
Total fund balances	412,606.30	115,989.27	528,595.57
Total liabilities, deferred inflows of resources, and fund balances	447,734.69	115,989.27	563,723.96

Amounts reported for governmental activities in the Statement of Net Position differ because:

Fund balances – governmental funds	528,595.57
Capital assets used in governmental activities are not financial resources and, therefore, are not reported as assets in governmental funds.	
Cost of capital assets	147,738.00
Less accumulated depreciation	(137,398.00)
Net position of governmental activities	538,935.57

BLACK DOG WATERSHED  
MANAGEMENT ORGANIZATION

Statement of Revenue, Expenditures, and Changes in Fund Balances  
Governmental Funds  
Year Ended December 31, 2023

	General Fund	Capital Improvement Fund	Total Governmental Funds 2023
<b>Revenue</b>			
Member assessments	131,000.00	12,500.00	143,500.00
Intergovernmental Revenue - Grants	-	-	-
Interest earnings	24,677.48	-	24,677.48
Total revenue	155,677.48	12,500.00	168,177.48
<b>Expenditures</b>			
General government			
System Operations			
Engineering	32,569.95	-	32,569.95
Special Projects	33,135.15	-	33,135.15
Insurance	2,599.00	-	2,599.00
Water quality monitoring	9,767.00	-	9,767.00
Administrative services			
Legal and audit	2,922.50	-	2,922.50
Administrative costs	23,184.01	-	23,184.01
Public education	21,184.00	-	21,184.00
Conferences, publications and reports	-	-	-
Contingency	-	-	-
Total expenditures	125,361.61	-	125,361.61
Expenditures	30,315.87	12,500.00	42,815.87
<b>Other Financing Source (Uses)</b>			
Transfers in	-	-	-
Transfers out	-	-	-
Total other financing sources (uses)	-	-	-
Net change in fund balances	30,315.87	12,500.00	42,815.87
<b>Fund balances</b>			
Beginning of year	382,290.43	103,489.27	485,779.70
End of year	412,606.30	115,989.27	528,595.57

Amounts reported for governmental activities in the Statement of Activities are different because:

Net change in fund balances – governmental funds	42,815.87
--------------------------------------------------	-----------

Capital outlays are reported as expenditures in governmental funds, but are allocated over the estimated useful lives of the capital assets as depreciation expense in the Statement of Activities.

Depreciation expense	(940.00)
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Change in net position of governmental activities	41,875.87
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BLACK DOG WATERSHED  
MANAGEMENT ORGANIZATION

Statement of Revenue, Expenditures, and Changes in Fund Balances  
Budget and Actual  
General Fund  
Year Ended December 31, 2023

	2023		
	Original and Final Budget	Actual	Over (Under) Final Budget
<b>Revenue</b>			
Management fees	131,000.00	131,000.00	-
Intergovernmental Revenue - Grants	-	-	-
Interest earnings	40.00	24,677.48	24,637.48
Total revenue	131,040.00	155,677.48	24,637.48
<b>Expenditures</b>			
General government			
System Operations			
Engineering	43,000.00	32,569.95	(10,430.05)
Special Projects	37,300.00	33,135.15	(4,164.85)
Insurance	2,500.00	2,599.00	99.00
Water quality monitoring	15,200.00	9,767.00	(5,433.00)
Administrative services			
Legal and audit	5,000.00	2,922.50	(2,077.50)
Administrative costs	24,000.00	23,184.01	(815.99)
Public education	25,700.00	21,184.00	(4,516.00)
Conferences, publications and reports	500.00	-	(500.00)
Contingency	5,000.00	-	(5,000.00)
Total expenditures	158,200.00	125,361.61	(32,838.39)
Expenditures	(27,160.00)	30,315.87	57,475.87
<b>Other Financing Source (Uses)</b>			
Transfers in	-	-	-
Transfers out	-	-	-
Total other financing sources (uses)	-	-	-
Net change in fund balances	(27,160.00)	30,315.87	57,475.87
<b>Fund balances</b>			
Beginning of year		382,290.43	
End of year		412,606.30	

BLACK DOG WATERSHED  
MANAGEMENT ORGANIZATION

Statement of Revenue, Expenditures, and Changes in Fund Balances  
Budget and Actual  
Capital Improvement Fund  
Year Ended December 31, 2023

	2023		
	Original and Final Budget	Actual	Over (Under) Final Budget
<b>Revenue</b>			
Management fees	12,500.00	12,500.00	-
Intergovernmental Revenue - Grants	-	-	-
Interest earnings	-	-	-
Total revenue	12,500.00	12,500.00	-
<b>Expenditures</b>			
General government			
System Operations			
Engineering	-	-	-
Special Projects	-	-	-
Insurance	-	-	-
Water quality monitoring	-	-	-
Administrative services			
Legal and audit	-	-	-
Administrative costs	-	-	-
Public education	-	-	-
Conferences, publications and reports	-	-	-
Contingency	-	-	-
Total expenditures	-	-	-
Excess (Deficiency) of Revenues Over (Under) Expenditures	12,500.00	12,500.00	-
<b>Other Financing Source (Uses)</b>			
Transfers in	-	-	-
Transfers out	-	-	-
Total other financing sources (uses)	-	-	-
Net change in fund balances	12,500.00	12,500.00	-
<b>Fund balances</b>			
Beginning of year		103,489.27	
End of year		115,989.27	

<b>BLACK DOG WATERSHED MANAGEMENT ORGANIZATION</b>				
<b>Accounts Receivable</b>				
<b>12/31/23</b>				
<b>Description</b>			<b>Amount</b>	<b>Deposit Date</b>
None				
			0.00	

<b>BLACK DOG WATERSHED MANAGEMENT ORGANIZATION</b>				
<b>Due From Other Governmental Units</b>				
<b>12/31/23</b>				
<b>Description</b>			<b>Amount</b>	<b>Deposit Date</b>
		DFOG		
			0.00	

BLACK DOG WATERSHED MANAGEMENT ORGANIZATION						
Accounts Payable/Due to Other Governments						
12/31/23						
Inv Date	Vendor Name	Amount	Description	Date Paid	Check #	Check Amt
	Barr Engineering	AP	\$ 6,289.38	Prof. services Oct.28-Dec.29,2023	01/17/24	1822 \$ 6,289.38
	Campbell Knutson	AP	\$ 595.00	Oct, Nov 2023 General Services	01/17/24	1823 \$ 595.00
	Dakota County Soil &	DTOG	\$ 4,815.00	October - December 2023 (Quarterly fees)	01/17/24	1824 \$ 4,815.00
	Campbell Knutson	AP	245.00	Dec 2023 General Services	02/21/24	1826 245.00
	City of Burnsville	DTOG	\$ 23,184.01	2023 Support services	02/21/24	1827 \$ 23,184.01
	<i>total</i>		<u>\$ 35,128.39</u>			
		AP	7,129.38			
		AP-Cap	0.00			
		DTOG	27,999.01			
	<i>total</i>		<u>\$ 35,128.39</u>			



BLACK DOG WATERSHED MANAGEMENT ORGANIZATION					
Outstanding checks at year-end					
12/31/2023					
Inv Date	Vendor Name	Amount	Description	Date Paid	Check #
None					
		\$ -			

<b>BLACK DOG WATERSHED MANAGEMENT ORGANIZATION</b>		
<b>Management Fees</b>		
<b>12/31/2023</b>		
<b>Management Fees 2023 (General Fund):</b>		
City of Apple Valley	\$ 10,412.00	
City of Burnsville	94,014.00	
City of Eagan	586.00	
City of Lakeville	25,988.00	
<b>Total</b>	<b>\$ 131,000.00</b>	
<b>Member Fees - Capital Improvement Fund 2023:</b>		
City of Apple Valley	\$ 992.00	
City of Burnsville	9,186.00	
City of Eagan	0.00	
City of Lakeville	2,322.00	
<b>Total</b>	<b>\$ 12,500.00</b>	
<b>Grand Total</b>	<b>143,500.00</b>	
<b>Total by City 2023:</b>		
City of Apple Valley	\$ 11,404.00	
City of Burnsville	\$ 103,200.00	
City of Eagan	\$ 586.00	
City of Lakeville	\$ 28,310.00	
<b>Total</b>	<b>\$ 143,500.00</b>	

<b>BLACK DOG WATERSHED MANAGEMENT ORGANIZATION</b>		
<b>Grants</b>		
<b>12/31/2023</b>		
<b>Description</b>	<b>Amount</b>	<b>Deposit Date</b>
GRANTS	\$ -	

**BLACK DOG WATERSHED MANAGEMENT ORGANIZATION**  
**CAPITAL ASSETS SUMMARY**  
**YEAR ENDED DECEMBER 31, 2023**

Acq Date	Description	Useful Life	Historical Cost 12/31/03	Accumulated Depreciation 12/31/22	Net Value 12/31/22	2023 Depreciation	Balance 12/31/2023
1994	Building	40	37,600	(26,320.00)	11,280.00	(940.00)	10,340.00
1994	Equipment	15	110,138	(110,138.00)	-	-	-
			<u>147,738.00</u>	<u>(136,458.00)</u>	<u>11,280.00</u>	<u>(940.00)</u>	<u>10,340.00</u>

total accumulated depreciation at YE (137,398.00)

<u>Assets</u>	<u>Years</u>
Buildings	40 years
Equipment	15 years

Capital asset activity for the year ended December 31, 2023 was as follows:

	<u>Beginning Balance</u>	<u>Additions</u>	<u>Deletions</u>	<u>Ending Balance</u>
Governmental Activities				
Capital assets, depreciated				
Buildings	\$ 37,600	\$ -	\$ -	\$ 37,600
Equipment	110,138	-	-	110,138
Total capital assets, depreciated	<u>147,738</u>	<u>-</u>	<u>-</u>	<u>147,738</u>
Less accumulated depreciation for				
Buildings	26,320	940	-	27,260
Equipment	110,138	-	-	110,138
Total accumulated depreciation	<u>136,458</u>	<u>940</u>	<u>-</u>	<u>137,398</u>
Governmental activities capital assets, net	<u>\$ 11,280</u>	<u>\$ (940)</u>	<u>\$ -</u>	<u>\$ 10,340</u>

BLACK DOG WATERSHED  
MANAGEMENT ORGANIZATION

Board of Commissioners and Administrators  
as of December 31, 2023

**BOARD OF COMMISSIONERS**

Curtis Enestvedt	Chair
Mike Hughes	Vice Chair
Scott Thureen	Secretary/Treasurer/Commissioner
Rollie Greeno	Commissioner
Lynette Dunsworth	Commissioner
Open	Commissioner (Alternate)
Greg Helms	Commissioner (Alternate)
Natalie Walker	Commissioner (Alternate)

**ADMINISTRATORS**

Daryl Jacobson	Administrator
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<b>BLACK DOG WATERSHED MANAGEMENT ORGANIZATION</b>		
<b>Notes</b>		
<b>12/31/23</b>		
<b>Description</b>	<b>Amount</b>	
The last audit was performed for year-end 2019.		
An audit is required every 5 years OR if the revenue thresholds set by the OSA are met/exceeded.		