

# **BLACK DOG**

**Watershed Management Organization**

## **2022 ANNUAL ACTIVITY REPORT**

**Prepared for  
Black Dog Watershed  
Management Commission**

**June 2023**

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### **2022 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 2022 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 2023
2. Mike Hughes (Vice-Chair) Representing the City of Burnsville	November 2023
3. Scott Thureen (Secretary/Treasurer) Representing the City of Lakeville	November 2023
4. Tom Harmening Representing the City of Burnsville [Resigned at end of term; seat vacant in December 2022]	November 2022
5. Rollie Greeno Representing the Cities of Apple Valley and Eagan	November 2023

<b>Alternate Board Members:</b>	<b>Term Ending</b>
1. Frank Boyce Representing City of Burnsville [Appointed January 2021; resigned at end of term; seat vacant in December 2022]	November 2022
2. Greg Helms Representing the Cities of Apple Valley and Eagan	November 2023
3. Natalie Walker Representing the City of Lakeville	November 2023

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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. In 2022, the Black Dog Watershed Management Commission Board retained services 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 Joel Jamnik 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

## 2022 Black Dog WMO Activities

- Completed work on 2022 Black Dog WMO Watershed Management Plan (Plan). The Black Dog WMO distributed the Plan for formal 60-day review on May 12, 2022. The Black Dog WMO responded to formal comments and hosted a public hearing on the draft Plan on August 17, 2022. The Administrator and Engineer presented the draft Plan to the Board of Water and Soil Resources (BWSR) Central Region Subcommittee on October 6, 2022. The BWSR Board approved the draft Plan in October, 2022 and the Black Dog WMO Commissioners adopted the Plan on November 16, 2022.
- Participated in the Metropolitan Council's Citizen-Assisted Monitoring Program (CAMP) for the following strategic water bodies:
  - Crystal Lake
  - Keller Lake
  - Kingsley Lake
  - Lac Lavon
  - Orchard Lake

Completed water quality trend analyses on these lakes using the information gathered through CAMP and the more detailed Black Dog WMO monitoring on Lac Lavon.

- Performed detailed (management level) monitoring on Lac Lavon, as recommended in the 2012 Black Dog WMO Watershed Management Plan. Monitoring activities included water quality monitoring and aquatic plant surveys. The water quality monitoring included collecting samples on 11 occasions—ice-out and then May through September, twice per month. On each monitoring occasion, analytical samples were collected at seven depths at the deepest spot in the lake—a surface sample, plus six samples at one-meter intervals from three to eight meters. All samples were analyzed for total phosphorus. In addition, Secchi disc readings were taken, and the surface samples were analyzed for chlorophyll-a. Field measurements of temperature, dissolved oxygen, pH, redox potential, and specific conductivity were recorded at one meter intervals at the monitoring location. Turbidity field measurements were also be taken on the surface water sample at the monitoring location. Two aquatic vegetation surveys were conducted on Lac Lavon (by a qualified subcontractor); one in June and one in August 2022. 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 2023 and posted on the Black Dog WMO website.
- Prepared the 2021 Crystal Lake technical memo summarizing the more detailed (management level) monitoring results and presented the technical memo at the April 20, 2022 Commission meeting.
- Performed habitat monitoring of Orchard Lake. Monitoring included a meandering survey around the entire lake as well as the previously established sample plots (in the emergent and upland

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buffer zones). The City of Lakeville provided results of their 2022 aquatic vegetation surveys, which were used to evaluate the submergent zone. 2022 was the last year of habitat monitoring based on the 2012 Watershed Management Plan. Elements of habitat monitoring will be incorporated into management level water quality monitoring beginning in 2023.

- Prepared the 2021 Kingsley Lake habitat monitoring report and presented the report at the April 20, 2022 Commission meeting.
- Conducted an annual evaluation of the watershed programs and reported the results to member communities via a watershed annual report (this report is incorporated into the annual activity report submitted to the Minnesota Board of Water and Soil Resources).
- Developed an annual activity report and watershed annual report and distributed them via the Black Dog WMO website and through the member communities (see attached Watershed Annual Report). The annual activity report meets all the State reporting requirements and is submitted to the Minnesota Board of Water and Soil Resources (BWSR).
- Partnered with the Dakota County SWCD by providing funding and support to install 9 water quality improvement projects through the Landscaping for Clean Water program for Black Dog WMO residents, consistent with SWCD cost share policies.
- 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. All programming in 2022 was held virtually. Three live virtual Introduction to Clean Water Class offerings were held in the spring (March through May) and then pre-recorded so others could participate in the classes at their leisure. A total of 58 residents of the Black Dog WMO participated in the Introduction classes through either a live virtual class or through the recordings. A total of 41 participants took part in the virtual Design Course classes which consisted of a series of pre-recorded videos. 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 15 participants took advantage of these virtual consultations with staff in 2022. In 2022, two Maintenance classes were taught in the spring focused on maintenance for all seasons. A total of 21 people registered for the Maintenance classes.
- Completed the 2021 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.
- Coordinated with member cities, Dakota County and Dakota County SWCD to select projects/activities to fund using BWSR watershed-based implementation funding program grant dollars.
- Formulated and approved the year 2023 Work Plan and Budget.

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- 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 2012 Watershed Management Plan\*\**

## 2022 Black Dog WMO Expenditures

	<b><u>BUDGET</u></b>	<b><u>ACTUAL</u></b>
<b><u>General Engineering Support</u></b>	\$31,000	\$22,608
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.		
<b><u>Special Projects – General Fund:</u></b>		
<b>Lac Lavon Lake Management Level Monitoring</b>	\$22,500	\$16,423
Funding to conduct “management level” monitoring of the lake’s water quality, per guidance in the Black Dog WMO Plan.		
<b>Dakota County SWCD—Landscaping for Clean Water Program Support</b>	\$13,500	\$6,750
Funds to partner with the Dakota County SWCD Landscaping for Clean Water program for Black Dog WMO residents.		
<b>Reporting on 2021 Crystal Lake Management Level Monitoring</b>	\$4,600	\$4,558
Prepare the 2021 Crystal Lake technical memo summarizing the monitoring results and a presentation for a Commission meeting.		
<b><u>Special Projects – Capital Improvement Fund:</u></b>		
<b>Keller Lake Alum Treatment</b>	\$5,000	\$0
Complete Keller Lake alum treatment project (the second phase of alum treatment was performed in fall 2021, while the first alum phase of alum treatment was in spring 2019). The Black Dog WMO received a \$230,000 BWSR Clean Water Fund Grant (awarded in December 2018, final contract execution in April 2019), which covers 80% of the project cost (grant requires a 20% local share). All project work was completed prior to 2022, including grant administration and final reporting.		
<b><u>Special Projects – General Fund Reserve:</u></b>		
<b>Watershed Management Plan Update</b>	\$40,000	\$43,005
Continue work on updating the Black Dog WMO Watershed Management Plan, which expires in September 2022. The planning process usually takes approximately two years to complete; preliminary work began later in 2020. Work completed		



or planned in 2021 includes stakeholder engagement, issue identification and prioritization, and drafting of the plan document. Work in 2022 will include completing the draft plan document, navigating the formal plan review process, and obtaining approval from the Minnesota Board of Water and Soil Resources.

<b><u>Insurance:</u></b>	\$3,000	\$1,966
<b><u>Legal and Audit:</u></b> Consulting fees for legal services.	\$5,500	\$2,067
<b><u>Administrative Services:</u></b> 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.	\$19,000	\$24,033
<b><u>Public Education:</u></b> Cost to produce and distribute the annual activity report and watershed annual report, funding support for the Dakota County SWCD Landscaping for Clean Water workshop support, and costs to maintain and redesign the Black Dog WMO website.	\$20,050	\$20,404
<b><u>Water Quality Monitoring:</u></b> Cost associated with water quality monitoring programs, including the habitat monitoring program, Metropolitan Council's CAMP, and analysis of water quality data.	\$17,100	\$16,322
<b><u>Conference / Publications:</u></b> Commissioner training and education materials.	\$500	\$0
<b><u>Contingency:</u></b> Funding for unexpected expenses and/or new program opportunities approved by the Commission	\$5,000	\$0

<b>Expenditure Total:</b>	<b>\$186,750</b>	<b>\$158,135</b>
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### 2022 Black Dog WMO Revenues

	<b><u>BUDGET</u></b>	<b><u>ACTUAL</u></b>
<b><u>Interest</u></b>	\$40	\$6,755
<b><u>Member City Contributions (Fees)</u></b>	\$131,000	\$131,000
<b><u>Member City Contributions—Capital Improvement Fund</u></b>	\$22,000	\$22,000
<b><u>Grants</u></b>	\$0	\$0
<b><u>Fund Balance Utilized</u></b>	\$33,710	(\$1,619)
<b>Revenue Total:</b>	<b>\$153,040</b>	<b>\$159,755</b>

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<b>2022 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> This fund serves as a savings account for future internal load reduction projects stemming from TMDLs.	\$17,000	\$22,000
<b><u>General Fund Reserve:</u></b> This fund serves as a savings account for the Black Dog WMO watershed plan ten-year update.	(\$50,710)	\$(20,381)
<b>Planned Changes in Fund Balance Total:</b>	<b>(\$33,710)</b>	<b>\$(1,619)</b>

## 2023 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
- Kingsley Lake
- Lac Lavon
- Orchard Lake

Complete water quality trend analyses on these lakes using the information gathered through CAMP and the more detailed monitoring on Keller Lake.

2. Perform more detailed (management level) 2023 monitoring on Keller Lake as recommended in the updated 2022 Black Dog WMO Watershed Management Plan. The 2023 monitoring includes water quality monitoring and aquatic vegetation surveys of Keller 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, a composite surface sample of 0-2 meters will be collected for laboratory analyses. Because Keller Lake is not much deeper than 2 meters, no additional samples will be collected at depth. 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. Burnsville and Apple Valley will coordinate to conduct two aquatic vegetation point intercept surveys on Keller Lake—one in June and one in August. In 2023, 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 Black Dog WMO Plan). In 2024, work will include preparing the summary report of the monitoring results in a new format/template (not yet developed), and preparing a presentation for a Commission meeting.
3. Prepare the 2022 Lac Lavon technical memo summarizing the more detailed (management level) monitoring results and a presentation for a Commission meeting.
4. Prepare the 2022 Orchard Lake habitat monitoring report and a presentation for a Commission meeting.
5. Develop a tracking tool to measure progress on the goals in the 2022 Black Dog WMO Watershed Management Plan.
6. As budget allows, develop a new template for the water monitoring reports (first report in 2024).

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7. Conduct an annual evaluation of the watershed programs and report the results to member communities via a watershed annual report (this report is incorporated into the annual activity report submitted to the Minnesota Board of Water and Soil Resources).
  8. Hold at least one meeting with the member cities 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.
  9. Partner with the Dakota County SWCD by providing funding and technical support to install up to 18 water quality improvement projects through the Landscaping for Clean Water program for Black Dog WMO residents, consistent with SWCD cost share policies.
  10. 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. All programs are expected to continue online in 2023 due to the ongoing Covid-19 pandemic. The virtual Introduction to Clean Water Class offerings will be held in the spring (March through May) and then pre-recorded so others can participate in the classes at their leisure. 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 are split into three online sessions. Each workshop focuses 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.
  11. Complete the 2022 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.
  12. 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.
  13. Apply for grants and/or assist member cities with grant applications.
  14. Assist with BWSR watershed-based funding.
  15. Formulate and approve the year 2024 Work Plan and Budget.
  16. Review and respond to any issues and opportunities brought to the attention of the Black Dog WMO.
  17. Maintain and update web site.

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18. Respond to requests to partner with member communities and Dakota County on educational outreach programs.
  19. Keep abreast of changes to the TMDL program, including additions to/removals from the impaired waters list and the listing criteria.
  20. Review revisions to local water management and comprehensive plans as needed. No reviews are expected in 2023, as all member cities' plans have been reviewed and approved.
  21. Continue implementing plan to accrue funds in a Capital Improvement Fund for the Black Dog WMO Watershed Management Plan ten-year update and future projects including Black Dog WMO 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 2023 Budget—**

**Table 1: Status of Implementation Tasks from 2012 Black Dog WMO Watershed Management Plan—through December 31, 2022**

Implementation Task	Original Implementation Date from Plan	Status/Accomplishments	Next Steps
<b><i>Administrative and Operational—Watershed-wide</i></b>			
General WMO administration, including reviewing and responding to issues and opportunities (not otherwise described in this table) as they arise. This may include services provided by: <ul style="list-style-type: none"> <li>Administrator (City of Burnsville)</li> <li>Black Dog WMO consulting engineer</li> <li>Black Dog WMO Attorney</li> </ul>	Ongoing	Black Dog WMO continues to perform these actions as needed/requested. In 2022, this included coordinating with BWSR and partners regarding allocation of watershed-based implementation funding.	Continue to perform as needed/requested.
Revise joint powers agreement (JPA) to allow cost allocation apportionment specified in Section 4.7.4 – Policy 8 of the 2012 Black Dog WMO Plan (funding of internal load reduction projects)	2013	Revision of the JPA not required to develop and implement plan to accrue funds in a Capital Improvement Fund.	None.
Review Burnsville local watershed management plan	2014	Black Dog WMO approval of plan in 2017.	Review local plans concurrent with next Comprehensive Plan update cycle. Local water plans are currently in compliance with the new 2022 Watershed Management Plan.
Review Lakeville local watershed management plan	2014	Black Dog WMO approval of plan in 2019.	
Review Apple Valley local watershed management plan	2014	Black Dog WMO approval of plan in 2018.	
Review Eagan local watershed management plans	2014	Black Dog WMO approval of plan in 2018.	
Miscellaneous reviews including, but not limited to: <ul style="list-style-type: none"> <li>Review city comprehensive plan changes that require review by the Metropolitan Council</li> <li>Review projects for consistency with the Black Dog WMO plan, as requested by member cities or other governmental agencies</li> <li>Review and approve any proposed changes to the intercommunity stormwater system that are inconsistent with an approved local plan</li> <li>Review and approve changes to an approved local plan that would cause the local plan to be inconsistent with the Black Dog WMO plan</li> </ul>	Ongoing	Black Dog WMO continues to perform these reviews as needed/requested.	Continue to perform as needed/requested.

**Table 1: Status of Implementation Tasks from 2012 Black Dog WMO Watershed Management Plan—through December 31, 2022**

Implementation Task	Original Implementation Date from Plan	Status/Accomplishments	Next Steps
City technical staff (technical advisor) attendance at Black Dog WMO meetings	Ongoing	City technical staff regularly attend Black Dog WMO meetings	City staff continue to attend Black Dog WMO meetings.
Facilitate intercommunity flood control, stormwater runoff, erosion, and sediment control projects	As needed	No facilitation of intercommunity projects currently planned	Provide facilitation, if needed.
Apply for and/or assist member cities with grant applications	Ongoing	The Black Dog WMO continues to pursue these opportunities as they arise. In December 2018, BWSR awarded the Black Dog WMO a \$230,000 Clean Water Fund Grant (grant agreement executed in early 2019) for the Keller Lake Alum Treatment project.	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.
Complete and submit annual audit to BWSR	Ongoing	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.	Prepare next audit in 2025; prepare annual finance statements in intervening years.

**Table 1: Status of Implementation Tasks from 2012 Black Dog WMO Watershed Management Plan—through December 31, 2022**

Implementation Task	Original Implementation Date from Plan	Status/Accomplishments	Next Steps
Update Black Dog WMO Watershed Management Plan	2020	In late 2020, the Black Dog WMO began preliminary work on updating the Watershed Management Plan. The Black Dog WMO distributed the draft Plan for formal 60-day review on May 12, 2022, responded to comments, and hosted a public hearing on the draft Plan on August 17, 2022. The BWSR Board approved the draft Plan in October, 2022 and the Black Dog WMO Commissioners adopted the Plan on November 16, 2022.	Begin new Plan update starting in 2030.
Development of TMDL Studies and Implementation Plans	Ongoing	Black Dog WMO will perform these tasks as necessary; there are no TMDL studies or implementation plans currently planned by the Black Dog WMO	Black Dog WMO will perform these tasks as necessary; do not anticipate studies in the near future.
Complete and publish watershed annual report (newsletter) and post on website	Ongoing	Published annually.	Complete annually.
Complete and submit annual activity report to BWSR and post on website	Ongoing	Completed, published, and submitted annually	Complete annually.
Create, maintain and update web site—put plan, data, meeting agenda and minutes, watershed annual reports, water quality monitoring reports, educational materials, project updates, etc. on the site	Ongoing	Website is hosted by Dakota SWCD and regularly updated as new material is available. Dakota SWCD updated/ redesigned the website in 2021.	Continue to maintain and update website.



**Table 1: Status of Implementation Tasks from 2012 Black Dog WMO Watershed Management Plan—through December 31, 2022**

Implementation Task	Original Implementation Date from Plan	Status/Accomplishments	Next Steps
Educational outreach including, but not limited to: exploring social media and email list serves to expand communication with the public, sponsoring workshops in partnership with the Blue Thumb program, the promotion of awareness of groundwater resource issues, and seeking volunteers to participate in water quality and water quantity programs	Ongoing	<p>Provided watershed annual report to member cities and posted to Black Dog WMO website; maintained website (see above); since 2009, Black Dog WMO has partnered with the Dakota SWCD to fund Landscaping for Clean Water (formerly Blue Thumb) Program workshops in the Black Dog WMO area. In 2022, Black Dog WMO provided funding for workshops in three program areas (all programs continued online in 2022 due to the ongoing Covid-19 pandemic):</p> <ol style="list-style-type: none"> <li>1. Introduction to Clean Water Class - four live virtual classes were held in the spring and were pre-recorded so others could participate.</li> <li>2. Design Course – the virtual classes were a series of pre-recorded videos. Project materials for participants were available online and an “Office Hours” program provided virtual consultations to class participants.</li> <li>3. Maintenance Workshop – in 2022, two maintenance courses were provided covering maintenance in all seasons.</li> </ol>	Continue providing watershed annual report to member cities and partnering with Dakota SWCD to fund workshops.

**Table 1: Status of Implementation Tasks from 2012 Black Dog WMO Watershed Management Plan—through December 31, 2022**

Implementation Task	Original Implementation Date from Plan	Status/Accomplishments	Next Steps																																
Implementation of small-scale best management practices on private property to improve water quality	Ongoing	<div>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 (formerly Blue Thumb and Community Conservation Cost Share Programs) for Black Dog WMO residents. Projects have included rainwater gardens, native gardens, shoreline improvements, and a bioretention site.</div> <table><thead><tr><th>Year</th><th>Number of projects</th></tr></thead><tbody><tr><td>2009</td><td>9</td></tr><tr><td>2010</td><td>7</td></tr><tr><td>2011</td><td>6</td></tr><tr><td>2012</td><td>18</td></tr><tr><td>2013</td><td>13</td></tr><tr><td>2014</td><td>16</td></tr><tr><td>2015</td><td>18</td></tr><tr><td>2016</td><td>16</td></tr><tr><td>2017</td><td>17</td></tr><tr><td>2018</td><td>18</td></tr><tr><td>2019</td><td>19</td></tr><tr><td>2020</td><td>9</td></tr><tr><td>2021</td><td>9</td></tr><tr><td>2022</td><td>9</td></tr><tr><td>Total</td><td>184</td></tr></tbody></table>	Year	Number of projects	2009	9	2010	7	2011	6	2012	18	2013	13	2014	16	2015	18	2016	16	2017	17	2018	18	2019	19	2020	9	2021	9	2022	9	Total	184	Continue partnering with Dakota SWCD to fund water quality improvement projects.
Year	Number of projects																																		
2009	9																																		
2010	7																																		
2011	6																																		
2012	18																																		
2013	13																																		
2014	16																																		
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2018	18																																		
2019	19																																		
2020	9																																		
2021	9																																		
2022	9																																		
Total	184																																		

**Table 1: Status of Implementation Tasks from 2012 Black Dog WMO Watershed Management Plan—through December 31, 2022**

Implementation Task	Original Implementation Date from Plan	Status/Accomplishments	Next Steps										
Implement recommended internal phosphorus load reduction projects identified in UAA and/or TMDL for non-strategic waterbodies or strategic waterbodies without inter-community shoreline	As needed	Black Dog WMO will implement these projects when watershed load reduction projects have been implemented and further water quality improvements are needed. See below for Black Dog WMO’s Keller Lake implementation project.	Implement when needed (see Keller Lake actions below).										
Annual CAMP water quality monitoring, performing trend analysis, and establishing action levels for the following strategic waterbodies: <ul style="list-style-type: none"><li>Crystal Lake</li><li>Keller Lake</li><li>Kingsley Lake</li><li>Lac Lavon</li><li>Orchard Lake</li></ul>	Ongoing	CAMP monitoring completed annually; trend analysis completed annually.	Continue annual CAMP monitoring and trend analyses of monitoring data.										
Management level water quality monitoring performed at 3-year intervals for the following strategic waterbodies: <ul style="list-style-type: none"><li>Crystal Lake</li><li>Lac Lavon</li><li>Orchard Lake</li></ul>	Ongoing	Performed for one lake annually; most recent monitoring includes Orchard Lake in 2020, and Crystal Lake in 2021, and Lac Lavon in 2022.	Transition to 5-year monitoring cycle as described in the 2022 Watershed Management Plan.										
Habitat monitoring at 5-year intervals for the following strategic waterbodies: <ul style="list-style-type: none"><li>Crystal Lake</li><li>Keller Lake</li><li>Kingsley Lake</li><li>Lac Lavon</li><li>Orchard Lake</li></ul>	Ongoing	Implementation of the redesigned program began in 2011; habitat monitoring has been performed as shown below: <table><tr><td>Kingsley Lake</td><td>2011, 2016, 2021</td></tr><tr><td>Orchard Lake</td><td>2012, 2017, 2022</td></tr><tr><td>Crystal Lake</td><td>2013, 2018</td></tr><tr><td>Lac Lavon</td><td>2014, 2019</td></tr><tr><td>Keller Lake</td><td>2015, 2020</td></tr></table>	Kingsley Lake	2011, 2016, 2021	Orchard Lake	2012, 2017, 2022	Crystal Lake	2013, 2018	Lac Lavon	2014, 2019	Keller Lake	2015, 2020	2022 was the last year of the habitat monitoring program. Elements of the habitat monitoring program will be incorporated into the management level water quality monitoring consistent with the 2022 Watershed Management Plan.
Kingsley Lake	2011, 2016, 2021												
Orchard Lake	2012, 2017, 2022												
Crystal Lake	2013, 2018												
Lac Lavon	2014, 2019												
Keller Lake	2015, 2020												
Implement lake water quality management actions recommended in Table 4-1 of the 2012 Black Dog WMO Plan, depending on water quality trends and comparison of recent water quality to action level, for the following strategic waterbodies: <ul style="list-style-type: none"><li>Kingsley Lake</li><li>Lac Lavon</li><li>Orchard Lake</li></ul>	As needed	Black Dog WMO will implement these actions as necessary; there are no actions currently planned.	Continue tracking water quality trends and action levels and take actions as/when necessary.										

**Table 1: Status of Implementation Tasks from 2012 Black Dog WMO Watershed Management Plan—through December 31, 2022**

Implementation Task	Original Implementation Date from Plan	Status/Accomplishments	Next Steps
<b>Capital Projects—Crystal Lake</b>			
Implement recommended watershed projects to reduce runoff-borne phosphorus loads, as identified in the TMDL, that may include: <ul style="list-style-type: none"> <li>• Street sweeping</li> <li>• Native shoreline buffers</li> <li>• Public outreach and education</li> </ul>	Ongoing	Projects to be performed by member cities (Lakeville, Burnsville) with possible grant funding from Black Dog MWO. Burnsville performs street sweeping in the watershed twice a year and performs ongoing outreach and education. Beyond website articles and city newsletter information, city staff meet with the Crystal Lake association twice a year. Black Dog WMO also performs ongoing public education.	Cities perform projects as needed; continue to perform public education.
Implement recommended internal phosphorus load reduction projects identified in the TMDL, that may include: <ul style="list-style-type: none"> <li>• In-lake alum treatment</li> <li>• Aquatic macrophyte management</li> <li>• Internal load reduction in upstream Keller Lake</li> </ul>	As needed	The Black Dog WMO began the Keller Lake Alum Treatment project in 2018 and received a BWSR Clean Water Fund grant for the project in 2019. The alum treatment was divided into two phases to increase the long-term effectiveness. Phase 1 occurred in June 2019 and Phase 2 occurred in September 2021. Other potential future projects are listed in Table 5-3 of the 2012 Black Dog WMO Plan; no other projects are currently planned.	Implement other projects when recommended.

**Table 1: Status of Implementation Tasks from 2012 Black Dog WMO Watershed Management Plan—through December 31, 2022**

Implementation Task	Original Implementation Date from Plan	Status/Accomplishments	Next Steps
<b>Capital Projects—Keller Lake</b>			
<p>Implement recommended watershed projects to reduce runoff-borne phosphorus loads, as identified in the TMDL, that may include:</p> <ul style="list-style-type: none"> <li>• Construction of a water quality treatment pond in Crystal Beach Park</li> <li>• Construction of a water quality treatment pond on southwest side of Keller Lake</li> <li>• Street sweeping</li> <li>• Native shoreline buffers</li> <li>• Public outreach and education</li> </ul>	<p>Ongoing</p> <p>2013 – 2015 (Crystal Beach Park project)</p> <p>2018 (SW Keller Lake project)</p>	<p>Member cities perform projects, with possible grant funding obtained by Black Dog WMO; Black Dog WMO performs ongoing public education.</p> <p>Crystal Beach Park project: the City of Burnsville completed the project in 2017.</p> <p>SW Keller Lake project: the City of Burnsville will construct this if additional total phosphorus load reductions are required in the watershed. However, if the Crystal Beach Park project meets the city's TMDL load reduction goals for Keller Lake, the city will not construct the SW Keller Lake project.</p> <p>In 2017, the City of Apple Valley conducted a subwatershed assessment for the portions of the city that drain to Keller Lake to target potential projects. The city completed construction of one of the projects (Redwood Pond) in 2021.</p>	<p>Burnsville will construct SW Keller Lake project if additional load reductions required.</p> <p>Apple Valley will implement other projects from the subwatershed assessment as budget and opportunity allows.</p>

**Table 1: Status of Implementation Tasks from 2012 Black Dog WMO Watershed Management Plan—through December 31, 2022**

Implementation Task	Original Implementation Date from Plan	Status/Accomplishments	Next Steps
Implement recommended internal phosphorus load reduction projects identified in the TMDL, that may include: <ul style="list-style-type: none"> <li>In-lake alum treatment</li> <li>Aquatic macrophyte management</li> </ul>	As needed	The Black Dog WMO began the Keller Lake Alum Treatment project in 2018 and received a BWSR Clean Water Fund grant for the project in 2019. The alum treatment was divided into two phases to increase the long-term effectiveness. Phase 1 occurred in June 2019 and Phase 2 occurred in September 2021. Other potential future projects are listed in Table 5-3 of the 2012 Black Dog WMO Plan; no other projects are currently planned.	Implement other projects when recommended.
<b>Capital Projects—Orchard Lake, Kingsley Lake, and Lac Lavon</b>			
Implement water quality improvement measures in Orchard Lake, Kingsley Lake, and Lac Lavon as identified in future diagnostic feasibility studies, that may include: <ul style="list-style-type: none"> <li>Watershed projects (e.g., stormwater treatment ponds, rainwater gardens, infiltration basins)</li> <li>Internal load reduction projects (e.g., in-lake alum treatment, aquatic macrophyte management)</li> </ul>	As needed	Black Dog WMO will implement projects as necessary; no projects are currently planned.	Implement projects as necessary; no projects planned.

## **2022 Watershed Annual Report**

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# BLACK DOG

Watershed Management Organization

## 2022 WATERSHED ANNUAL REPORT

Published April 2023

### Our Vision:

*To manage water resources and related ecosystems 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 tools to track progress toward goals:

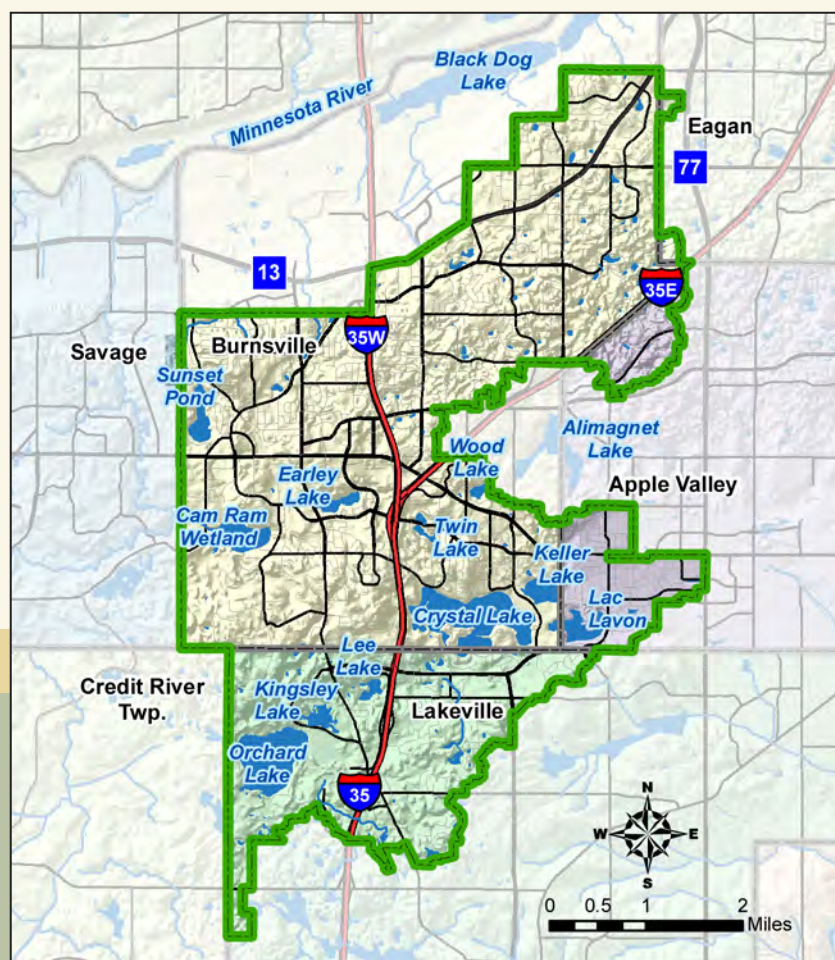
- **Trend Analysis**—The BDWMO collects water quality information to track water quality trends.
- **Performance Analysis**—The BDWMO will evaluate the member cities' implementation of maintenance plans, capital improvement projects, programs, and other items.
- **Habitat Quality Analysis**—The BDWMO collects habitat quality data to detect conditions that would trigger a need for management actions.

This annual report outlines the BDWMO's goals, progress toward those goals in 2022, and plans for 2023 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

- Watershed Management Plan Approved and Adopted .....page 2
- Landscaping for Clean Water Projects.....page 3
- Lac Lavon Water Quality .....page 4
- Monitoring Programs..... pages 4–5
- 2022 Monitoring Results ..... pages 5–7
- 2023 Income & Expenditures .....page 8

BDWMO Approves and Adopts Updated Watershed Management Plan

At the end of 2022, the BDWMO completed the lengthy process of updating its 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 the next decade (2022–2032).

The plan provides resource data and background information, identifies and prioritizes watershed-wide and resource-specific issues, establishes measurable goals, sets policies and performance standards for the BDWMO and its cities, and lays out a 10-year implementation schedule including projects and programs.

Land and Water Resources Inventory

The plan includes a land and water resources inventory, covering climate and precipitation; topography and drainage; population, demographics, and land use; soils; geology; groundwater; surface water resources (lakes, ponds, and wetlands); water monitoring and studies; water quality and BDWMO management classifications; water quantity and flooding; natural communities and rare species; fish and wildlife habitat; open space and recreational areas; and pollutant sources.

Priority Issues and Resources

Understanding the condition of water and natural resources present in the BDWMO is key to identifying priority issues, establishing goals, and targeting the actions of the BDWMO, its member cities, and other partners. As part of the plan development, the BDWMO commissioners solicited input on priority issues and concerns from residents, state agencies, member cities, and regional partners through multiple stakeholder engagement activities, including:

- Plan notification letter
- City and Partner staff interviews
- Online survey
- Technical Advisory Committee (TAC) workshop
- Public kickoff meeting (virtual)

Higher Priority Issues	Lower Priority Issues
<ul style="list-style-type: none"><li>• <b>Water quality</b>, including:<ul style="list-style-type: none"><li>- Stormwater runoff quality</li><li>- In-lake water quality</li><li>- Impairments (Keller Lake)</li></ul></li><li>• <b>Lake ecology and habitat</b>, including:<ul style="list-style-type: none"><li>- Habitat quality</li><li>- Invasive species management</li></ul></li><li>• <b>Groundwater management</b>, including:<ul style="list-style-type: none"><li>- Pollution prevention</li><li>- Conservation and sustainability</li></ul></li><li>• <b>Education and Engagement</b></li></ul>	<ul style="list-style-type: none"><li>• <b>Flooding and water levels</b></li><li>• <b>Wetland management</b></li><li>• <b>Upland and natural area management</b></li></ul>

The BDWMO also classified Crystal Lake, Keller Lake, Kingsley Lake, Lac Lavon, and Orchard Lake as strategic waterbodies to be the focus of BDWMO activities.

Goals and Policies

The plan presents the goals and policies established by the BDWMO to address the priority resources or operational issues. Where possible, BDWMO goals contain measurable targets to evaluate progress.

Key goals include:

- Maintain or improve water quality in BDWMO strategic waterbodies to meet applicable state standards or existing 10-year (2012–2021) summer average water quality, if better than state standards.
- Work with member cities to reduce chloride loading relative to current conditions through practices consistent with the Twin Cities Metropolitan Area Chloride Management Plan and Minnesota Statewide Chloride Management Plan.
- Maintain or improve the ecological and habitat quality of BDWMO strategic waterbodies to achieve applicable standards for floristic quality index (FQI  $\geq 17.8$ ) and native species diversity of submerged vegetation (at least 11 species).
- Support member city and partner actions to prevent the increase or reduce the occurrence of aquatic invasive species within BDWMO strategic waterbodies.
- Increase awareness and knowledge of residents, local officials, and city staff regarding water resources and stormwater management through actions coordinated with member cities, Dakota SWCD, and other partners.
- Increase community capacity to implement water and natural resource stewardship action through increased participation in volunteer activities; increased participation in small-scale BMP cost share projects; and providing data through accessible media.

Implementation Program

The plan also presents a 10-year implementation program, including a continuation of ongoing activities as well as new activities to address emerging issues and changing priorities. Notable new or expanded activities include:

- Expanded water chemistry monitoring of Keller Lake and Kingsley Lake
- Algal community monitoring of strategic waterbodies
- Chloride monitoring of strategic waterbodies
- Development of K-12 education outreach
- Targeted outreach to address chloride loading
- Opportunities to use watershed-based implementation funding (WBIF) to support member city projects for stormwater treatment, shoreline improvement, and aquatic plant management for strategic waterbodies.



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

Since most land is privately owned, it is up to each individual landowner to do the right thing on their property to help keep water clean. The Landscaping for Clean Water program makes it easy for residents to turn their yards into a lush and lovely force for clean water rather than a contributor to water pollution.

Are you doing everything possible on your patch of lawn? Attend a Landscaping for Clean Water workshop to find out. Participants in the program attend design workshops to develop landscape plans for their own yards. These plans include creating native gardens, raingardens, or native shorelines that stabilize soil. These planting practices provide habitat for pollinators and birds, reduce watering and require no chemical inputs. On top of that, these practices help water soak into the ground rather than running off and delivering polluted stormwater into lakes, rivers and wetlands.

#### Who can get a grant?

Participants in the workshops can submit an application, project plan, and cost estimates to the Dakota County SWCD for grant funds of up to \$250.

#### 2022 Classes and Participants

In 2022, all Landscaping for Clean Water programming was held virtually. Three live virtual Introduction classes were held in the spring (March through May) and then recorded so others could participate in the classes at their leisure. A total of 58 residents of the BDWMO participated in the Introduction classes through either a live virtual class or through the recordings.

A total of 41 participants took part in the virtual Design classes which consisted of a series of pre-recorded videos. 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 15 participants took advantage of these virtual consultations with staff in 2022. Participants were thankful for the additional one-on-one design assistance.

Nine projects were installed in the BDWMO in 2022—five raingardens and four native gardens (see two below).

In 2022, two Maintenance classes were taught in the spring. Each workshop focused on garden maintenance across all seasons. Providing participants with seasonal information on how to maintain and promote the health, performance, and beauty of their garden. A total of 21 people registered for the Maintenance classes.

The 2023 Landscaping for Clean Water program will be held both in-person and virtually for the first time since 2019! For more information and to get signed up, visit <https://dakotaswcd.org/services/landscaping-for-clean-water/>.



*Before and after: Installation of a 250 sq. ft. residential native garden*



*Before and after: Installation of a 250 sq. ft. residential raingarden*

**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/>.

### “School” of Goldfish

There are two new teachers in the Black Dog WMO, and they are here to remind you not to release unwanted pets into local water bodies. Two new educational goldfish mounts, “Betty” and “Bubbles” are available for use by local public entities to help educate the public on harms of exotic invasive species. Goldfish can wreak havoc in lakes and ponds—these two examples were found in Keller Lake. Their feeding behavior disrupts shallow rooted plants, muddying the water, and also



releasing phosphorous bound in the sediment. Less clear water and additional phosphorous can prevent sunlight from reaching plants and can lead to additional algal blooms. Aquatic plants provide important habitat for native fish and help sustain water clarity by holding sediments in place.

The goldfish mounts were funded through an Aquatic Invasive Species grant offered by Dakota County Environmental Services as learning tools for education and outreach opportunities. Other entities or local government units can borrow the fish for educational events. Contact 952-953-2462 for more information on borrowing one of the mounts.

### Lac Lavon Looking Lovely

The BDWMO is pleased to report that Lac Lavon continues to have excellent water quality. The 2022 summer-average Secchi disc transparency in Lac Lavon was 3.5 meters (11.5 feet), and considerably better than the MPCA deep-lake water quality standard of 1.4 meters. The 2022 summer average of total phosphorus (the nutrient that drives algal growth) was 13 µg/L, considerably better than the MPCA's deep lake standard (40 µg/L). The summer-average chlorophyll-a (a measure of algal abundance) was 3 µg/L, also considerably better than the MPCA's deep lake standard (14 µg/L).

Aquatic plant surveys were performed in June and August of 2022—the survey found twelve aquatic plant species present in Lac Lavon, nine of which are native to Minnesota. The three non-native aquatic plants identified in 2022 were curly-leaf pondweed, Eurasian watermilfoil, and brittle naiad. Eurasian watermilfoil, and the native plant coontail, were the two most abundant aquatic plants in June and August. The non-native emergent plant purple loosestrife was also identified on shorelines. Brittle naiad was first identified on Lac Lavon in 2003. As of 2022, the Minnesota Department of Natural Resources reports that



*Non-native brittle naiad in Lac Lavon, August 10, 2022*



only six lakes in Minnesota are known to have brittle naiad. Brittle naiad does not grow very tall, and does not appear to be growing at nuisance levels in Lac Lavon—it was not even identified in aquatic plant surveys conducted in 2019.

The BDWMO will continue to monitor the water quality of Lac Lavon in 2023.

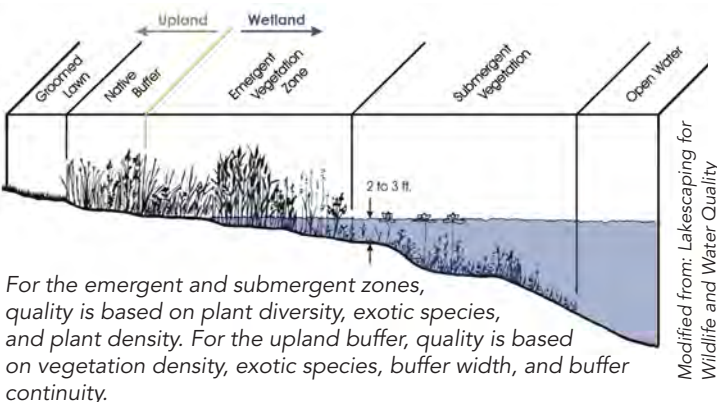
#### Lac Lavon Raingarden Coming in 2023

The City of Apple Valley leveraged \$40,000 in local grant dollars to design and construct a raingarden at the parking lot located on the north end of Lac Lavon. Currently, stormwater runoff flows off the parking lot, down a slope, ultimately reaching Lac Lavon. The raingarden, featuring native plants, will serve as a demonstration project for the improvement of water quality within the watershed.

### Habitat Monitoring Program

Since 2003, the BDWMO has implemented a program for monitoring the wildlife and fish habitat quality of strategic water resources in the watershed, including biological and physical indicators, such as upland and aquatic vegetation, buffer zones, erosion, sedimentation, and the presence of non-native exotic species. The program also recommends management actions based upon monitoring results.

2022 was the final year of the habitat monitoring program.



In 2022, the BDWMO monitored the habitat quality of Orchard Lake. Monitoring included transect, plot, and meandering surveys. Photographs were taken to document conditions. Analysis and reporting of the monitoring data includes a floristic quality assessment and a four-tiered rating system (poor, moderate, high, and excellent). Private versus public ownership was identified along the entire shoreline. The survey results, along with parcel data, were used to identify possible locations for restoration and preservation.

Habitat monitoring results showed that Orchard Lake's submergent zone was rated high, but both the emergent and upland buffer zones were rated moderate. Curly-leaf pondweed and Eurasian watermilfoil are treated each year in Orchard Lake.

See page 7 for additional Orchard Lake habitat monitoring results. See [www.blackdogwmo.org](http://www.blackdogwmo.org) for the full report.

The member cities have provided lakeshore owners with shoreline restoration information since 2004 and continually promote and encourage lakeshore property owners each year to take advantage of the Dakota County SWCD Landscaping for Clean Water shoreline restoration program. (See page 3 for more about this program.)



## Water Quality Monitoring Program

The BDWMO and member cities continued to monitor several of its lakes during 2022 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 monitoring on Lac Lavon (see page 4). 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. Because the MPCA periodically evaluates water quality data from the most recent ten-year period to determine if a lake violates applicable water quality standards, the WMO 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.

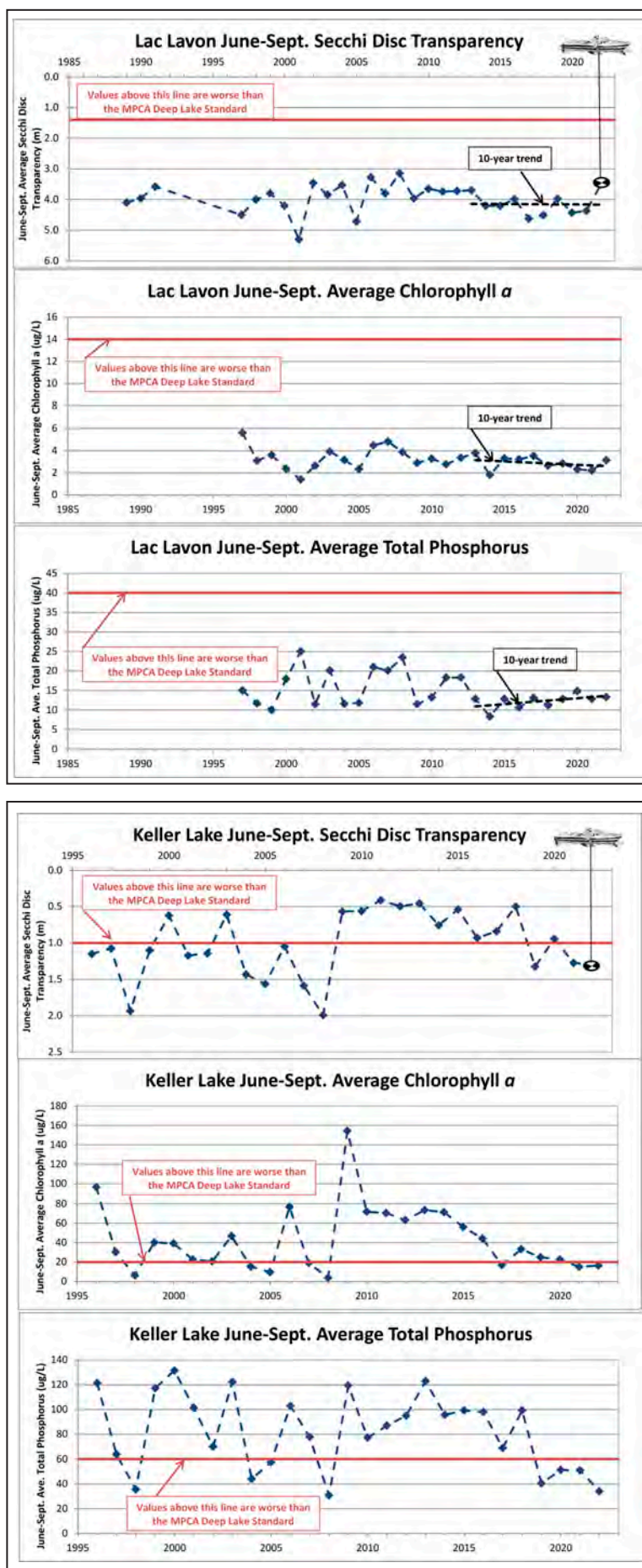
### Lac Lavon (Apple Valley & Burnsville)

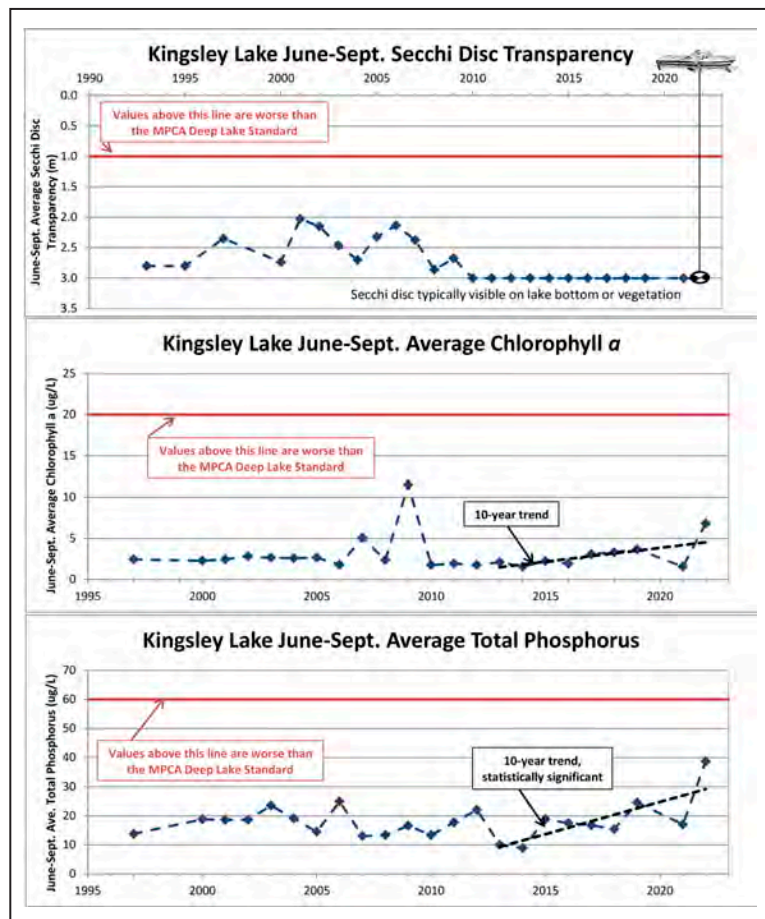
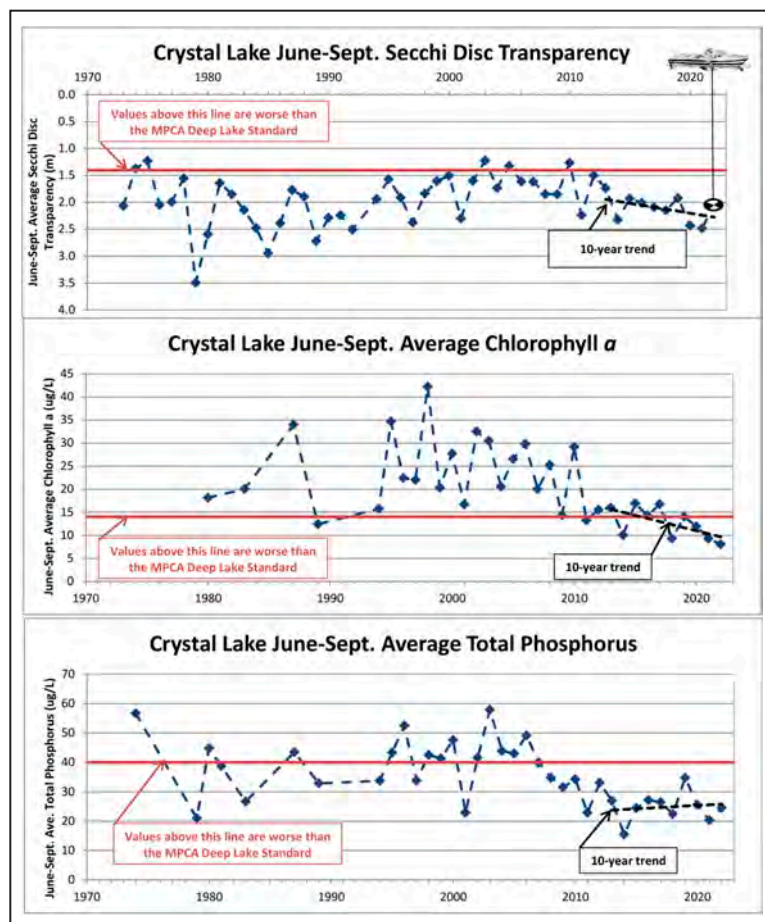
**Water Quality Monitoring**—In 2022, the BDWMO performed more detailed management level monitoring on the lake (see story on page 4).

### 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 2022 Secchi disc transparency summer average was 1.3 meters (4.2 feet), which is better than the MPCA's shallow lake standard of 1.0 meter (3.3 feet). The summer-average total phosphorus (34  $\mu\text{g/L}$ ) was also better than the MPCA's shallow lake standard of 60  $\mu\text{g/L}$ . 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 2022 summer-average of chlorophyll-a (16  $\mu\text{g/L}$ ) was also better than the MPCA's shallow lake standard of 20  $\mu\text{g/L}$ .

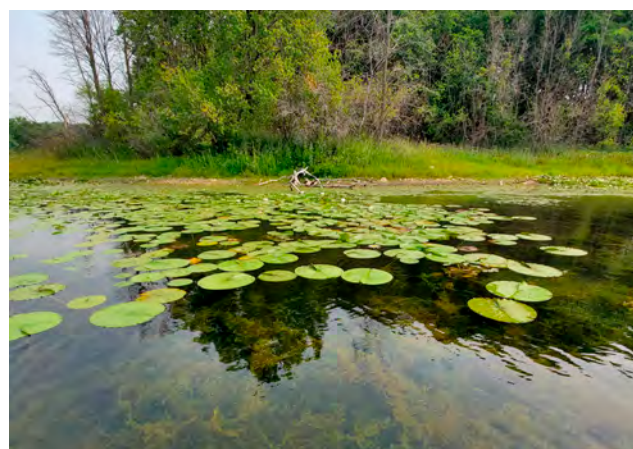
Trend analyses were not completed for Keller Lake because of the alum and sodium aluminate treatments that were conducted in 2019 and 2021. The three-lake TMDL study and implementation plan identifies the water quality improvement measures needed to achieve the BDWMO and MPCA goals for the lake. The BDWMO will continue to monitor the water quality of Keller Lake in 2023, including regularly-scheduled management level monitoring.





## Crystal Lake (Burnsville & Lakeville)

**Water Quality Monitoring**—Crystal Lake continued to experience good water quality in 2022. The 2022 summer-average Secchi disc transparency was 2.0 meters (6.6 feet), which is better than the MPCA deep-lake water quality standard of 1.4 meters. The 2022 summer average of total phosphorus ( $25 \mu\text{g/L}$ ) was better than the deep lake standard ( $40 \mu\text{g/L}$ ). The summer average of chlorophyll- $a$  ( $8 \mu\text{g/L}$ ) was also better than the deep lake standard ( $14 \mu\text{g/L}$ ), and was the best on record for Crystal Lake. There were no statistically significant trends in summer averages of water quality for the period 2013–2022. The BDWMO will continue to monitor the water quality of Crystal Lake in 2023.



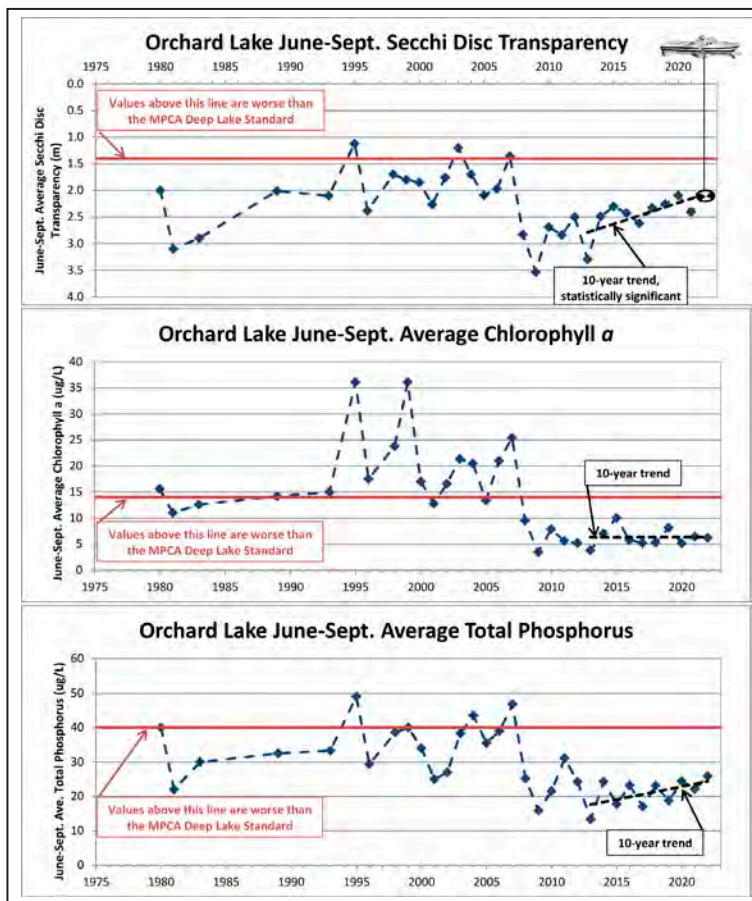
Kingsley Lake

## Kingsley Lake (Lakeville)

**Water Quality Monitoring**—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 ( $39 \mu\text{g/L}$ ) was the worst on record, and double the 2021 summer average, but still much better than the shallow lake standard ( $60 \mu\text{g/L}$ ). However, there is a statistically significant trend of degrading total phosphorus concentration for the 10-year period of 2013–2022. Chlorophyll- $a$  ( $7 \mu\text{g/L}$ ) concentrations were the worst they have been since 2009, but also still much better than the shallow lake standard ( $20 \mu\text{g/L}$ ). 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. \*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.



# 2022 Monitoring Results

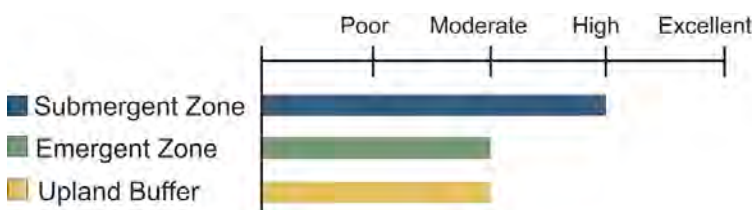


## Orchard Lake (Lakeville)

**Water Quality Monitoring**—Orchard Lake's water quality in 2022 was similar to other recent years, but has generally experienced declining water clarity over the past 13 years. There is a statistically significant trend of degrading water clarity for the 10-year period of 2013-2022. The 2022 summer average Secchi disc transparency was 2.1 meters (6.9 feet), which is better than the MPCA deep-lake water quality standard of 1.4 meters. The 2022 summer-averages of total phosphorus (26 µg/L) and chlorophyll-a (6 µg/L) were better than the MPCA's deep-lake water quality standards as well. There were no statistically significant trends in summer averages of total phosphorus and chlorophyll-a 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 fifteen years (2008-2022). The BDWMO will continue to monitor the water quality of Orchard Lake in 2023.

## Orchard Lake Habitat Monitoring Results for 2022

As mentioned in the article on page 4, habitat monitoring was conducted in 2022 on Orchard Lake. The BDWMO made the following quality ratings, based on the monitoring results:



■ Submergent zone quality rating = High  
Rating based on averaging four criteria:

1. excellent total number of native species (16)
2. excellent average native plant density (1.2)
3. moderate rating for average exotic species density (1.3)
4. moderate coefficient of conservatism value (mean C-value) (5.3)

Curly-leaf pondweed and Eurasian watermilfoil are treated each year in Orchard Lake. Curly-leaf pondweed has been documented within Orchard Lake since 2004. Eurasian watermilfoil was first observed in 2017 and has since increased in distribution. Coontail is the dominant native submergent plant species. Moderate and light densities of native plants were well distributed on Orchard Lake in 2022, including flatstem pondweed, muskgrass, and largeleaf pondweed. Filamentous algae was also present on the lake in 2022.

*The BDWMO recommends continued monitoring and control of non-native invasive plant species.*

■ Emergent vegetation zone quality rating = Moderate  
Rating based on averaging four criteria:

1. excellent number of native wetland plant species (64)
2. moderate rating for % coverage of exotic species (51-75%)
3. a poor mean C-value rating (2.9)
4. high rating for total vegetative cover (51-75%)

Non-native species, including narrowleaf and hybrid cattail, and purple loosestrife are found in the vegetated emergent zone. The deep marsh habitat in the northeastern portion of Orchard Lake contains dense cattails and purple loosestrife along with native vegetation, including sedges, rushes, bulrushes, bur-reeds, ferns, iris, and bluejoint, which provide habitat for frogs, turtles, green herons, wood ducks, and great blue herons. One shoreline restoration is well maintained by the resident landowner, providing aesthetically pleasing shoreline pollinator habitat and erosion protection with dense coverage of native emergent species.

*The BDWMO recommends continued control and management of purple loosestrife and encouragement of additional residential shoreline restoration projects to control erosion and improve habitat.*

■ Upland buffer zone quality rating = Moderate

- 41 native species and 24 exotic species observed.
- Exotic plant species >40% of upland vegetative cover. The mean C-value rating is 2.2 (poor).
- Upland buffer within residential properties is dominated by maintained lawn grasses with little to no naturalized vegetation. These area could be vegetated with native grasses and wildflowers to control erosion and improve habitat. The BDWMO recommends control of non-native common buckthorn, Chinese silver grass, and Siberian elm.
- Additional recommendations are in areas of bare soil to prevent erosion.
- Lakeshore property owners are encouraged to apply for funds (see page 3) to assist with implementation of the BDWMO recommendations.



# BLACK DOG

Watershed Management Organization

[www.blackdogwmo.org](http://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 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 that 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)  
Lynette Dunsworth, Commissioner  
(serving since 2023)  
Alternate — Open position

### 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:

Karen Chandler, P.E., Barr Engineering Co.

### Legal Consultant:

Jared Shepherd, Campbell Knutson, P.A.

## For more information, please contact:

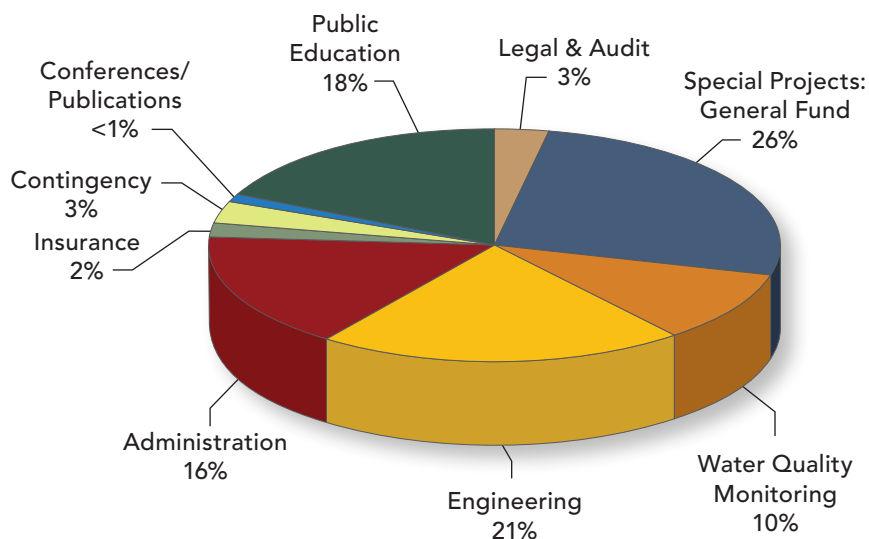
**Daryl Jacobson, Administrator**  
**Black Dog WMO**

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

## 2023 Budget

Engineering .....	\$31,000
Legal and Audit .....	\$5,000
Administrative Services .....	\$24,000
Public Education .....	\$25,700
Insurance .....	\$2,500
Special Projects – General Fund .....	\$37,300
Conference/Publications .....	\$500
Water Quality Monitoring .....	\$15,200
Contingency .....	\$5,000

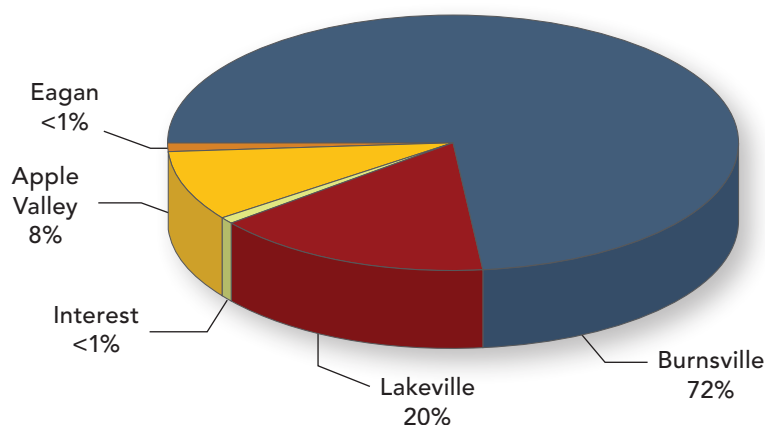
**Total Expenditures ..... \$146,200**



## 2023 Income

Member Contributions .....	\$143,500
Interest .....	\$40

**Total Income ..... \$143,540**



## 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.



## 2022 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 2022, 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 2013-2022 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 2022, including CAMP data and data collected by the Black Dog WMO Engineer. The 2022 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.

Water quality monitoring data is also available for other “non-strategic” water bodies in the Black Dog WMO. In 2022, 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)

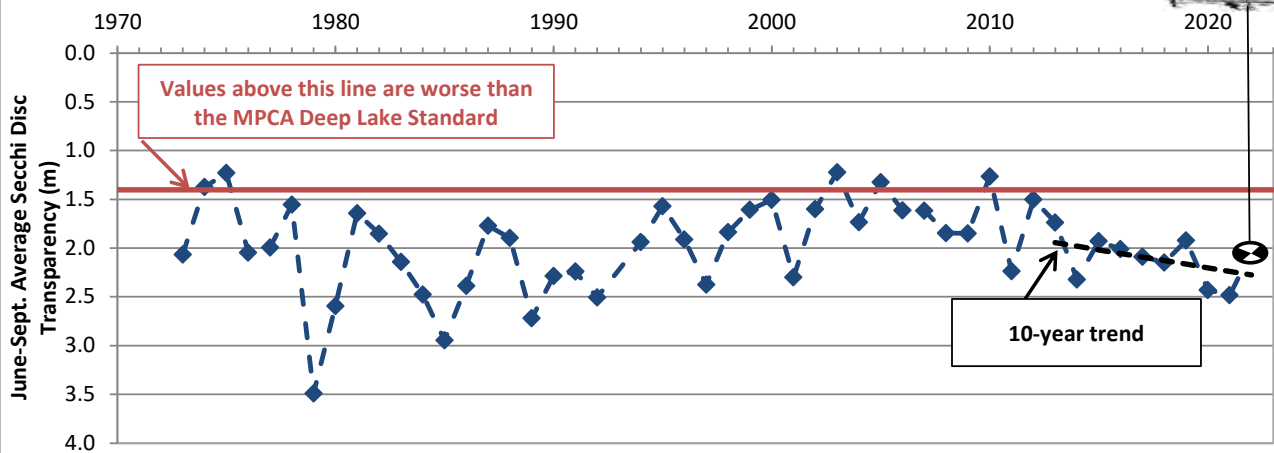
Results of the 2022 water quality monitoring of non-strategic water bodies is available from the Metropolitan Council’s CAMP program at: [Advanced Search \(state.mn.us\)](https://state.mn.us/advanced-search).

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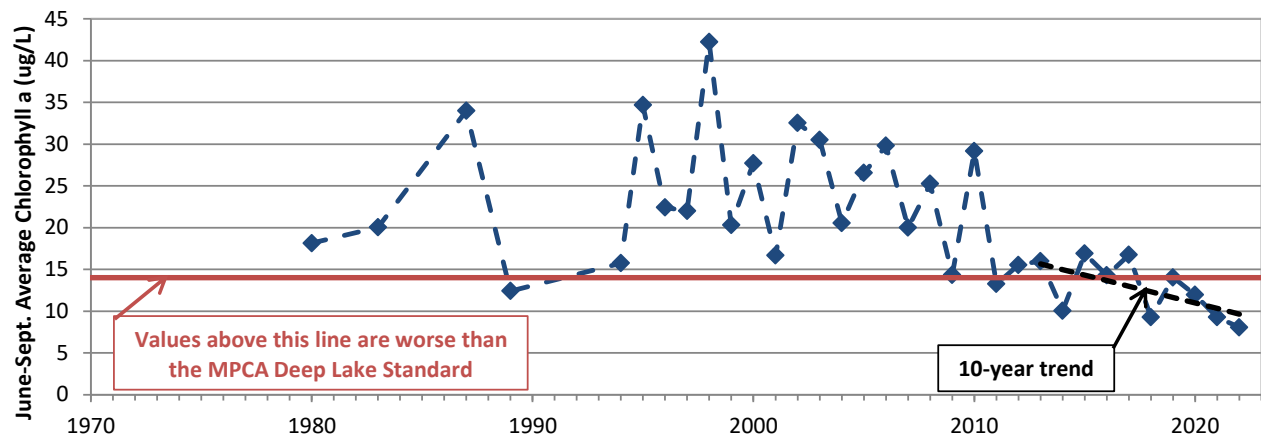
## Historical Water Quality Data—Figures

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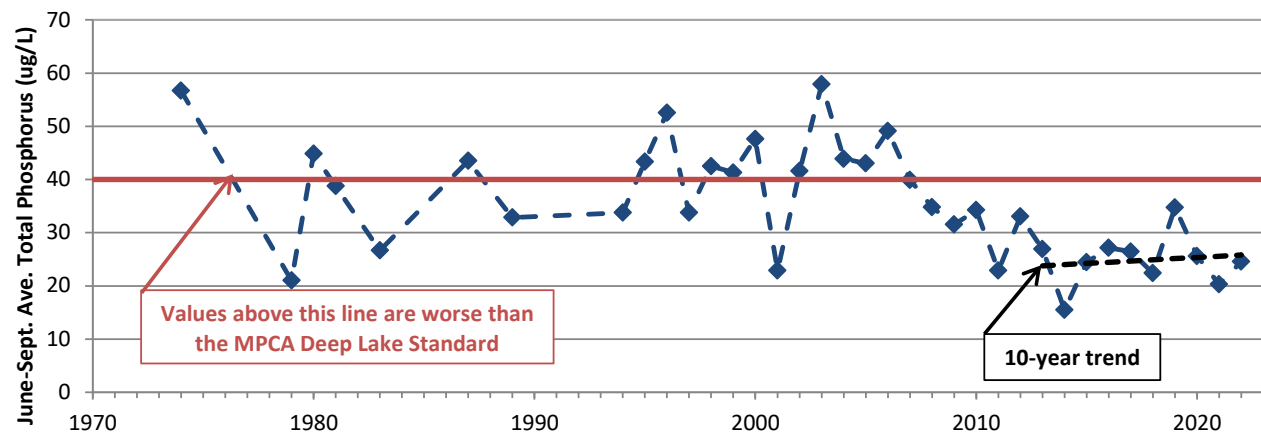
### Crystal Lake June-Sept. Secchi Disc Transparency

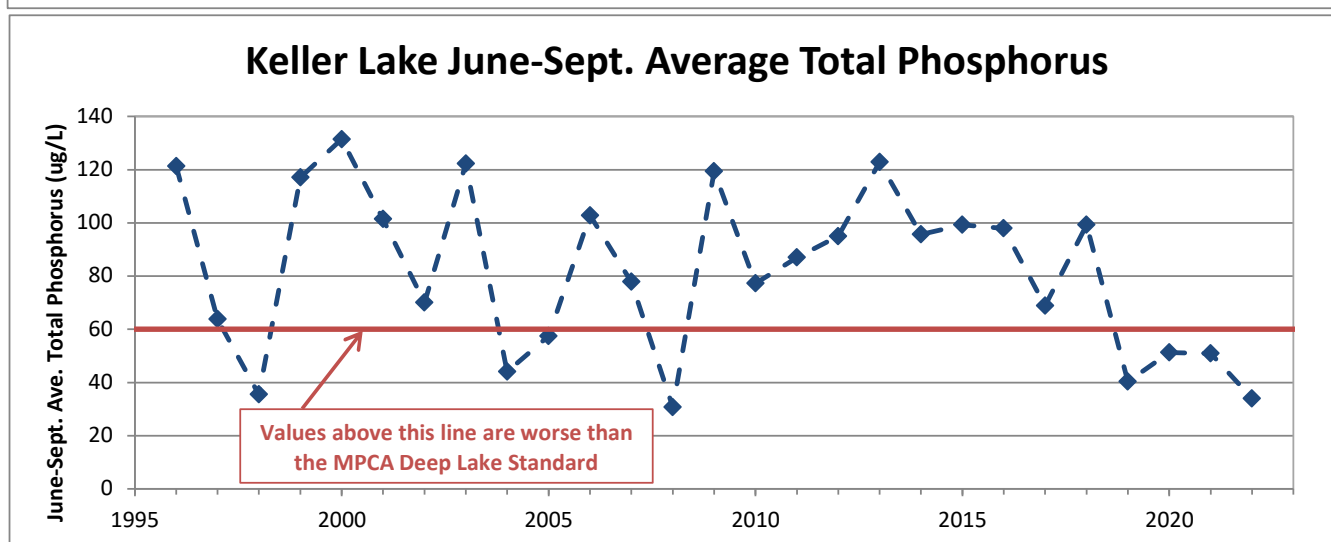
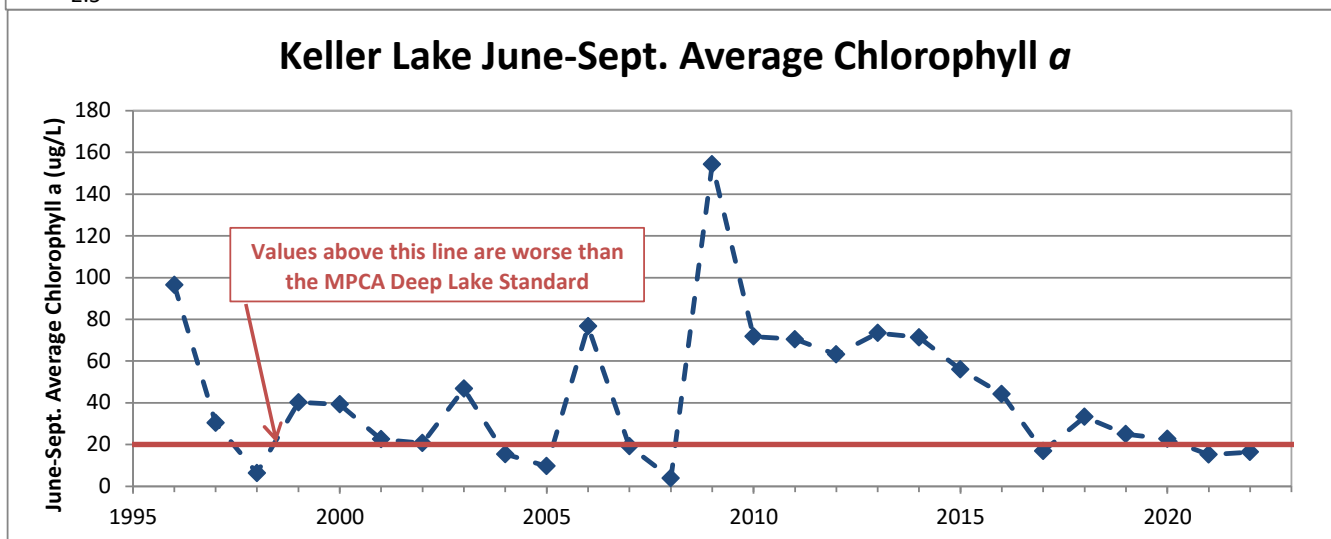
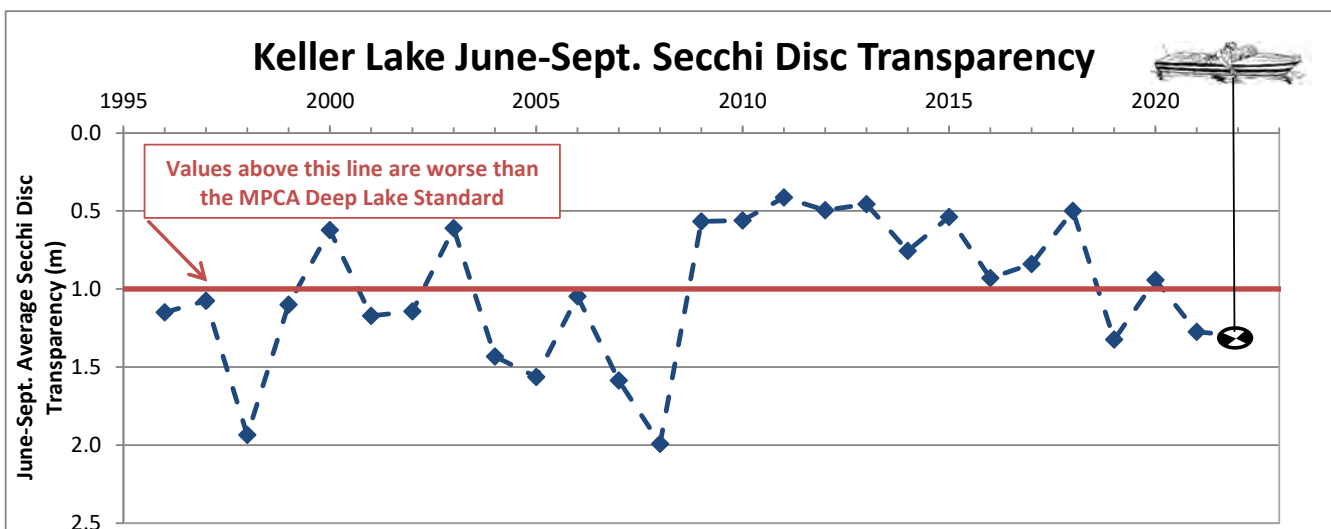


### Crystal Lake June-Sept. Average Chlorophyll *a*

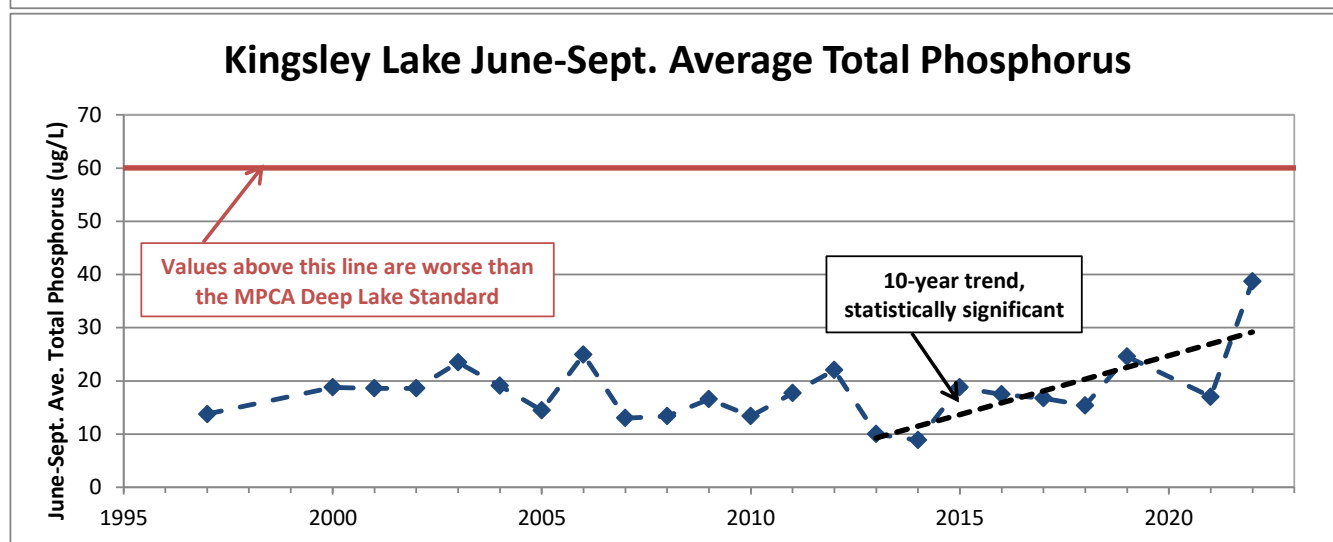
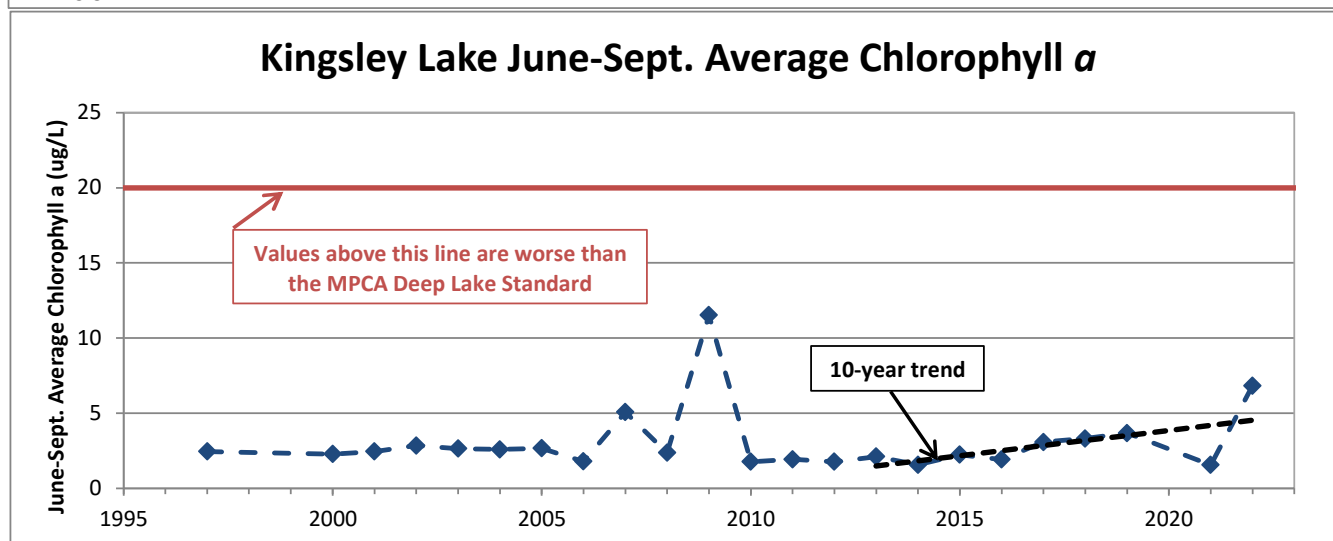
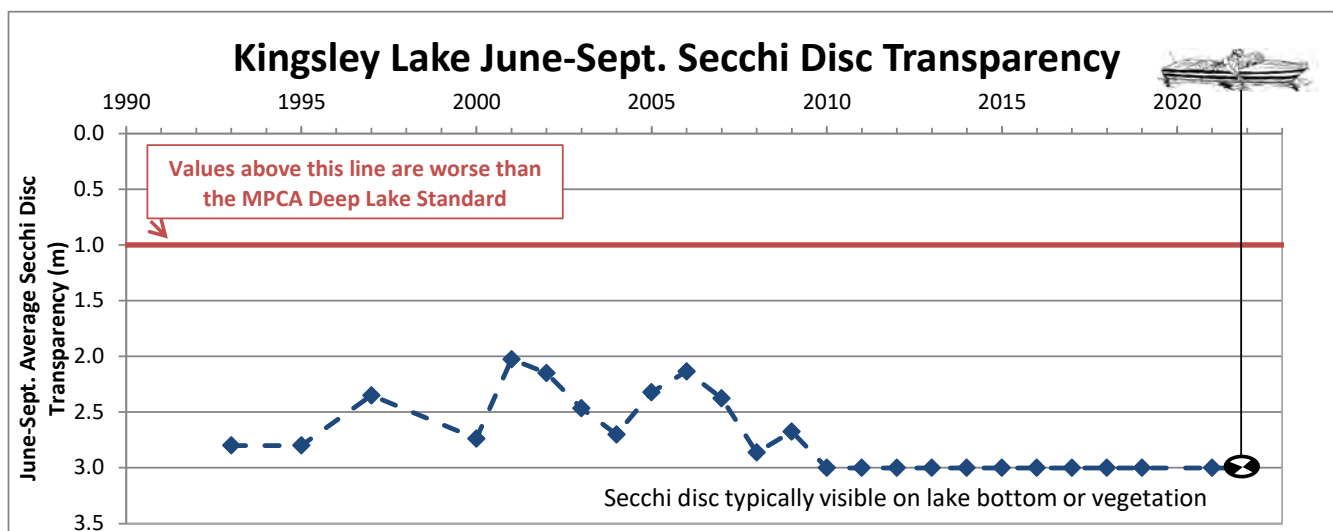


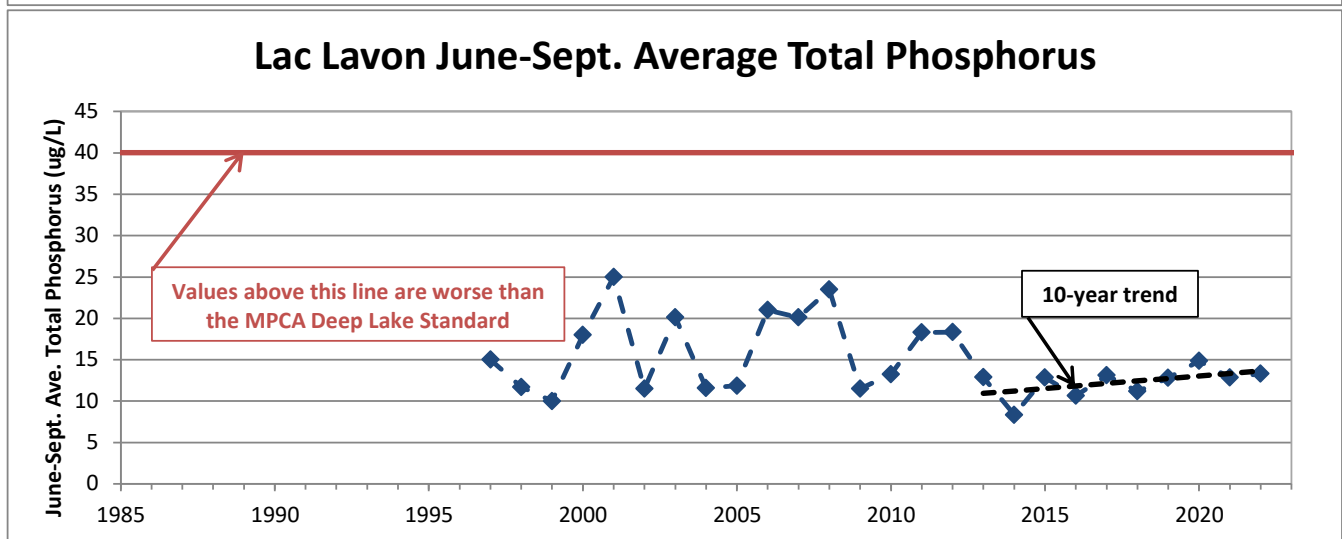
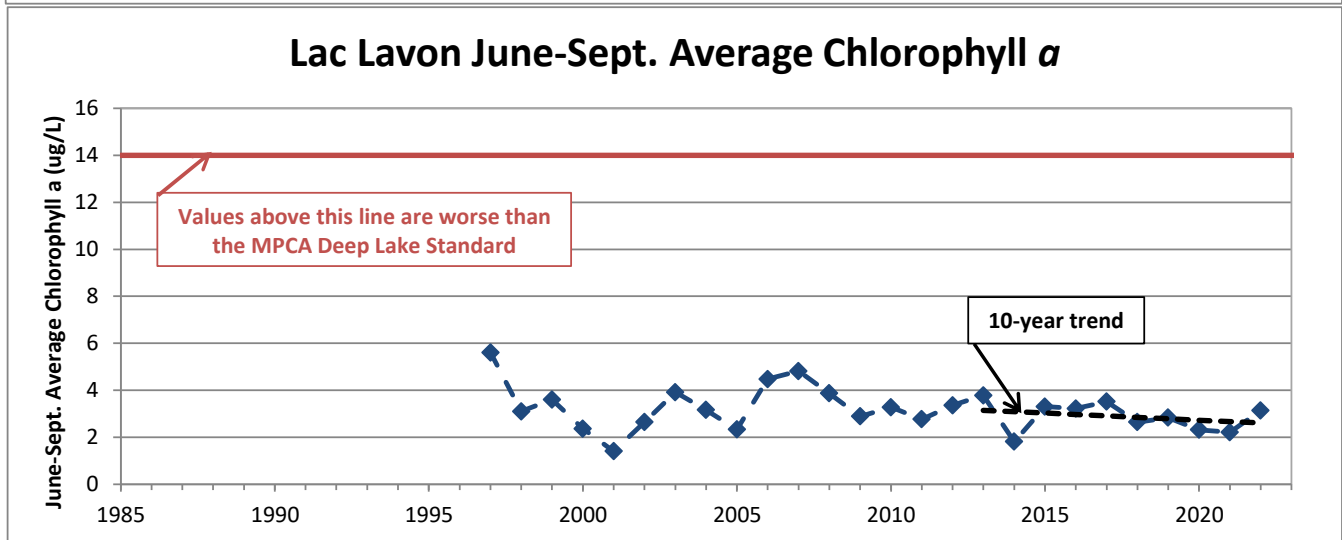
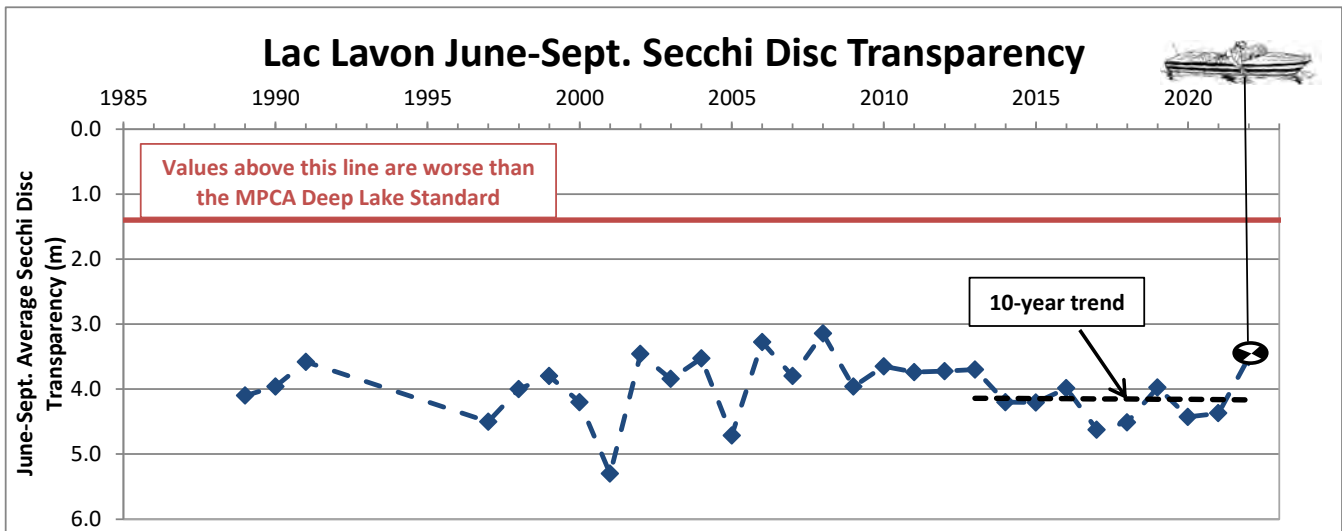
### Crystal Lake June-Sept. Average Total Phosphorus

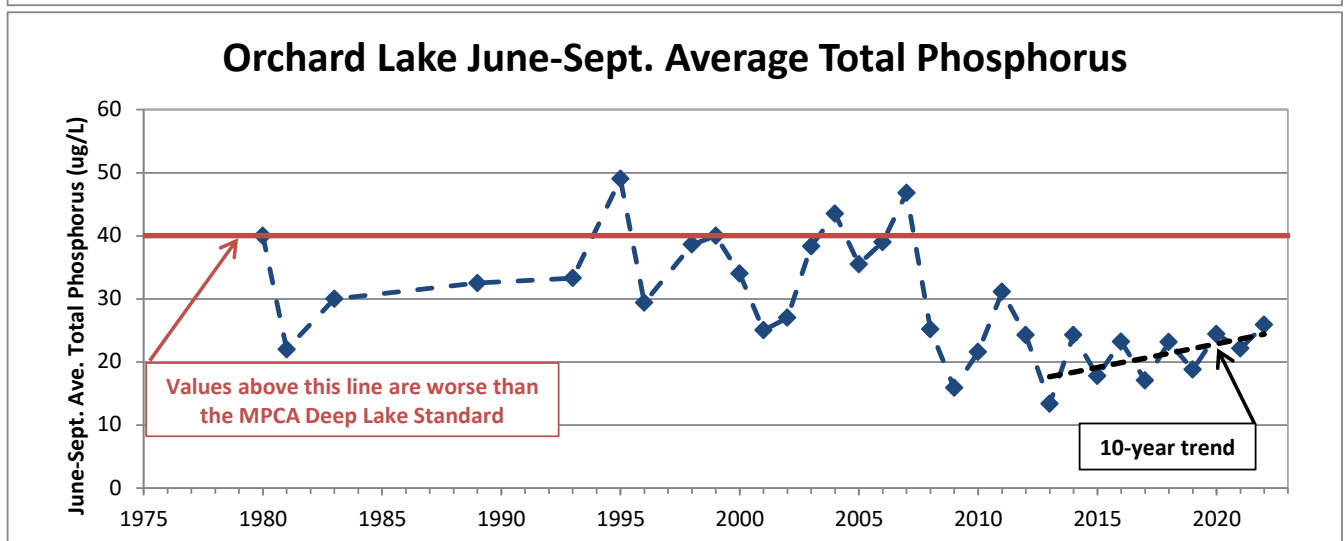
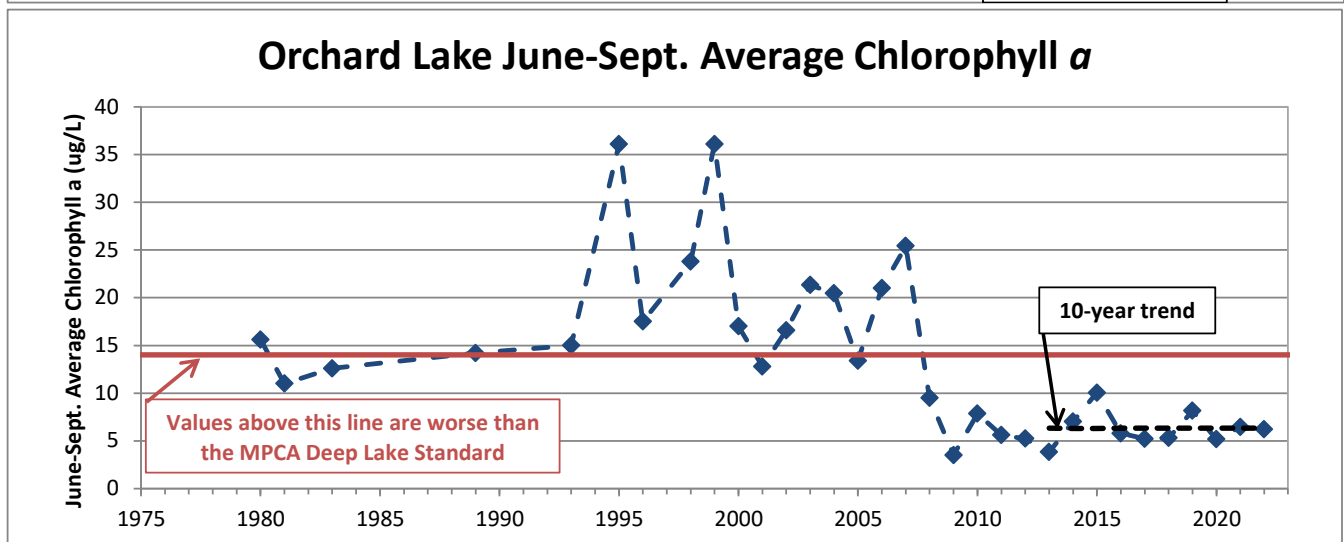
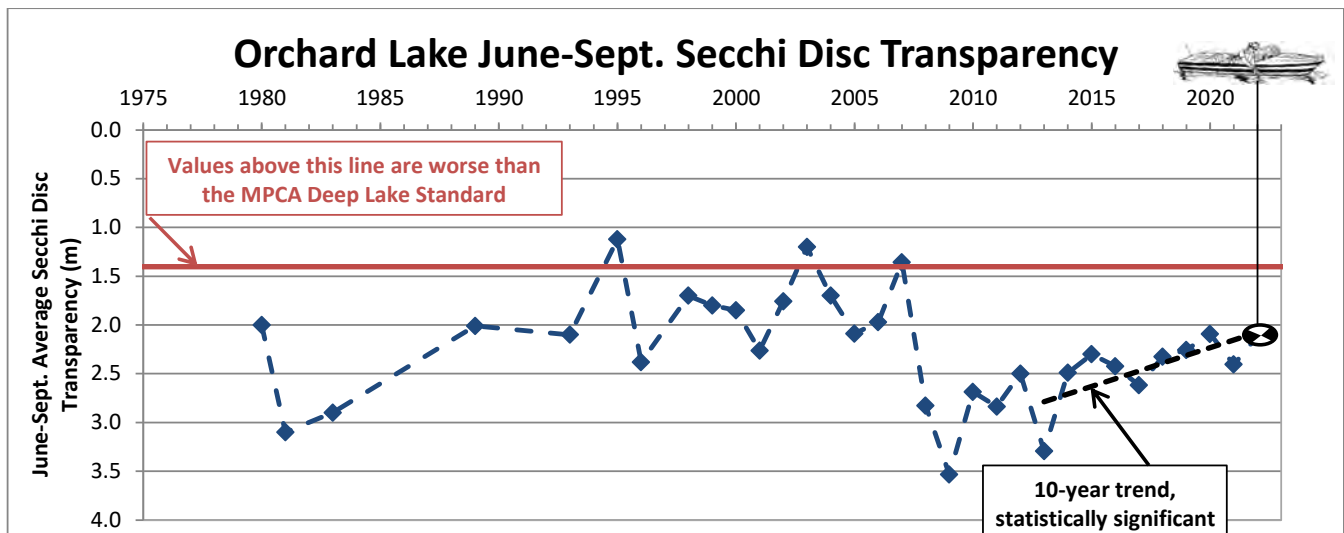












## 2022 Water Quality Data—Tables

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**Table 1: Crystal Lake 2022 Water Quality Data  
Citizen-Assisted Monitoring Program**

<b>Sample Date</b>	<b>Sample Depth (m)</b>	<b>Secchi Disc Transparency (m)</b>	<b>Chlorophyll-a, Pheophytin Corrected (µg/L)</b>	<b>Total Phosphorus (µg/L)</b>	<b>Nitrogen, Total Kjeldahl (mg/L)</b>	<b>Temperature (°C)</b>
4/29/2022	0	2.5	7.6	30	0.68	7.9
5/10/2022	0	2.7	2.5	17	0.57	15.3
5/26/2022	0	2.5	3.9	27	0.67	16.5
6/7/2022	0	3.5	6.4	18	0.46	19.9
6/23/2022	0	2.2	3.3	26	0.62	25.5
7/7/2022	0	2.2	6.9	37	0.62	26.4
7/24/2022	0	1.8	6.1	24	0.52	25.9
8/5/2022	0	1.8	7.2	22	0.67	25.8
8/18/2022	0	1.6	9.1	21	0.84	24.6
8/31/2022	0	1.6	12	24	0.88	23.4
9/2/2022	0	2.1	8.5	22	0.73	25.1
9/17/2022	0	1.5	13	27	0.82	22.3
10/4/2022	0	1.3	11	40	0.78	16.9

Notes

**Table 2: Keller Lake 2022 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)
4/28/2022	0	1.4	7.6	34	0.71	8.5
5/10/2022	0	1.5	7.9	39	0.59	17.8
6/2/2022	0	2	6.4	22	0.60	21.3
6/16/2022	0	1.6	12.0	27	0.83	24.2
6/26/2022	0	1.5	4.3	56	0.75	25.2
7/6/2022	0	1.8	7.2	21	0.63	28.8
7/26/2022	0	1.7	12.0	33	0.82	25.8
8/9/2022	0	0.7	24.0	33	0.95	27.8
8/21/2022	0	1	22.0	36	1.1	26.1
9/1/2022	0	0.6	42.0	44	1.4	27.6
9/29/2022	0	0.8	18.0	34	1.4	15
10/20/2022	0	1.5	1.3	31	1.1	7.8

Notes

**Table 3: Kingsley Lake 2022 Water Quality Data, Citizen-Assisted Monitoring Program**  
**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)
5/10/2022	0	2.4	77	24	0.47	17.2
5/27/2022	0	2.3	49	~ 9	0.45	16.2
6/9/2022	0	2.1	71	12	0.55	23.7
6/23/2022	0	2.2	66	184	3.2*	27.4
7/7/2022	0	+ 1.9	98	66	1.20	26.8
7/22/2022	0	1.9	78	13	0.60	26.4
8/5/2022	0	+ 2.0	65	12	0.51	26.3
8/16/2022	0	1.9	73	20	0.43	
9/2/2022	0	2.2	65	15	0.20	27.7
9/14/2022	0	+ 1.9	73	16	0.41	20.6
9/27/2022	0	1.7	62	10	0.41	15.5

Notes

+1.9, +2.0 Secchi disk was resting on vegetation or lake bottom.

~ 9 Indicates result is an estimated value above the method detection limit, but below the method reporting limit.

3.2\* Result is suspect.



**Table 4: Lac Lavon 2022 Water Quality Data  
Citizen-Assisted Monitoring Program**

<b>Sample Date</b>	<b>Sample Depth (m)</b>	<b>Secchi Disc Transparency (m)</b>	<b>Chlorophyll-a, Pheophytin Corrected (µg/L)</b>	<b>Total Phosphorus (µg/L)</b>	<b>Nitrogen, Total Kjeldahl (mg/L)</b>	<b>Temperature (°C)</b>
5/3/2022	0	3.0	3.6	18	0.66	12.6
5/30/2022	0	4.9	1.1	11	0.58	21.1
6/26/2022	0	4.8	1.6	15	0.48	25.4
8/9/2022	0	4.4	2.7	10	0.48	25.4

Notes

**Table 5: Orchard Lake 2022 Water Quality Data, Citizen-Assisted Monitoring Program**  
**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)
5/1/2022	0	2.0	4.1	28	0.77	8.1
5/14/2022	0	2.8	1.8	27	0.75	19.6
5/26/2022	0	3.0	4.0	28	0.75	16
6/8/2022	0	3.4	8.1	39	0.86	21.0
6/21/2022	0	3.4	< 1.0	41	0.75	26.4
7/7/2022	0	2.9	4.8	17	0.66	25.8
7/22/2022	0	1.8	5.3	12	0.79	27.2
8/4/2022	0	2.0	5.6	14	0.85	26.8
8/18/2022	0	1.6	6.1	22	0.75	25.4
9/1/2022	0	1.5	6.9	26	0.76	25.4
9/2/2022	0	2.0	8.2	35	0.76	24.7
9/22/2022	0	1.4	8.5	28	0.77	21.4
9/29/2022	0	1.1	7.7	25	0.96	16.4
10/13/2022	0	1.9	9.9	29	0.72	13.3

Notes

< 1.0 Indicates result is below the method detection limit.

**Table 6**  
**Lac Lavon 2022 Water Quality Measured by Barr Engineering**  
**BDWMO**

Date	Sample Depth (m)	Field Measurements						Laboratory Analyses	
		Dissolved oxygen [mg/L]	pH	Specific conductance @ 25°C [µS/cm]	Water temperature [°C]	Secchi disc transparency [m]	Turbidity [NTU]	Chlorophyll a, pheophytin adjusted [µg/L]	Total phosphorus [µg/L]
4/19/2022	0 - 2	--	--	--	--	2.2	4.0	11.9	15
4/19/2022	0	12.6	6.73	596	5.1		--	--	--
4/19/2022	1	12.6	6.86	596	5.1		--	--	--
4/19/2022	2	12.6	7.02	595	5.1		--	--	--
4/19/2022	3	12.6	7.14	593	5.0		--	--	17
4/19/2022	4	12.4	7.22	594	5.0		--	--	18
4/19/2022	5	12.4	7.27	594	5.0		--	--	17
4/19/2022	6	12.5	7.30	594	5.0		--	--	16
4/19/2022	7	12.5	7.32	593	5.0		--	--	17
4/19/2022	8	12.5	7.33	593	4.9		--	--	18
4/19/2022		12.5	7.60	593	4.9		--	--	24
5/10/2022	0-2	--	--	--	--	2.2	2.2	4.6	16
5/10/2022	0	11.0	8.31	598	14.7		--	--	--
5/10/2022	1	11.1	8.30	598	14.6		--	--	--
5/10/2022	2	11.2	8.28	598	14.5		--	--	--
5/10/2022	3	11.1	8.25	595	14.2		--	--	20
5/10/2022	4	11.4	8.23	589	10.4		--	--	22
5/10/2022	5	12.0	8.24	587	8.9		--	--	14
5/10/2022	6	12.0	8.14	589	8.5		--	--	19
5/10/2022	7	12.1	8.01	591	8.3		--	--	23
5/10/2022	8	8.5	7.90	594	8.1		--	--	22
5/10/2022	9	6.1	7.67	606	8.1		--	--	23
5/24/2022	0-2	--	--	--	--	3.4	1.3	4.2	21
5/24/2022	0	10.2	7.82	592	17.4		--	--	--
5/24/2022	1	10.1	8.00	590	17.4		--	--	--
5/24/2022	2	10.1	8.08	591	17.3		--	--	--
5/24/2022	3	9.8	8.14	592	16.9		--	--	13
5/24/2022	4	11.6	8.25	597	13.8		--	--	23
5/24/2022	5	12.1	8.34	589	10.4		--	--	16
5/24/2022	6	12.1	8.17	593	9.2		--	--	17
5/24/2022	7	5.3	7.73	600	8.6		--	--	28
5/24/2022	8	0.9	7.41	617	8.1		--	--	33
5/24/2022	9	0.6	7.36	618	8.0		--	--	56
6/07/2022	0-2	--	--	--	--	3.5	4.6	4.3	20
6/07/2022	0	10.1	8.55	596	20.1		--	--	--
6/07/2022	1	10.1	8.60	595	20.1		--	--	--
6/07/2022	2	10.1	8.60	595	20.1		--	--	--
6/07/2022	3	10.1	8.57	595	19.6		--	--	13
6/07/2022	4	11.0	8.50	600	17.2		--	--	15
6/07/2022	5	12.8	8.61	598	12.1		--	--	17
6/07/2022	6	11.0	8.38	601	10.2		--	--	17
6/07/2022	7	2.5	7.88	616	9.1		--	--	22
6/07/2022	8	0.8	7.72	632	8.5		--	--	39

**Table 6**  
**Lac Lavon 2022 Water Quality Measured by Barr Engineering**  
**BDWMO**

Date	Sample Depth (m)	Field Measurements						Laboratory Analyses	
		Dissolved oxygen [mg/L]	pH	Specific conductance @ 25°C [µS/cm]	Water temperature [°C]	Secchi disc transparency [m]	Turbidity [NTU]	Chlorophyll a, pheophytin adjusted [µg/L]	Total phosphorus [µg/L]
6/21/2022	0-2	--	--	--	--	2.8	1.8	2.3	18
6/21/2022	0	9.6	8.50	535	21.7		--	--	--
6/21/2022	1	9.7	8.50	535	21.7		--	--	--
6/21/2022	2	9.7	8.50	535	21.6		--	--	--
6/21/2022	3	9.7	8.50	535	21.5		--	--	9
6/21/2022	4	11.2	8.40	549	19.4		--	--	16
6/21/2022	5	12.6	8.40	557	15.1		--	--	18.0
6/21/2022	6	10.0	7.90	566	11.0		--	--	33
6/21/2022	7	4.5	7.60	574	8.9		--	--	24
6/21/2022	8	0.2	7.10	610	7.6		--	--	38
6/21/2022	9	0.1	7.10	666	7.2		--	--	58
7/06/2022	0-2	--	--	--	--	3.0	1.0	2.9	13
7/06/2022	0	9.5	9.14	603	25.8		--	--	--
7/06/2022	1	9.6	9.13	602	25.8		--	--	--
7/06/2022	2	9.6	9.12	602	25.8		--	--	--
7/06/2022	3	9.4	9.03	606	24.7		--	--	11
7/06/2022	4	9.4	8.75	618	22.9		--	--	13
7/06/2022	5	15.1	8.95	625	15.9		--	--	14
7/06/2022	6	13.4	8.91	640	12.0		--	--	20
7/06/2022	7	2.1	8.15	661	9.8		--	--	33
7/06/2022	8	0.8	7.86	681	9.0		--	--	64
7/19/2022	0-2	--	--	--	--	3.1	1.7	3.1	9
7/19/2022	0	9.4	9.00	545	27.0		--	--	--
7/19/2022	1	9.4	8.90	546	27.0		--	--	--
7/19/2022	2	9.4	8.90	546	27.0		--	--	--
7/19/2022	3	8.5	8.60	555	26.2		--	--	9
7/19/2022	4	8.2	8.40	568	24.5		--	--	8
7/19/2022	5	11.9	8.20	580	18.2		--	--	9
7/19/2022	6	10.7	8.20	592	12.8		--	--	14
7/19/2022	7	3.4	7.60	607	10.7		--	--	16
7/19/2022	8	0.7	7.30	632	9.3		--	--	36
8/03/2022	0-2	--	--	--	--	3.0	2.7	3.0	12
8/03/2022	0	9.1	8.80	581	25.5		--	--	--
8/03/2022	1	9.2	8.80	580	25.5		--	--	--
8/03/2022	2	9.2	8.80	580	25.5		--	--	--
8/03/2022	3	9.2	8.80	580	25.5		--	--	11
8/03/2022	4	8.9	8.80	585	24.8		--	--	15
8/03/2022	5	11.1	8.40	620	21.7		--	--	9
8/03/2022	6	10.0	8.10	633	14.7		--	--	14
8/03/2022	7	4.3	7.80	654	11.4		--	--	20
8/03/2022	8	0.9	7.30	730	9.4		--	--	48

**Table 6**  
**Lac Lavon 2022 Water Quality Measured by Barr Engineering**  
**BDWMO**

Date	Sample Depth (m)	Field Measurements						Laboratory Analyses	
		Dissolved oxygen [mg/L]	pH	Specific conductance @ 25°C [µS/cm]	Water temperature [°C]	Secchi disc transparency [m]	Turbidity [NTU]	Chlorophyll a, pheophytin adjusted [µg/L]	Total phosphorus [µg/L]
8/18/2022	0-2	--	--	--	--	3.7	1.8	5.3	15
8/18/2022	0	9.5	8.80	562	24.3		--	--	--
8/18/2022	1	9.6	8.80	562	24.3		--	--	--
8/18/2022	2	9.6	8.80	562	24.3		--	--	--
8/18/2022	3	9.2	8.80	563	24.1		--	--	9
8/18/2022	4	8.4	8.70	565	23.3		--	--	8
8/18/2022	5	6.3	8.10	601	22.6		--	--	11
8/18/2022	6	8.1	8.00	633	16.5		--	--	11
8/18/2022	7	1.3	7.70	651	12.4		--	--	14
8/18/2022	8	0.8	7.20	683	10.1		--	--	52
8/31/2022	0-2	--	--	--	--	3.5	1.8	3.7	12
8/31/2022	0	8.6	8.70	548	23.5		--	--	--
8/31/2022	1	8.6	8.80	548	23.5		--	--	--
8/31/2022	2	8.5	8.80	548	23.5		--	--	--
8/31/2022	3	8.5	8.80	548	23.5		--	--	14
8/31/2022	4	8.5	8.80	548	23.5		--	--	11
8/31/2022	5	7.1	8.50	561	22.9		--	--	14
8/31/2022	6	6.4	7.90	618	18.2		--	--	9
8/31/2022	7	1.0	7.50	643	13.4		--	--	17
8/31/2022	8	0.7	7.10	677	10.5		--	--	28
9/13/2022	0-2	--	--	--	--	3.3	1.6	3	9
9/13/2022	0	8.8	8.80	530	22.1		--	--	--
9/13/2022	1	8.7	8.80	531	22.2		--	--	--
9/13/2022	2	8.6	8.80	531	22.2		--	--	--
9/13/2022	3	8.6	8.80	531	22.2		--	--	9
9/13/2022	4	8.6	8.80	531	22.2		--	--	10
9/13/2022	5	8.2	8.80	532	22.2		--	--	8
9/13/2022	6	3.2	7.70	600	18.7		--	--	10
9/13/2022	7	0.8	7.60	617	14.2		--	--	28
9/13/2022	8	0.7	7.20	660	10.8		--	--	164
9/13/2022	9	0.2	7.40	813	9.4		--	--	94

## **2022 Annual Finance Statement**

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BLACK DOG WATERSHED  
MANAGEMENT ORGANIZATION

Financial Statements  
as of December 31, 2022

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, 2022

	<u>Governmental Activities</u> <u>2022</u>
Assets	
Cash and investments	533,464.61
Accounts receivable	-
Due from other governmental units	-
Prepays	-
Capital assets	
Buildings	37,600.00
Equipment	110,138.00
Less accumulated depreciation	<u>(136,458.00)</u>
Total capital assets, net of accumulated depreciation	<u>11,280.00</u>
Total assets	<u><u>544,744.61</u></u>
Liabilities	
Accounts payable	7,814.50
Due to other governmental units	39,870.41
Unearned revenue	<u>-</u>
Total liabilities	47,684.91
Net position	
Net investment in capital assets	11,280.00
Restricted for capital improvements	103,489.27
Unrestricted	<u>382,290.43</u>
Total net position	<u>497,059.70</u>
Total liabilities and net position	<u><u>544,744.61</u></u>

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BLACK DOG WATERSHED  
MANAGEMENT ORGANIZATION

Statement of Activities  
Year Ended December 31, 2022

	<u>Governmental Activities</u>
	<u>2022</u>
Expenses	
General government	
System operations	111,631.68
Administrative services	46,503.09
Depreciation	<u>940.00</u>
Total program expenses	159,074.77
Revenues	
General government	
Charges for services	
Management fees	153,000.00
Grants	
State of MN Board of Water and Soil Resources	-
General revenues	
Interest earnings	<u>6,754.91</u>
Total revenues	<u>159,754.91</u>
Change in net position	680.14
Net position	
Beginning of year	<u>496,379.56</u>
End of year	<u><u>497,059.70</u></u>

BLACK DOG WATERSHED  
MANAGEMENT ORGANIZATION

Balance Sheet  
Governmental Funds  
Year Ended December 31, 2022

	General Fund	Capital Improvement Fund	Total Governmental Funds 2022
<b>Assets</b>			
Cash and investments	429,975.34	103,489.27	533,464.61
Accounts receivable	0.00	0.00	0.00
Due from other governmental units	0.00	0.00	0.00
<b>Total assets</b>	<b>429,975.34</b>	<b>103,489.27</b>	<b>533,464.61</b>
<b>Liabilities</b>			
Accounts payable	7,814.50	0.00	7,814.50
Due to other governmental units	39,870.41	0.00	39,870.41
Unearned revenue	0.00	0.00	0.00
<b>Total liabilities</b>	<b>47,684.91</b>	<b>0.00</b>	<b>47,684.91</b>
<b>Fund balances</b>			
Restricted for capital improvements	0.00	103,489.27	103,489.27
Assigned for subsequent year's budget deficit	27,160.00	0.00	27,160.00
Unassigned	355,130.43	0.00	355,130.43
<b>Total fund balances</b>	<b>382,290.43</b>	<b>103,489.27</b>	<b>485,779.70</b>
<b>Total liabilities, deferred inflows of resources, and fund balances</b>	<b>429,975.34</b>	<b>103,489.27</b>	<b>533,464.61</b>

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

Fund balances – governmental funds	485,779.70
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	(136,458.00)
<b>Net position of governmental activities</b>	<b>497,059.70</b>

BLACK DOG WATERSHED  
MANAGEMENT ORGANIZATION

Statement of Revenue, Expenditures, and Changes in Fund Balances  
Governmental Funds  
Year Ended December 31, 2022

	General Fund	Capital Improvement Fund	Total Governmental Funds 2022
Revenue			
Member assessments	131,000.00	22,000.00	153,000.00
Intergovernmental Revenue - Grants	-	-	-
Interest earnings	6,754.91	-	6,754.91
Total revenue	137,754.91	22,000.00	159,754.91
Expenditures			
General government			
System Operations			
Engineering	22,608.43	-	22,608.43
Special Projects	70,735.25	-	70,735.25
Insurance	1,966.00	-	1,966.00
Water quality monitoring	16,322.00	-	16,322.00
Administrative services			
Legal and audit	2,066.68	-	2,066.68
Administrative costs	24,032.91	-	24,032.91
Public education	20,403.50	-	20,403.50
Conferences, publications and reports	-	-	-
Contingency	-	-	-
Total expenditures	158,134.77	-	158,134.77
Expenditures	(20,379.86)	22,000.00	1,620.14
Other Financing Source (Uses)			
Transfers in	-	-	-
Transfers out	-	-	-
Total other financing sources (uses)	-	-	-
Net change in fund balances	(20,379.86)	22,000.00	1,620.14
Fund balances			
Beginning of year	402,670.29	81,489.27	484,159.56
End of year	382,290.43	103,489.27	485,779.70

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

Net change in fund balances – governmental funds	1,620.14
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)
Change in net position of governmental activities	680.14

BLACK DOG WATERSHED  
MANAGEMENT ORGANIZATION

Statement of Revenue, Expenditures, and Changes in Fund Balances  
Budget and Actual  
General Fund  
Year Ended December 31, 2022

	2022		
	Original and Final Budget	Actual	Over (Under) Final Budget
Revenue			
Management fees	131,000.00	131,000.00	-
Intergovernmental Revenue - Grants	-	-	-
Interest earnings	40.00	6,754.91	6,714.91
Total revenue	131,040.00	137,754.91	6,714.91
Expenditures			
General government			
System Operations			
Engineering	31,000.00	22,608.43	(8,391.57)
Special Projects	80,600.00	70,735.25	(9,864.75)
Insurance	3,000.00	1,966.00	(1,034.00)
Water quality monitoring	17,100.00	16,322.00	(778.00)
Administrative services			
Legal and audit	5,500.00	2,066.68	(3,433.32)
Administrative costs	19,000.00	24,032.91	5,032.91
Public education	20,050.00	20,403.50	353.50
Conferences, publications and reports	500.00	-	(500.00)
Contingency	5,000.00	-	(5,000.00)
Total expenditures	181,750.00	158,134.77	(23,615.23)
Expenditures	(50,710.00)	(20,379.86)	30,330.14
Other Financing Source (Uses)			
Transfers in	-	-	-
Transfers out	-	-	-
Total other financing sources (uses)	-	-	-
Net change in fund balances	(50,710.00)	(20,379.86)	30,330.14
Fund balances			
Beginning of year		402,670.29	
End of year		382,290.43	

BLACK DOG WATERSHED  
MANAGEMENT ORGANIZATION

Statement of Revenue, Expenditures, and Changes in Fund Balances  
Budget and Actual  
Capital Improvement Fund  
Year Ended December 31, 2022

	2022		
	Original and Final Budget	Actual	Over (Under) Final Budget
Revenue			
Management fees	22,000.00	22,000.00	-
Intergovernmental Revenue - Grants	-	-	-
Interest earnings	-	-	-
Total revenue	22,000.00	22,000.00	-
Expenditures			
General government			
System Operations			
Engineering	-	-	-
Special Projects	5,000.00	-	(5,000.00)
Insurance	-	-	-
Water quality monitoring	-	-	-
Administrative services			
Legal and audit	-	-	-
Administrative costs	-	-	-
Public education	-	-	-
Conferences, publications and reports	-	-	-
Contingency	-	-	-
Total expenditures	5,000.00	-	(5,000.00)
Excess (Deficiency) of Revenues Over (Under)			
Expenditures	17,000.00	22,000.00	5,000.00
Other Financing Source (Uses)			
Transfers in	-	-	-
Transfers out	-	-	-
Total other financing sources (uses)	-	-	-
Net change in fund balances	17,000.00	22,000.00	5,000.00
Fund balances			
Beginning of year		81,489.27	
End of year		103,489.27	

[illegible]

BLACK DOG WATERSHED MANAGEMENT ORGANIZATION				
Accounts Receivable				
12/31/22				
<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>12/31/22</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							
12/31/22							
Inv Date	Vendor Name	Amount	Description	Date Paid	Check #	Check Amt	
	Barr Engineering	AP	\$ 7,639.50	Prof. services Oct.29-Dec.30,2022	01/18/23	1797	\$ 7,639.50
	Met Council - ES	DTOG	\$ 3,420.00	Citizen Assist Monitor Project 2022	01/18/23	1799	\$ 3,420.00
	Campbell Knutson	AP	\$ 175.00	Nov 2022 General Services	01/18/23	1798	\$ 175.00
	City of Burnsville	DTOG	\$ 24,032.91	2022 Support services	02/15/23	1802	\$ 24,032.91
	Dakota County Soil &	DTOG	\$ 1,005.00	October - December 2022 (Quarterly fees)	02/15/22	1803	\$ 1,005.00
	Dakota County Soil &	DTOG	11,412.50	July - September 2022 (Quarterly Fees)	04/19/23	1806	11,412.50
	<i>total</i>		\$ 47,684.91				
		AP	7,814.50				
		AP-Cap	0.00				
		DTOG	39,870.41				
	<i>total</i>		\$ 47,684.91				

<b>BLACK DOG WATERSHED MANAGEMENT ORGANIZATION</b>					
<b>Outstanding checks at year-end</b>					
<b>12/31/2022</b>					
Inv Date	Vendor Name	Amount	Description	Date Paid	Check #
None					
		\$ -			

<b>BLACK DOG WATERSHED MANAGEMENT ORGANIZATION</b>		
<b>Management Fees</b>		
<b>12/31/2022</b>		
<b>Management Fees 2022 (General Fund):</b>		
City of Apple Valley	\$ 10,399.00	
City of Burnsville	94,104.00	
City of Eagan	575.00	
City of Lakeville	25,922.00	
Total	<u>\$ 131,000.00</u>	
<b>Member Fees - Capital Improvement Fund 2022:</b>		
City of Apple Valley	\$ 1,742.00	
City of Burnsville	16,193.00	
City of Eagan	0.00	
City of Lakeville	4,065.00	
Total	<u>\$ 22,000.00</u>	
Grand Total	<u>153,000.00</u>	
<b>Total by City 2022:</b>		
City of Apple Valley	\$ 12,141.00	
City of Burnsville	\$ 110,297.00	
City of Eagan	\$ 575.00	
City of Lakeville	\$ 29,987.00	
Total	<u>\$ 153,000.00</u>	

BLACK DOG WATERSHED MANAGEMENT ORGANIZATION		
Grants		
12/31/2022		
Description	Amount	Deposit Date
GRANTS	\$ -	

**BLACK DOG WATERSHED MANAGEMENT ORGANIZATION**  
**CAPITAL ASSETS SUMMARY**  
**YEAR ENDED DECEMBER 31, 2022**

Acq Date	Description	Useful Life	Historical Cost 12/31/03	Accumulated Depreciation 12/31/21	Net Value 12/31/21	2021 Depreciation	Balance 12/31/2022
1994	Building	40	37,600	(25,380.00)	12,220.00	(940.00)	11,280.00
1994	Equipment	15	110,138	(110,138.00)	-	-	-
			147,738.00	(135,518.00)	12,220.00	(940.00)	11,280.00

fully depreciated at 200!

total accumulated depreciation at YE (136,458.00)

Assets	Years
Buildings	40 years
Equipment	15 years

Capital asset activity for the year ended December 31, 2022 was as follows:

	Beginning Balance	Additions	Deletions	Ending Balance
<b>Governmental Activities</b>				
Capital assets, depreciated				
Buildings	\$ 37,600	\$ -	\$ -	\$ 37,600
Equipment	110,138	-	-	110,138
Total capital assets, depreciated	147,738	-	-	147,738
Less accumulated depreciation for				
Buildings	25,380	940	-	26,320
Equipment	110,138	-	-	110,138
Total accumulated depreciation	135,518	940	-	136,458
Governmental activities capital assets, net	\$ 12,220	\$ (940)	\$ -	\$ 11,280

BLACK DOG WATERSHED  
MANAGEMENT ORGANIZATION

Board of Commissioners and Administrators  
as of December 31, 2022

**BOARD OF COMMISSIONERS**

Curtis Enestvedt	Chair
Mike Hughes	Vice Chair
Scott Thureen	Secretary/Treasurer/Commissioner
Rollie Greeno	Commissioner
Tom Harmening	Commissioner
Frank Boyce	Commissioner (Alternate)
Greg Helms	Commissioner (Alternate)
Natalie Walker	Commissioner (Alternate)

**ADMINISTRATORS**

Daryl Jacobson	Administrator
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BLACK DOG WATERSHED MANAGEMENT ORGANIZATION		
Notes		
12/31/22		
Description	Amount	
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.		