



BLACK DOG

Watershed Management Organization

2023 ANNUAL ACTIVITY REPORT

Prepared for
Black Dog Watershed
Management Commission

May 2024

2023 BOARD MEMBERS

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

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

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

CONSULTANTS

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

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

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

Administrator	City of Burnsville Daryl Jacobson 13713 Frontier Ct. Burnsville, MN 55337 Phone: (952) 895-4574
Website:	www.blackdogwmo.org

PERMITS AND VARIANCES

The Black Dog WMO does not have a permit program.

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.

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

2023 Black Dog WMO Activities

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

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

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

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

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

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

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

2023 Black Dog WMO Expenditures

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

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

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

2023 Black Dog WMO Revenues

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

2023 Black Dog WMO Planned Changes in Fund Balance

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

2024 Black Dog WMO Work Plan

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

2023 Watershed Annual Report

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2023 Water Quality Data

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

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

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

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

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

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

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

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Historical Water Quality Data—Figures

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2023 Water Quality Data—Tables

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2023 Annual Finance Statement

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