



BLACK DOG

Watershed Management Organization

2025 WATERSHED ANNUAL REPORT

Published April 2026

Our Vision:

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

Evaluating our Success

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

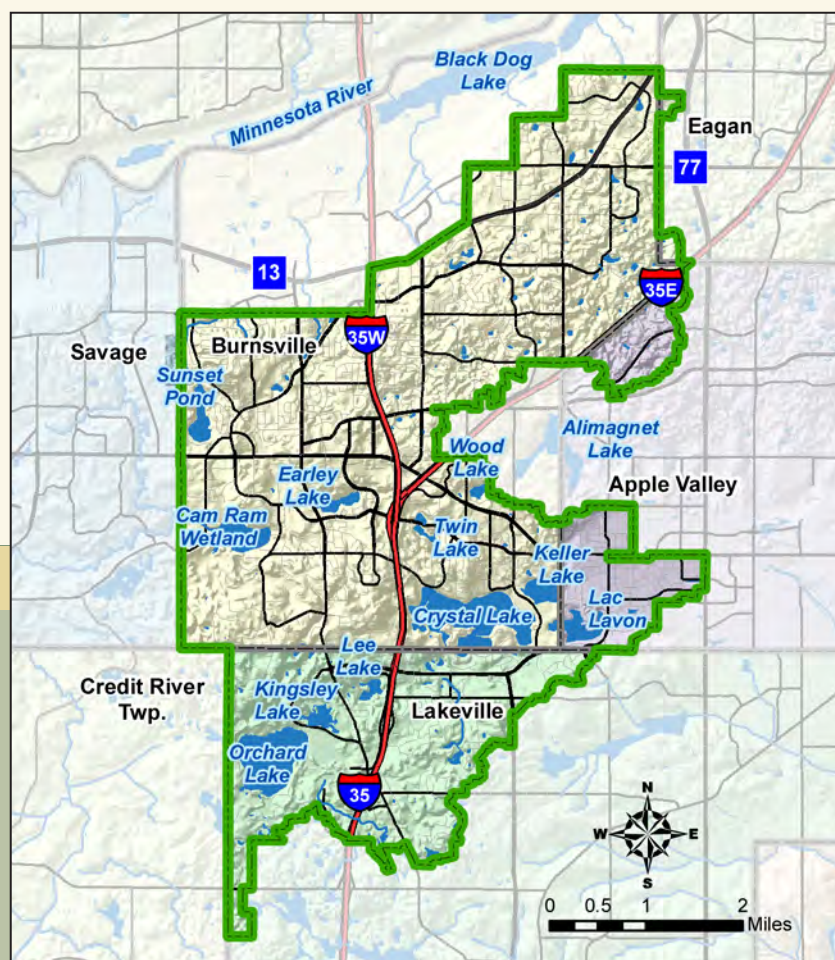
- **Trend Analysis**—The BDWMO collects water quality information to track water quality trends in its strategic waterbodies (see page 5).
- **BDWMO Goal Tracking**—The BDWMO identified metrics and outcomes associated with each goal included in its watershed management plan. At least biennially, the BDWMO evaluates those metrics to assess progress toward plan goals. Goal tracking will be reported in the 2026 annual newsletter.

This annual report outlines BDWMO and member city actions relevant to BDWMO goals and plan implementation, progress toward water quality goals in 2025, and plans for 2026 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 appointed by the cities within the watershed, including 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.



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Chloride Management in the Watershed

Chloride loading from the use of winter deicing salt is a significant pollutant source in the Black Dog watershed. The chemical properties of sodium chloride make it effective at melting ice but also result in the chloride dissolving in water and persisting in the environment. Salt damages property and the environment, harms aquatic species and impacts drinking water quality. Water samples from lakes, wetlands, streams, and groundwater show high chloride levels in the Twin Cities Metropolitan Area. The BDWMO's member cities and partners are taking steps to limit the overuse of salt as a winter deicer.

City Operations and Planning

Cities within the BDWMO reduce the amount and impact of their chloride use through practices outlined in their municipal stormwater (MS4) permits and following guidance in the Twin Cities Metro Area Chloride Management Plan. Some of these actions include:

- Hosting annual training for municipal salt applicators (e.g., plow drivers) to share guidance and best practices.
- Pre-treating roadways with salt brine or other chemicals ahead of winter storms to limit ice formation and reduce subsequent salting needs.
- Calibrating salt application equipment to ensure accurate application rates and reduce waste.
- Meeting with potential developers and encouraging them to consider design elements that consider winter maintenance and reduce salt needs (i.e., smart salt design).
- Sharing best practices for winter salt use, storage, and clean up with residents through social media, handouts, and other communications.



Credit: City of Apple Valley

Pretreating streets before a storm can reduce salt use.

Winter Salt Week at Dakota County Libraries

Local governments, state agencies, and non-profits across the United States sponsored the first Winter Salt Week in 2025 to raise awareness around salt pollution and reduction solutions. From January, through January 31, 2025, local partner Dakota County encouraged visitors of its public libraries to enjoy a scavenger hunt, learn how to use salt safely with a Smart Salter measuring cup, and meet mascot **Salty Dawg** to take the Smart Salter pledge.

Coordinated with Dakota County and Soil and Watershed Conservation District staff, select locations offered free Salt Watch Kits which included materials for community members to test their local lake, stream or wetland for chloride. Kits provided maps of nearby sampling locations and instructions to share testing results on their Clean Water Hub.



The local success of winter salt week at Dakota County libraries prompted continued participation in 2026 with plans to continue in future years. To learn more about Winter Salt Week, visit: www.wintersaltweek.org



Salty Dog's scavenger hunt promotes salt pollution awareness.

Watershed Based Implementation Funding—2025 Update

The Minnesota Board of Water and Soil Resources launched the Watershed Based Implementation Funding (WBIF) Grant Program in fiscal year 2018–2019 as an alternative to the traditional project-by-project competitive process often used to fund water quality improvement projects. This program provides dedicated funding, allocated by watershed, to allow collaborating local governments to pursue timely solutions based on a watershed's highest priority needs.

The primary purpose of this program is to implement projects and programs that protect, enhance, and restore surface water quality in lakes, rivers, and streams; protect groundwater from degradation; and protect drinking water sources.

The BDWMO convenes a meeting of city, Dakota County, and Dakota County SWCD staff annually to identify potential projects for potential WBIF funding.

Past WBIF Accomplishments

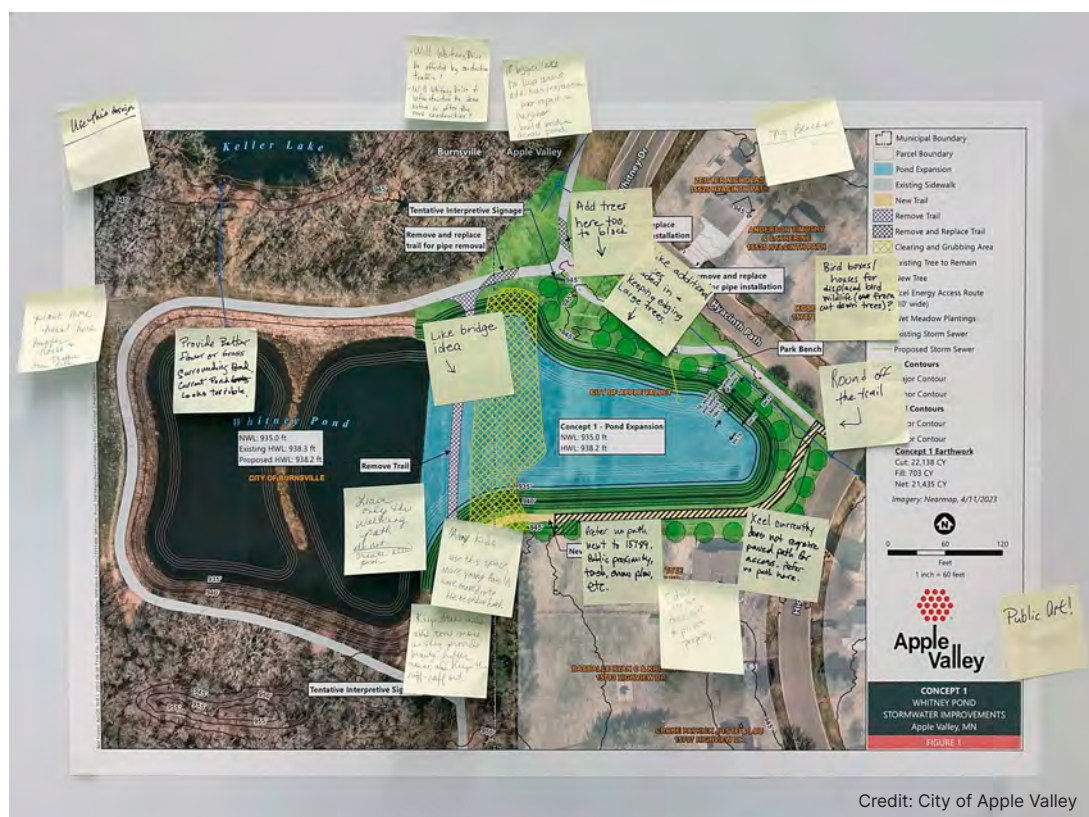
Dakota County used WBIF funding for targeted well sealing of unused or abandoned wells in 2023 and 2024. Unused or abandoned wells are a potential threat to health, safety, and the environment since they provide a direct conduit

to the groundwater aquifer. WBIF funding was used to perform an inventory and seal 14 wells within the Black Dog watershed area.

The City of Apple Valley also used WBIF funding to complete a feasibility study to evaluate opportunities for stormwater improvements surrounding pond Whitney Pond located within Keller Park. Stormwater improvements will help improve water quality and will be necessary to provide required, permit mandated stormwater management for upcoming street reconstruction projects in the surrounding neighborhood. In 2024 and 2025, the City worked with Barr Engineering to finalize plans for pond improvements based on a concept (Concept 3) that was established as part of the City's public engagement process.

WBIF Looking Forward

The BDWMO and City of Apple Valley intend to use additional WBIF funding to support the construction of the Whitney Pond improvements. Scheduling of project construction has not been finalized due in part to unknowns in other funding sources, including State bond funding. The City is optimistic that construction will begin sometime in 2026 and will keep the BDWMO and residents informed as the project progresses.



Residents provide comments on an early concept design at a City-hosted open house.

Landscaping for Clean Water—Clean Water Starts at Home

The Dakota Soil and Water Conservation District (SWCD) Landscaping for Clean Water program provides instruction and grants property owners to install a raingarden, native garden, or native shoreline planting. The goal of the Landscaping for Clean Water program is to teach residents how to beautify their yard while also protecting local water quality and providing habitat for pollinators.

New for 2026, the program increased its grant amount from \$250 to \$400 with the support of financial partners like the BDWMO.

In 2025, Landscaping for Clean Water programming was held in both in-person and virtual formats. Four in-person and one virtual Introduction Classes were held in the spring and followed by six in-person design courses. Virtual learning options for the Design Course were also available. A total of 41 residents of the BDWMO participated in the introduction classes either in-person or virtually.

A total of 122 households countywide took part in the Design Course in-person or through pre-recorded videos. A total of 111 projects were designed, 32 of which were by BDWMO residents. Project materials for participants were made available online, and an “Office Hours” program was used to provide virtual consultations to online Design Course participants.

The Landscaping for Clean Water program offered an additional class for residents with shoreline areas in 2025, encouraging the use of native plantings to protect or enhance the areas. A total of 18 residents county-wide participated in the shoreline class.

A total of 43 projects county-wide were installed in 2025. 12 projects were installed within the Black Dog watershed area, including 6 rain gardens and 6 native gardens.

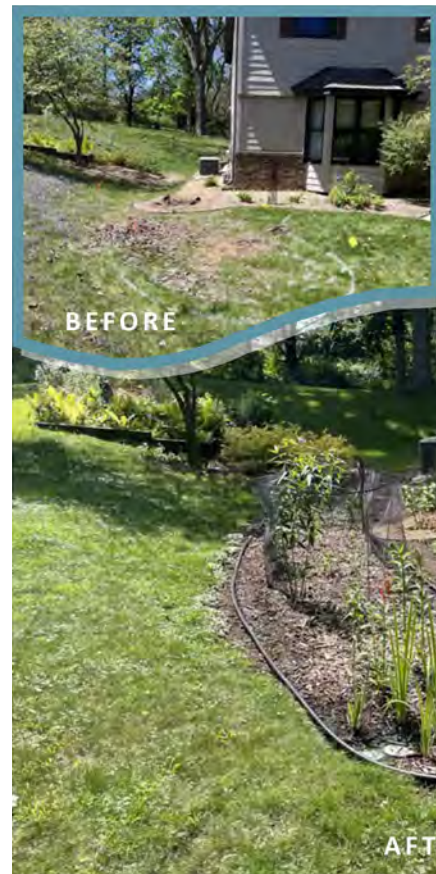
In the spring of 2025, one maintenance class was offered virtually. The class focused on garden maintenance across all seasons and provided participants with seasonal information on how to maintain and promote the health, performance, and beauty of their gardens. A total of 13 people county-wide attended the maintenance class.

The 2026 Landscaping for Clean Water program includes more program offerings with three shoreline classes and a return of the in-person maintenance class. Courses will be hosted primarily in-person with some virtual and on-demand options also available. New for 2026, the program increased its grant amount from \$250 to \$400 with the support of financial partners like the BDWMO. For more information and to sign up, visit: www.landscapingforcleanwater.com

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/>

RAINGARDEN PROJECT EXAMPLE



A raingarden is a shallow depression that captures rainwater, removes pollutants, and soaks the water into the ground.

Credit: Dakota SWCD

PROJECT

Installation of a 112 square foot residential raingarden in Burnsville

COST

Project materials cost estimated at \$1,295

FUNDING

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

BENEFITS

- Runoff volume reduction
- Improved water quality
- Improved wildlife habitat
- Opportunity for public education and outreach
- Improved aesthetics

PARTNERS

Black Dog Watershed Management Organization

INSTALLATION

Summer 2025

Water Quality Monitoring Program

The BDWMO and member cities continued to monitor several of their lakes during 2025 through the Metropolitan Council's Community-Assisted Monitoring Program (CAMP) to detect any water quality changes that would require management action by the WMO. In addition, the BDWMO conducted more detailed "management-level" monitoring on Crystal Lake (see page 7). The monitoring focused on three water quality indicators—total phosphorus and chlorophyll-*a* concentrations, plus Secchi disc transparency. All three variables correlate strongly to the open-water nuisance conditions of lakes (i.e., algal blooms).

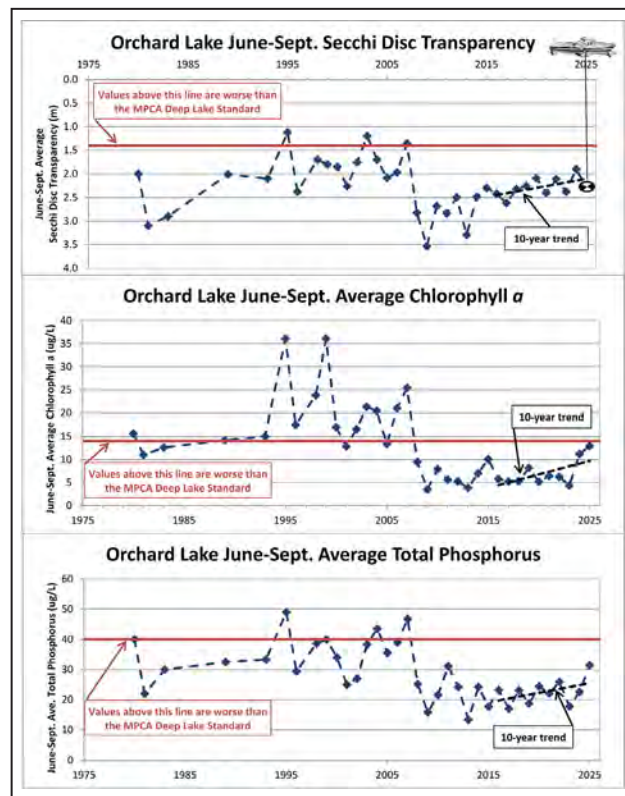
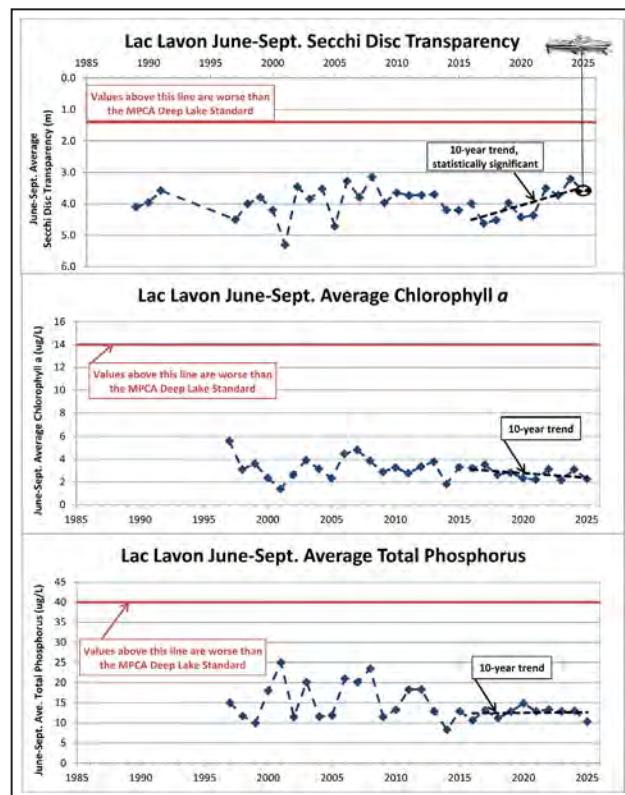
Long-term monitoring is important because lakes can change from year to year. Only when several years of data are compiled do trends become apparent. The Minnesota Pollution Control Agency (MPCA) periodically evaluates water quality data from the most recent ten-year period to determine if a lake exceeds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

Lac Lavon (Apple Valley & Burnsville)

Water Quality Monitoring—Lac Lavon continued to experience excellent water quality in 2025. The 2025 summer-average Secchi disc transparency was 3.6 meters (11.7 feet) and is much better than the MPCA deep-lake water quality standard of 1.4 meters. The 2025 summer averages of total phosphorus (10 µg/L) is tied for the second best on record for the lake and is much better than the deep lake water quality standard (40 µg/L). The summer average of chlorophyll-*a* (2 µg/L) was also considerably better than respective deep-lake water quality standard and further indicates excellent water quality for Lac Lavon. Although the 2025 summer average of Secchi disc transparency was better than the previous year (3.2 meters in 2024), there is a statistically significant worsening (i.e., decreasing) trend in summer average Secchi disc transparency for the 10-year period of 2016–2025. There are no statistically significant trends in total phosphorus or chlorophyll-*a* for the same period, and summer averages of both parameters have been consistently excellent for many years. The BDWMO will continue to monitor the water quality of Lac Lavon in 2026, including management level monitoring in 2026.

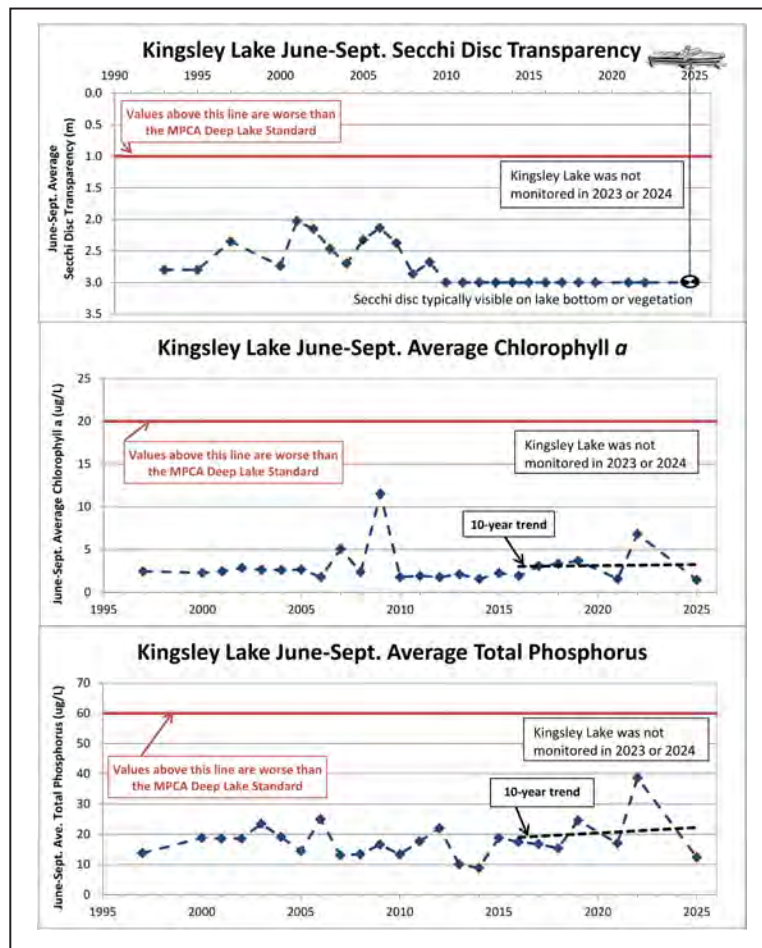
Orchard Lake (Lakeville)

Water Quality Monitoring—Orchard Lake's water quality remained good in 2025, and summer averages of total phosphorus (31 µg/L), chlorophyll-*a* (13 µg/L), and Secchi disc transparency (2.3 meters or 7.4 feet) were all better than deep lake water quality standards. Orchard Lake monitoring activities in 2025 included CAMP level monitoring as well as additional water quality monitoring conducted by Metropolitan Council Environmental Services staff as part of their rotating assessment of regionally significant waterbodies. The 2025 summer averages of phosphorus and chlorophyll-*a* were worse (i.e., higher) than other recent years and were the worst they've been since 2007. The 2025 summer average of Secchi disc transparency, however, was similar to other recent years. Just two years prior, Orchard Lake experienced the third best summer average of chlorophyll-*a* on record for the lake (4 µg/L in 2023). The 2023 summer average of total phosphorus (18 µg/L) was also lower compared to 2025. Although 2025 summer averages for total phosphorus and chlorophyll-*a* were worse than recent years, there were no statistically significant trends in summer averages



of water quality for the 2016–2025 period. Summer averages of water quality in Orchard Lake have been consistently better than the water quality standards for the last eighteen years (2008–2025) but have fluctuated in recent years. The BDWMO will continue to monitor the water quality of Orchard Lake in 2026.

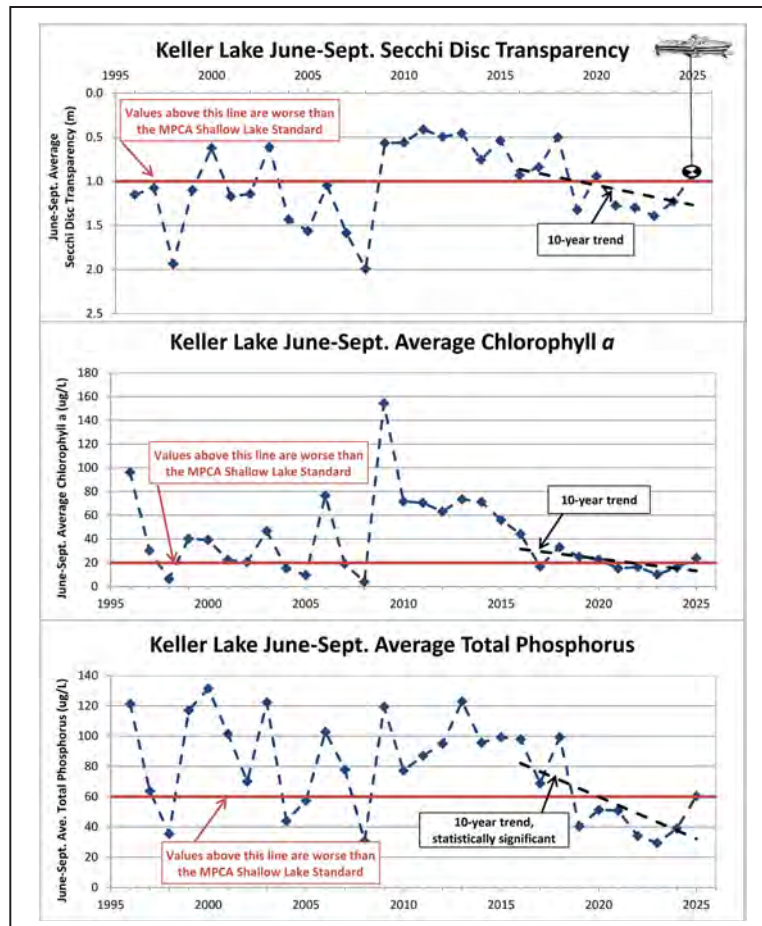
2025 Monitoring Results



Kingsley Lake (Lakeville)

Water Quality Monitoring—Water quality monitoring was not performed on Kingsley Lake in 2023 or 2024, due to low water levels which made accessing open water difficult. Water quality monitoring was resumed on the lake in 2025, and 2025 summer averages of water quality show continued good water quality on 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. Secchi disc readings in Kingsley Lake are also complicated because lake vegetation obscures the Secchi disc, giving false measurements; therefore, no trend line is included in the graph of Kingsley Lake Secchi disc transparency.

The 2025 summer average of total phosphorus (13 µg/L) was the third best on record for the lake, and much better than the shallow lake standard (60 µg/L). It is also a significant improvement compared to the 2022 summer average (39 µg/L), the worst on record for the lake. The 2025 summer average of chlorophyll-a (1.5 µg/L) was the best on record for the lake, and well below the shallow lake standard (20 µg/L). The summer averages of total phosphorus and chlorophyll-a in Kingsley Lake have been better than the water quality standards consistently since 1997. The BDWMO will continue to monitor the water quality of Kingsley Lake in 2026.



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 years following the treatment. Keller Lake experienced four consecutive years (2021–2024) where summer averages of all three parameters were better than standards. The 2025 summer-average total phosphorus of 60 micrograms per liter (µg/L) was equal to the MPCA's shallow lake standard. The 2025 Secchi disc transparency summer average was 0.9 meters (3.0 feet), which is slightly worse than the MPCA's shallow lake standard of 1.0 meter (3.3 feet), and the 2025 summer-average of chlorophyll-a (24 µg/L) was also slightly worse than the MPCA's shallow lake standard of 20 µg/L. Only three samples were collected on Keller Lake during the June–September period used to calculate summer averages, however.

Prior to the alum and sodium aluminate treatment, summer averages of total phosphorus had been consistently worse than the MPCA for the period 2009–2018. The 2023 summer average of total phosphorus (29 µg/L) two years after the second treatment was the best on record for Keller Lake. Water quality was somewhat worse in 2024 and 2025 compared to 2023. Despite the most recent data, the cumulative pre- and post- alum treatment data still show a statistically significant improvement in total phosphorus. The BDWMO will continue to monitor Keller Lake in 2026.

Crystal Lake (Burnsville & Lakeville)

Water Quality Monitoring—The BDWMO performed more detailed management-level monitoring of Crystal Lake in 2025. Crystal Lake continued to experience good water quality in 2025. Summer averages of total phosphorus (23 µg/L), chlorophyll-a (13 µg/L), and Secchi disc transparency (1.8 meters or 5.9 feet) were all better than the MPCA's deep lake water quality standards. Water quality was better in 2025 compared to 2024, but worse than in 2023. The 2023 summer average of chlorophyll-a (4 µg/L) was the best on record for the lake. There were no statistically significant trends in summer averages of water quality for the period 2016-2025.

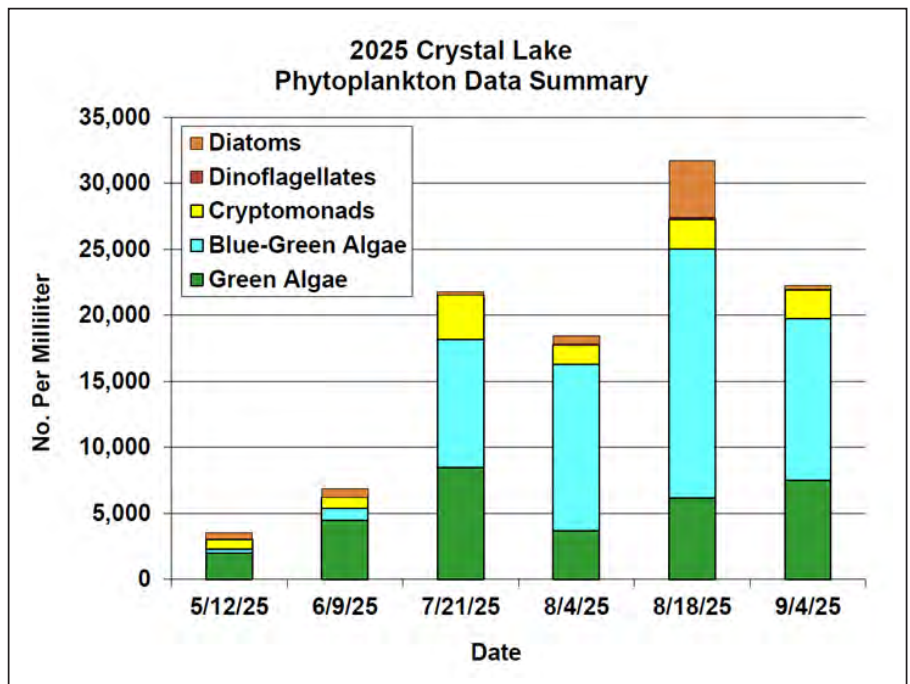
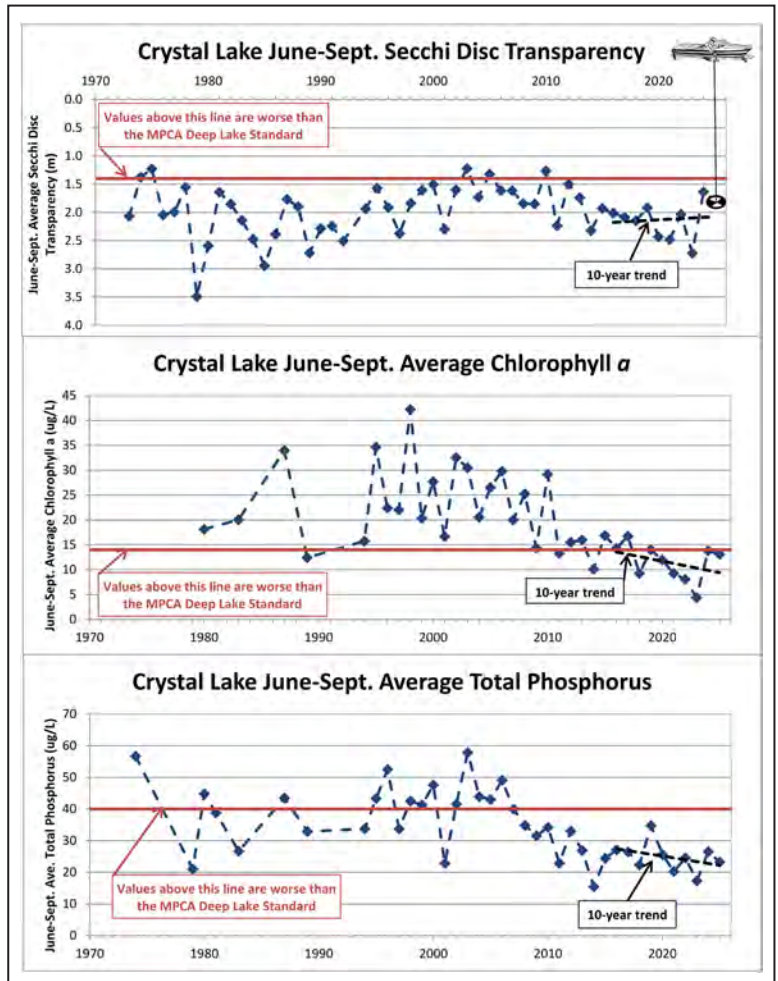
The BDWMO performed more detailed management-level monitoring of Crystal Lake in 2025. Phytoplankton monitoring performed on Crystal Lake in 2025 as part of this effort is discussed below. More detailed monitoring results are presented in a 2026 water quality monitoring report. The BDWMO will continue to monitor the water quality of Crystal Lake in 2026.

Crystal Lake 2025 Phytoplankton Monitoring

Samples of phytoplankton, microscopic aquatic plants, were collected from Crystal Lake to evaluate water quality and the quality of food available to zooplankton (microscopic animals). Phytoplankton numbers were very low in May and early June. The numbers of phytoplankton were higher in July, August, and September but remained low to moderate, generally reflecting the lake's good water quality.

Green algae are a good source of food for the lake's zooplankton and comprise most of the phytoplankton present in May and June. In July, the phytoplankton population began to shift from green algae to blue-green algae. Green algae were present throughout the summer, but comprised as a smaller percentage of the overall phytoplankton community (see figure at right).

Blue-green algae, which are associated with water quality problems and can be a source of health concerns (if certain species are present in significant numbers), were present in very small numbers in May and June. Blue-green algae numbers increased between June and July samples and were the dominant type present in August and September. The World Health Organization (WHO) has established that lakes with blue-green algae densities of less than 20,000 cells per milliliter pose no risk to the health of humans or pets. Blue-green



algae concentrations measured in Crystal Lake in 2025 were consistently below this threshold, although the late August sample was close (at approximately 18,000 cells per milliliter).



BLACK DOG

Watershed Management Organization

www.blackdogwmo.org

WANTED: Lakeville Alternate Commissioner

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

Email Zach Johnson at:
zjohnson@lakevillemn.gov

Board of Commissioners

Representing Burnsville:

Curtis Enestvedt, Chair
(serving since 2014)

Mike Hughes, Vice Chair
(serving since 2008)

Paul Below, Commissioner
(serving since 2024)

Todd Christopherson, Commissioner
(serving 2023 to 2025)

Ben Maas, Alternate
(serving since 2025)

Representing Apple Valley and Eagan:

Rollie Greeno, Commissioner
(serving since 2018)

Greg Helms, Alternate
(serving since 2011)

Representing Lakeville:

Scott Thureen, Secretary/Treasurer
(serving since 2008)

Alternate — Open position

Engineering Consultant:

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

Legal Consultant:

Cole Birkeland, Campbell Knutson, P.A.

Jared Shephard, Campbell Knutson, P.A.

**For more information,
please contact:**

**Daryl Jacobson, Administrator
Black Dog WMO**

City of Burnsville

13713 Frontier Court | Burnsville, MN 55337

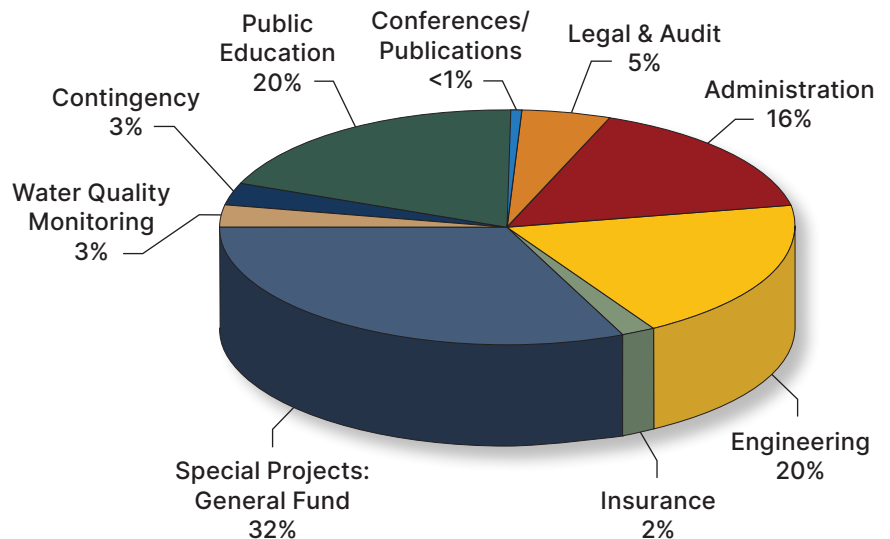
Phone: 952-895-4574

Daryl.Jacobson@burnsvillemn.gov

2026 Budget

Engineering	\$32,100
Legal and Audit	\$7,500
Administrative Services	\$25,000
Public Education	\$31,800
Insurance	\$2,500
Special Projects – General Fund	\$50,700
Conference/Publications	\$500
Water Quality Monitoring	\$5,600
Contingency	\$5,000

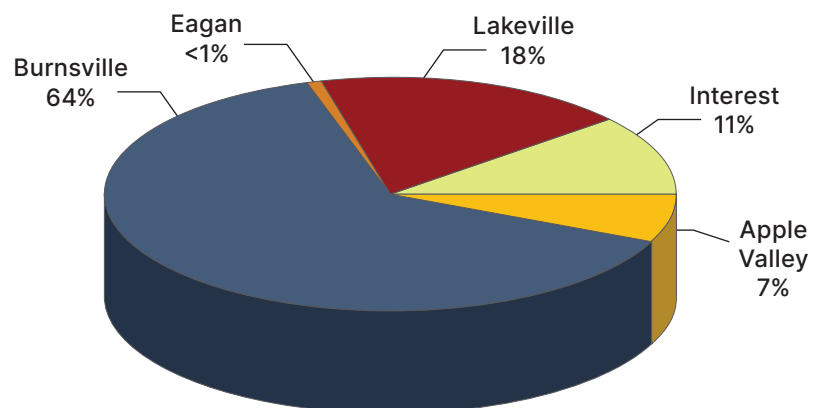
Total Expenditures..... \$160,700



2026 Income

Member Contributions	\$119,000
Interest	\$15,000

Total Income..... \$134,000



Regular board meetings...

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