Black Dog Watershed Management Organization <u>2019 ANNUAL ACTIVITY REPORT</u>



Prepared for Black Dog Watershed Management Commission

June 2020

2019 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 2019 Black Dog WMO Board Members and the city/cities they represent are listed below:

Board	I Members:	Term Ending
1.	Roger Baldwin (Chair) Representing the City of Burnsville	November 2020
2.	Greg Helms (Vice-Chair) Representing the Cities of Apple Valley and Eagan	November 2020
3.	Scott Thureen (Secretary/Treasurer) Representing the City of Lakeville	November 2020
4.	Tom Harmening Representing the City of Burnsville	November 2020
5.	Mike Hughes Representing the City of Burnsville	November 2020

Alternate Board Members:		Term Ending
1.	Rollie Greeno Representing the Cities of Apple Valley and Eagan	November 2020
2.	Curtis Enestvedt Representing the City of Burnsville	November 2020
3.	Vacant Representing the City of Lakeville	November 2020

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 2018. As the statutes require the solicitation to occur every two years, the Black Dog Watershed Management Commission will solicit proposals again in 2020. The Black Dog Watershed Management Commission Board retains 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 Roger Knutson 317 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 2012 Watershed Management Plan in October 2012. The member cities are required to update their local water management plans to conform to the 2012 Black Dog WMO Plan, per Minnesota Statute 103B.235. In 2014, the City of Burnsville updated their Water Resources Management Plan; the Black Dog WMO approved the updated plan at their May 21, 2014 meeting. At their November 16, 2016 meeting, the Black Dog WMO approved the City of Apple Valley's 2007 Surface Water Management Plan and associated city ordinances, finding them in conformance with the 2012 Black Dog WMO Plan. In 2017, the City of Burnsville updated their Water Resources Management Plan; the Black Dog WMO approved the City of Apple Valley's Surface Water Management Plan, the Updated plan at their September 20, 2017 meeting. At their July 18, 2018 meeting, the Black Dog WMO approved the City of Apple Valley's Surface Water Management Plan. At their December 19, 2018 meeting, the Black Dog WMO approved the City of Eagan's Storm Water Master Plan Update and Water Quality and Wetland Management Plan. At their February 20, 2019 meeting, the Black Dog WMO approved the City of Lakeville's Water and Natural Resources Management Plan.

2019 Black Dog WMO Activities

- Participated in the Metropolitan Council's Citizen-Assisted Lake Monitoring Program (CAMP) at the following Black Dog WMO-designated strategic water bodies: Crystal Lake, Keller Lake, Kingsley Lake, Lac Lavon, and Orchard Lake. Performed management level monitoring at Lac Lavon (see below). Completed water quality trend analyses on these lakes using the information gathered through CAMP and the more-detailed monitoring on Crystal Lake.
- Performed management level monitoring of Lac Lavon water quality, per guidance in the Black Dog WMO Plan. The monitoring consisted of collecting samples on 11 occasions—ice out and then May through September, twice per month. On each monitoring occasion, samples were collected at the deepest spot in the lake at seven depths, a surface sample (0-2 meters), plus six samples at 1-meter intervals from 3 meters to 8 meters depth. All of the samples were analyzed for total phosphorus; the surface water samples were also analyzed for chlorophyll-a. Secchi disc readings were also taken. Field probe measurements of water temperatures, dissolved oxygen concentrations, pH levels, specific conductivities, and oxidation/reduction potentials were collected at 1-meter depth intervals at the deepest spot in the lake. Field probe measurements of turbidity measurements were also taken on the surface water sample at the monitoring location. The Black Dog WMO also performed aquatic vegetation surveys on two occasions over the monitoring season. The work also included entering data into EQuIS database, and submitting the data to the MPCA. A technical memo summarizing the water quality monitoring results will be completed in 2020 and posted on the Black Dog WMO website.
- Completed the first phase of a two-phase alum treatment of Keller Lake as part of the Keller Lake Alum Treatment project. In December 2018, BWSR awarded the Black Dog WMO a \$230,000 Clean Water Fund grant for the alum treatment project, and executed an agreement with the Black Dog WMO in early 2019. In 2019, this project included preparation of contract documents, permitting, contract administration, treatment oversight, alum treatment expenses, and grant reporting. The project (and grant funding) will continue through 2021.
- Performed habitat monitoring of Lac Lavon, per the redesigned habitat monitoring program, which was implemented beginning in 2011 with Kingsley Lake. The redesigned program includes monitoring of a single water body on a cycle of once every five years. Monitoring included a meandering survey of the entire lake (in the submergent, emergent, and upland buffer zones), rather than only at sample plots, as done in the past. The lake was also evaluated for sedimentation and shoreline erosion problems. A memo summarizing the habitat monitoring results will be completed in 2020 and posted on the Black Dog WMO website.
- 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.

- Partnered with the Dakota County SWCD to fund two Landscaping for Clean Water workshops and two, two-part design workshops (i.e., two nights) in the Black Dog WMO area attended by homeowners.
- Continued implementing plan to accrue funds in 1) a Capital Improvement Fund, to be used for the current Keller Lake Alum Treatment project, and 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) in a General Fund Reserve to be used for the Black Dog WMO watershed plan ten-year update.
- Conducted an annual evaluation of the watershed programs and reported the results to member communities via the Watershed Annual Report and Annual Activity Report.
- Formulated and approved the 2020 Work Plan and Budget.
- Completed the 2018 Annual Finance Statement.
- 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 of the State reporting requirements and is submitted to the Minnesota Board of Water and Soil Resources (BWSR).
- Reviewed and responded to any issues and opportunities brought to the attention of the Black Dog WMO.
- Maintained, updated, and revised the Black Dog WMO website.

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

2019 Black Dog WMO Expenditures <u>ACTUAL</u> **BUDGET** 31,000 \$15,850 **General Engineering Support:** Consulting services for engineering support, such as to prepare for and attend meetings, review/respond to issues and opportunities, 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. \$39,200 \$34,065 **Special Projects – General Fund:** Lac Lavon Management Level Monitoring. \$25,700 \$17,450 Funding to conduct "management level" monitoring of the lake's water quality, per quidance in the Black Dog WMO Plan. Dakota County SWCD—Landscaping for Clean Water \$13,500 \$13,500 **Program Support** Funds to partner with the Dakota County SWCD Landscaping for Clean Water program for Black Dog WMO residents. 2018 Work Carried into 2019 \$14,504 \$3,115 Finalization of the 2018 Crystal Lake water quality monitoring report and the 2018 Crystal Lake habitat monitoring report. Special Projects – Capital Improvement Fund: \$96,700 Keller Lake Alum Treatment Feasibility Study & \$100,939 Implementation Planning. Funding to perform the 2019 Keller Lake alum treatment, including preparation of contract documents, permitting, contract administration, treatment oversight, alum treatment expenses, and grant reporting. Insurance: \$3,000 \$2,557 Legal and Audit: \$4,400 \$2,256 Consulting fees for legal and annual audit services. \$18,000 **Administrative Support:** \$19,296 City of Burnsville charges for providing administrative support to the Commission, including staff time, printing and postage. \$17,900 **Public Education:** \$17,136 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 the Black Dog WMO website.

Water Quality Monitoring: Cost associated with water quality monitoring programs, including the habitat monitoring program, Metropolitan Council's CAMP, and analysis of water quality data.	\$14,900	\$14,616
Conference / Publications: Commissioner training and education materials.	\$500	\$295
Contingency: Funding for unexpected expenses and/or new program opportunities approved by the Commission	\$5,000	\$0
Expenditure Total:	\$230,600	\$207,009

2019 Black Dog	WMO Revenues	;	
		BUDGET	ACTUAL
<u>Interest</u>		\$40	\$10,465
Member City Contributions (Fees)	\$131,000	\$131,000	
Member City Contributions—Capital Improveme	\$22,000	\$22,000	
<u>Grants</u>		\$0	\$100,939*
Fund Balance Utilized		\$0	\$0
F	Revenue Total:	\$153,040	\$264,404

* Although the grant proceeds received by the Black Dog WMO were \$115,000, the grant revenue earned (spent) in 2019 was \$100,939; therefore, the unspent grant revenue in 2019 was \$14,061.

2019 Black Dog WMO Planned Changes in Fund Balance				
	BUDGET	ACTUAL		
<u>Capital Improvement Fund:</u> This fund serves as a savings account for future internal load reduction projects stemming from TMDLs.	(\$54,700)	\$22,000		
General Fund Reserve: This fund serves as a savings account for the Black Dog WMO watershed plan ten-year update.	(\$22,860)	\$35,395		
Planned Changes in Fund Balance Total:	(\$77,560)	\$57,395		

2020 Black Dog WMO Goals & 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 Orchard Lake.

- 2. Perform additional (management level) monitoring on Orchard Lake, as recommended in the Black Dog WMO Watershed Management Plan. The monitoring will consist of collecting samples on 11 occasions—ice-out and then May through September, twice per month. On each monitoring occasion, samples will be 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 of the samples will be analyzed for total phosphorus. In addition, Secchi disc readings will be taken, and the surface samples will be analyzed for chlorophyll-a. 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 work includes field work, lab work, QA/QC of lab data (including coordination with lab), entering data into EQuIS database, submitting the data to the MPCA, preparing a technical memo summarizing the monitoring results, and preparing a presentation for a Commission meeting. The City of Lakeville will perform aquatic plant surveys in June and August, and share the results with the Black Dog WMO.
- Continue implementing the Keller Lake Alum Treatment project. The 2020 work includes grant administration. BWSR awarded the Black Dog WMO a \$230,000 Clean Water Fund Grant in December 2018, and executed an agreement with the Black Dog WMO in early 2019. The grant covers 80% of the project cost (grant requires a 20% local share).
- 4. Perform habitat monitoring of Keller Lake. Habitat monitoring is performed at one strategic water body per year, such that all five strategic water bodies will be completed over a five-year cycle. Monitoring will include a meandering survey around the entire lake as well as the previously established sample plots (in the emergent and upland buffer zones) and identification of sedimentation and shoreline erosion problems. The City of Apple Valley's and City of Burnsville's 2020 aquatic plant survey results for Keller Lake will be used to evaluate the submergent zone. The work includes analysis and reporting of 2020 data, and preparation of a presentation for a Commission meeting, which may need to be carried over into 2021.
- 5. 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).

- 6. Partner with the Dakota County SWCD by providing funding and 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.
- 7. Partner with the Dakota County SWCD to fund two Landscaping for Clean Water workshops and two design workshops (four evenings) in the Black Dog WMO area.
- 8. Complete the 2019 Financial Audit—statute changes allow the Black Dog WMO to perform audits every five years, rather than every year. Annual finance statements will be prepared in the intervening years between audits.
- 9. As budget allows, prepare up to two educational pieces and/or presentations for the Commission regarding new technology (e.g., new stormwater best management practices, new lake treatment technologies, etc.) or aquatic invasive species.
- 10. Apply for grants and/or assist member cities with grant applications.
- 11. Assist with BWSR watershed-based funding grant application and work plan.
- 12. Formulate and approve the year 2021 Work Plan and Budget.
- 13. Review and respond to any issues and opportunities brought to the attention of the Black Dog WMO.
- 14. Maintain and update web site.
- 15. Respond to requests to partner with member communities and Dakota County on educational outreach programs.
- 16. Keep abreast of changes to the TMDL program, including additions to/removals from the impaired waters list and the listing criteria.
- 17. Review revisions to local water management and comprehensive plans as needed. No reviews are expected in 2020, as the last of the member cities' plans were reviewed and approved in 2019.
- 18. Continue implementing plan to accrue funds in 1) a Capital Improvement Fund, to be used for the current Keller Lake Alum Treatment project, and 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) in a General Fund Reserve to be used for the Black Dog WMO watershed plan tenyear update.
- 19. Begin preliminary work on updating the Watershed Management Plan (e.g., scoping, goals, etc.) in the last half of 2020.

-See Attached Watershed Annual Report for information on the 2020 Budget-

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Implementation Task	Original Implementation Date from Plan	Status/Accomplishments	Next Steps
Administrative and Operational—Watershed-wide			
 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: Administrator (City of Burnsville) Black Dog WMO consulting engineer Black Dog WMO Attorney 	Ongoing	Black Dog WMO continues to perform these actions as needed/requested. In 2019, this included coordinating with BWSR regarding BWSR's final policy for its watershed-based funding program.	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.	None.
Review Lakeville local watershed management plan	2014	Black Dog WMO approval of plan in 2019.	None.
Review Apple Valley local watershed management plan	2014	Black Dog WMO approval of plan in 2018.	None.
Review Eagan local watershed management plans	2014	Black Dog WMO approval of plan in 2018.	None.
 Miscellaneous reviews including, but not limited to: Review city comprehensive plan changes that require review by the Metropolitan Council Review projects for consistency with the Black Dog WMO plan, as requested by member cities or other governmental agencies Review and approve any proposed changes to the intercommunity stormwater system that are inconsistent with an approved local plan Review and approve changes to an approved local plan that would cause the local plan to be inconsistent with the Black Dog WMO plan 	Ongoing	Black Dog WMO continues to perform these reviews as needed/requested.	Continue to perform as needed/requested.

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.
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. The last audit was prepared for year 2014; the next audit will need to be prepared for year 2019.	Prepare next audit in 2020; prepare annual finance statements in intervening years.
Update Black Dog WMO Watershed Management Plan	2020	Black Dog WMO adopted its latest Watershed Management Plan in 2012.	Planning for an updated Plan will begin in 2020.
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.

Implementation Task	Original Implementation Date from Plan	Status/Accomplishments	Next Steps
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.	Continue to maintain and update website.
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	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. Black DogWMO funded 4 workshops in 2019 (2 Landscaping for Clean Water Intro Workshops and 2 Landscaping for Clean Water Design Workshops).	Continue providing watershed annual report to member cities and partnering with Dakota SWCD to fund workshops.

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	Since 2009, Black Dog WMO has partner with the Dakota County SWCD by provi funding and support to install water qui improvement projects through the Landscaping for Clean Water Program (formerly Blue Thumb and Community Conservation Cost Share Programs) for Dog WMO residents. Projects have inclu- rainwater gardens, native gardens, shor improvements, and a bioretention site. <u>Year</u> 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 Total 157	ding SWCD to fund water quality ality improvement projects. Black uded
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 fu water quality improvements are needed below for Black Dog WMO's Keller Lake implementation project.	urther I. See

Implementation Task	Original Implementation Date from Plan	Status/Accomplishments	Next Steps
 Annual CAMP water quality monitoring, performing trend analysis, and establishing action levels for the following strategic waterbodies: Crystal Lake Keller Lake Kingsley Lake Lac Lavon Orchard Lake 	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: Crystal Lake	Ongoing	Performed for one lake annually; most recent monitoring includes Orchard Lake in 2017, Crystal Lake in 2018 and Lac Lavon in 2019.	Continue cycle of monitoring: Orchard Lake in 2020, Crystal Lake in 2021, and Lac Lavon in 2022.
Habitat monitoring at 5-year intervals for the following strategic waterbodies: • Crystal Lake • Keller Lake • Kingsley Lake • Lac Lavon • Orchard Lake	Ongoing	Implementation of the redesigned programbegan in 2011; habitat monitoring has beenperformed as shown below:Kingsley Lake2011, 2016Orchard Lake2012, 2017Crystal Lake2013, 2018Lac Lavon2014, 2019Keller Lake2015	Continue cycle of monitoring: Keller Lake in 2020, Kingsley Lake in 2021, Orchard Lake in 2022, Crystal Lake in 2023, and Lac Lavon in 2024,
Implement lake water quality management actions recommendedin Table 4-1 of the 2012 Black Dog WMO Plan, depending on waterquality trends and comparison of recent water quality to actionlevel, for the following strategic waterbodies:• Kingsley Lake• Lac Lavon• Orchard Lake	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.

Implementation Task	Original Implementation Date from Plan	Status/Accomplishments	Next Steps
Capital Projects—Crystal Lake			
 Implement recommended watershed projects to reduce runoff- borne phosphorus loads, as identified in the TMDL, that may include: Street sweeping Native shoreline buffers Public outreach and education 	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: In-lake alum treatment Aquatic macrophyte management Internal load reduction in upstream Keller Lake 	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 will occur in spring or fall of 2021. Other potential future projects are listed in Table 5-3 of the 2012 Black Dog WMO Plan; no other projects are currently planned.	Continue implementation of the Keller Lake Alum Treatment project in 2021. Implement other projects when recommended.

Implementation Task	Original Implementation Date from Plan	Status/Accomplishments	Next Steps
Capital Projects—Keller Lake			
 Implement recommended watershed projects to reduce runoff- borne phosphorus loads, as identified in the TMDL, that may include: Construction of a water quality treatment pond in Crystal Beach Park Construction of a water quality treatment pond on southwest side of Keller Lake Street sweeping Native shoreline buffers Public outreach and education 	Ongoing 2013 – 2015 (Crystal Beach Park project) 2018 (SW Keller Lake project)	Member cities perform projects, with possible grant funding obtained by Black Dog WMO; Black Dog WMO performs ongoing public education. Crystal Beach Park project: the City of Burnsville completed the project in 2017. 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. 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 will construct one of the projects (Redwood Pond) in 2020.	Burnsville will construct SW Keller Lake project if additional load reductions required. Apple Valley will construct the Redwood Pond project in 2020 and implement other projects from the subwatershed assessment as budget and opportunity allows.

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: In-lake alum treatment Aquatic macrophyte management 	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 will occur in spring or fall of 2021. Other potential future projects are listed in Table 5-3 of the 2012 Black Dog WMO Plan; no other projects are currently planned.	Perform second Keller Lake alum treatment in 2021.
Capital Projects—Orchard Lake, Kingsley Lake, and Lac Lavon			
 Implement water quality improvement measures in Orchard Lake, Kingsley Lake, and Lac Lavon as identified in future diagnostic feasibility studies, that may include: Watershed projects (e.g., stormwater treatment ponds, rainwater gardens, infiltration basins) Internal load reduction projects (e.g., in-lake alum treatment, aquatic macrophyte management) 	As needed	Black Dog WMO will implement projects as necessary; no projects are currently planned.	Implement projects as necessary; no projects planned.

2019 Watershed Annual Report

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Black Dog Watershed Management Organization 2019 WATERSHED ANNUAL REPORT

Published April 2020

Our mission is . . .

To provide leadership in the management and stewardship of the water resources in northwestern Dakota County, Minnesota, through the cooperation of four cities and the involvement of local stakeholders.

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, captial 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 2019, and plans for 2020 and beyond.

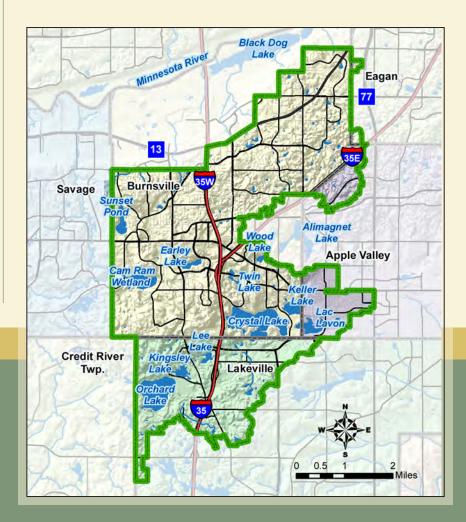
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What is the Black Dog Watershed Management Organization?

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.



More Improvements for Keller Lake

Phase I of the Keller Lake Alum Treatment is Complete

In 2019, the BDWMO received a BWSR Clean Water Fund grant for an alum treatment project to improve Keller Lake's water quality. The alum treatment was divided into two phases to increase the long-term effectiveness. Phase I occurred in June, 2019 when 21,109 gallons of chemical precipitant were applied to Keller Lake (see page 5 for story on Keller Lake water quality monitoring). It is expected that, following completion of both phases of the in-lake aluminum treatment, the annual average TP (total phosphorus) load to Keller Lake will be reduced by 80% or 186 lbs/yr. The in-lake aluminum application represents most of the remaining TP load reduction required to ensure that Keller Lake water quality can meet the MPCA's shallow lake standards on a consistent basis.

Secondary benefits of this project include improving water clarity and providing the means for attaining a healthy native plant community in the lake. This project will also improve the water quality of Crystal Lake, which is immediately downstream of Keller Lake. Protecting the water quality of Crystal Lake is also important as it was recently removed from the impaired waters list for eutrophication (see page 6 for story on Crystal Lake water quality monitoring).



Alum treatment in action

How Does Alum Treatment Work?

When aluminum is applied to lake water, it binds with phosphorus in the lake sediment, forming a compound. After it binds with the aluminum, the phosphorus no longer supplies nutrients to lake algae, reducing its growth.

Two forms of aluminum are typically applied to lakes: alum and sodium aluminate. When alum is added to a lake, it will lower the pH (make it more acidic), while sodium aluminate will raise the pH (more basic). Therefore, these two chemicals are often added in combination to neutralize the pH effects during treatment.



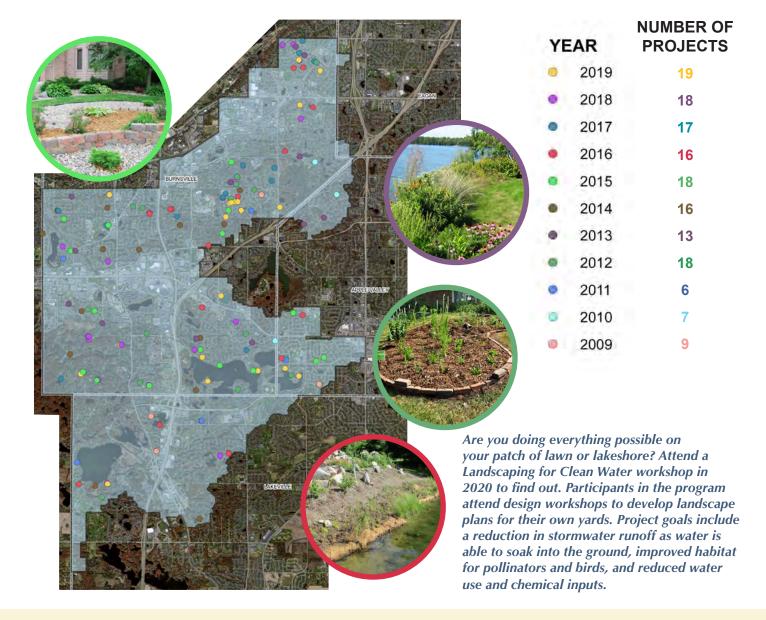
City of Burnsville is Developing Use Attainability Analysis for Keller Lake

Based on the updated lake and watershed condition, the City of Burnsville is developing an Use Attainability Analysis (UAA) of Keller Lake. The specific purpose of the UAA is to assess and develop an achievable water clarity goal for Keller Lake using the results of watershed and in-lake water quality modeling. The study approach includes a detailed evaluation of the historical lake water quality dataset for Keller Lake to assess what level of water clarity can be achieved based on what is known about the current lake and watershed conditions. This assessment will require an evaluation of the long-term trends and interrelationships of all of the water quality and ecological variables, including consideration of the applicable state standards and goals from other similar lakes in the region. As a part of the process, stakeholders will learn more about how varying levels of lake water clarity (and associated variables) correspond with the potential lake uses. Knowing what uses are intended for Keller Lake will ultimately inform the decision-making on the recommended lake water quality goals. A public meeting and draft UAA report are planned for summer 2020.

Landscaping for Clean Water—A Look at the Past Decade

As we enter 2020, it's instructive to look back on the progress made over the past decade. From 2009 through 2019, hundreds of people participated in the Dakota SWCD's Landscaping for Clean Water program workshops. Nearly 160 projects were completed within the BDWMO

through the support of the BDWMO for the program. The map below shows the project locations, color-coded by year. Projects included the creation of native gardens, raingardens, or native shorelines that stabilize soil. A few past projects are featured in the photos below.



Who Can Get a Grant?

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.

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. In 2019, 97 homeowners attended Landscaping for Clean Water Introductory classes hosted by the BDWMO; 54 went on to design projects. The BDWMO provided 19 construction funding grants—10 grants went to landowners who

attended the Burnsville introductory workshops, with the other 9 grants going to landowners who live in the BDWMO, but attended the Introductory Class in another city or previous year. The BDWMO will fund up to 18 Landscaping for Clean Water projects in 2020. Homeowners must attend workshops to apply for grants.

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 www.dakotaswcd. org/costshare.html.

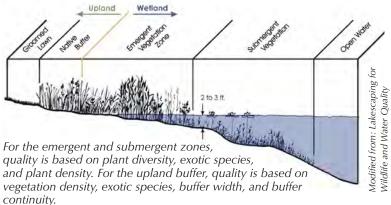
Looking at Lac Lavon

The BDWMO is pleased to report that Lac Lavon continues to have excellent water quality. The summer-average Secchi disc transparency (a measure of water clarity) in 2019 was 4.0 meters (13 feet), which is significantly better than the MPCA deep-lake water quality standard of 1.4 meters. In addition to measuring water clarity with a Secchi disc, concentrations of chlorophyll-a (a measure of algal abundance) and total phosphorus (the nutrient that drives algal growth) were also monitored in Lac Lavon. The summer-average concentrations of chlorophyll-a (2.8 μ g/L) and total phosphorus (13 μ g/L) were both better than the MPCA deep-lake water quality standards of 14 µg/L and 40 µg/L, respectively. Lac Lavon is a flooded former gravel pit with a small watershed, and receives much of its water from groundwater inflow. Therefore, the amount of external phosphorus entering Lac Lavon is relatively small, and the process of eutrophication (i.e. the process by which nutrients build up in a waterbody) in Lac Lavon is expected to be slow.

Surveys of Lac Lavon's aquatic vegetation were performed in June and August of 2019. The vegetation surveys found an abundance of both native and non-native aquatic plants. A total of 12 native species were identified in the submergent zone of Lac Lavon. The density of native plants was relatively moderate, including three species that are considered indicative of good water quality: longleaf pondweed, muskgrass, and white water crowfoot. The non-native aquatic plants that were found in 2019 include curly-leaf pondweed and Eurasian watermilfoil. Curly-leaf pondweed dies off in mid-summer, earlier than native plants, releasing nutrients that can contribute to summer algae blooms. Eurasian watermilfoil was found to

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.





be growing in high densities in a few areas of Lac Lavon, and may be crowding out native plants in these areas. The non-native purple loosestrife, an emergent wetland plant, was also found along the shoreline in several locations. The non-native brittle naiad was found in Lac Lavon in previous years, but was not encountered during the 2019 surveys. Lac Lavon is one of only a handful of Minnesota lakes that are known to be infested with brittle naiad. True to its name, brittle naiad easily breaks into fragments, which can spread and grow into new plants. Invasive non-native aquatic plants can be spread to other lakes by transport of seeds and/or plant fragments, and lake users should take care in removing all plant fragments from boats and other equipment when leaving the water to avoid spreading nonnative plants to other waterbodies.

The BDWMO will continue to monitor the water quality of Lac Lavon in 2020. Habitat monitoring is scheduled again for Lac Lavon in 2024.

In 2019, the BDWMO monitored the habitat quality of Lac Lavon. 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.

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.)

See page 7 for Lac Lavon habitat monitoring results. See www.blackdogwmo.org for the full report.

Water Quality Monitoring Program

The BDWMO and member cities continued to monitor several of its lakes during 2019 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.

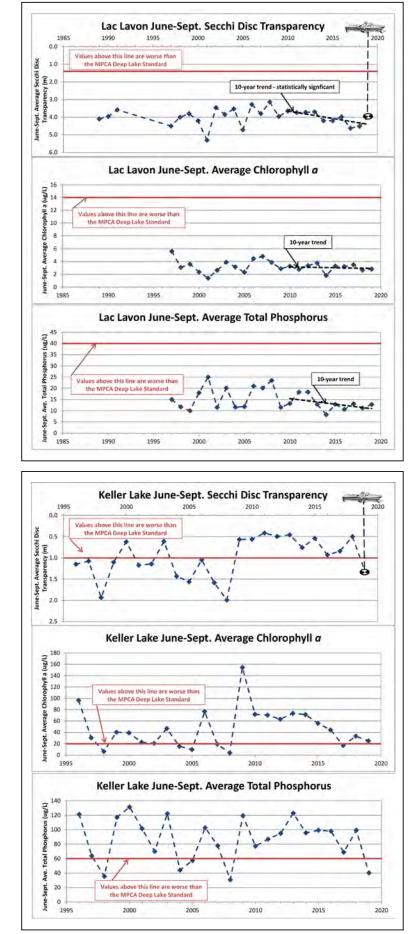
Lac Lavon (Apple Valley & Burnsville)

Water Quality Monitoring—In 2019, the BDWMO performed more detailed management level monitoring on the lake (see story on page 4). Habitat monitoring was also performed in 2019 (see page 7 for results).

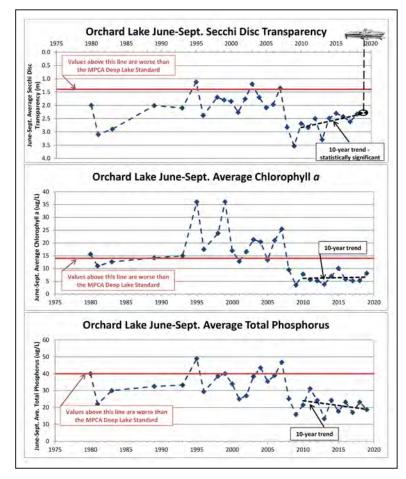
Keller Lake (Burnsville & Apple Valley)

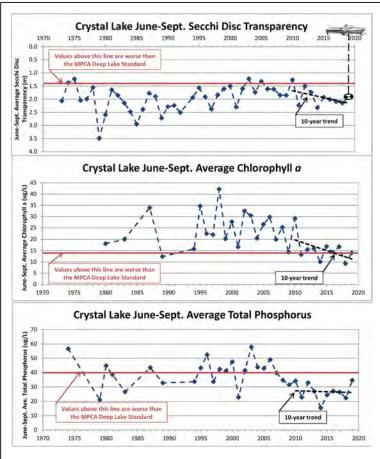
Water Quality Monitoring—An alum treatment was conducted on Keller Lake in spring 2019, resulting in improved water quality. (See story on page 2). The 2019 Secchi disc transparency summer average was 1.3 meters (4.3 feet), which is better than it has been since 2008, and is better than the MPCA's shallow lake standard of 1.0 meter (3.3 feet). The summer-average total phosphorus (40 µg/L) was also better than it has been since 2008, and was better than the MPCA shallow lake standard of 60 µg/L. The 2019 summer-average of chlorophyll-*a* (25 µg/L) was worse than the MPCA's shallow lake standard of 20 µg/L.

Trend analyses were not completed for Keller Lake because of the alum treatment that was conducted in spring 2019. 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 2020. Habitat monitoring is also scheduled for the lake in 2020.



2019 Monitoring Results





Orchard Lake (Lakeville)

Water Quality Monitoring—The 2019 summeraverage Secchi disc transparency was 2.3 meters (7.6 feet), which is the same as the 2018 summer average, and better than the MPCA deep-lake water quality standard of 1.4 meters. The 2019 summer average of total phosphorus (19 μ g/L) was better than the 2018 summer average, and is better than the MPCA's deep lake standard (40 μ g/L). The summer-average chlorophyll-*a* (8.2 μ g/L) was worse than the 2018 summer average, but better than the MPCA's deep lake standard (14 μ g/L). The BDWMO will continue to monitor the water quality of Orchard Lake in 2020. Habitat monitoring is scheduled for the lake in 2022.

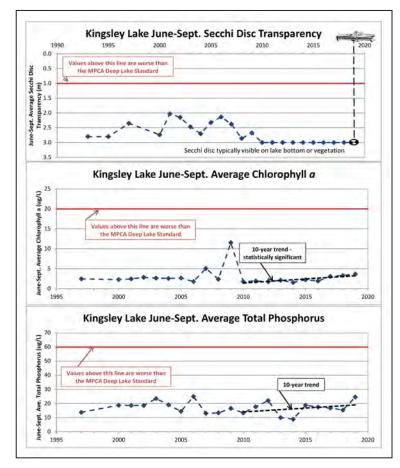


Crystal Lake (Burnsville & Lakeville)

Water Quality Monitoring—The 2019 summeraverage Secchi disc transparency was 1.9 meters (6.2 feet), which is similar to other recent summer averages, and better than the MPCA deep-lake water quality standard of 1.4 meters. The 2019 summer average of total phosphorus (35 μ g/L) was worse than the 2018 summer average, but better than the MPCA's deep lake standard (40 μ g/L). The summer-average chlorophyll-*a* (14 μ g/L) was worse than the 2018 summer average, and is equal to the MPCA's deep lake standard (14 μ g/L). The BDWMO will continue to monitor the water quality of Crystal Lake in 2020. The next Crystal Lake habitat monitoring is scheduled for 2023.



2019 Monitoring Results



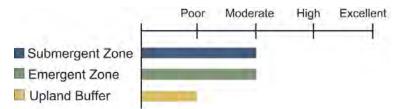
Kingsley Lake (Lakeville)

Water Quality Monitoring—Water quality monitoring data from 2019 show continued excellent water quality in Kingsley Lake. The lake 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 2019 summer averages of total phosphorus (25 µg/L) was the highest it's been since 2006, but still considerably better than the MPCA shallow lake standard (60 µg/L). The 2019 summer average chlorophyll-*a* (3.7 µg/L) was similar to years 2015-2018, and is considerably better than the MPCA's shallow lake standard (20 µg/L). The BDWMO will continue to monitor the water quality of Kingsley Lake in 2020. Habitat monitoring is scheduled for Kingsley Lake in 2021.

* 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 above.

Lac Lavon Habitat Monitoring Results for 2019

As mentioned in the article on page 4, Lac Lavon habitat monitoring was conducted in 2019. The BDWMO made the following quality ratings, based on the monitoring results:



Submergent zone quality rating = Moderate

Rating based on averaging four criteria:

- 1. high total number of native species (12)
- 2. moderate average native plant density (1.5)
- 3. moderate rating for average exotic species density (1.7)
- 4. moderate coefficient of conservatism value (mean C-value) (4.5)

Curly-leaf pondweed, a dominant species found every year in Lac Lavon, was present at 29 percent of sample points shallower than the maximum depth of plant growth in June. In August, (after seasonal die-off) only a handful of the plants were observed. This die-off creates a sudden loss of habitat and releases nutrients into the water that can produce algal blooms and create turbid water conditions. Eurasian watermilfoil was also found in Lac Lavon in 2019 and in previous years. Eurasian watermilfoil has fast growing stems and often branches out and covers the water surface, which impedes boating, makes water recreation difficult, and often shades out slower-growing native plants.

The BDWMO recommends continued monitoring, control, and management of these invasive species.

- **Emergent vegetation zone quality rating = Moderate** Rating based on averaging four criteria:
 - 1. excellent number of native wetland plant species (38)
 - 2. high rating for % coverage of exotic species (26-50%)
 - 3. a poor mean C-value rating (2.4)
 - 4. poor rating for total vegetative cover (0-25%)

Narrowleaf cattail is a dominant non-native invasive species found in the lake. Purple loosestrife, another nonnative invasive plant species, is present in shallow open water and along the shoreline and has been managed for years through the release of beetles, which eat the plants. At the southwest portion of the lake, the emergent shoreline adjacent to the Burnsville prairie restoration project was seeded with native emergent vegetation.

The BDWMO recommends continued control and management of purple loosestrife.

Upland buffer zone quality rating = Poor

- 56 native species and 41 exotic species observed
- Exotic plant species > 40% of upland vegetative cover. The mean C-value rating is 2.0 (poor).
- Upland buffer (within city-owned property) along the western and northeastern portions of the shoreline is wide, providing wildlife habitat and shoreline protection.
- The majority of residential properties are dominated by maintained lawn grasses and sand beaches with little to no naturalized vegetation. The majority of the residential shoreline properties on Lac Lavon have the potential to provide a 50-foot naturalized buffer without altering any structures. One residential property has a naturalized buffer width adequate for wildlife protection (≥100 feet).
- 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

Board of Commissioners

Representing Burnsville:

Roger Baldwin, Chair (serving since 1996) Tom Harmening, Commissioner (serving since 2002) Mike Hughes, Commissioner (serving since 2008) Curtis Enestvedt, Alternate (serving since 2014)

Representing Apple Valley and Eagan:

Greg Helms, Vice Chair (serving since 2011) Rollie Greeno, Alternate (serving since 2018)

Representing Lakeville:

Scott Thureen, Secretary/Treasurer (serving since 2008) Vacant, Alternate

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

Legal Consultant: Roger Knutson, Campbell Knutson, P.A.

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.

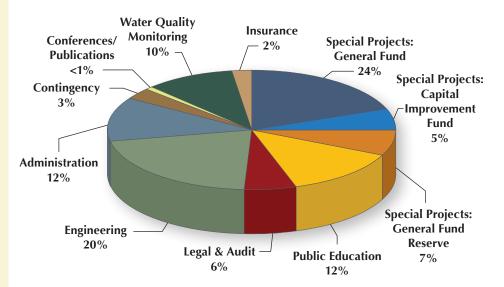
For more information, please contact:

Daryl Jacobson, Administrator Black Dog WMO City of Burnsville 13713 Frontier Court Burnsville, MN 55337 Telephone: 952-895-4574 Fax: 952-895-4531

Website: www.blackdogwmo.org

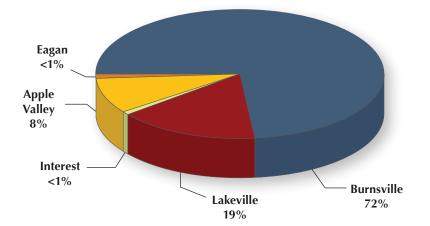
2020 Expenditures

Engineering	\$31,000
Legal and Audit	\$8,400
Administrative Services	\$18,000
Public Education	\$17,900
Insurance	\$3,000
Special Projects – General Fund	\$36,500
Special Projects - Capital Improvement Fund	
Special Projects – General Fund Reserve	\$10,000
Conference/Publications	\$500
Water Quality Monitoring	\$15,400
Contingency	\$5,000
Total Expenditures	\$152,700



2020 Income

Member Contributions	\$153,000
Interest	\$40
Total Income	\$153.040



2019 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 2019, the strategic water bodies included:

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

Some of the 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 also display the trend lines for the past 10 years' water quality data, if a trend was observed. The linear best-fits were determined using a "least squares" regression analysis of the summer averages of the past 10 years (2010—2019) of data. Trend analyses were not performed for Keller Lake because of the alum treatment that was conducted in spring 2019. The 2019 CAMP data provided by the Metropolitan Council were preliminary data at the time this report was prepared.

Second are a series of tables that show the results of the water quality monitoring for each data collection date in 2019.

Water quality monitoring data is also available for other "non-strategic" water bodies in the Black Dog WMO. In 2019, the member cities funded participation in the CAMP program for the following non-strategic water bodies

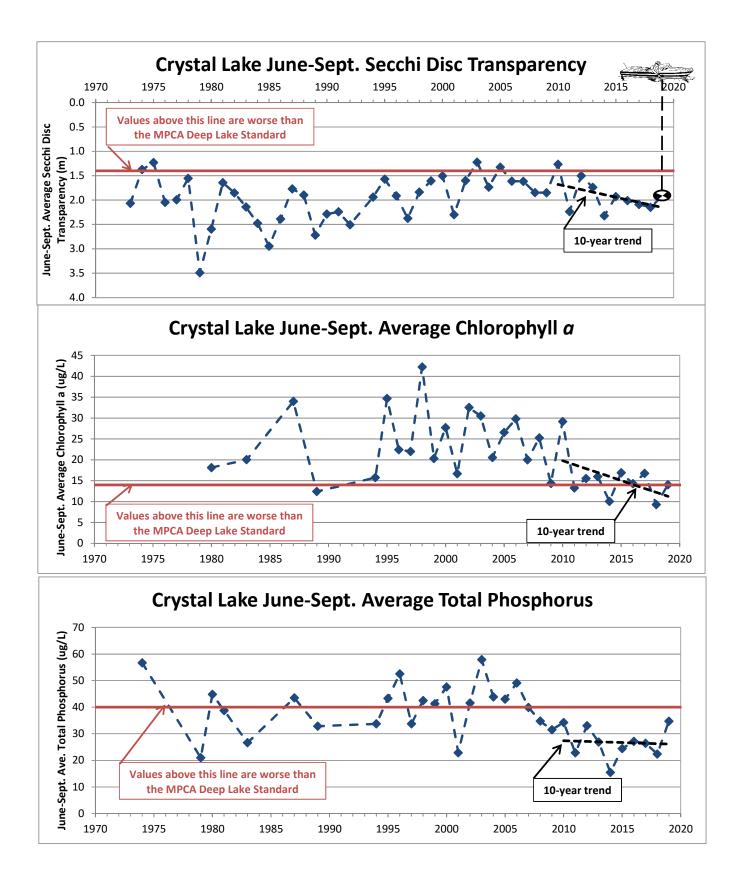
- Earley Lake (City of Burnsville)
- Twin Lake (City of Burnsville)
- Sunset Pond (City of Burnsville)
- Wood Pond (City of Burnsville)
- Lee Lake (City of Lakeville)

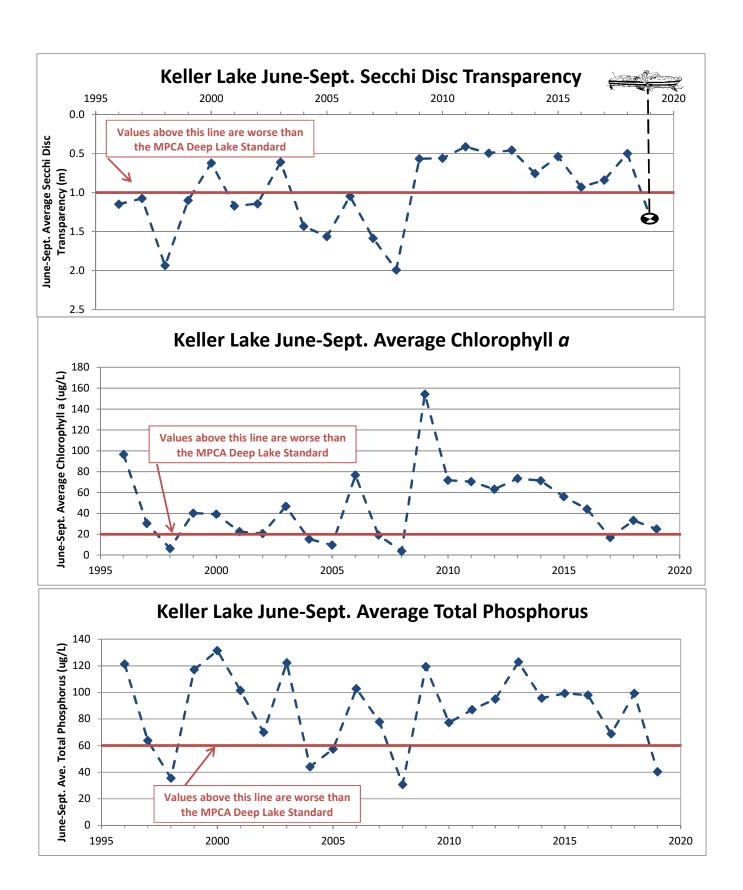
Results of the 2019 water quality monitoring of these water bodies is available from the Metropolitan Council's CAMP program.

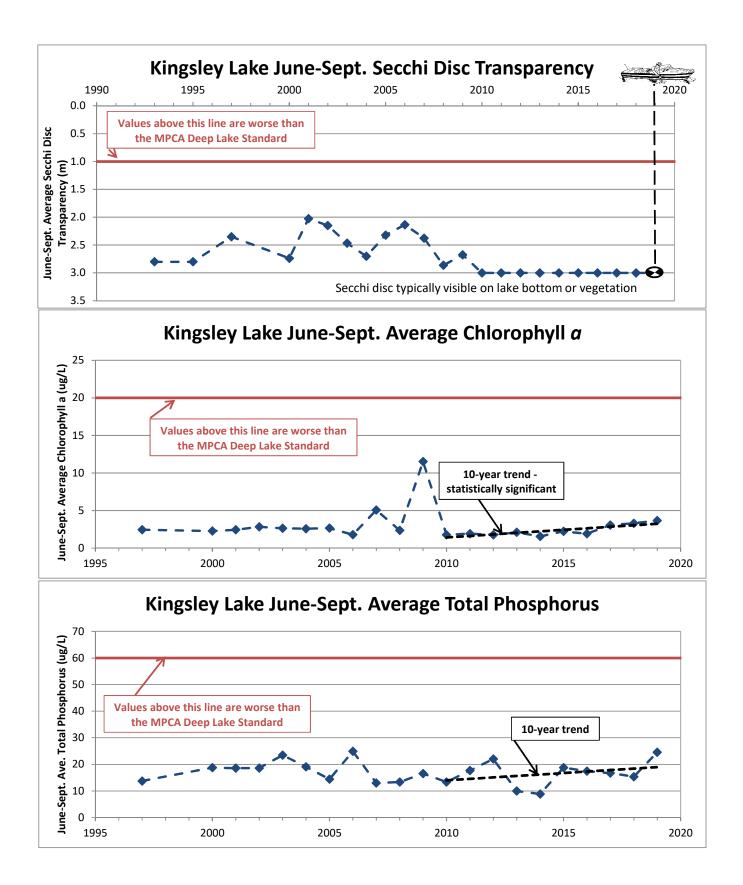
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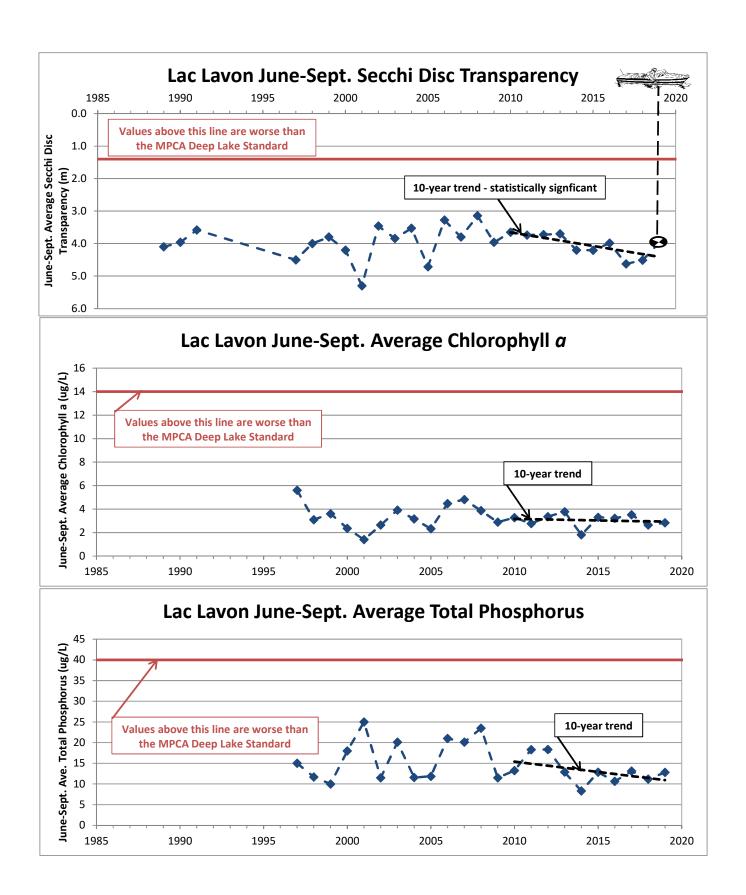
Historical Water Quality Data—Figures

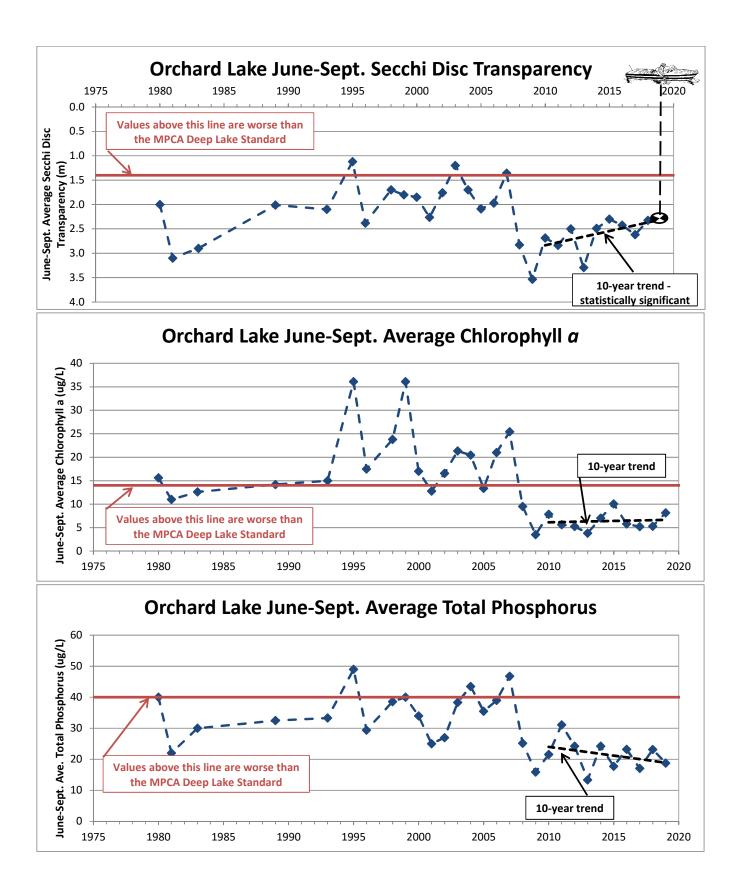
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2019 Water Quality Data—Tables

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Table 1:	Crystal Lake 2019 Water Quality Data	I
Citizen-	Assisted Monitoring Program	

Date & Time	Sample Depth (m)	Secchi Disc Transparency (m)	Chlorophyll-a, Pheophytin Corrected (μg/L)	Total Phosphorus (mg/L)	Nitrogen, Total Kjeldahl (mg/L)	Temperature (°C)	Comment
4/19/2019 9:30	0	3.4	<1.0	0.019	0.57	18.0	
5/2/2019 9:30	0	3.3	2.1	0.022	0.63	18.5	
5/17/2019 9:30	0	3.3	1.5	0.038	0.65	18.9	
5/31/2019 12:04	0	2.4	3.5	0.021	0.60	18.9	
5/31/2019 12:04	0			0.031	0.46		field replicate
6/12/2019 15:00	0	4.0	3.6	0.025	0.81	21.6	
6/26/2019 13:00	0	2.3	3.9	0.025	0.39	21.9	
7/8/2019 15:00	0	2.3	6.8	0.019	0.49	27.3	
7/12/2019 11:38	0	2.0	16	0.018	0.59	26.2	
7/12/2019 11:38	0			0.027	0.65		field replicate
7/24/2019 12:30	0	1.9	17	0.036	0.56	26.0	
8/9/2019 8:30	0	1.4	21	0.043	0.57	25.4	
8/21/2019 13:30	0	1.4	21	0.022	0.68	24.4	
9/4/2019 10:30	0	1.4	18	0.033	0.66	21.2	
9/19/2019 10:30	0	1.3	18	0.089	0.74	21.7	
9/30/2019 13:00	0	1.2	15	0.033	0.69	18.1	
10/17/2019 11:00	0	2.0	16	0.020	0.46	9.8	

Notes

< 1.0 Indicates result is below the method detection limit.

Table 2: Keller Lake 2019 Water Quality DataCitizen-Assisted Monitoring Program

Date & Time	Sample Depth (m)	Secchi Disc Transparency (m)	Chlorophyll-a, Pheophytin Corrected (μg/L)	Total Phosphorus (mg/L)	Nitrogen, Total Kjeldahl (mg/L)	Temperature (°C)	Comment
5/11/2019 18:30	0	1.1	7.7	0.058	0.80	15.5	
5/11/2019 18:30	0			0.061	0.98		field replicate
5/26/2019 18:30	0	1.2	3.0	0.050	0.78	21.5	
6/13/2019 18:00	0	+2.3	4.4	0.031	0.62	25.7	
6/26/2019 17:00	0	1.5		0.041	1.7	26.7	
6/26/2019 17:00	0			0.046	1.4		
7/9/2019 18:30	0	1.1	15	0.046	1.9	27.0	
7/25/2019 19:15	0	1.0	44	0.047	1.9	27.0	
8/6/2019 16:15	0	1.0	38	0.039	1.5	26.1	
9/20/2019 11:00	0	1.0	22	0.039	1.2		
9/20/2019 11:15	0	1.1	25	0.032	1.2	23.4	field replicate
10/8/2019 9:00	0	1.3	14	0.042	0.71	12.8	
10/18/2019 12:00	0	2.0	4.7	0.031	0.60	9.1	

Notes + 2.8 Secchi disk was resting on vegetation or lake bottom.

Table 3: Kingsley Lake 2019 Water Quality DataCitizen-Assisted Monitoring Program

Date & Time	Sample Depth (m)	Secchi Disc Transparency (m)	Chlorophyll-a, Pheophytin Corrected (μg/L)	Total Phosphorus (mg/L)	Nitrogen, Total Kjeldahl (mg/L)	Temperature (°C)	Comment
5/2/2019 14:34	0	>3.2	1.9	0.012	0.35	11.6	
5/13/2019 9:40	0	+3.3	1.3	~0.007	0.33	15.3	
5/29/2019 14:20	0	+3.5	2.3	0.013	0.33	19.0	
5/29/2019 14:20	0			0.012	0.35		
6/10/2019 12:45	0	>3.4	1.3	0.018	0.40	23.5	
6/28/2019 9:05	0	3.3	4.1	0.026	0.43	23.5	
7/9/2019 9:05	0	3.2	3.6	0.019	0.46	26.9	
7/23/2019 9:00	0	3.8	4.1	0.031	0.45	26.6	
8/8/2019 9:20	0	+3.8	3.2	0.028	0.44	27.0	
8/23/2019 9:45	0	+3.1	4.6	0.030	0.46	24.1	
9/3/2019 9:45	0	3.3	4.8	0.020	0.40	22.3	
9/16/2019 8:45	0	+3.7				20.6	
10/4/2019 14:00	0	+3.5	5.6	0.027	0.40	14.3	

<u>Notes</u>

+ 3.3 Secchi disk was resting on vegetation or lake bottom.

< 1.0 Indicates result is below the method detection limit.

~ 0.007 Indicates result is above the method detection limit, but below the method reporting limit.

Date & Time	Sample Depth (m)	Secchi Disc Transparency (m)	Chlorophyll-a, Pheophytin Corrected (μg/L)	Total Phosphorus (mg/L)	Nitrogen, Total Kjeldahl (mg/L)	Temperature (°C)	Comment
4/20/2019 8:40	0	2.0	5.8	0.033	0.62	7.7	
4/20/2019 8:40	0			0.028	0.63		field replicate
5/4/2019 7:30	0	2.2	2.4	0.023	0.68	10.8	
5/22/2019 12:15	0	3.0	3.2	0.027	0.53	13.0	
6/4/2019 15:18	0	4.4	2.2	0.019	0.59	22.3	
6/18/2019 10:11	0	2.6	5.5	0.016	0.64	21.5	
6/29/2019 19:50	0	2.6	4.5	0.012	0.60	26.1	
7/12/2019 13:09	0		5.6	0.014	0.57	26.0	
7/23/2019 19:30	0	1.9	11	0.018	0.55	26.0	
8/3/2019 18:45	0	2.1	4.9	0.021	0.94	27.7	
8/10/2019 16:45	0	1.7	14	0.018	0.68	25.3	
8/25/2019 18:00	0	1.4	12	0.026	0.86	22.6	
9/6/2019 18:32	0	1.7	8.9	0.021	0.79	22.0	
9/19/2019 11:00	0	1.9	13	0.023	0.68	21.9	
10/6/2019 13:50	0	2.4	11	0.039	0.81	13.5	
10/14/2019 16:53	0	2.7	9.7	0.025	0.71	9.1	

Table 4: Orchard Lake 2019 Water Quality Data, Citizen-Assisted Monitoring Program Citizen-Assisted Monitoring Program

Table 5: Lac Lavon 2019 Water Quality DataCitizen-Assisted Monitoring Program

Date & Time	Sample Depth (m)	Secchi Disc Transparency (m)	Chlorophyll-a, Pheophytin Corrected (μg/L)	Total Phosphorus (mg/L)	Nitrogen, Total Kjeldahl (mg/L)	Temperature (°C)	Comment
5/7/2019 12:00	0	3.9	1.6	0.018	0.58	13.1	
5/22/2019 14:30	0	3.5	2.2	0.015	0.55	14.3	
6/2/2019 14:30	0	4.5	2.6	0.014	0.53	25.5	
6/16/2019 11:30	0	4.8	2.5	~0.007	0.59	21.8	
8/27/2019 14:30	0	4.3	3.9	0.010	0.47	22.3	
9/9/2019 15:00	0	3.6	5.2	~0.009	0.48	20.7	
9/22/2019 13:30	0	4.5	2.8	0.011	0.44	21.2	
10/19/2019 13:00	0	2.9	12	0.018	0.60	11.4	

<u>Notes</u>

 ~ 0.009 Indicates result is above the method detection limit, but below the method reporting limit.

Table 6: Lac Lavon Water Quality Measured by Barr Engineering

				Laboratory	Laboratory Analyses				
	Sample	Dissolved oxygen		Specific conductance @ 25 °C	Water Temperature	Secchi	Turbidity	Chlorophyll-a, pheophytin- adjusted	Total Phosphorus
Date	Depth	(mg/L)	рН	(umhos/cm)	(℃)	disc (m)	(NTU)	(ug/L)	as P (mg/L)
4/24/2019	0 - 2 m					2.1	2.6	5.7	0.021
4/24/2019	0 m	11.8	8.2	572	11.6				
4/24/2019	1 m	12.0	8.2	573	11.9				
4/24/2019	2 m	12.2	8.2	573	10.7				
4/24/2019	3 m	12.3	8.1	572	9.0				0.018
4/24/2019	4 m	11.1	7.9	574	7.5				0.016
4/24/2019	5 m	10.6	7.8	574	6.8				0.020
4/24/2019	6 m	9.0	7.6	574	6.2				0.016
4/24/2019	7 m	8.1	7.5	577	5.9				0.018
4/24/2019	8 m	7.7	7.5	578	5.9				0.020
4/24/2019	9 m	6.9	7.4	580	5.6				0.021
5/08/2019	0 - 2 m					2.9	1.7	1.5	0.025
5/08/2019	0 m	11.1	8.2	582	14.3				
5/08/2019	1 m	11.2	8.2	581	14.3				
5/08/2019	2 m	11.2	8.3	582	14.3				
5/08/2019	3 m	11.5	8.3	581	13.8				0.027
5/08/2019	4 m	12.2	8.2	575	10.8				0.019
5/08/2019	5 m	12.3	8.0	571	7.8				0.026
5/08/2019	6 m	9.1	7.7	575	6.7				0.021
5/08/2019	7 m	6.2	7.4	580	6.3				0.030
5/08/2019	8 m	4.4	7.2	580	6.0				0.032
5/08/2019	9 m	0.2	7.1	643	5.9				0.042
5/23/2019	0 - 2 m					2.7	2.1	2.1	0.018
5/23/2019	0 m	9.8	8.2	565	13.7				
5/23/2019	1 m	9.8	8.2	565	13.7				
5/23/2019	2 m	9.8	8.3	565	13.7				
5/23/2019	3 m	9.8	8.3	566	13.7				0.025
5/23/2019	4 m	9.8	8.3	566	13.7				0.022
5/23/2019	5 m	9.8	8.3	566	13.6				0.020
5/23/2019	6 m	9.8	8.3	565	13.6				0.030
5/23/2019	7 m	10.6	7.8	580	9.0				0.030
5/23/2019	8 m	1.2	7.5	584	7.1				0.041
5/23/2019	9 m	0.1	7.3	685	6.3				0.038

Table 6: Lac Lavon Water Quality	y Measured by Barr Engineering
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				Field Meas	surements			Laboratory	Analyses
Data	Sample	Dissolved oxygen	-11	Specific conductance @ 25 °C	Water Temperature	Secchi	Turbidity	Chlorophyll-a, pheophytin- adjusted	Total Phosphorus
Date	Depth	(mg/L)	рН	(umhos/cm)	(℃)	disc (m) 3.7	(NTU)	(ug/L)	as P (mg/L)
6/04/2019	0 - 2 m			560		-	1.2	2.8	0.012
6/04/2019	0 m	10.7	8.4		20.6				
6/04/2019	1 m	10.7 10.7	8.5	560 560	20.5				
6/04/2019	2 m		8.5		20.4				
6/04/2019	3 m	11.5	8.4	556	18.3				0.0092
6/04/2019	4 m	11.4	8.4	566	16.1				0.014
6/04/2019	5 m	9.8	8.1	571	13.7				0.012
6/04/2019	6 m	9.3	7.7	582	9.8				0.011
6/04/2019	7 m	6.2	7.4	584	7.9				0.017
6/04/2019	8 m	0.8	7.2	598	7.1				0.020
6/17/2019	0 - 2 m					4.2	1.8	2.3	0.018
6/17/2019	0 m	9.6	8.5	535	21.7				
6/17/2019	1 m	9.7	8.5	535	21.7				
6/17/2019	2 m	9.7	8.5	535	21.6				
6/17/2019	3 m	9.7	8.5	535	21.5				0.0092
6/17/2019	4 m	11.2	8.4	549	19.4				0.016
6/17/2019	5 m	12.6	8.4	557	15.1				0.018
6/17/2019	6 m	10.0	7.9	566	11.0				0.033
6/17/2019	7 m	4.5	7.6	574	8.9				0.024
6/17/2019	8 m	0.2	7.1	610	7.6				0.038
6/17/2019	9 m	0.1	7.1	666	7.2				0.058
7/01/2019	0 - 2 m					3.1	1.6	2.6	0.017
7/01/2019	0 m	9.0	8.4	517	24.2				
7/01/2019	1 m	9.0	8.4	517	24.2				
7/01/2019	2 m	9.1	8.4	519	24.2				
7/01/2019	3 m	9.0	8.4	516	24.1				0.015
7/01/2019	4 m	7.1	7.9	555	21.8				0.016
7/01/2019	5 m	10.4	8.1	574	18.2				0.022
7/01/2019	6 m	8.8	7.6	584	11.7				0.029
7/01/2019	7 m	4.5	7.2	602	9.8				0.027
7/01/2019	8 m	0.08	7.0	638	8.4				0.038
7/01/2019	9 m	0.05	6.9	713	7.7				0.045

Table 6: Lac Lavon Water Quality Measured by Barr Engineering

			Field Measurements						Analyses
	Sample	Dissolved oxygen		Specific conductance @ 25 °C	Water Temperature	Secchi	Turbidity	Chlorophyll-a, pheophytin- adjusted	Total Phosphorus
Date	Depth	(mg/L)	рН	(umhos/cm)	(℃)	disc (m)	(NTU)	(ug/L)	as P (mg/L)
7/22/2019	0 - 2 m					3.7	1.8	1.3	0.013
7/22/2019	0 m	8.5	8.5	506	26.0				
7/22/2019	1 m	8.6	8.6	504	26.1				
7/22/2019	2 m	8.6	8.6	504	26.0				
7/22/2019	3 m	8.6	8.6	505	26.0				0.012
7/22/2019	4 m	8.6	8.5	507	26.0				0.014
7/22/2019	5 m	8.2	7.8	533	20.5				0.018
7/22/2019	6 m	9.8	7.8	592	15.3				0.024
7/22/2019	7 m	3.1	7.2	605	11.4				0.020
7/22/2019	8 m	0.2	7.0	652	9.2				0.025
7/22/2019	9 m	0.1	7.0	749	8.2				0.058
8/05/2019	0 - 2 m					4.1	0.3	3.0	0.015
8/05/2019	0 m	10.1	8.9	513	26.9				
8/05/2019	1 m	10.0	8.9	512	27.0				
8/05/2019	2 m	10.1	8.9	513	27.0				
8/05/2019	3 m	10.0	8.9	514	27.0				0.015
8/05/2019	4 m	6.9	8.8	570	26.5				0.012
8/05/2019	5 m	8.5	8.0	600	22.0				0.020
8/05/2019	6 m	8.6	7.8	607	16.3				0.034
8/05/2019	7 m	1.7	7.3	628	12.4				0.042
8/05/2019	8 m	0.4	7.2	662	9.8				0.076
8/05/2019	9 m	0.1	7.2	789	8.2				0.17
8/19/2019	0 - 2 m					3.6	1.4	2.2	0.017
8/19/2019	0 m	8.6	8.7	504	25.0				
8/19/2019	1 m	8.7	8.7	504	24.6				
8/19/2019	2 m	8.6	8.7	504	24.5				
8/19/2019	3 m	8.4	8.7	502	24.4				0.016
8/19/2019	4 m	6.1	7.8	576	22.9				0.013
8/19/2019	5 m	8.1	7.8	596	17.7				0.014
8/19/2019	6 m	1.2	7.2	621	13.2				0.016
8/19/2019	7 m	0.7	7.0	667	10.5				0.015
8/19/2019	8 m	0.6	7.1	788	8.6				0.030
8/19/2019	9 m	0.4	7.1	804	8.5				0.092

					Laboratory Analyses				
Date	Sample Depth	Dissolved oxygen (mg/L)	pH	Specific conductance @ 25 °C (umhos/cm)	Water Temperature (℃)	Secchi disc (m)	Turbidity (NTU)	Chlorophyll-a, pheophytin- adjusted (ug/L)	Total Phosphorus as P (mg/L)
9/11/2019	0 - 2 m					2.8	1.3	3.8	0.017
9/11/2019	0 m	8.4	8.5	515	20.2				
9/11/2019	1 m	8.3	8.3	515	20.2				
9/11/2019	2 m	8.3	8.5	515	20.1				
9/11/2019	3 m	8.1	8.5	515	20.1				0.014
9/11/2019	4 m	8.1	8.5	515	20.1				0.014
9/11/2019	5 m	8.1	8.5	515	20.1				0.015
9/11/2019	6 m	4.6	7.8	545	19.2				0.016
9/11/2019	7 m	0.5	7.4	630	14.6				0.042
9/11/2019	8 m	0.4	7.2	686	11.1				0.036
9/11/2019	9 m	0.4	7.2	814	8.9				0.056
9/24/2019	0 - 2 m					4.1	1.6	2.8	0.015
9/24/2019	0 m	9.2	8.6	514	20.9				
9/24/2019	1 m	9.1	8.7	514	20.9				
9/24/2019	2 m	9.1	8.7	512	20.9				
9/24/2019	3 m	9.1	8.6	512	20.8				0.012
9/24/2019	4 m	7.6	8.4	518	19.8				0.013
9/24/2019	5 m	5.8	8.2	518	19.3				0.017
9/24/2019	6 m	2.3	7.7	528	18.5				0.014
9/24/2019	7 m	0.3	7.4	636	15.3				0.032
9/24/2019	8 m	0.2	7.3	684	11.8				0.036
9/24/2019	9 m	0.2	7.4	813	9.4				0.094

Table 6: Lac Lavon Water Quality Measured by Barr Engineering

2019 Audit

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Financial Statements and Supplemental Information Year Ended December 31, 2019

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INTRODUCTORY SECTION

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Board of Commissioners and Administrators as of December 31, 2019

BOARD OF COMMISSIONERS

Roger Baldwin Greg Helms Scott Thureen Tom Harmening Mike Hughes Curtis Enestvedt Rollie Greeno

Chairman Vice Chairman Secretary/Treasurer/Commissioner Commissioner Commissioner (Alternate) Commissioner (Alternate)

ADMINISTRATORS

Daryl Jacobson

Administrator

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FINANCIAL SECTION

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PRINCIPALS Thomas A. Karnowski, CPA Paul A. Radosevich, CPA William J. Lauer, CPA James H. Eichten, CPA Aaron J. Nielsen, CPA Victoria L. Holinka, CPA/CMA Jaclyn M. Huegel, CPA Kalen T. Karnowski, CPA

INDEPENDENT AUDITOR'S REPORT

To the Board of Commissioners and Management Black Dog Watershed Management Organization

REPORT ON THE FINANCIAL STATEMENTS

We have audited the financial statements of the governmental activities and each major fund of the Black Dog Watershed Management Organization (the Organization) as of and for the year ended December 31, 2019, and the related notes to the financial statements, which collectively comprise the Organization's basic financial statements as listed in the table of contents.

MANAGEMENT'S RESPONSIBILITY FOR THE FINANCIAL STATEMENTS

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

AUDITOR'S RESPONSIBILITY

Our responsibility is to express opinions on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Organization's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Organization's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

(continued)

OPINIONS

In our opinion, the financial statements referred to on the previous page present fairly, in all material respects, the respective financial position of the governmental activities and each major fund of the Organization as of December 31, 2019, the respective changes in financial position thereof, and the budgetary comparison for the General Fund and Capital Improvement Fund for the year then ended, in accordance with accounting principles generally accepted in the United States of America.

OTHER MATTERS

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that management's discussion and analysis (MD&A) be presented to supplement the basic financial statements. The Organization has omitted the MD&A that accounting principles generally accepted in the United States of America require to be presented to supplement the basic financial statements. Such missing information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. Our opinion on the basic financial statements is not affected by this missing information.

Other Information

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the Organization's basic financial statements. The introductory section, as listed in the table of contents, is presented for purposes of additional analysis and is not a required part of the basic financial statements. The introductory section has not been subjected to the auditing procedures applied in the audit of the basic financial statements and, accordingly, we do not express an opinion or provide any assurance on it.

Malloy, Montaque, Karnowski, Radasenich & Co., P.A.

Minneapolis, Minnesota June 5, 2020

BASIC FINANCIAL STATEMENTS

Statement of Net Position as of December 31, 2019

	GovernmentalActivities			
Assets				
Cash and investments	\$	538,405		
Capital assets				
Buildings		37,600		
Equipment		110,138		
Less accumulated depreciation		(133,638)		
Total capital assets, net of depreciation	-	14,100		
Total assets	\$	552,505		
Liabilities				
Accounts payable	\$	2,508		
Due to other governmental units		21,111		
Unearned revenue		14,061		
Total liabilities		37,680		
Net position				
Net investment in capital assets		14,100		
Restricted for capital improvements		86,787		
Unrestricted		413,938		
Total net position		514,825		
Total liabilities and net position	\$	552,505		

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Statement of Activities Year Ended December 31, 2019

	 Governmental Activities	
Expenses		
General government		
System operations	\$ 168,027	
Administrative services	38,982	
Depreciation	940	
Total expenses	 207,949	
Revenues		
General government		
Charges for services		
Management fees	153,000	
Capital grants and contributions	,	
Intergovernmental revenue – grants	100,939	
General revenues	;	
Interest earnings	10,465	
Total revenues	 264,404	
Change in net position	56,455	
Net position		
Beginning of year	 458,370	
End of year	\$ 514,825	

1

Balance Sheet Governmental Funds as of December 31, 2019

	_ Genera			Capital Improvement Fund		Total
Assets						
Cash and investments	\$	437,557	\$	100,848	\$	538,405
Liabilities						
Accounts payable	\$	2,508	\$	_	\$	2,508
Due to other governmental units	Ψ	21,111	Ψ	_	Ŷ	21,111
Unearned revenue				14,061		14,061
Total liabilities		23,619		14,061		37,680
Total hadmities		25,017		1 1,001		01,000
Fund balances						
Restricted for capital improvements		_		86,787		86,787
Assigned for subsequent year's budget deficit		14,660		_		14,660
Unassigned		399,278				399,278
Total fund balances	S=====	413,938		86,787		500,725
Total liabilities and fund balances	\$	437,557	\$	100,848	\$	538,405
Amounts reported for governmental activities in the Statement of Ne	et Posit	ion are differ	ent bec	cause:	•	500 50 5
Fund balances – governmental funds					\$	500,725
Capital assets used in governmental activities are not financial res as assets in governmental funds.	ources	and, therefor	e, are i	not reported		
Cost of capital assets						147,738
Less accumulated depreciation						(133,638)
Net position of governmental activities					\$	514,825

Statement of Revenue, Expenditures, and Changes in Fund Balances Governmental Funds Year Ended December 31, 2019

	General Fund		Capital Improvement Fund		 Total
Revenues					
Management fees	\$	131,000	\$	22,000	\$ 153,000
Intergovernmental revenue – grants		- -		100,939	100,939
Interest earnings		10,465		· -	10,465
Total revenue	-	141,465		122,939	 264,404
Expenditures					
General government					
System operations					
Water quality monitoring		14,616		_	14,616
Special projects		34,065		100,939	135,004
Engineering		15,850		_	15,850
Insurance		2,557		_	2,557
Administrative services					
Legal and audit		2,256		_	2,256
Administrative costs		19,296			19,296
Public education		17,135		_	17,135
Conferences, publications, and reports		295		-	295
Total expenditures		106,070		100,939	207,009
Net change in fund balance		35,395		22,000	57,395
Fund balances					
Beginning of year		378,543		64,787	 443,330
End of year	\$	413,938	\$	86,787	\$ 500,725
Amounts reported for governmental activities in the Statement of	Activit	ies are differe	ent beca	iuse:	
Net change in fund balances					\$ 57,395
Governmental funds report capital outlay as expenditures. He the cost of those assets is allocated over their useful lives and Depreciation expense					(940)
. 1					()
Change in net position					\$ 56,455

Statement of Revenue, Expenditures, and Changes in Fund Balances Budget and Actual General Fund Year Ended December 31, 2019

	Original and Final Budget Actual		Actual		Over (Under) Budget	
Revenues						
Management fees	\$ 131,000	\$	131,000	\$		
Interest earnings	 40		10,465		10,425	
Total revenue	131,040		141,465		10,425	
Expenditures						
General government						
System operations						
Water quality monitoring	14,900		14,616		(284)	
Special projects	39,200		34,065		(5,135)	
Engineering	31,000		15,850		(15,150)	
Insurance	3,000		2,557		(443)	
Administrative services						
Legal and audit	4,400		2,256		(2,144)	
Administrative costs	18,000		19,296		1,296	
Public education	17,900		17,135		(765)	
Contingency	5,000		_		(5,000)	
Conferences, publications, and reports	500		295		(205)	
Total expenditures	 133,900		106,070		(27,830)	
Excess (deficiency) of revenue over expenditures	(2,860)		35,395		38,255	
Other financing uses						
Transfers out	 (20,000)				20,000	
Net change in fund balance	\$ (22,860)		35,395	\$	58,255	
Fund balance						
Beginning of year			378,543			
End of year		\$	413,938			

Statement of Revenue, Expenditures, and Changes in Fund Balances Budget and Actual Capital Improvement Fund Year Ended December 31, 2019

	Original and O Final Budget Actual				Over (Under) Budget
Revenues					
Management fees	\$ 22,000	. \$ 22,000	\$ –		
Intergovernmental revenue – grants	_	100,939	100,939		
Total revenues	22,000	122,939	100,939		
Expenditures					
General government					
System operations					
Special projects	96,700	100,939	4,239		
Excess (deficiency) of revenue over expenditures	(74,700)	22,000	96,700		
Other financing sources					
Transfers in	20,000		(20,000)		
Net change in fund balance	\$ (54,700)	22,000	\$ 76,700		
Fund balance					
Beginning of year		64,787			
End of year		\$ 86,787			

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BLACK DOG WATERSHED MANAGEMENT ORGANIZATION

Notes to Basic Financial Statements December 31, 2019

NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

A. Organization

The Black Dog Watershed Management Organization (the Organization) was established as a watershed management organization under Minnesota Statutes in 1984 through a joint powers agreement among the member cities of Burnsville, Lakeville, Apple Valley, and Eagan. The Organization is governed by seven commissioners who are appointed by the member cities.

The purpose of the Organization is to provide an organization to regulate the natural water storage and retention of the Black Dog watershed to (a) protect, preserve, and use natural surface and ground water storage and retention systems; (b) minimize public capital expenditures needed to correct flooding and water quality problems; (c) identify and plan for means to effectively protect and improve surface and ground water quality; (d) establish more uniform local policies and official controls for surface and ground water management; (e) prevent erosion of soil into surface water systems; (f) promote ground water recharge; (g) protect and enhance fish and wildlife habitat and water recreational facilities; and (h) secure the other benefits associated with the proper management of surface and ground water.

Each member city annually contributes management fees in amounts necessary to fund the general activities of the Organization based upon the adopted budget for that year. Each member city may also be required to contribute amounts to fund improvement projects. The Organization may also fund improvement projects by issuing debt and levying an ad valorem tax.

B. Financial Reporting Entity

A joint venture is a legal entity resulting from a contractual agreement that is owned, operated, or governed by two or more participants as a separate and specific activity subject to joint control, in which the participants retain either an ongoing financial interest or an ongoing financial responsibility. The Organization, as described above, is considered a joint venture of the member cities.

As required by accounting principles generally accepted in the United States of America, these financial statements include the Organization (the primary government) and its component units. Component units are legally separate entities for which the primary government is financially accountable, or for which the exclusion of the component unit would render the financial statements of the primary government misleading. The criteria used to determine if the primary government is financially accountable for a component unit includes whether or not the primary government appoints the voting majority of the potential component unit's board, is able to impose its will on the potential component unit, is in a relationship of financial benefit or burden with the potential component unit, or is fiscally depended upon by the potential component unit. Based on these criteria, there are no component units required to be included in the Organization's financial statements.

NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

C. Government-Wide Financial Statements

The government-wide financial statements (Statement of Net Position and Statement of Activities) display information about the reporting government as a whole. These statements include all the financial activities of the Organization. The Statement of Activities demonstrates the degree to which the direct expenses of a given function are offset by program revenues. Direct expenses are those that are clearly identifiable with a specific function or segment. Program revenues include: 1) charges to customers or applicants who purchase, use, or directly benefit from goods, services, or privileges provided by a given function or segment; 2) grants and contributions that are restricted to meeting the operational or capital requirements of a particular function or segment. Taxes and other items not properly included among program revenues are reported instead as general revenues.

The operating grants and contributions include operating specific and discretionary grants, while the capital grants and contributions include capital specific grants and contributions.

The government-wide financial statements are reported using the economic resources focus and the accrual basis of accounting. Revenues are recorded when earned and expenses are recorded when a liability is incurred, regardless of the timing of related cash flows. Grants and similar items are recognized as revenue when all eligibility requirements imposed by the provider have been met. Generally, the effect of interfund activity has been eliminated from the government-wide financial statements.

D. Fund Financial Statement Presentation

The accounts of the Organization are organized on the basis of funds, each of which is considered a separate accounting entity. The operations of each fund are accounted for with a separate set of self-balancing accounts that comprise its assets, liabilities, fund equity, revenue, and expenditures. Resources are allocated to, and accounted for in individual funds based on the purposes for which they are to be spent and the means by which spending activities are controlled. The resources of the Organization are accounted for in two funds:

- General Fund (governmental fund type) This fund is used to receive management fees and other revenues which may be disbursed for any and all purposes authorized by the bylaws of the Organization.
- **Capital Improvement Capital Projects Fund** The Capital Improvement Capital Projects Fund is used to account for resources set aside for the construction of improvements to the watershed. Its primary resources are management fees from member cities and grants.

Separate fund financial statements are provided for governmental funds, with major individual governmental funds reported in separate columns. Governmental fund financial statements are reported using the current financial resources measurement focus and the modified accrual basis of accounting. With this measurement focus, only current assets, current liabilities, and deferred inflows/outflows of resources generally are included on the Balance Sheet. Operating statements of this fund present increases (revenue and other financing sources) and decreases (expenditures and other financing uses) in fund balances. Under this basis of accounting, transactions are recorded in the following manner:

- 1. **Revenue Recognition** Revenue is recognized when it becomes measurable and available. "Measurable" means the amount of the transaction can be determined and "available" means collectible within the current period or soon enough thereafter to be used to pay liabilities of the current period. For this purpose, the Organization considers revenues to be available if collected within 60 days after year-end. Grants and similar items are recognized as revenue when all eligibility requirements imposed by the provider have been met. Grant advances received for which not all eligibility requirements have been met are reported as unearned revenue at year-end. All significant revenue sources are considered susceptible to accrual.
- 2. Recording of Expenditures Expenditures are generally recorded when a liability is incurred.

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

E. Cash and Temporary Investments

Investments are generally stated at fair value, except for investments in external investment pools, which are stated at amortized cost. Short-term, highly liquid debt instruments (including commercial paper, bankers' acceptance, and U.S. treasury and agency obligations) purchased with a remaining maturity of one year or less are also reported at amortized cost. Investment income is accrued at the Balance Sheet date.

F. Budgetary Data

The Organization adopts an annual budget. While the member cities do not approve the annual budget as proposed by the Organization, if a majority objects to it, the budget cannot be adopted. However, a majority of the member cities must approve plans for capital improvements. The amounts shown in the financial statements present both original and final budgeted amounts for the year. The joint powers agreement specifies procedures regarding the adoption of the General Fund and Capital Improvement Fund budgets. The budget for the ensuing year is adopted through passage of a commission resolution, normally in June of each year. The budget is effective January 1 of each year and is adopted on a basis consistent with accounting principles generally accepted in the United States of America. Appropriations lapse at year-end and encumbrance accounting is not used. Budgetary control is at the fund level. Expenditures in the Capital Improvement Fund exceeded budgeted appropriations by \$4,239.

G. Net Position

In the government-wide financial statements, net position represents the difference between assets and liabilities. Net position is displayed in three components:

- Net Investment in Capital Assets Consists of capital assets, net of accumulated depreciation, reduced by any outstanding debt attributable to acquire capital assets.
- **Restricted Net Position** Consists of net position restricted when there are limitations imposed on their use through external restrictions imposed by creditors, grantors, or laws or regulations of other governments.
- Unrestricted Net Position All other net position that does not meet the definition of "restricted" or "net investment in capital assets."

The Organization applies restricted resources first when an expense is incurred for which both restricted and unrestricted resources are available.

NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

H. Fund Balance Classifications

In the fund financial statements, governmental funds report fund balance in classifications that disclose constraints for which amounts in those funds can be spent. These classifications are as follows:

- Nonspendable Consists of amounts that are not in spendable form, such as prepaid items, inventory, and other long-term assets.
- **Restricted** Consists of amounts related to externally imposed constraints established by creditors, grantors, or contributors; or constraints imposed by state statutory provisions.
- **Committed** Consists of internally imposed constraints that are established by resolution of the Board of Commissioners. Those committed amounts cannot be used for any other purpose unless the Board of Commissioners removes or changes the specified use by taking the same type of action it employed to previously commit those amounts.
- Assigned Consists of internally imposed constraints. These constraints consist of amounts intended to be used by the Organization for specific purposes but do not meet the criteria to be classified as restricted or committed. In governmental funds, assigned amounts represent intended uses established by the governing body itself or by an official to which the governing body delegates the authority.
- **Unassigned** The residual classification for the General Fund, which also reflects negative residual amounts in other funds.

When both restricted and unrestricted resources are available for use, the Organization first uses restricted resources, then uses unrestricted resources as they are needed.

When committed, assigned, or unassigned resources are available for use, the Organization uses resources in the following order: 1) committed, 2) assigned, and 3) unassigned.

I. Use of Estimates

The preparation of basic financial statements, in conformity with accounting principles generally accepted in the United States of America, requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenditures/expenses during the reporting period. Actual results could differ from those estimates.

NOTE 2 – DEPOSITS AND INVESTMENTS

A. Deposits

In accordance with applicable Minnesota Statutes, the Organization maintains a checking account authorized by the Board of Commissioners.

The following is considered the most significant risk associated with deposits:

Custodial Credit Risk – In the case of deposits, this is the risk that in the event of a bank failure, the Organization's deposits may be lost.

Minnesota Statutes require that all deposits be protected by federal deposit insurance, corporate surety bond, or collateral. The market value of collateral pledged must equal 110 percent of the deposits not covered by federal deposit insurance or corporate surety bonds. Authorized collateral includes treasury bills, notes, and bonds; issues of U.S. government agencies; general obligations rated "A" or better; revenue obligations rated "AA" or better; irrevocable standard letters of credit issued by the Federal Home Loan Bank; and certificates of deposit. Minnesota Statutes require that securities pledged as collateral be held in safekeeping in a restricted account at the Federal Reserve Bank or in an account at a trust department of a commercial bank or other financial institution that is not owned or controlled by the financial institution furnishing the collateral. The Organization has no additional deposit policies addressing custodial credit risk.

At year-end, the carrying amount of the Organization's deposits was \$0, and the balance on the bank records was \$0. The Organization maintains a checking account with US Bank, the balance of which is swept into the Organization's investments at the end of each business day. At December 31, 2019, deposits were fully covered by federal deposit insurance.

B. Investments

At December 31, 2019, the Organization held \$538,405 in investments with the Minnesota Municipal Money Market Fund (4M Fund).

The 4M Fund is an external investment pool not registered with the Securities and Exchange Commission (SEC) that follows the same regulatory rules of the SEC under rule 2a7. The 4M Fund is a customized cash management and investment program for Minnesota public funds that is allowable under Minnesota Statutes. The Organization's investment in the 4M Fund is measured at the net position value per share provided by the pool, which is based on an amortized cost method that approximates fair value.

Investments are subject to various risks, the following of which are considered the most significant:

Custodial Credit Risk – For investments, this is the risk that in the event of a failure of the counterparty to an investment transaction (typically a broker-dealer) the Organization would not be able to recover the value of its investments or collateral securities that are in the possession of an outside party. The Organization does not have a formal investment policy addressing this risk, but typically limits its exposure by purchasing insured or registered investments, or by the control of who holds the securities.

NOTE 2 – DEPOSITS AND INVESTMENTS (CONTINUED)

Credit Risk - This is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. Minnesota Statutes limit the Organization's investments to direct obligations or obligations guaranteed by the United States or its agencies; shares of investment companies registered under the Federal Investment Company Act of 1940 that receive the highest credit rating, are rated in one of the two highest rating categories by a statistical rating agency, and all of the investments have a final maturity of 13 months or less; general obligations rated "A" or better; revenue obligations rated "AA" or better; general obligations of the Minnesota Housing Finance Agency rated "A" or better; bankers' acceptances of United States banks eligible for purchase by the Federal Reserve System; commercial paper issued by United States corporations or their Canadian subsidiaries, rated of the highest quality category by at least two nationally recognized rating agencies, and maturing in 270 days or less; Guaranteed Investment Contracts guaranteed by a United States commercial bank, domestic branch of a foreign bank, or a United States insurance company, and with a credit quality in one of the top two highest categories; repurchase or reverse purchase agreements and securities lending agreements with financial institutions qualified as a "depository" by the government entity, with banks that are members of the Federal Reserve System with capitalization exceeding \$10,000,000; that are a primary reporting dealer in U.S. government securities to the Federal Reserve Bank of New York; or certain Minnesota securities broker-dealers. The Organization does not have an investment policy that further addresses credit risk.

Concentration Risk – This is the risk associated with investing a significant portion of the Organization's investment (considered 5 percent or more) in the securities of a single issuer, excluding U.S. guaranteed investments (such as treasuries), investment pools, and mutual funds. The Organization does not have an investment policy limiting the concentration of investments.

Interest Rate Risk – This is the risk of potential variability in the fair value of fixed rate investments resulting from changes in interest rates (the longer the period for which an interest rate is fixed, the greater the risk). The Organization does not have an investment policy limiting the duration of investments.

NOTE 3 – CAPITAL ASSETS

Capital assets, which include property, plant, and equipment, are recorded in the entity-wide financial statements. Such assets are recorded at historical cost. Donated assets are recorded as capital assets at their estimated fair market value at the date of donation. The Organization defines capital assets as those with an initial, individual cost of \$500 or more with an estimated useful life in excess of one year. The costs of normal maintenance and repairs that do not add to the value of the asset are not capitalized.

Capital asset amounts reported for governmental activities in the Statement of Net Position are different than the balances in the General Fund Balance Sheet because capital assets used in governmental activities are not financial resources and, therefore, are not reported in the General Fund. The General Fund reports capital outlays as expenditures. In the governmental activities Statement of Activities, the cost of these assets is allocated over their estimated useful lives and reported as depreciation expense.

NOTE 3 – CAPITAL ASSETS (CONTINUED)

Property, plant, and equipment of the Organization are depreciated using the straight-line method over the following estimated useful lives:

Assets	Years			
Buildings	40 years			
Equipment	15 years			

Capital asset activity for the year ended December 31, 2019 was as follows:

	Beginning Balance		Additions		Deletions		Ending Balance	
Governmental activities								
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		22,560		940		_		23,500
Equipment		110,138		-				110,138
Total accumulated depreciation		132,698		940		_	_	133,638
Governmental activities								
capital assets, net	\$	15,040	\$	940	\$	_	\$	14,100

NOTE 4 – RISK MANAGEMENT

The Organization is exposed to various risk of loss related to torts: theft of, damage to, and destruction of assets; errors and omissions; and natural disasters. In order to protect against these risks of loss, the Organization purchases commercial insurance through the League of Minnesota Cities Insurance Trust (LMCIT), a public entity risk pool. This pool currently operates common risk management and insurance programs for municipal entities. The Organization pays an annual premium to the LMCIT for its insurance coverage. The LMCIT is self-sustaining through commercial companies for excess claims. The Organization is covered through the pool for any claims incurred but unreported; however, the Organization retains risk for the deductible portion of its insurance policies. The amounts of these deductibles are considered immaterial to the financial statements.

During the year ended December 31, 2019, there were no significant reductions in insurance coverage from the prior year. Settled claims have not exceeded the Organization's commercial coverage in any of the past three years.

NOTE 5 - RELATED PARTIES

In 2019, the member cities contributed management fees of \$153,000 to the Organization to be used for general administration, minor improvements, and normal maintenance of the facilities constructed by the Organization. The annual contribution made by each member is based 50 percent on the assessed valuation of all property within the watershed and 50 percent on the basis of the total of each member within the boundaries of the watershed each year in comparison to the total area in the watershed.

Management fees received from each member city during 2019 were as follows:

City of Apple Valley	\$ 12,057
City of Burnsville	110,798
City of Eagan	568
City of Lakeville	 29,577
Total	\$ 153,000

Expenditures/expenses of \$19,296 for special projects, supplies, and administrative services with the City of Burnsville were incurred for the year ended December 31, 2019. This amount is included in amounts shown as "due to other governmental units" in the General Fund Balance Sheet and on the Statement of Net Position.

NOTE 6 – SUBSEQUENT EVENTS

Shortly after the 2019 fiscal year-end, the worldwide spread of the novel coronavirus (COVID-19) has caused significant volatility in the economy and financial markets. There is significant uncertainty about the breadth and duration of potential business disruptions related to COVID-19, and its economic impact in the U.S. and around the world. At this time, the Organization is unable to determine what effect this may have on its future financial condition and operations.

OTHER REQUIRED REPORTS

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PRINCIPALS Thomas A. Karnowski, CPA Paul A. Radosevich, CPA William J. Lauer, CPA James H. Eichten, CPA Aaron J. Nielsen, CPA Victoria L. Holinka, CPA/CMA Jaclyn M. Huegel, CPA Kalen T. Karnowski, CPA

INDEPENDENT AUDITOR'S REPORT ON

INTERNAL CONTROL OVER FINANCIAL REPORTING

To the Board of Commissioners and Management Black Dog Watershed Management Organization

INTERNAL CONTROL OVER FINANCIAL REPORTING

In planning and performing our audit of the financial statements of the governmental activities and each major fund of the Black Dog Watershed Management Organization (the Organization) as of and for the year ended December 31, 2019, and the related notes to the financial statements, in accordance with auditing standards generally accepted in the United States of America, we considered the Organization's internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Organization's internal control. Accordingly, we do not express an opinion on the effectiveness of the Organization's internal control.

Our consideration of internal control was for the limited purpose described in the preceding paragraph and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies and, therefore, material weaknesses or significant deficiencies may exist that were not identified. In addition, because of inherent limitations in internal control, including the possibility of management override of controls, misstatements due to error or fraud may occur and not be detected by such controls. However, as discussed below, we identified one deficiency in internal controls that we consider to be a material weakness.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A material weakness is a deficiency, or combination of deficiencies in internal control, such that there is a reasonable possibility that a material misstatement of the Organization's financial statements will not be prevented, or detected and corrected, on a timely basis. A significant deficiency is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance. We consider the deficiency described in the accompanying Schedule of Findings to be a material weakness.

This report is intended solely for the information and use of management, the Board of Commissioners of the Organization, others within the Organization, and the state of Minnesota and is not intended to be, and should not be, used by anyone other than these specified parties.

Malloy, Montague, Karnowski, Radasenich & Co., P.A.

Minneapolis, Minnesota June 5, 2020

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INDEPENDENT AUDITOR'S REPORT

ON MINNESOTA LEGAL COMPLIANCE

To the Board of Commissioners and Management Black Dog Watershed Management Organization

We have audited, in accordance with auditing standards generally accepted in the United States of America, the financial statements of the governmental activities and each major fund of the Black Dog Watershed Management Organization (the Organization) as of and for the year ended December 31, 2019, and the related notes to the financial statements, which collectively comprise the Organization's basic financial statements, and have issued our report thereon dated June 5, 2020.

MINNESOTA LEGAL COMPLIANCE

In connection with our audit, nothing came to our attention that caused us to believe that the Organization failed to comply with the provisions of the claims and disbursements, deposits and investments, contracting and bidding, conflicts of interest, and miscellaneous provisions sections of the *Minnesota Legal Compliance Audit Guide for Other Political Subdivisions*, promulgated by the State Auditor pursuant to Minnesota Statutes § 6.65, insofar as they relate to accounting matters. However, our audit was not directed primarily toward obtaining knowledge of such noncompliance. Accordingly, had we performed additional procedures, other matters may have come to our attention regarding the Organization's noncompliance with the above referenced provisions, insofar as they relate to accounting matters.

This report is intended solely for the information and use of the Board of Commissioners of the Organization, others within the Organization, management of the Organization, and the Office of the State Auditor and is not intended to be, and should not be, used by anyone other than these specified parties.

Malloy, Montague, Karnowski, Radasenich & Co., P.A.

Minneapolis, Minnesota June 5, 2020

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BLACK DOG WATERSHED MANAGEMENT ORGANIZATION

Schedule of Findings Year Ended December 31, 2019

FINDINGS - INTERNAL CONTROLS - MATERIAL WEAKNESS

SEGREGATION OF DUTIES

Finding – Generally, a system of internal control contemplates a segregation of duties such that no one individual has responsibility to execute a transaction, has physical access to the related assets, and has the responsibility or authority to record the transaction. The Black Dog Watershed Management Organization (the Organization) does not have proper segregation of duties, due to the size of the Organization's staff. This lack of ideal segregation of duties subjects the Organization to a higher risk that errors or fraud could occur and not be detected in a timely manner. This limited segregation of duties exists in most of the Organization's transaction cycles, including cash receipts and cash disbursements.