

## Crystal Lake [Burnsville] (19-0027) Black Dog Watershed Management Commission

Crystal Lake located mainly in the City of Burnsville (Dakota County). It is considered a Priority Lake by the Metropolitan Council for its high regional recreation value (METC 2007). The lake has a surface area of 292 acres. The MN DNR has designated the lake as being infested with Eurasian water milfoil (*Myriophyllum spicatum*). The MPCA has listed the lake as impaired for mercury content in fish.

On each sampling day the lake was monitored for total phosphorus (TP), chlorophyll-a (CLA), total kjeldahl nitrogen (TKN), and secchi transparency, as well as the lake's perceived physical condition and recreational suitability. The resulting data are summarized in tables and figures on the following page.

### 2009 summer (May-September) data summary

<i>Parameter</i>	<i>Mean</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Grade</i>
<b>TP</b> ( $\mu\text{g/l}$ )	30.8	17.0	49.0	B
<b>CLA</b> ( $\mu\text{g/l}$ )	13.7	4.6	24.0	B
<b>Secchi</b> (m)	2.1	1.3	3.8	C
<b>TKN</b> (mg/l)	0.92	0.71	1.20	
<b>Lake Grade</b>				B

The lake received a lake grade of B for 2009. This lake grade is the only second B for this lake since 1994. The lake typically receives a C lake grade.

Throughout the monitoring period, the volunteer's opinions of the lake's physical condition and recreational suitability were ranked on a 1-to-5 scale. These user perception rankings are shown on the following page.

The Fisheries Section of the Minnesota Department of Natural Resources (MDNR) has conducted a fisheries survey on the lake. Information on the survey can be obtained through the MDNR Fisheries Section by calling (651) 259-5831 or by downloading the information off the Internet at <http://www.dnr.state.mn.us/lakefind/>.

If you notice any errors in the lake's data or physical information, or are aware of any additional or missing information, please contact Brian Johnson of the Metropolitan Council at (651) 602-8743 or [brian.johnson@metc.state.mn.us](mailto:brian.johnson@metc.state.mn.us).

## Crystal Lake, Burnsville, Dakota Co.



● Sampling site  
Contours in meters

Lake ID: 190027-00  
WMO: Black Dog  
Volunteer: Carroll Arnett, PhD

### 2009 Data

DATE	Surf Temp (°C)	Bot Temp (°C)	Surf DO (mg/L)	Bot DO (mg/L)	CLA (µg/L)	Surf TP (µg/L)	Bot TP (µg/L)	Secchi (m)	PC	RS
4/18	13.6				5.1	24		2.2	2	2
5/2	12.8				7.2	26		2.5	2	1
5/16	14.8				4.6	36		2.7	2	1
5/30	19.8				7.9	23		3.3	2	2
6/14	20.5				5.3	17		3.8	2	2
6/27	26.3				9.4	34		2.2	2	2
7/11	23.8				23	35		1.3	3	2
7/25	22.4				24	31		1.4	3	2
8/8	22.7				15	32		1.6	2	2
8/22	22.3				21	24		1.6	2	1
9/5	22.6				13	32		1.7	2	1
9/19	24				20	49		1.5	3	2
10/3	15.2				18	51		2.0	2	1
10/17	9.4				12	22		3.0	1	1

### Lake Water Quality Grades Based on Summertime Averages

Year	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Total Phosphorus	C	C		C							B	
Chlorophyll <i>a</i>	C			B				C		B		
Secchi Depth	C	C	C	B	C	B	B	C	C	B	C	B
<b>Lake Grade</b>	<b>C</b>			<b>B</b>						<b>B</b>		

Year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total Phosphorus			C	C	C	C	C	C	C	B	C	C
Chlorophyll <i>a</i>			B	C	C	C	C	B	C	B	B	C
Secchi Depth	B		C	C	C	C	C	C	C	C	C	C
<b>Lake Grade</b>	<b>C</b>		<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>B</b>	<b>C</b>	<b>C</b>

Year	2004	2005	2006	2007	2008	2009
Total Phosphorus	C	C	C	C	C	B
Chlorophyll <i>a</i>	B	C	C	C	C	B
Secchi Depth	C	C	C	C	C	C
<b>Lake Grade</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>B</b>

Source: Metropolitan Council and STORET data

