Tamarack Lake (10-0010) *Minnehaha Creek Watershed District*

Tamarack Lake is located in the City of Victoria (Carver County). The lake has a surface area of 24 acres. It has a maximum depth of approximately 20 m (66 ft). Approximately 41 percent of the lake's surface area is considered littoral zone, which is the 0-15 feet depth zone of aquatic plant dominance.

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

Parameter	*Mean*	*Minimum*	*Maximum*	*Grade*
TP (µg/l)	28.7	19.0	37.0	B
CLA (µg/l)	10.9	1.1	18.0	B
Secchi (m)	2.7	1.4	5.5	B
TKN (mg/l)	1.20	1.10	1.30	
			Lake Grade	B

The lake received a lake grade of B for 2009, which is consistent with its historical water quality database. The lake grades for the lake have varied in the range of B and C. Further monitoring is suggested to continue to build the water quality database for increasing the power to detect water quality trends.

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.

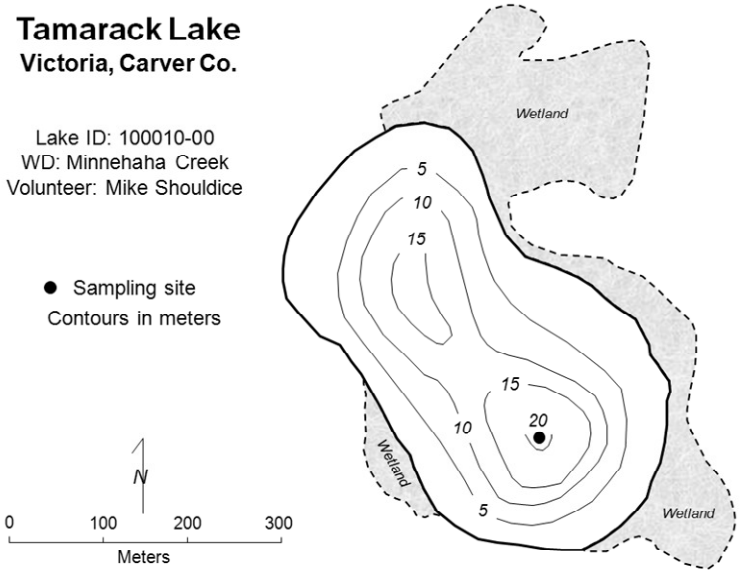
The Fisheries Section of the Minnesota Department of Natural Resources (MDNR) has conducted a fisheries survey on the lake. Information on the survey can be obtained through the MDNR Fisheries Section by calling (651) 259-5831 or by downloading the information off the Internet at http://www.dnr.state.mn.us/lakefind/.

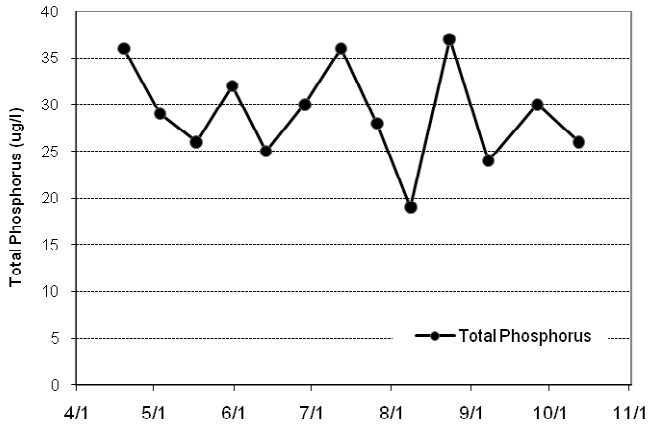
If you notice any errors in the lake's data or physical information, or are aware of any additional or missing information, please contact Brian Johnson of the Metropolitan Council at (651) 602-8743 or brian.johnson@metc.state.mn.us.

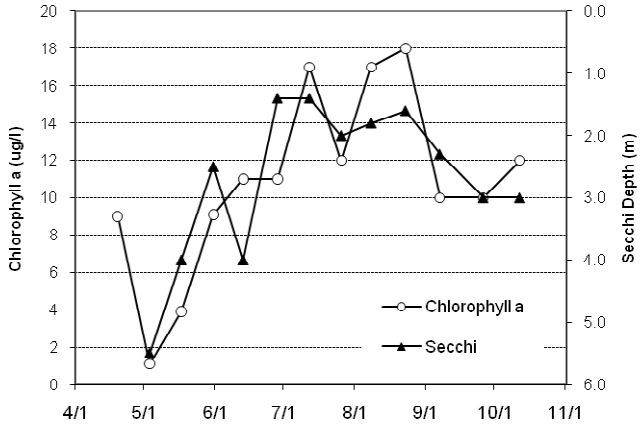
Tamarack Lake
Victoria, Carver Co.

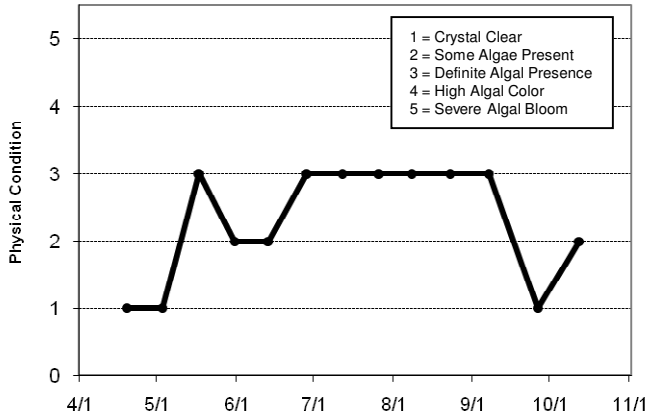
Lake ID: 100010-00
WD: Minnehaha Creek
Volunteer: Mike Shouldice

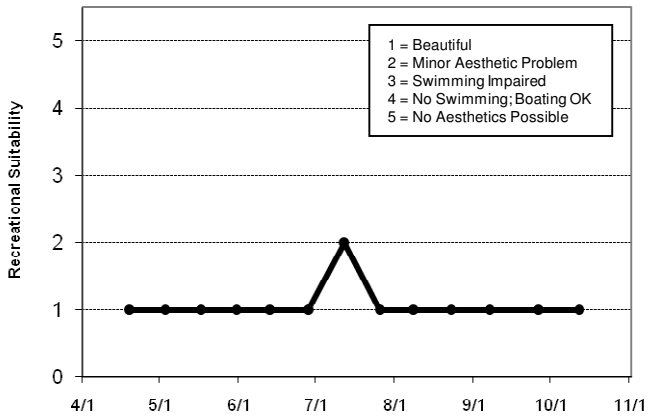
● Sampling site
Contours in meters











2009 Data

DATE	Surf Tmp (ºC)	Bot Tmp (ºC)	Surf DO (mg/L)	Bot DO (mg/L)	CLA (µg/L)	Surf TP (µg/L)	Bot TP (µg/L)	Secchi (m)	PC	RS
4/19	13.4				9	36			1	1
5/3	15.7				1.1	29		5.5	1	1
5/17	22.2				3.9	26		4.0	3	1
5/31	18.4				9.1	32		2.5	2	1
6/13	19.8				11	25		4.0	2	1
6/28	24.1				11	30		1.4	3	1
7/12	25.3				17	36		1.4	3	2
7/26	24.6				12	28		2.0	3	1
8/8	23.6				17	19		1.8	3	1
8/23	23.3				18	37		1.6	3	1
9/7	23				10	24		2.3	3	1
9/26	19.4				10	30		3.0	1	1
10/12	9.4				12	26		3.0	2	1

Lake Water Quality Grades Based on Summertime Averages

Year	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Total Phosphorus												
Chlorophyll a												
Secchi Depth												
Lake Grade												

Year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total Phosphorus									C	B	B	C
Chlorophyll a									C	A	B	B
Secchi Depth					A				C	B	C	C
Lake Grade									**C**	**B**	**B**	**C**

Year	2004	2005	2006	2007	2008	2009
Total Phosphorus	D	C	D	B	B	B
Chlorophyll a	C	C	C	B	A	B
Secchi Depth	C	C	C	B	B	B
Lake Grade	**C**	**C**	**C**	**B**	**B**	**B**

Source: Metropolitan Council and STORET data

Terrapin Lake (82-0031) *Carnelian - Marine - St. Croix Watershed District*

Terrapin Lake is located in May Township (Washington County). It has a surface area of 86 acres and a maximum depth of 4.6 m (15 ft). The entire area of the lake is considered littoral zone which is the 0-15 feet depth zone of aquatic plant dominance. Furthermore, the lake does not maintain a thermocline, which is a density gradient caused by changing water temperatures throughout the water column.

On each sampling day the lake was monitored for secchi transparency, as well as the lake's perceived physical condition and recreational suitability. Depth profiles for temperature and dissolved oxygen were also measured. The resulting data are summarized in tables and figures on the following page.

2009 summer (May-September) data summary

Parameter	*Mean*	*Minimum*	*Maximum*	*Grade*
Secchi (m)	3.2	2.4	3.8	A

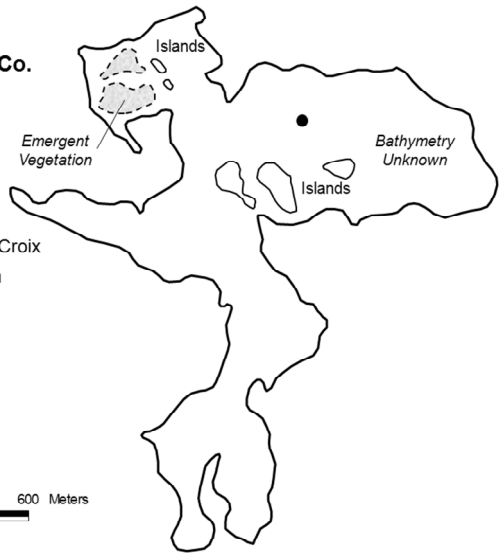
The lake received a secchi grade of A for 2009, which is consistent with the historical water quality database. No lake grade was given for the lake this year because total phosphorus and chlorophyll were not monitored. Additional years of monitoring are suggested for continuing to build the water quality database so as to better understand the lake's water quality and determine potential water quality trends.

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 (MNDNR) has conducted a fisheries survey on the lake. Information on the survey can be obtained through the MNDNR 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.

Terrapin Lake
May Twp., Washington Co.



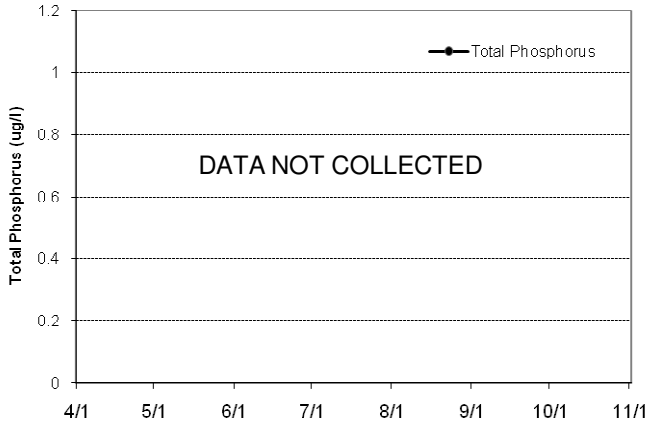
LAKE ID: 820031-00
WD: Carnelian-Marine-St. Croix
Volunteer: Washington Conservation District

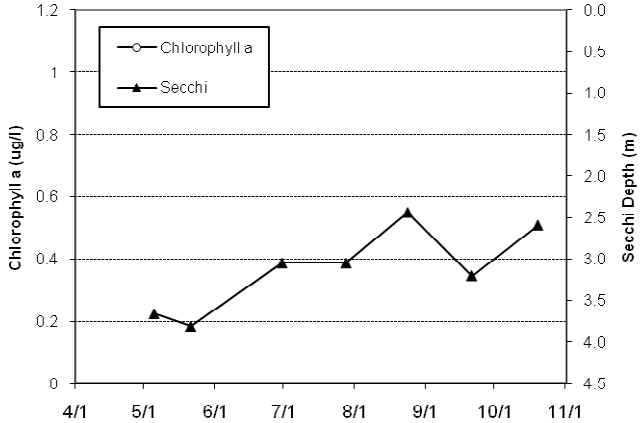
● Sampling site

Contours in meters

N

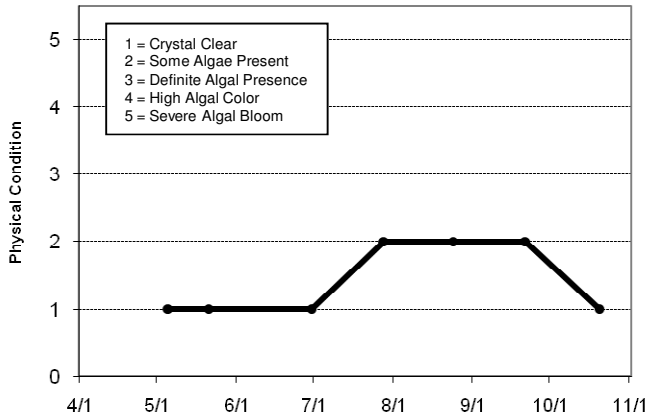
0 200 400 600 Meters





2009 Data

DATE	Surf Tmp (ºC)	Bot Tmp (ºC)	Surf DO (mg/L)	Bot DO (mg/L)	CLA (µg/L)	Surf TP (µg/L)	Bot TP (µg/L)	Secchi (m)	PC	RS
5/5	15.6	13.7	11.05	0.11				3.7	1	1
5/21	19.3	16.5	10.13	0.26				3.8	1	1
6/30	22.3	21.7	8.22	0.19				3.0	1	1
7/28	23	21.6	9.3	0.99				3.0	2	1
8/24	22.5	20.7	6.86	0.3				2.4	2	1
9/21	22.6	21.4	8.4	0.08				3.2	2	2
10/20	8.8	8.4	11.57	5.75				2.6	1	1



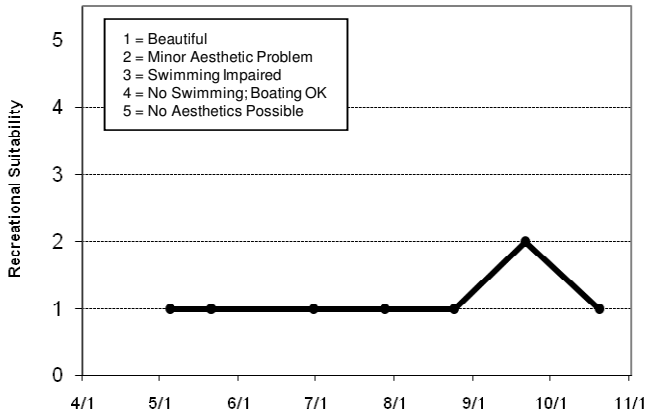
Lake Water Quality Grades Based on Summertime Averages

Year	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Total Phosphorus												
Chlorophyll a												
Secchi Depth												
Lake Grade												

Year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total Phosphorus												
Chlorophyll a												
Secchi Depth												
Lake Grade												

Year	2004	2005	2006	2007	2008	2009
Total Phosphorus	B	A	C	B		
Chlorophyll a	A	A	A	A		
Secchi Depth	A	A	A	B	A	A
Lake Grade	**A**	**A**	**B**	**B**		

Source: Metropolitan Council and STORET data



Turtle Lake (82-0036) *Carnelian - Marine - St. Croix Watershed District*

Turtle Lake is located in May Township (Washington County). The lake has a surface area of 44 acres, and has maximum and mean depths of 2.4 m (7.9 ft) and 1.2 m (3.9 ft), respectively. The entire area of the lake is considered littoral zone which is the 0-15 feet depth zone of aquatic plant dominance. Furthermore, the lake does not maintain a thermocline, which is a density gradient caused by changing water temperatures throughout the water column.

On each sampling day the lake was monitored for secchi transparency, as well as the lake's perceived physical condition and recreational suitability. Depth profiles for temperature and dissolved oxygen were also measured. The resulting data are summarized in tables and figures on the following page.

2009 summer (May-September) data summary

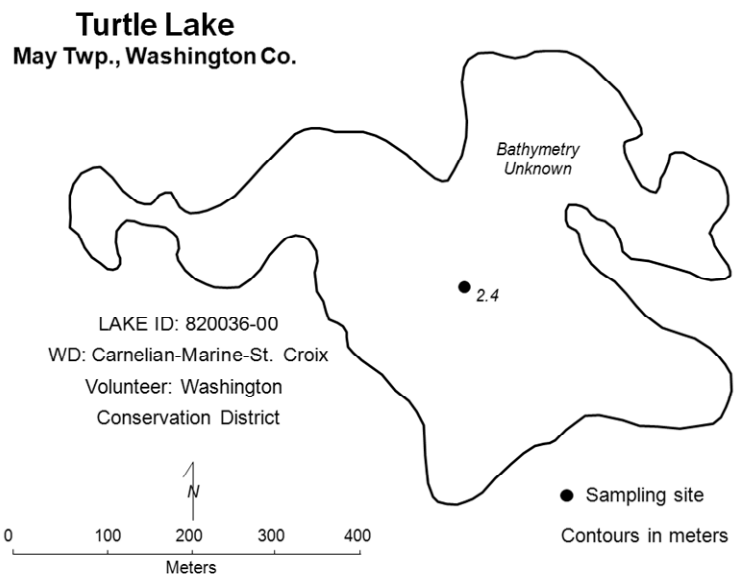
Parameter	*Mean*	*Minimum*	*Maximum*	*Grade*
Secchi (m)	1.2	1.1	1.4	C

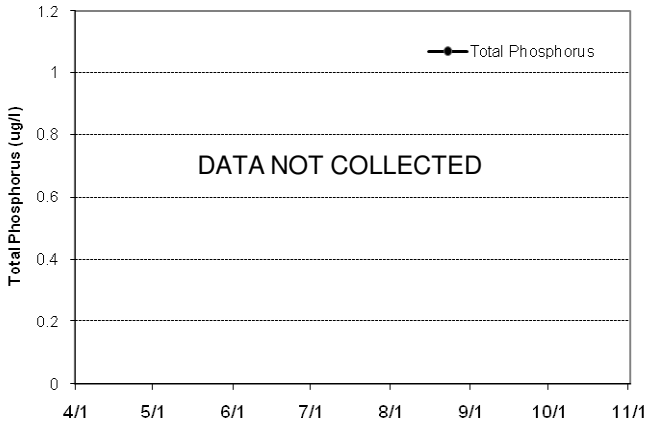
The lake received a Secchi grade of C for 2009, which is consistent with the historical water quality database for the monitoring years since 1999. No lake grade was given for the lake this year because total phosphorus and chlorophyll were not monitored.

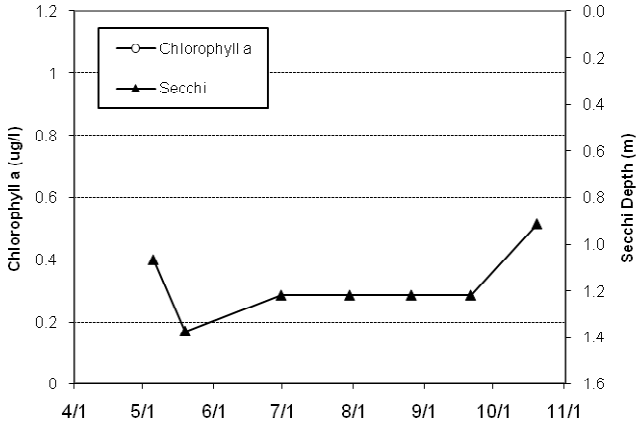
Additional years of monitoring are suggested for continuing to build the water quality database so as to better understand the lake's water quality and determine potential water quality trends.

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.

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.

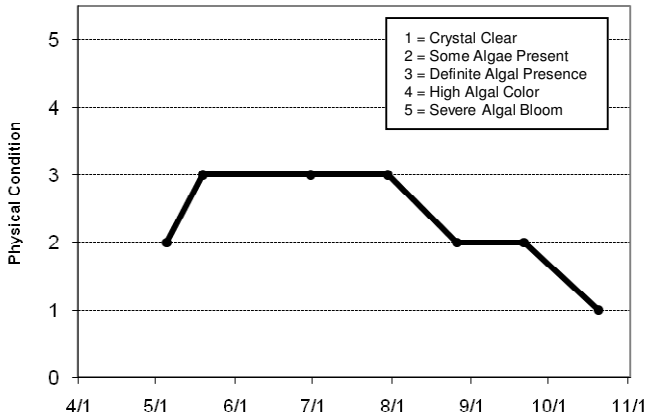






2009 Data

DATE	Surf Tmp (ºC)	Bot Tmp (ºC)	Surf DO (mg/L)	Bot DO (mg/L)	CLA (µg/L)	Surf TP (µg/L)	Bot TP (µg/L)	Secchi (m)	PC	RS
5/5	15.6	15.7	11.24	10.68				1.1	2	2
5/19	19.4	18.9	12.56	13.13				1.4	3	4
6/30	18.5	18.6	6.76	6.75				1.2	3	4
7/30	21.2	21.1	8.12	4.23				1.2	3	4
8/26	21.4	21.1	8.35	0.15				1.2	2	4
9/21	21.9	21.7	10.5	10.42				1.2	2	4
10/20	8.8	8.8	12.23	11.72				0.9	1	4



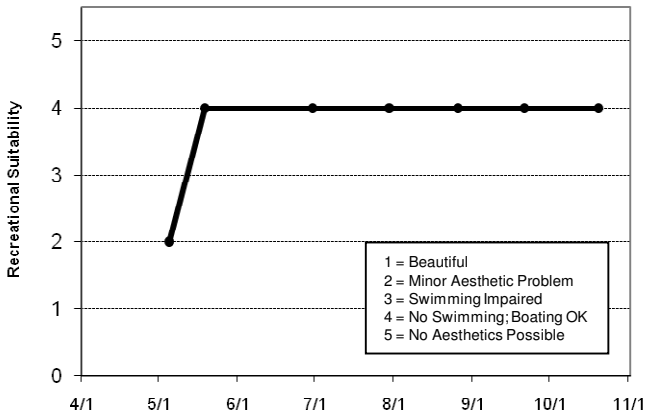
Lake Water Quality Grades Based on Summertime Averages

Year	1980	1981	1982	1983	1984	1985	1987	1988	1989	1990	1991
Total Phosphorus											F
Chlorophyll a											F
Secchi Depth											F
Lake Grade											**F**

Year	1992	1993	1994	1995	1996	1997	1999	2000	2001	2002	2003
Total Phosphorus	F				C	C	B	D	C		D
Chlorophyll a	F				D	D	C	B	B		B
Secchi Depth	F	D	C	D	D	D	C	C	C	C	C
Lake Grade	**F**				**D**	**D**	**C**	**C**	**C**		**C**

Year	2004	2005	2006	2007	2008	2009
Total Phosphorus						
Chlorophyll a						
Secchi Depth	C	C	C	C	C	C
Lake Grade						

Source: Metropolitan Council and STORET data



Twin Lake [Burnsville] (19-0028) *Black Dog Watershed Management Commission*

Twin Lake is an 11-acre lake located in the City of Burnsville (Dakota County). The entire area of the lake is considered littoral zone which is the 0-15 feet depth zone of aquatic plant dominance. Furthermore, the lake does not maintain a thermocline, which is a density gradient caused by changing water temperatures throughout the water column. The lake has been designated by the MN DNR has being infested with Eurasian water milfoil (*Myriophyllum spicatum*).

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.

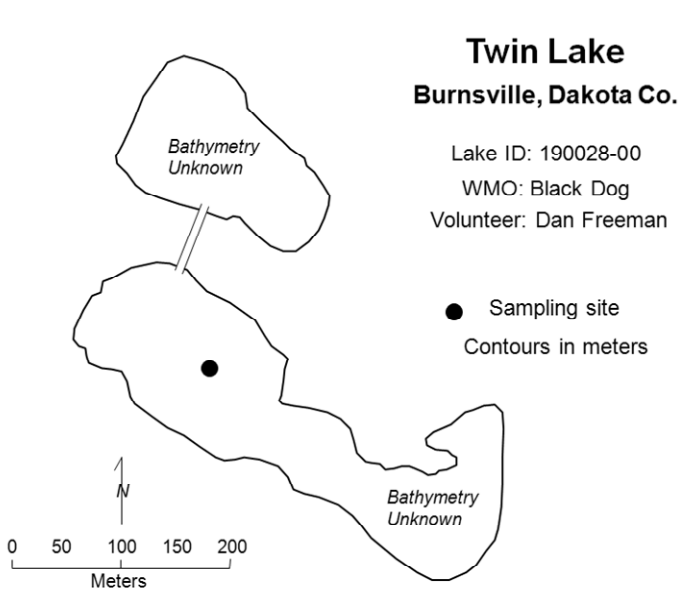
2009 summer (May-September) data summary

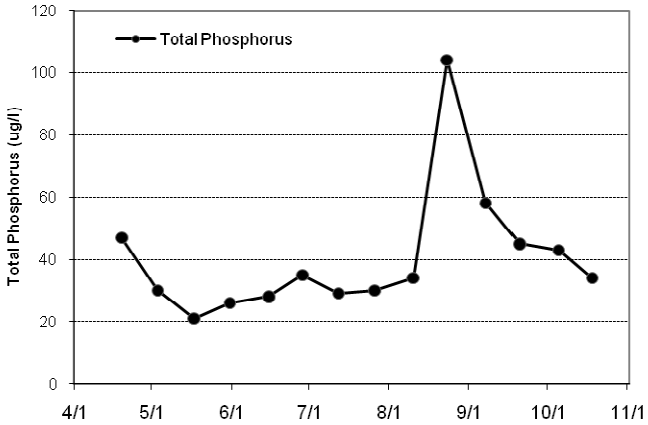
Parameter	*Mean*	*Minimum*	*Maximum*	*Grade*
TP (µg/l)	40.0	21.0	104.0	C
CLA (µg/l)	11.0	4.2	22.0	B
Secchi (m)	1.9	1.2	2.5	C
TKN (mg/l)	0.92	0.64	1.40	
			Lake Grade	C

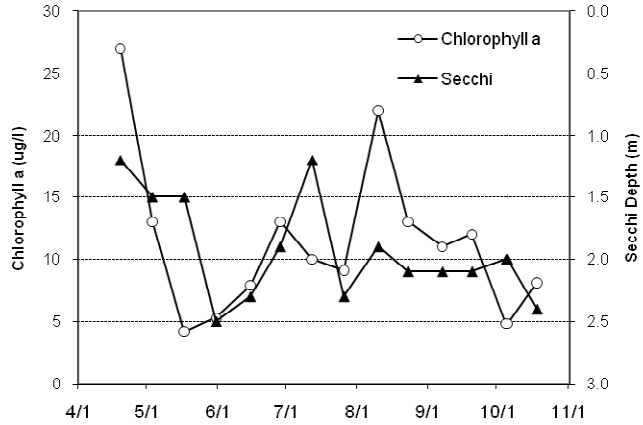
The lake received a lake grade of C for 2009. The lake grades received in the past have varied in the B and C range. Since 2005 CLA grades have varied widely from an A in 2005, to a C in 2006, back to an A in 2007, to Bs in 2008 and 2009. The water clarity grades have remained a C since 2001.

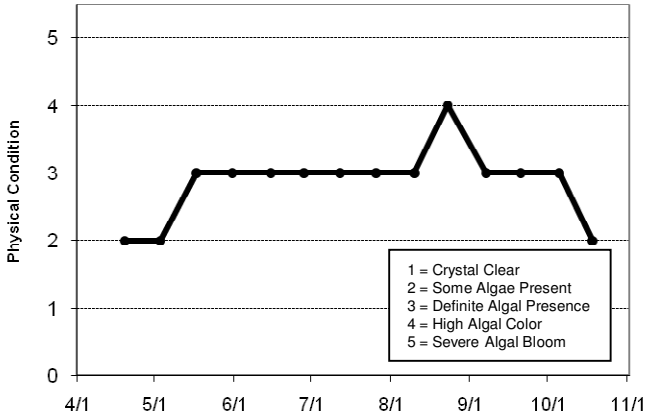
Throughout the monitoring period, the volunteer's opinions of the lake's physical condition and recreational suitability were ranked on a 1-to-5 scale. These user perception rankings are shown on the following page.

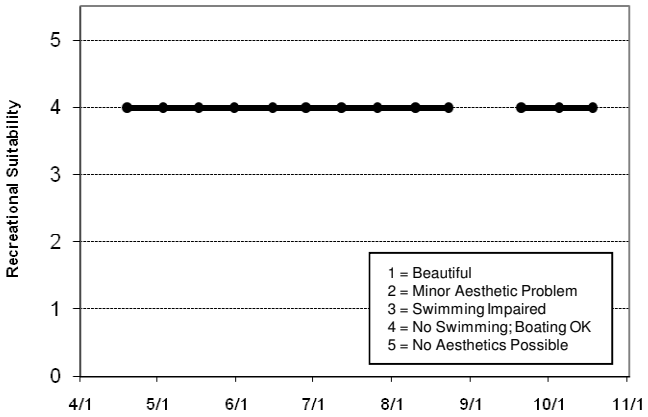
If you notice any errors in the lake's data or physical information, or are aware of any additional or missing information, please contact Brian Johnson of the Metropolitan Council at (651) 602-8743 or brian.johnson@metc.state.mn.us.











2009 Data

DATE	Surf Tmp (ºC)	Bot Tmp (ºC)	Surf DO (mg/L)	Bot DO (mg/L)	CLA (µg/L)	Surf TP (µg/L)	Bot TP (µg/L)	Secchi (m)	PC	RS
4/19	15.3				27	47		1.2	2	4
5/3	15.4				13	30		1.5	2	4
5/17	19				4.2	21		1.5	3	4
5/31	22.7				5.3	26		2.5	3	4
6/15	22				7.9	28		2.3	3	4
6/28	25.8				13	35		1.9	3	4
7/12	26.8				10	29		1.2	3	4
7/26	26.8				9.1	30		2.3	3	4
8/10	23.6				22	34		1.9	3	4
8/23	24				13	104		2.1	4	4
9/7	24				11	58		2.1	3	
9/20	23.3				12	45		2.1	3	4
10/5	11.8				4.8	43		2.0	3	4
10/18	8.5				8.1	34		2.4	2	4

Lake Water Quality Grades Based on Summertime Averages

Year	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Total Phosphorus												
Chlorophyll a												
Secchi Depth												
Lake Grade												

Year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total Phosphorus								D		C	C	C
Chlorophyll a								B		A	A	A
Secchi Depth								D		C	C	C
Lake Grade								**C**		**B**	**B**	**B**

Year	2004	2005	2006	2007	2008	2009
Total Phosphorus		C	D	C	C	C
Chlorophyll a		A	C	A	B	B
Secchi Depth		C	C	C	C	C
Lake Grade		**B**	**C**	**B**	**C**	**C**

Source: Metropolitan Council and STORET data

Twin Lake [St. Louis Park] (27-0656) *City of St. Louis Park*

Twin Lake is a small shallow lake located within the city of St. Louis Park (Hennepin County). Bathymetric information is unknown for the lake.

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

Parameter	*Mean*	*Minimum*	*Maximum*	*Grade*
TP (µg/l)	166.2	73.0	292.0	F
CLA (µg/l)	79.9	14.0	230.0	F
Secchi (m)	0.6	0.4	0.9	F
TKN (mg/l)	1.63	1.20	2.20	
			Lake Grade	F

The lake received a lake grade of F for 2009. Water clarity (secchi) remains poor with a grade of F. The CLA grades have reduced from a B grade in 2002, to C grades in 2003, 2005, and 2006, and then to D grades in 2007 and 2008. Furthermore, water clarity grades in 2002-2004 were Ds, but since then water clarity grades degressed to Fs. These observations seem to indicate that the water quality for Twin Lake has degraded since 2002. Additional years of monitoring are suggested for continuing to build the water quality database so as to better understand the lake's water quality and determine potential water quality trends.

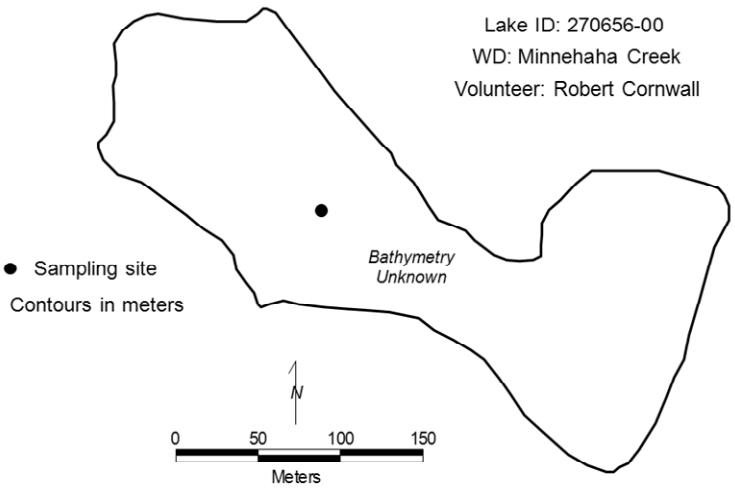
Throughout the monitoring period, the volunteer's opinions of the lake's physical condition and recreational suitability were ranked on a 1-to-5 scale. These user perception rankings are shown on the following page.

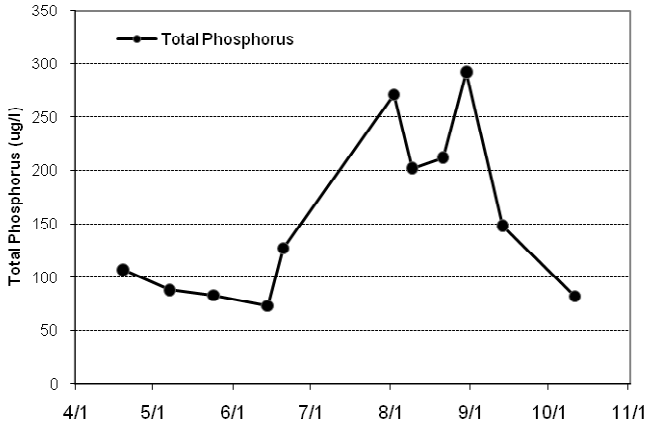
If you notice any errors in the lake's data or physical information, or are aware of any additional or missing information, please contact Brian Johnson of the Metropolitan Council at (651) 602-8743 or brian.johnson@metc.state.mn.us.

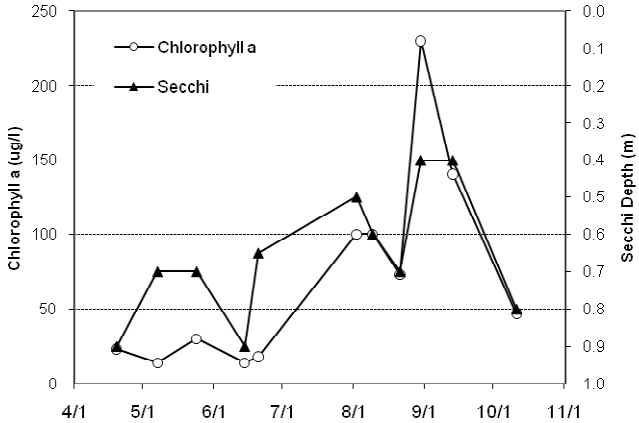
Twin Lake

St. Louis Park, Hennepin Co.

Lake ID: 270656-00
WD: Minnehaha Creek
Volunteer: Robert Cornwall

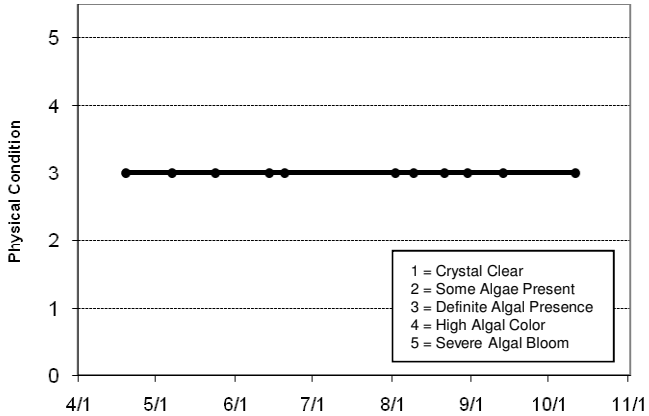






2009 Data

DATE	Surf Tmp (ºC)	Bot Tmp (ºC)	Surf DO (mg/L)	Bot DO (mg/L)	CLA (µg/L)	Surf TP (µg/L)	Bot TP (µg/L)	Secchi (m)	PC	RS
4/19	15.2				23	107		0.9	3	4
5/7	21.1				14	88		0.7	3	4
5/24	20.2				30	83		0.7	3	4
6/14	22.1				14	73		0.9	3	4
6/20	27.6				18	127		0.7	3	4
8/2	25.5				100	271		0.5	3	4
8/9	27				100	202		0.6	3	
8/21	21				73	212		0.7	3	4
8/30	20.8				230	292		0.4	3	4
9/13	28.3				140	148		0.4	3	4
10/11	8.2				47	82		0.8	3	4

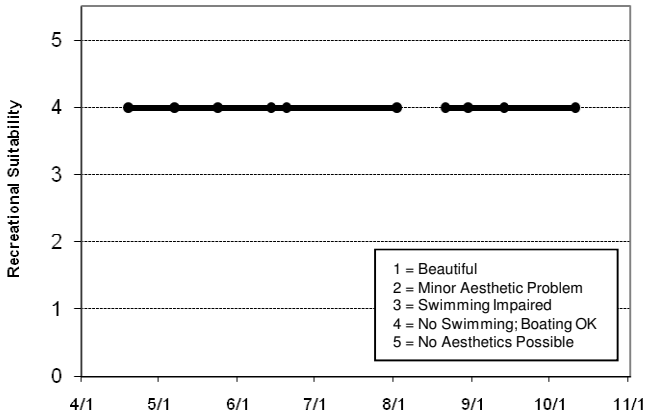


Lake Water Quality Grades Based on Summertime Averages

Year	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Total Phosphorus												
Chlorophyll a												
Secchi Depth												
Lake Grade												

Year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total Phosphorus											F	F
Chlorophyll a											B	C
Secchi Depth											D	D
Lake Grade											**D**	**D**

Year	2004	2005	2006	2007	2008	2009
Total Phosphorus	F	F	D	F	D	F
Chlorophyll a	D	C	C	D	D	F
Secchi Depth	D	F	F	F	F	F
Lake Grade	**D**	**D**	**D**	**F**	**D**	**F**



Source: Metropolitan Council and STORET data

Twin Lake [south basin] (82-0048) *May Township*

Twin Lake is located in May Township (Washington County). The lake is considered an METC Priority Lake for its exceptional water clarity (METC 2007). The south basin has a maximum depth of 10 m (33 ft). Other bathymetric information is unknown for this lake. The lake's inflow receives water from Square Lake.

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. Depth profiles for temperature and dissolved oxygen were also measured. The resulting data are summarized in tables and figures on the following page.

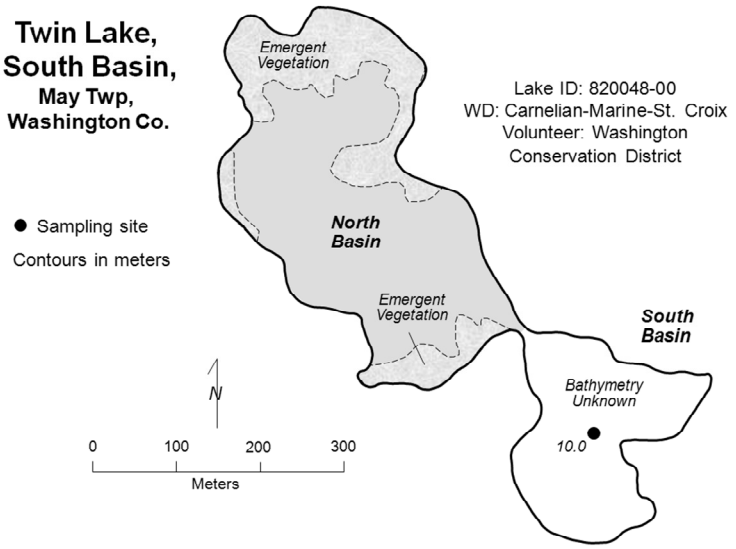
2009 summer (May-September) data summary

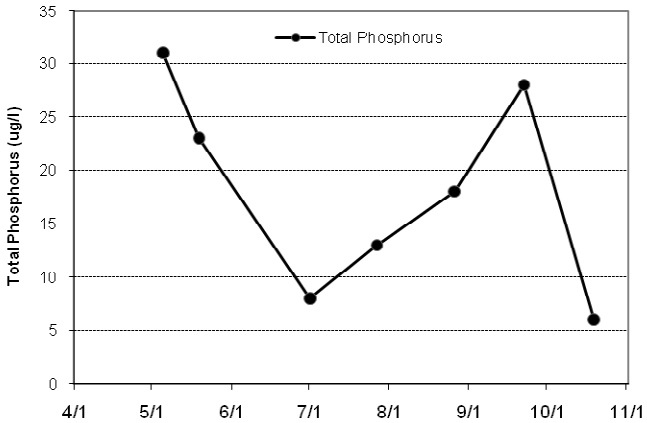
Parameter	*Mean*	*Minimum*	*Maximum*	*Grade*
TP (µg/l)	20.2	8.0	31.0	A
CLA (µg/l)	4.3	1.6	6.1	A
Secchi (m)	4.8	3.4	6.1	A
TKN (mg/l)	0.62	0.50	0.84	
			Lake Grade	A

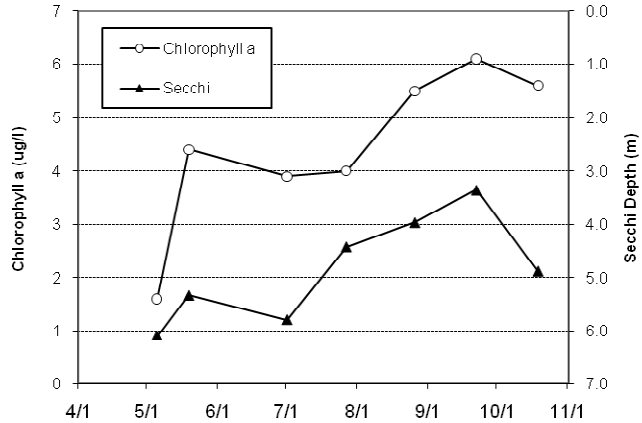
The lake received a lake grade of A for 2009, which is consistent with its limited historical database. Additional years of monitoring are suggested for continuing to build the water quality database so as to better understand the lake's water quality and determine potential water quality trends.

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.

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.

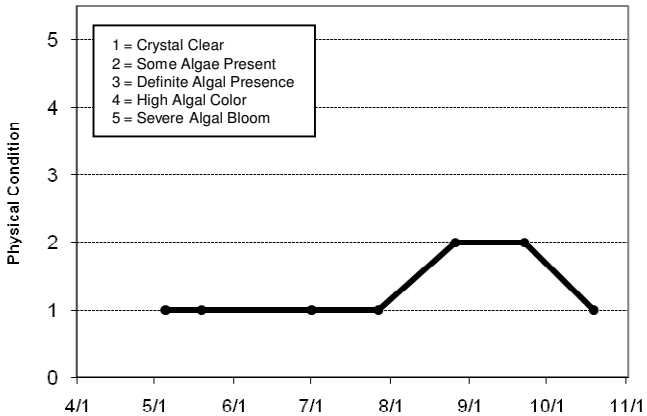






2009 Data

DATE	Surf Tmp (ºC)	Bot Tmp (ºC)	Surf DO (mg/L)	Bot DO (mg/L)	CLA (µg/L)	Surf TP (µg/L)	Bot TP (µg/L)	Secchi (m)	PC	RS
5/5	15	6.3	10.38	0.22	1.6	31		6.1	1	1
5/19	17.1	7.4	10.59	0.11	4.4	23		5.3	1	1
7/1	22.2	9.3	8.81	0.15	3.9	8		5.8	1	1
7/27	23.8	11.1	9.24	0.18	4	13		4.4	1	1
8/26	23.7	11.6	8.9	0.07	5.5	18		4.0	2	2
9/22	22.8	12	9.15	0.05	6.1	28		3.4	2	2
10/19	10.2	10	10.14	0.11	5.6	6		4.9	1	1



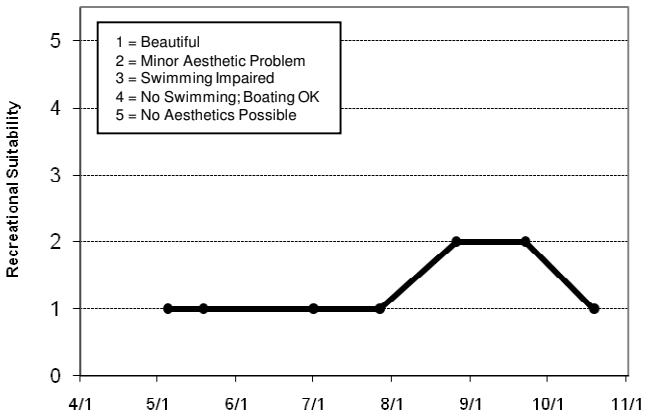
Lake Water Quality Grades Based on Summertime Averages

Year	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Total Phosphorus												
Chlorophyll a												
Secchi Depth												
Lake Grade												

Year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total Phosphorus						A	A					
Chlorophyll a						A	A					
Secchi Depth						A	A					
Lake Grade						**A**	**A**					

Year	2004	2005	2006	2007	2008	2009
Total Phosphorus					A	A
Chlorophyll a					A	A
Secchi Depth					A	A
Lake Grade					**A**	**A**

Source: Metropolitan Council and STORET data



Valley Lake (19-0348) *City of Lakeville*

Valley Lake is located in the City of Lakeville (Dakota County). The surface area of the lake is 8 acres, and it has a maximum depth of 3.2 m (10 ft). The entire lake is considered littoral zone, which is the shallow 0 – 15 feet depth zone that is typically dominated by aquatic plants. Since the lake is relatively shallow, it does not maintain a thermocline, which is a density gradient caused by changing water temperatures throughout the water column. The MN DNR has designated the lake as being infested with Eurasion water milfoil (*Myriophyllum spicatum*).

The lake has been involved in a project in which barley straw or crushed corn was added to the lake in an attempt to inhibit algal populations. CAMP data were used to evaluate the effectiveness of these additions. Refer to McComas and Stuckert (2009b) for details on the project.

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

Parameter	*Mean*	*Minimum*	*Maximum*	*Grade*
TP (µg/l)	57.0	32.0	88.0	C
CLA (µg/l)	6.5	2.0	15.0	A
Secchi (m)	2.3	1.7	3.3	B
TKN (mg/l)	0.95	0.79	1.20	
			Lake Grade	B

The lake received a lake grade of B for 2009, which is consistent with the lake's historical water quality database. The lake grades have varied in the range of B to D for the past 15 years.

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.

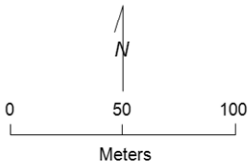
The Fisheries Section of the Minnesota Department of Natural Resources (MDNR) has conducted a fisheries survey on the lake. Information on the survey can be obtained through the MDNR Fisheries Section by calling (651) 259-5831 or by downloading the information off the Internet at http://www.dnr.state.mn.us/lakefind/.

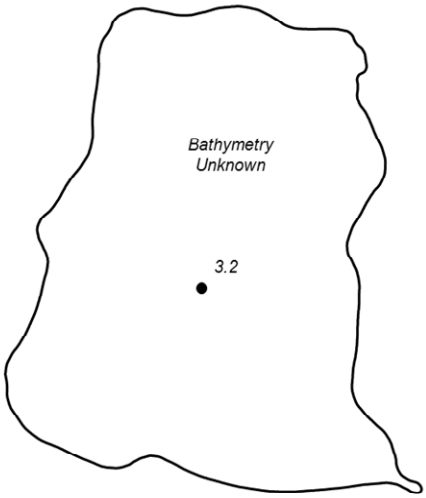
If you notice any errors in the lake's data or physical information, or are aware of any additional or missing information, please contact Brian Johnson of the Metropolitan Council at (651) 602-8743 or brian.johnson@metc.state.mn.us.

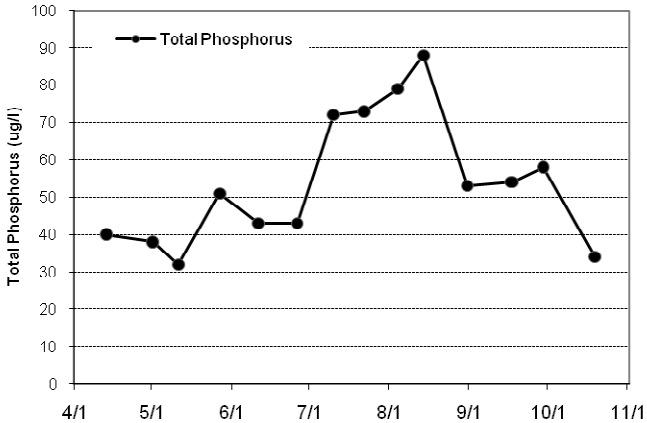
Valley Lake
Lakeville, Dakota Co.

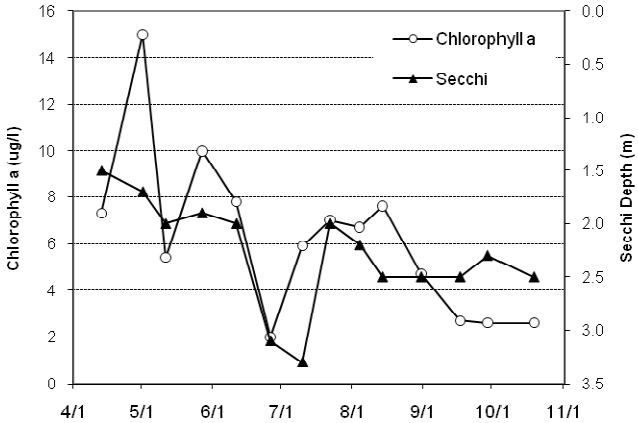
Lake ID: 190348-00
WMO: Vermillion River
Volunteers: Lakeville City Staff

● Sampling site
Contours in meters



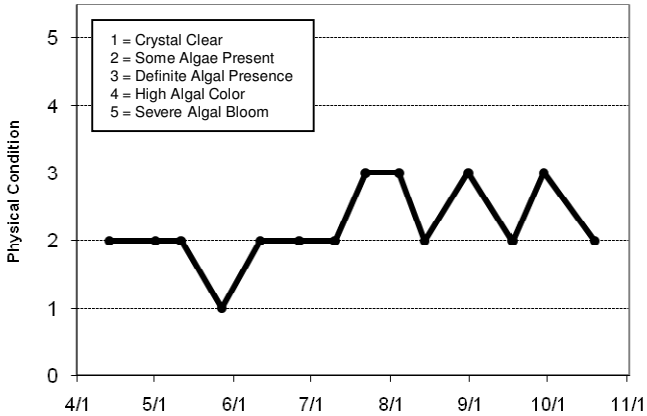






2009 Data

DATE	Surf Tmp (ºC)	Bot Tmp (ºC)	Surf DO (mg/L)	Bot DO (mg/L)	CLA (µg/L)	Surf TP (µg/L)	Bot TP (µg/L)	Secchi (m)	PC	RS
4/13	11				7.3	40		1.5	2	1
5/1	14				15	38		1.7	2	2
5/11	15				5.4	32		2.0	2	1
5/27	19.7				10	51		1.9	1	2
6/11					7.8	43		2.0	2	2
6/26	27				2	43		3.1	2	2
7/10	25				5.9	72		3.3	2	3
7/22	23				7	73		2.0	3	3
8/4	26				6.7	79		2.2	3	3
8/14	25.4				7.6	88		2.5	2	2
8/31	22.8				4.7	53		2.5	3	3
9/17	22.8				2.7	54		2.5	2	3
9/29	17.7				2.6	58		2.3	3	4
10/19	6.3				2.6	34		2.5	2	3

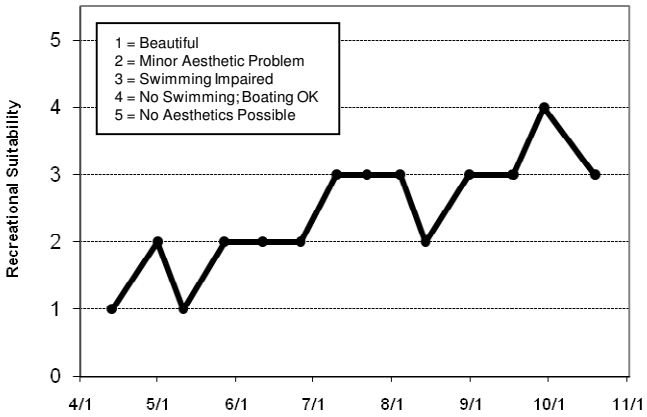


Lake Water Quality Grades Based on Summertime Averages

Year	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Total Phosphorus												
Chlorophyll a												
Secchi Depth												
Lake Grade												

Year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total Phosphorus				D	D	C			C	C	C	C
Chlorophyll a				C	C	C		C	B	A	A	B
Secchi Depth				D	D	D		D	C	C	B	B
Lake Grade				**D**	**D**	**C**			**C**	**B**	**B**	**B**

Year	2004	2005	2006	2007	2008	2009
Total Phosphorus	C	C	D	D	C	C
Chlorophyll a	C	C	D	C	C	A
Secchi Depth	C	C	D	C	C	B
Lake Grade	**C**	**C**	**D**	**C**	**C**	**B**



Source: Metropolitan Council and STORET data

Waconia Lake (10-0059) *Carver County Environmental Services*

Lake Waconia is located near the City of Waconia (Carver County). It is considered a Priority Lake by the Metropolitan Council for its high regional recreation value (METC 2007). The lake is one of the largest bodies of water in the region with a surface area of approximately 3,000 acres. It has mean and maximum depths of 4.0 m and 11.3 m (13 ft and 47 ft), respectively. The MN DNR has designated the lake as being infested with Eurasian water milfoil (*Myriophyllum spicatum*).

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

Parameter	*Mean*	*Minimum*	*Maximum*	*Grade*
TP (µg/l)	45.8	14.0	222.0	C
CLA (µg/l)	8.3	2.3	16.0	A
Secchi (m)	3.5	2.0	6.0	A
TKN (mg/l)	0.81	0.50	1.20	
			Lake Grade	B

The lake received a lake grade of B for 2009, which is consistent with its historical database. The lake grades fluctuate from year to year, but generally the lake receives either a B or C lake grade. Secchi depths were measured via the MPCA's Citizen Lake Monitoring Program in the 1970s.

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.

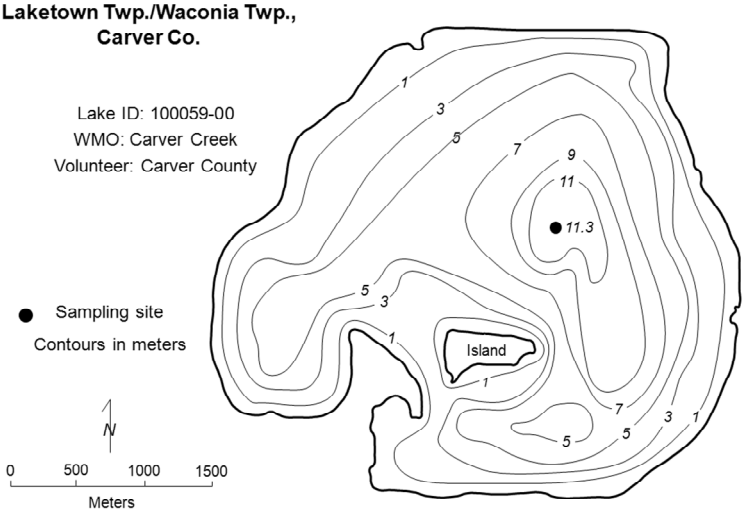
The Fisheries Section of the Minnesota Department of Natural Resources (MDNR) has conducted a fisheries survey on the lake. Information on the survey can be obtained through the MDNR Fisheries Section by calling (651) 259-5831 or by downloading the information off the Internet at http://www.dnr.state.mn.us/lakefind/.

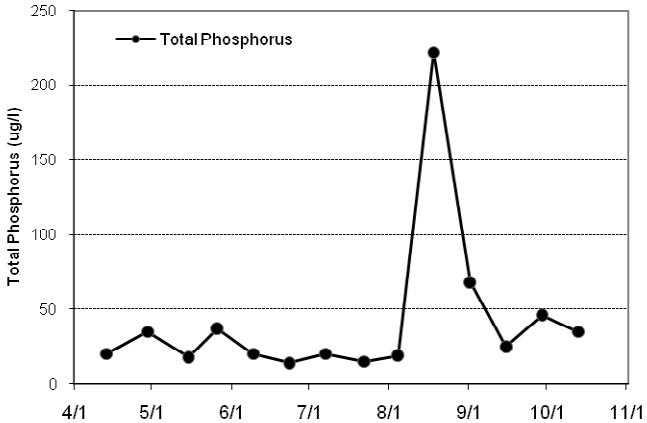
If you notice any errors in the lake's data or physical information, or are aware of any additional or missing information, please contact Brian Johnson of the Metropolitan Council at (651) 602-8743 or brian.johnson@metc.state.mn.us.

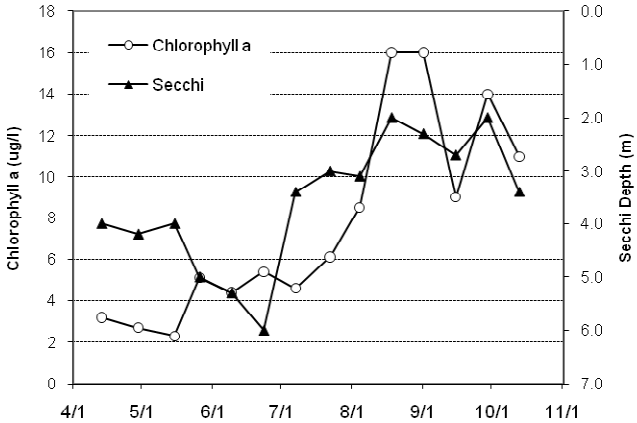
Lake Waconia

Laketown Twp./Waconia Twp., Carver Co.

Lake ID: 100059-00
WMO: Carver Creek
Volunteer: Carver County

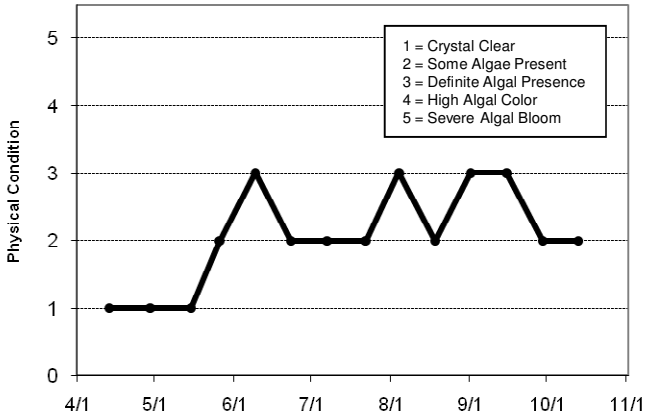






2009 Data

DATE	Surf Tmp (ºC)	Bot Tmp (ºC)	Surf DO (mg/L)	Bot DO (mg/L)	CLA (µg/L)	Surf TP (µg/L)	Bot TP (µg/L)	Secchi (m)	PC	RS
4/13	6.49		8.95		3.2	20		4.0	1	1
4/29	10.9		11.16		2.7	35		4.2	1	1
5/15	14.65		9.32		2.3	18		4.0	1	1
5/26	17.55		10.24		5.1	37		5.0	2	2
6/9	17.22		8.8		4.4	20		5.3	3	3
6/23	24.9		10.15		5.4	14		6.0	2	2
7/7	24.7		14.8		4.6	20		3.4	2	2
7/22	22.66		12.51		6.1	15		3.0	2	2
8/4	22.09		8.67		8.5	19		3.1	3	3
8/18	23.71		8.72		16	222		2.0	2	2
9/1	21.41		10.33		16	68		2.3	3	3
9/15	23.12		12.72		9	25		2.7	3	2
9/29	18.16		9		14	46		2.0	2	2
10/13	9.59		12.5		11	35		3.4	2	2



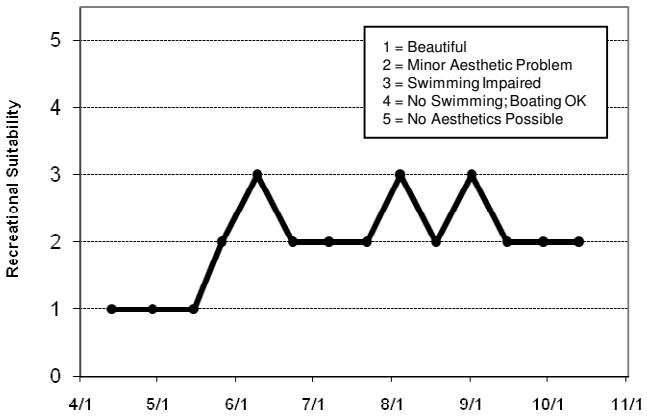
Lake Water Quality Grades Based on Summertime Averages

Year	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Total Phosphorus	C	B				B						
Chlorophyll a	C	B				B					C	
Secchi Depth	C	C	C	C	D	C	C	C	D	C	C	C
Lake Grade	**C**	**B**				**B**						

Year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total Phosphorus			A	A	B	B	C	C	C	C	B	C
Chlorophyll a			A	B	B	B	B	B	B	B	B	B
Secchi Depth	C	C	A	B	C	C	C	C	C	B	B	C
Lake Grade			**A**	**B**	**B**	**B**	**C**	**C**	**C**	**B**	**B**	**C**

Year	2004	2005	2006	2007	2008	2009
Total Phosphorus	B	B	C	C	C	C
Chlorophyll a	B	B	C	B	C	A
Secchi Depth	C	A	B	C	B	A
Lake Grade	**B**	**B**	**C**	**C**	**C**	**B**

Source: Metropolitan Council and STORET data



Weber Pond (82-0119) *Valley Branch Watershed District*

Weber Pond is located in the City of Mahtomedi (Washington County). It has a surface area of 7.5 acres and a maximum depth of 2.0 m (6.5 ft). Other bathymetric information is unknown. The entire lake is considered littoral zone, which is the shallow 0 – 15 feet depth zone that is typically dominated by aquatic plants. Since the lake is relatively shallow, it does not maintain a thermocline, which is a density gradient caused by changing water temperatures throughout the water column.

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. Depth profiles for temperature and dissolved oxygen were also measured. The resulting data are summarized in tables and figures on the following page.

2009 summer (May-September) data summary

Parameter	*Mean*	*Minimum*	*Maximum*	*Grade*
TP (µg/l)	30.8	22.0	40.0	B
CLA (µg/l)	5.7	2.7	12.0	A
Secchi (m)	1.1	0.8	1.4	D
TKN (mg/l)	1.24	0.89	1.50	
			Lake Grade	B

The lake received a lake grade of B for 2009. Additional years of monitoring are suggested for continuing to build the water quality database so as to better understand the lake's water quality and determine potential water quality trends.

The water clarity grade of D does not correlate well with the CLA grade of A. A possible explanation may be that the water clarity may be affected by higher levels of total suspended solids from surface runoff from storm sewers and the surrounding suburban watershed. It may be that higher loadings of suspended solids have decreased water clarity which would decrease light penetration thereby inhibiting algal growth.

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.

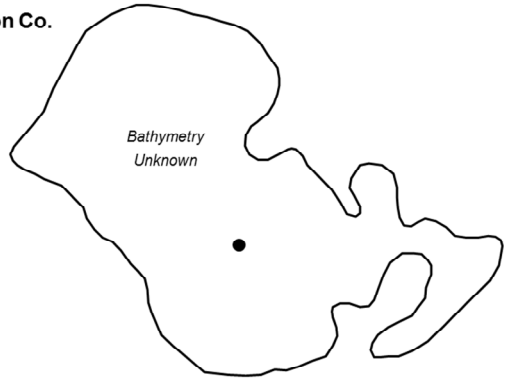
If you notice any errors in the lake's data or physical information, or are aware of any additional or missing information, please contact Brian Johnson of the Metropolitan Council at (651) 602-8743 or brian.johnson@metc.state.mn.us.

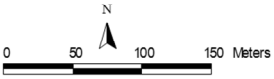
Weber Pond

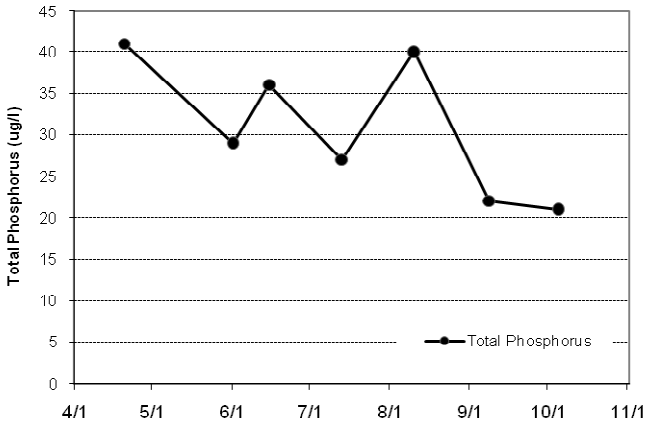
Mahtomedi, Washington Co.

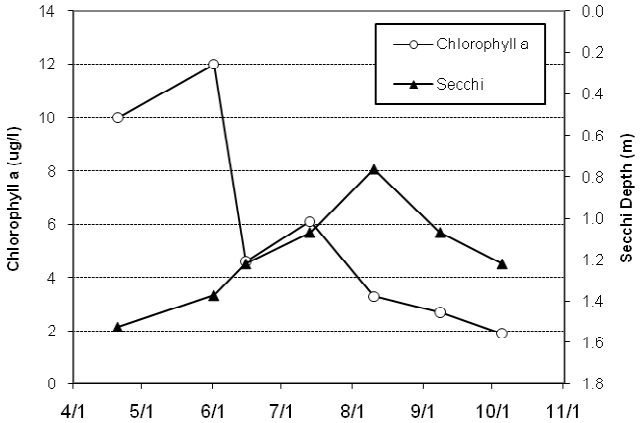
Lake ID: 820119-00
WD: Valley Branch
Volunteer: Washington
Conserv. Dist.

● Sampling site
Contours in meters



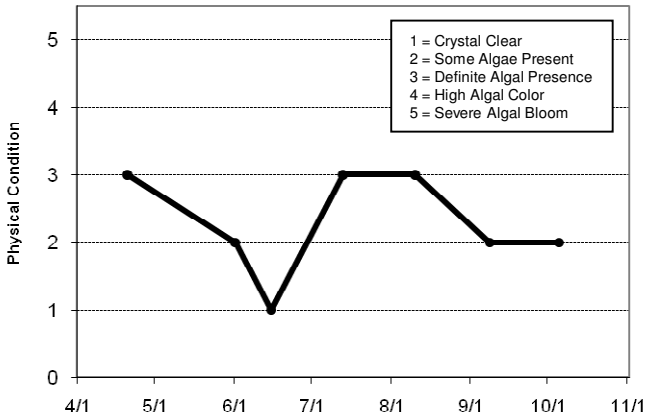






2009 Data

DATE	Surf Tmp (ºC)	Bot Tmp (ºC)	Surf DO (mg/L)	Bot DO (mg/L)	CLA (µg/L)	Surf TP (µg/L)	Bot TP (µg/L)	Secchi (m)	PC	RS
4/20	12.9	13.1	6.95	1.25	10	41		1.5	3	4
6/1	19.8	18.1	9.68	0.29	12	29		1.4	2	4
6/15	24.1	17.6	11.92	0.09	4.6	36		1.2	1	2
7/13	23.3	22	8.72	0.18	6.1	27		1.1	3	4
8/10	25	19.7	9.77	0.14	3.3	40		0.8	3	4
9/8	20.5	17.8	8.24	0.08	2.7	22		1.1	2	4
10/5	10.3	10.8	9.77	0.11	1.9	21		1.2	2	4



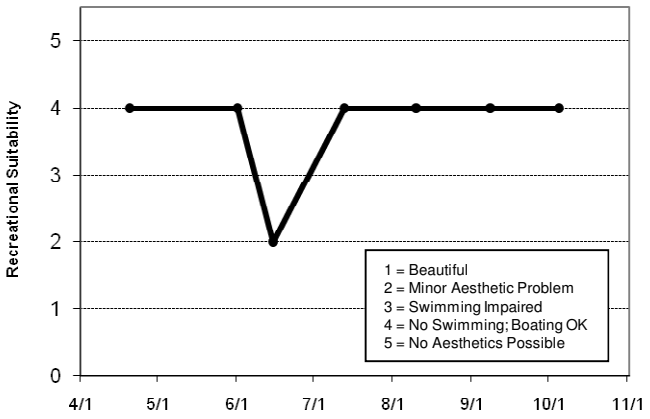
Lake Water Quality Grades Based on Summertime Averages

Year	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Total Phosphorus												
Chlorophyll a												
Secchi Depth												
Lake Grade												

Year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total Phosphorus												
Chlorophyll a												
Secchi Depth												
Lake Grade												

Year	2004	2005	2006	2007	2008	2009
Total Phosphorus			D			B
Chlorophyll a			A		A	A
Secchi Depth			D		D	D
Lake Grade			**C**			**B**

Source: Metropolitan Council and STORET data



West Boot Lake (82-0044) *Carnelian - Marine - St. Croix Watershed District*

West Boot Lake is located in May Township (Washington County). It is considered a Priority Lake by the Metropolitan Council for its exceptional water clarity (METC 2007). The 110-acre lake has mean and maximum depths of 5.9 m (19 ft) and 11.9 m (39 ft), respectively. The lake's 209-acre immediate watershed translates to a relatively small 2:1 watershed-to-lake area ratio. The greater the ratio, the greater the potential stress on the lake from surface runoff.

On each sampling day the lake was monitored for secchi transparency, as well as the lake's perceived physical condition and recreational suitability. Depth profiles for temperature and dissolved oxygen were also measured. The resulting data are summarized in tables and figures on the following page.

2009 summer (May-September) data summary

Parameter	*Mean*	*Minimum*	*Maximum*	*Grade*
Secchi (m)	4.3	3.0	6.2	A

The Secchi depth grade of A for 2009 is consistent with the A grades received since 1999. A lake grade was not given this year because total phosphorus and CLA samples were not collected in 2009.

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/.

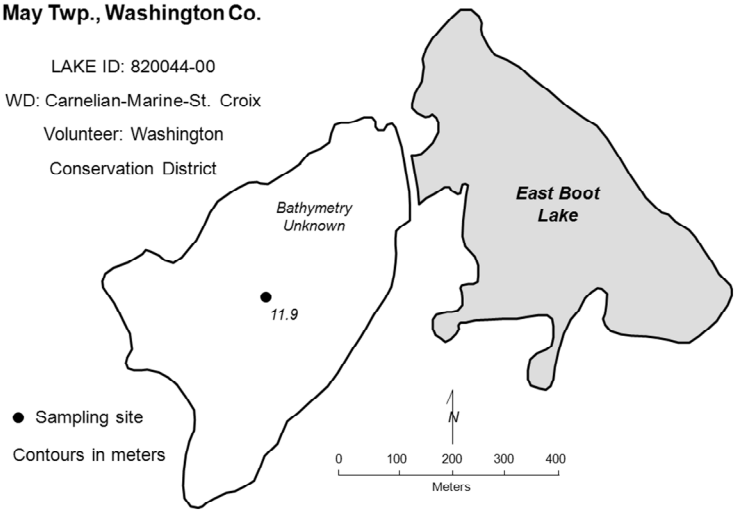
If you notice any errors in the lake's data or physical information, or are aware of any additional or missing information, please contact Brian Johnson of the Metropolitan Council at (651) 602-8743 or brian.johnson@metc.state.mn.us.

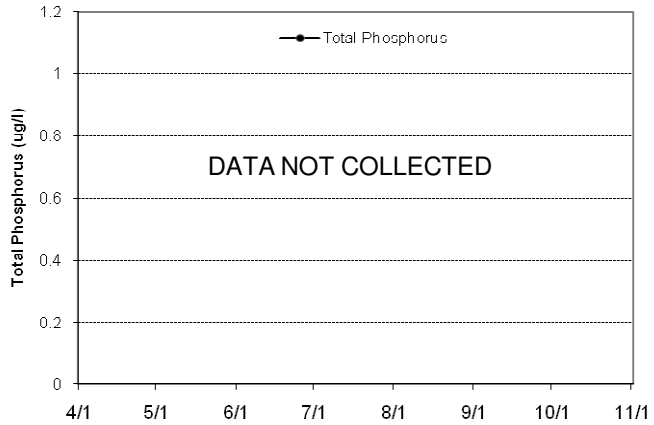
West Boot Lake
May Twp., Washington Co.

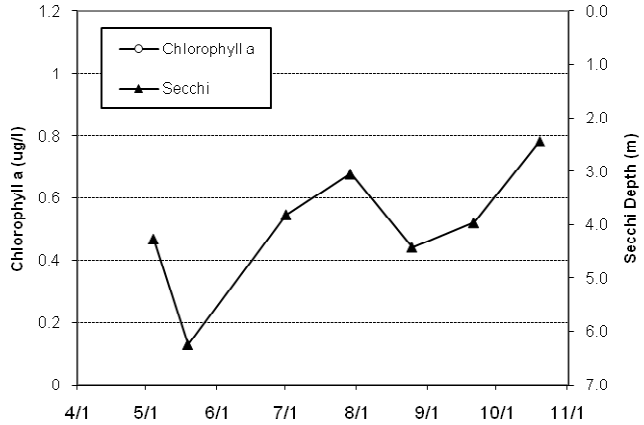
LAKE ID: 820044-00

WD: Carnelian-Marine-St. Croix

Volunteer: Washington Conservation District

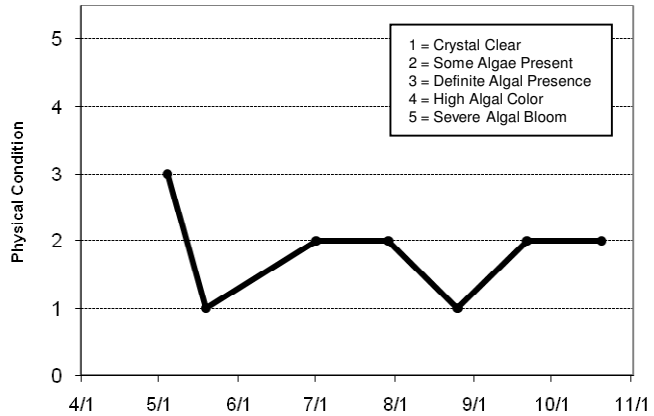






2009 Data

DATE	Surf Tmp (ºC)	Bot Tmp (ºC)	Surf DO (mg/L)	Bot DO (mg/L)	CLA (µg/L)	Surf TP (µg/L)	Bot TP (µg/L)	Secchi (m)	PC	RS
5/4	15.3	4.8	10.4	0				4.3	3	2
5/19	17.9	4.8	10.56	0.08				6.2	1	1
7/1	21.2	5.1	7.02	0.07				3.8	2	1
7/29	23.3	5.5	8.23	0.07				3.0	2	1
8/25	22.1	5.5	6.14	0.05				4.4	1	1
9/21	22.1	5.5	6.06	0.06				4.0	2	2
10/20	8.8	6.4	9.58	0.06				2.4	2	2

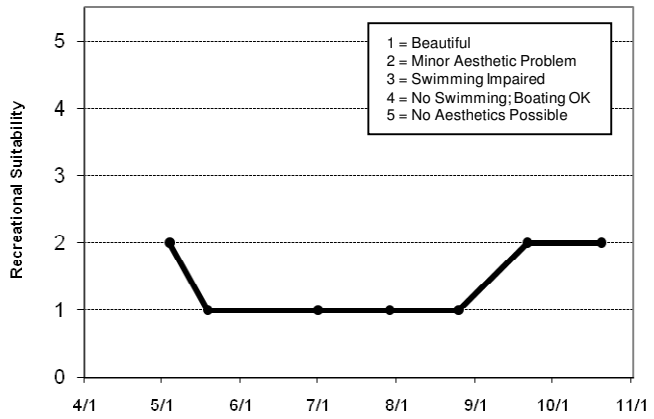


Lake Water Quality Grades Based on Summertime Averages

Year	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Total Phosphorus												
Chlorophyll a												
Secchi Depth												C
Lake Grade												

Year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total Phosphorus					B	C	A	A	A	A	A	B
Chlorophyll a					A	B	C	A	A	A	A	A
Secchi Depth					B	C	B	A	A	A	A	A
Lake Grade					**B**	**C**	**B**	**A**	**A**	**A**	**A**	**A**

Year	2004	2005	2006	2007	2008	2009
Total Phosphorus	A	A	A	B		
Chlorophyll a	A	A	A	A		
Secchi Depth	A	A	A	A	A	A
Lake Grade	**A**	**A**	**A**	**A**		



Source: Metropolitan Council and STORET data

West Lakeland Storage Site [north basin] (82-0119) *Valley Branch Watershed District*

The West Lakeland Storage Site is located in West Lakeland Township (Washington County). The storage site consists of three basins: north, middle, and south. The north basin has a maximum depth of 5.8 m (19 ft). Other bathymetric information for the basin is unknown. Most of the area of the basin is considered littoral zone which is the 0-15 feet depth zone of aquatic plant dominance.

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. Depth profiles for temperature and dissolved oxygen were also measured. The resulting data are summarized in tables and figures on the following page.

2009 summer (May-September) data summary

Parameter	*Mean*	*Minimum*	*Maximum*	*Grade*
TP (µg/l)	56.2	31.0	80.0	C
CLA (µg/l)	26.1	8.0	57.0	C
Secchi (m)	1.6	0.3	2.7	C
TKN (mg/l)	1.44	1.20	1.90	
			Lake Grade	C

The north basin received a lake grade of C for 2009. Additional years of monitoring are suggested for continuing to build the water quality database so as to better understand the lake's water quality and determine potential water quality trends.

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.

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.

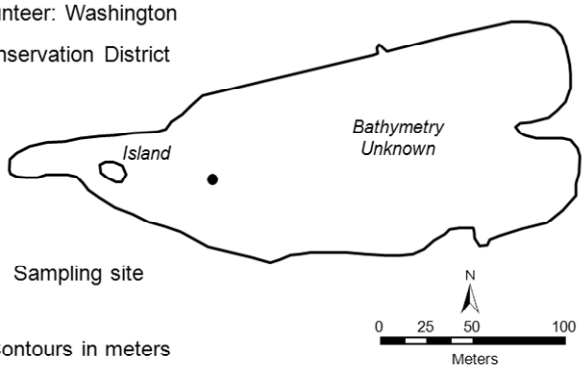
West Lakeland Storage Site (North Basin)

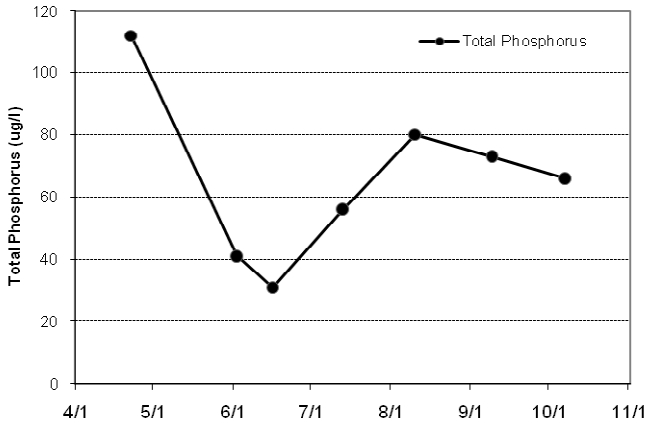
West Lakeland Twp., Washington Co.

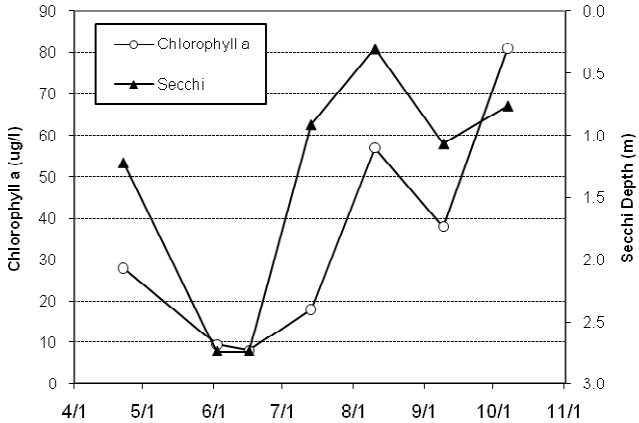
LAKE ID: 820488-00

WD: Valley Branch

Volunteer: Washington Conservation District

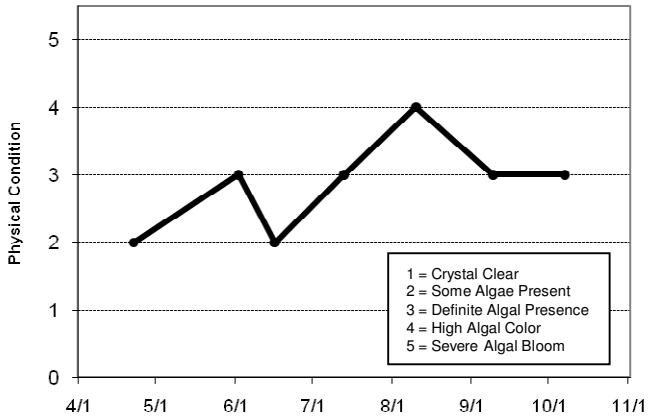






2009 Data

DATE	Surf Tmp (ºC)	Bot Tmp (ºC)	Surf DO (mg/L)	Bot DO (mg/L)	CLA (µg/L)	Surf TP (µg/L)	Bot TP (µg/L)	Secchi (m)	PC	RS
4/22	12.3	5.8	12.43	0.11	28	112		1.2	2	4
6/2	20.9	18.6	9.68	1.44	9.4	41		2.7	3	4
6/16	22.8	17.3	10.17	0.1	8	31		2.7	2	2
7/13	27.4	21.9	8.79	0.09	18	56		0.9	3	4
8/10	28.1	20.8	12.99	0.07	57	80		0.3	4	4
9/9	22.7	19.7	11.2	0.08	38	73		1.1	3	4
10/7	12.4	11.1	13.49	0.13	81	66		0.8	3	4



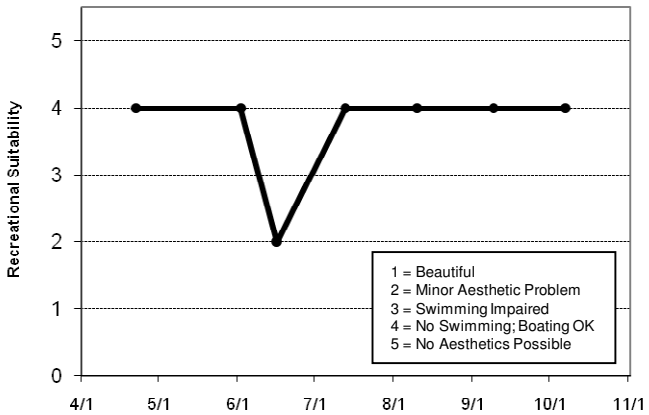
Lake Water Quality Grades Based on Summertime Averages

Year	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Total Phosphorus												
Chlorophyll a												
Secchi Depth												
Lake Grade												

Year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total Phosphorus												
Chlorophyll a												
Secchi Depth												
Lake Grade												

Year	2004	2005	2006	2007	2008	2009
Total Phosphorus					C	C
Chlorophyll a					B	C
Secchi Depth					C	C
Lake Grade					**C**	**C**

Source: Metropolitan Council and STORET data



Westwood Lake (27-0711) *Bassett Creek Watershed Management Organization*

Westwood Lake is located in the City of St. Louis Park (Hennepin County). The lake has a surface are of 41 acres and a maximum depth of 2.0 m (6.6 ft). The entire area of the lake is considered littoral zone which is the 0-15 feet depth zone of aquatic plant dominance. Since the lake is relatively shallow, it does not maintain a thermocline, which is a density gradient caused by changing water temperatures throughout the water column.

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.

2005 summer (May-September) data summary

Parameter	*Mean*	*Minimum*	*Maximum*	*Grade*
TP (µg/l)	40.5	20.0	61.0	C
CLA (µg/l)	10.4	3.3	27.0	B
Secchi (m)	1.0	0.7	1.3	D
TKN (mg/l)	1.57	1.10	2.00	
			Lake Grade	C

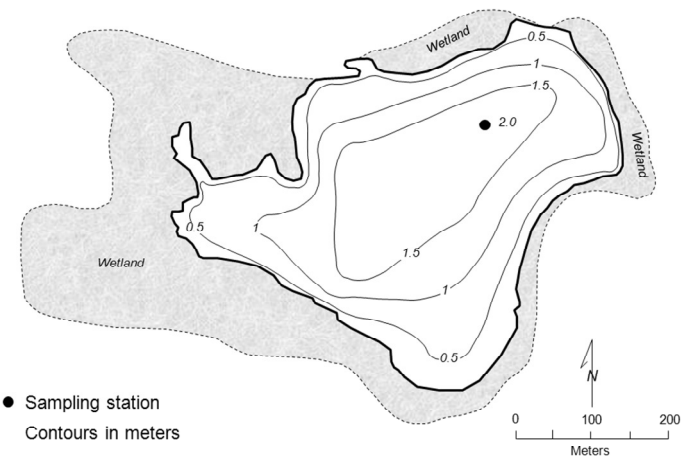
The lake received a lake grade of C in 2009, which is consistent with its historical database. The lake grades have varied mainly in the Cs and Bs. Further monitoring is suggested to continue to build the water quality database for increasing power to detect water quality trends.

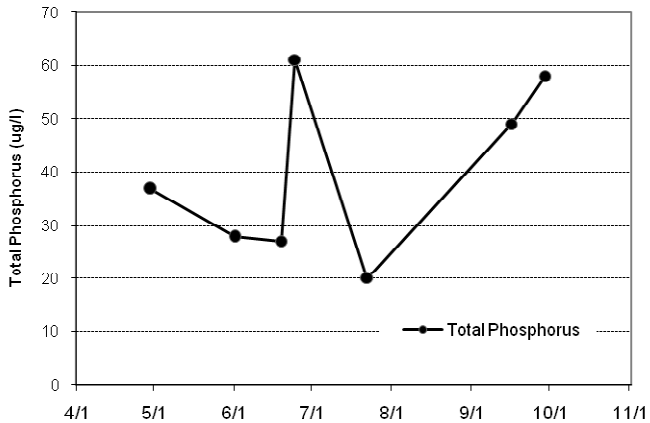
Throughout the monitoring period, the volunteer's opinions of the lake's physical condition and recreational suitability were ranked on a 1-to-5 scale. These user perception rankings are shown on the following page.

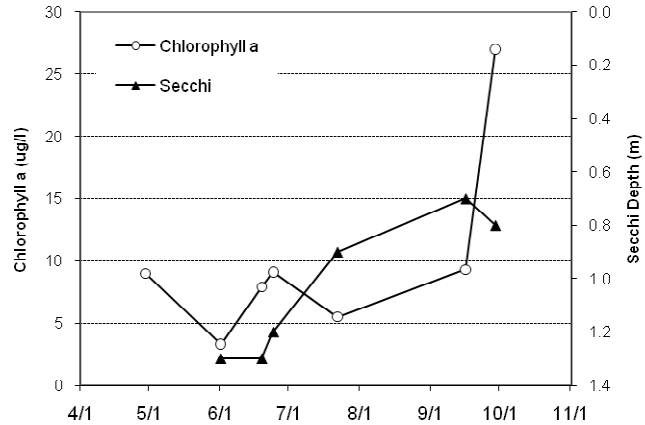
If you notice any errors in the lake's data or physical information, or are aware of any additional or missing information, please contact Brian Johnson of the Metropolitan Council at (651) 602-8743 or brian.johnson@metc.state.mn.us.

Lake ID: 270711-00
WMO: Bassett Creek
Volunteer: The Westwood Nature Center

Westwood Lake,
St. Louis Park, Hennepin Co.

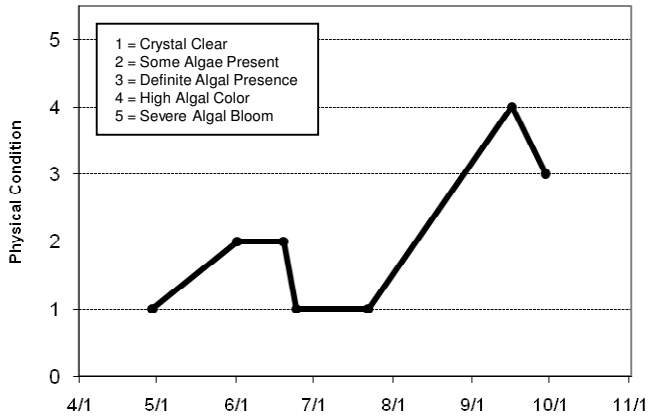






2009 Data

DATE	Surf Tmp (ºC)	Bot Tmp (ºC)	Surf DO (mg/L)	Bot DO (mg/L)	CLA (µg/L)	Surf TP (µg/L)	Bot TP (µg/L)	Secchi (m)	PC	RS
4/29	13.2				9	37			1	1
6/1	22.5				3.3	28		1.3	2	2
6/19	26.1				7.9	27		1.3	2	4
6/24	26.8				9.1	61		1.2	1	4
7/22	24.7				5.5	20		0.9	1	4
9/16	23				9.3	49		0.7	4	3
9/29	14.2				27	58		0.8	3	4

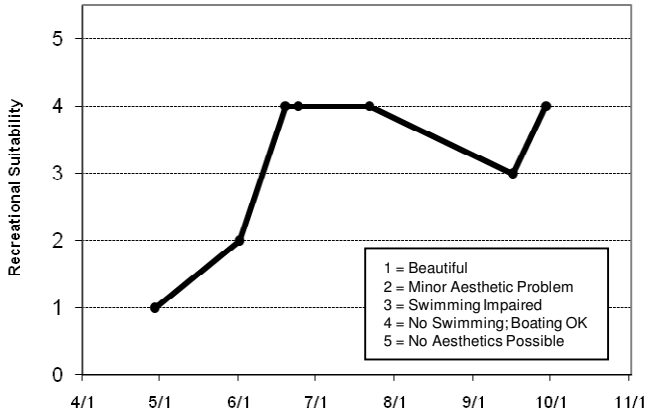


Lake Water Quality Grades Based on Summertime Averages

Year	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Total Phosphorus			F									
Chlorophyll a			C									
Secchi Depth			D									
Lake Grade			**D**									

Year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total Phosphorus		C							B	B	C	C
Chlorophyll a		C							B	C	B	A
Secchi Depth		C							C	C	C	C
Lake Grade		**C**							**B**	**C**	**C**	**B**

Year	2004	2005	2006	2007	2008	2009
Total Phosphorus	C	D	D	C	B	C
Chlorophyll a	A	C	B	B	A	B
Secchi Depth	C	C	C	C	D	D
Lake Grade	**B**	**C**	**C**	**C**	**B**	**C**



Source: Metropolitan Council and STORET data

White Rock Lake (82-0072) *Rice Creek Watershed District*

White Rock Lake is a 65-acre lake located in Washington County. There is no other known morphological data for the lake.

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

Parameter	Mean	*Minimum*	*Maximum*	*Grade*
TP (µg/l)	99.3	70.0	129.0	D
CLA (µg/l)	30.2	5.2	51.0	C
Secchi (m)	0.8	0.6	1.5	D
TKN (mg/l)	2.41	1.80	3.00	
			Lake Grade	D

The lake received a lake grade of D in 2009, which is consistent with its limited historical database. Additional years of monitoring are suggested for continuing to build the water quality database so as to better understand the lake's water quality and determine potential water quality trends.

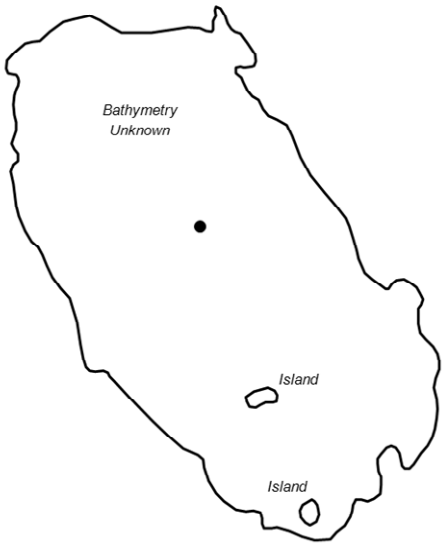
Throughout the monitoring period, the volunteer's opinions of the lake's physical condition and recreational suitability were ranked on a 1-to-5 scale. These user perception rankings are shown on the following page.

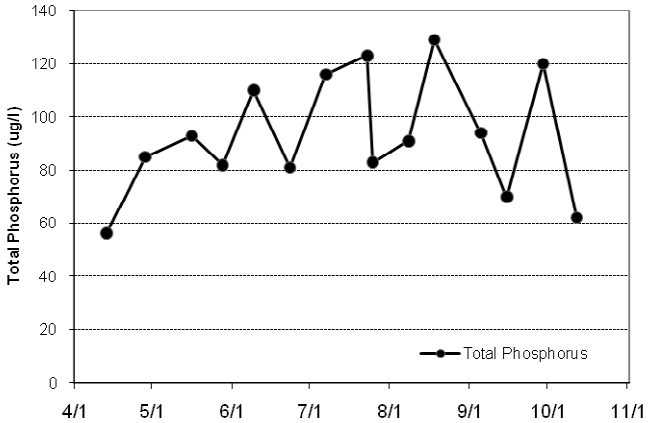
If you notice any errors in the lake's data or physical information, or are aware of any additional or missing information, please contact Brian Johnson of the Metropolitan Council at (651) 602-8743 or brian.johnson@metc.state.mn.us.

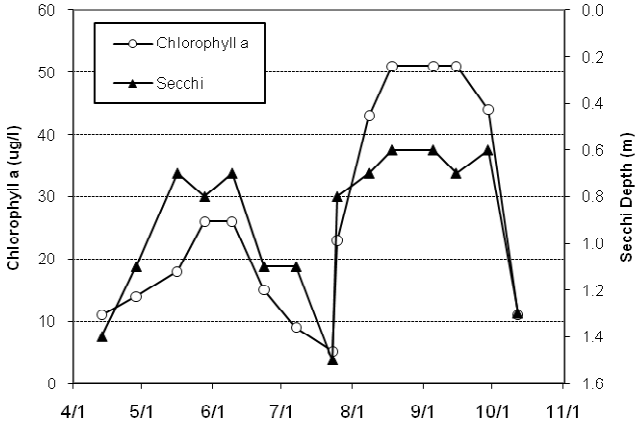
White Rock Lake,
New Scandia Twp., Washington Co.

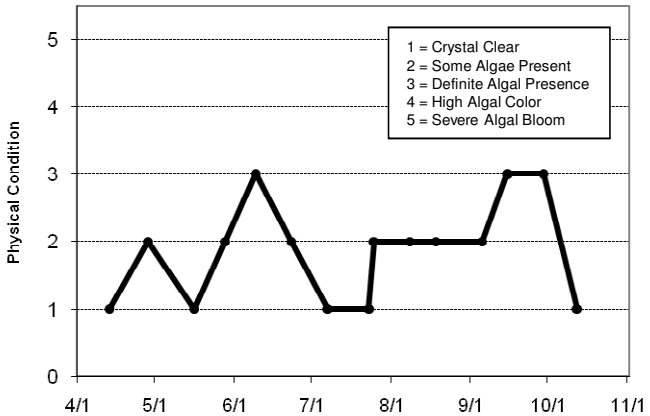
Lake ID: 820072-00
WD: Rice Creek
Volunteer: David Bluhm

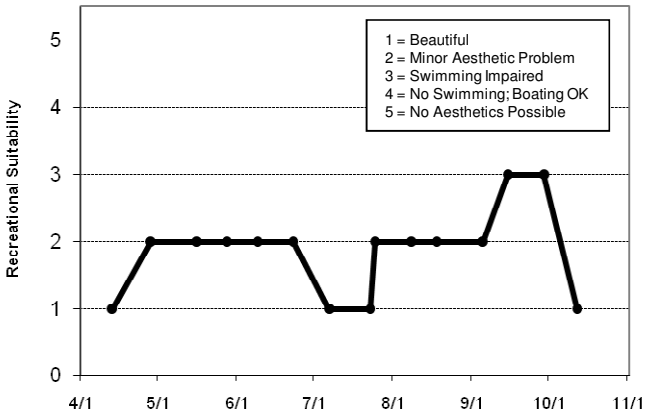
● Sampling station
Contours in meters











2009 Data

DATE	Surf Tmp (ºC)	Bot Tmp (ºC)	Surf DO (mg/L)	Bot DO (mg/L)	CLA (µg/L)	Surf TP (µg/L)	Bot TP (µg/L)	Secchi (m)	PC	RS
4/13	11.1				11	56		1.4	1	1
4/28	14.1				14	85		1.1	2	2
5/16	16.1				18	93		0.7	1	2
5/28	13.6				26	82		0.8	2	2
6/9	17.4				26	110		0.7	3	2
6/23	23.4				15	81		1.1	2	2
7/7	25.1				9	116		1.1	1	1
7/23	26				5.2	123		1.5	1	1
7/25	23.2				23	83		0.8	2	2
8/8	23.1				43	91		0.7	2	2
8/18	25.3				51	129		0.6	2	2
9/5	23.6				51	94		0.6	2	2
9/15	29.1				51	70		0.7	3	3
9/29	14.9				44	120		0.6	3	3
10/12	7.2				11	62		1.3	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												
Chlorophyll a												
Secchi Depth												
Lake Grade												

Year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total Phosphorus												
Chlorophyll a												
Secchi Depth												
Lake Grade												

Year	2004	2005	2006	2007	2008	2009
Total Phosphorus			D	D	D	D
Chlorophyll a			C	C	C	C
Secchi Depth			F	F	D	D
Lake Grade			**D**	**D**	**D**	**D**

Source: Metropolitan Council and STORET data

Wilmes Lake (82-0090) *City of Woodbury*

Wilmes Lake is located in the City of Woodbury (Washington County). The lake has a surface area of 41 acres and a maximum depth of 5.5 m (18 feet). The lake has a watershed area of 2,247 acres which gives a large watershed-to-lake area ratio of 55:1. The larger the ratio, the greater the potential stress on the lake quality from surface runoff. The MN DNR has designated the lake as being infested with Eurasion water milfoil (*Myriophyllum spicatum*).

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

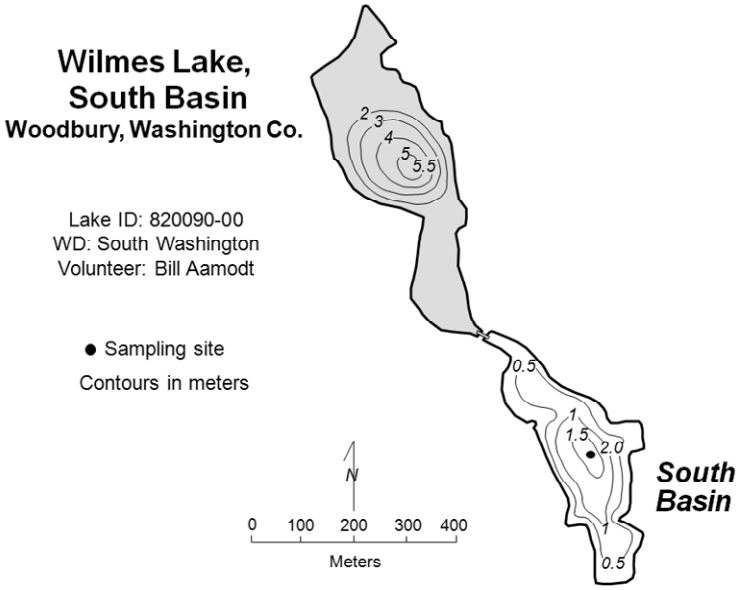
Parameter	*Mean*	*Minimum*	*Maximum*	*Grade*
TP (µg/l)	64.8	52.0	80.0	C
CLA (µg/l)	20.6	9.4	28.0	C
Secchi (m)	1.5	1.1	2.6	C
TKN (mg/l)	1.26	1.10	1.50	
			Lake Grade	C

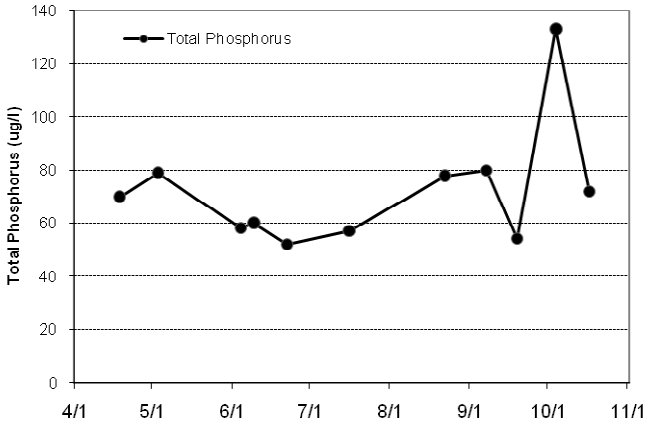
The lake received a lake grade of C for 2009, which is consistent with its historical water quality database. The water quality of the lake varies between a lake grade of C and D

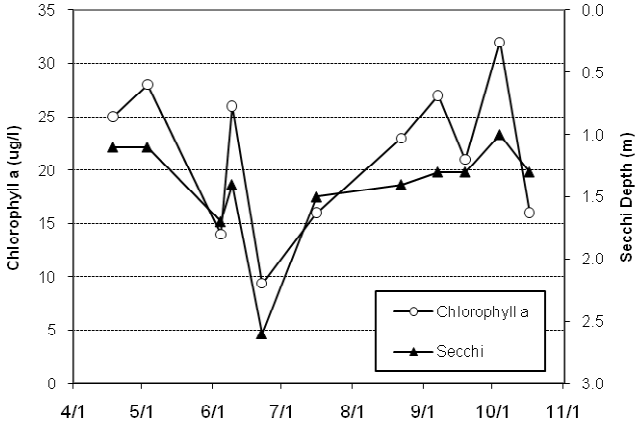
The 1994 and 1995 CAMP monitoring was performed in the northern basin of Wilmes Lake, while the 1996-2009 monitoring was performed in the lake's south basin. Comparisons between the 1994-1995 data and the 1996-2009 data should not be made because they are from different basins.

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.

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.

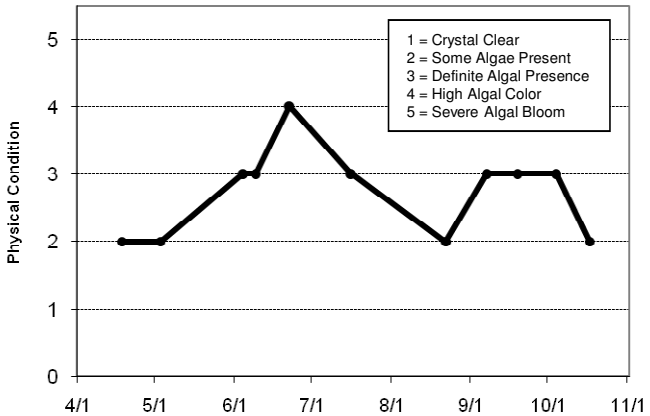






2009 Data

DATE	Surf Tmp (ºC)	Bot Tmp (ºC)	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	16				25	70		1.1	2	2
5/3	15.9				28	79		1.1	2	2
6/4	24.2				14	58		1.7	3	2
6/9	18.4				26	60		1.4	3	2
6/22	28.1				9.4	52		2.6	4	3
7/16	23.9				16	57		1.5	3	2
8/22	23.9				23	78		1.4	2	2
9/7	23				27	80		1.3	3	3
9/19	24.5				21	54		1.3	3	3
10/4	14.6				32	133		1.0	3	3
10/17	10.1				16	72		1.3	2	2



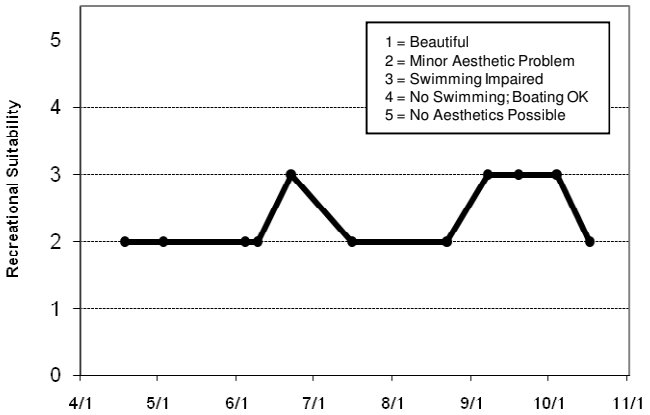
Lake Water Quality Grades Based on Summertime Averages

Year	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Total Phosphorus												
Chlorophyll a												
Secchi Depth												
Lake Grade												

Year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total Phosphorus			C	D	D	D	D	D	D	D	D	D
Chlorophyll a			B	B	C	C	C	C	C	C	D	C
Secchi Depth			B	C	C	D	D	C	C	D	D	C
Lake Grade			**B**	**C**	**C**	**D**	**D**	**C**	**C**	**D**	**D**	**C**

Year	2004	2005	2006	2007	2008	2009
Total Phosphorus	C	D	D	D	C	C
Chlorophyll a	C	C	C	C	C	C
Secchi Depth	C	D	C	C	D	C
Lake Grade	**C**	**D**	**C**	**C**	**C**	**C**

Source: Metropolitan Council and STORET data



Wing Lake (27-0091) *Nine Mile Creek Watershed District*

Wing Lake is located within the City of Minnetonka (Hennepin County). It has a surface area of 11 acres. There is little known morphological data available for the lake.

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.

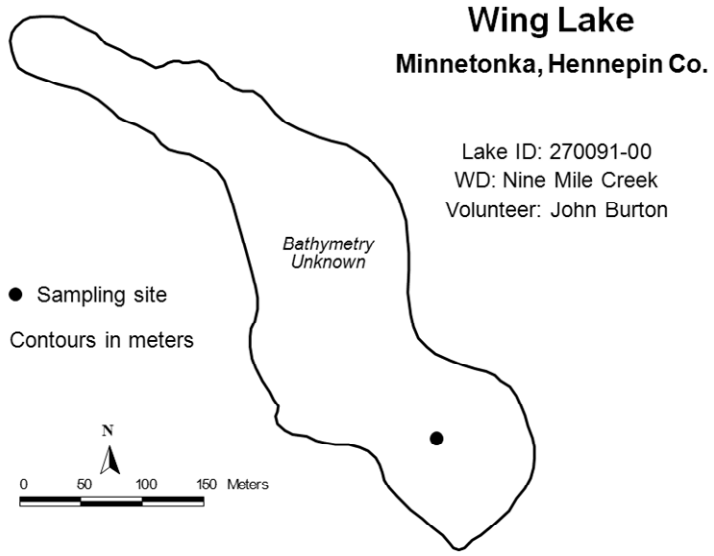
2009 summer (May-September) data summary

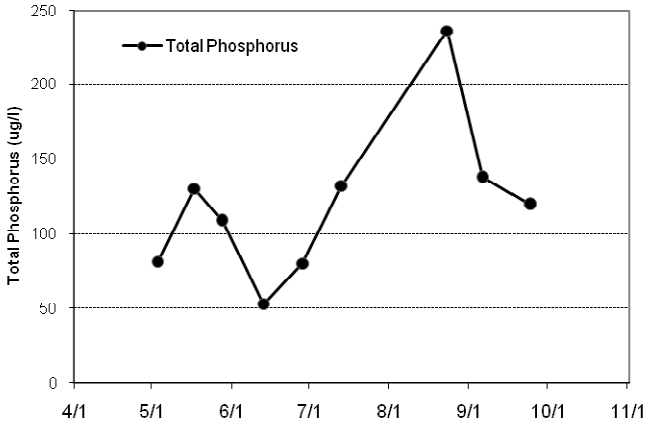
Parameter	*Mean*	*Minimum*	*Maximum*	*Grade*
TP (µg/l)	119.9	53.0	236.0	D
CLA (µg/l)	46.7	15.0	190.0	C
Secchi (m)	0.7	0.5	1.2	D
TKN (mg/l)	1.78	1.30	2.60	
			Lake Grade	D

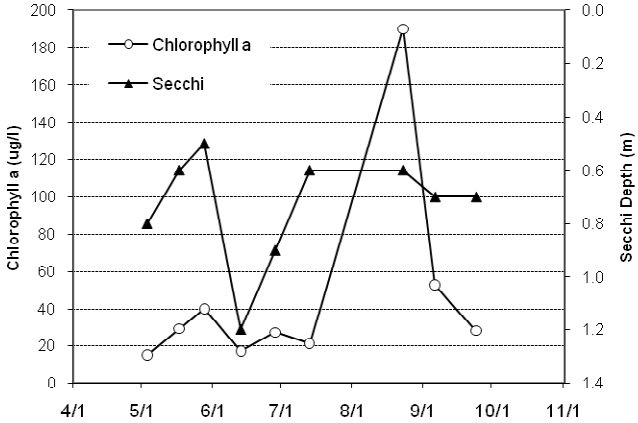
The lake received a lake grade of D for 2009, which is consistent with its limited historical database. Additional years of monitoring are suggested for continuing to build the water quality database so as to better understand the lake's water quality and determine potential water quality trends.

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.

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.

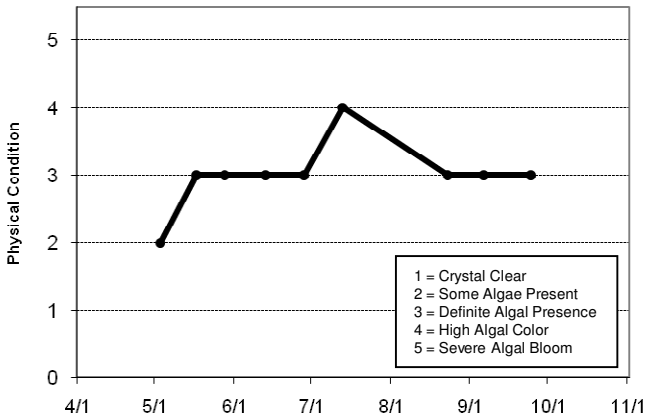






2009 Data

DATE	Surf Tmp (ºC)	Bot Tmp (ºC)	Surf DO (mg/L)	Bot DO (mg/L)	CLA (µg/L)	Surf TP (µg/L)	Bot TP (µg/L)	Secchi (m)	PC	RS
5/3	17.8				15	81		0.8	2	4
5/17	18				29	130		0.6	3	4
5/28	22.8				40	109		0.5	3	4
6/13	22				17	53		1.2	3	4
6/28	24				27	80		0.9	3	5
7/13	24				21	132		0.6	4	5
8/23	23				190	236		0.6	3	5
9/6	22				53	138		0.7	3	5
9/24	22				28	120		0.7	3	5



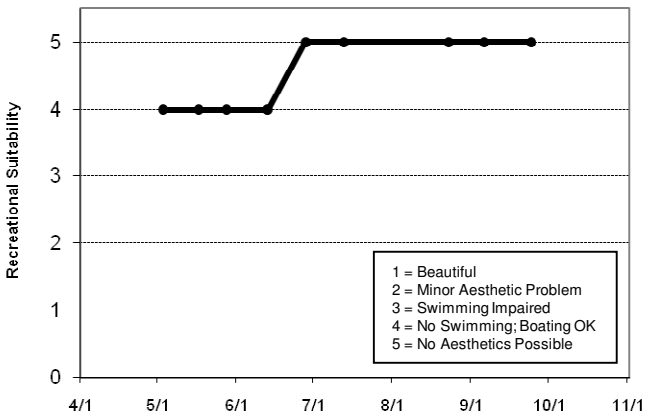
Lake Water Quality Grades Based on Summertime Averages

Year	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Total Phosphorus												
Chlorophyll a												
Secchi Depth												
Lake Grade												

Year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total Phosphorus												
Chlorophyll a												
Secchi Depth												
Lake Grade												

Year	2004	2005	2006	2007	2008	2009
Total Phosphorus			D	D	D	D
Chlorophyll a			C	C	C	C
Secchi Depth			D	D	D	D
Lake Grade			**D**	**D**	**D**	**D**

Source: Metropolitan Council and STORET data



Wood Lake (19-0024) *Black Dog Watershed Management Commission*

Wood Lake is located in the City of Burnsville (Dakota County). The lake has a surface area of 9 acres. The maximum depth of the lake is 4.5 m (14.8 feet). The entire area of the lake is considered littoral zone which is the 0-15 feet depth zone of aquatic plant dominance. Since the lake is relatively shallow, it does not maintain a thermocline, which is a density gradient caused by changing water temperatures throughout the water column.

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

Parameter	*Mean*	*Minimum*	*Maximum*	*Grade*
TP (µg/l)	35.3	20.0	50.0	C
CLA (µg/l)	15.2	6.0	45.0	B
Secchi (m)	1.9	0.8	2.8	C
TKN (mg/l)	1.24	0.75	1.50	
			Lake Grade	C

The lake received a lake grade of C for 2009, which is consistent with its historical database. The lake appears to be represented by a lake grade of C.

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.

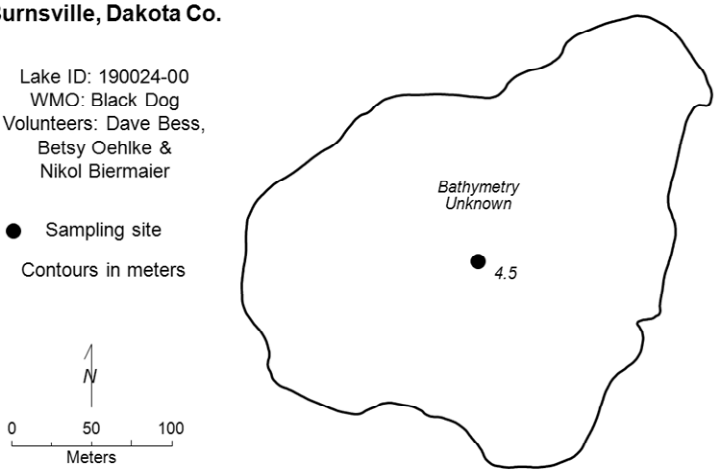
Wood Pond

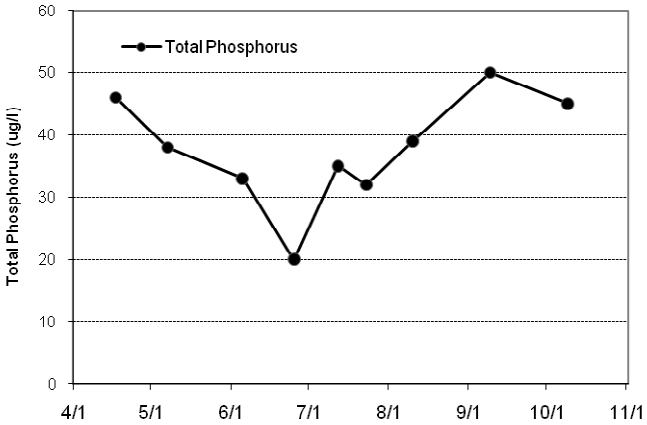
Burnsville, Dakota Co.

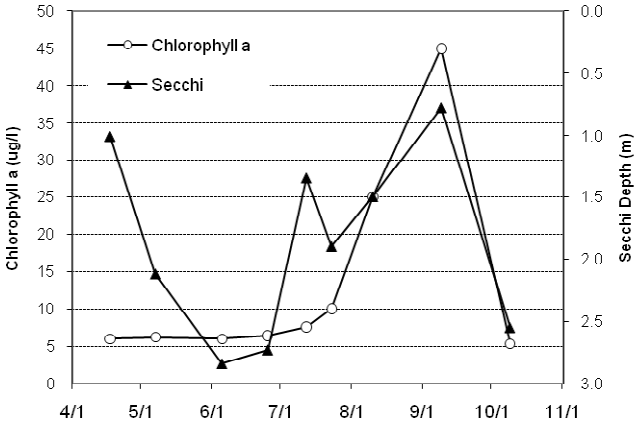
Lake ID: 190024-00
WMO: Black Dog
Volunteers: Dave Bess, Betsy Oehlke & Nikol Biermaier

● Sampling site

Contours in meters

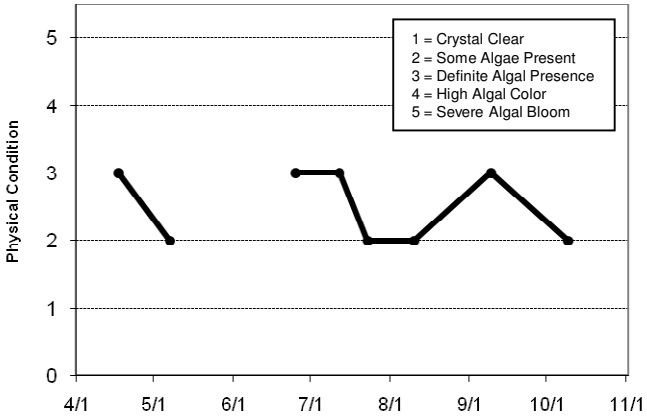






2009 Data

DATE	Surf Tmp (ºC)	Bot Tmp (ºC)	Surf DO (mg/L)	Bot DO (mg/L)	CLA (µg/L)	Surf TP (µg/L)	Bot TP (µg/L)	Secchi (m)	PC	RS
4/17	14.8				6	46		1.0	3	4
5/7	17.7				6.2	38		2.1	2	4
6/5	21.6				6	33		2.8		
6/25	27				6.4	20		2.7	3	4
7/12	25.1				7.6	35		1.4	3	4
7/23	23.4				10	32		1.9	2	4
8/10	25.6				25	39		1.5	2	4
9/9	23.1				45	50		0.8	3	4
10/9	12.5				5.3	45		2.6	2	4



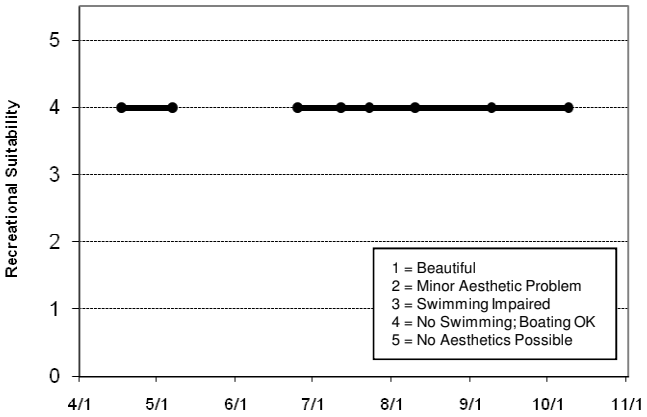
Lake Water Quality Grades Based on Summertime Averages

Year	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Total Phosphorus												
Chlorophyll a												
Secchi Depth												
Lake Grade												

Year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total Phosphorus					C	C	B	C	C	C	C	C
Chlorophyll a					B	B	B	B	B	C	C	B
Secchi Depth					C	C	C	C	C	C	C	C
Lake Grade					**C**	**C**	**B**	**C**	**C**	**C**	**C**	**C**

Year	2004	2005	2006	2007	2008	2009
Total Phosphorus	C	C	D	C	C	C
Chlorophyll a	B	C	C	B	B	B
Secchi Depth	C	C	C	C	C	C
Lake Grade	**C**	**C**	**C**	**C**	**C**	**C**

Source: Metropolitan Council and STORET data



Woodpile Lake (82-0132) *Browns Creek Watershed District*

Woodpile Lake is located in Washington County. It has a surface area of 19 acres. The maximum depth of the lake is 8.2 m (27 ft).

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

Parameter	*Mean*	*Minimum*	*Maximum*	*Grade*
TP (µg/l)	38.7	28.0	63.0	C
CLA (µg/l)	13.6	5.6	32.0	B
Secchi (m)	2.5	1.1	4.0	B
TKN (mg/l)	1.10	0.86	1.50	
			Lake Grade	B

The lake received a lake grade of B for 2009, which is consistent with its limited historical database. Additional years of monitoring are suggested for continuing to build the water quality database so as to better understand the lake's water quality and determine potential water quality trends.

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.

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.

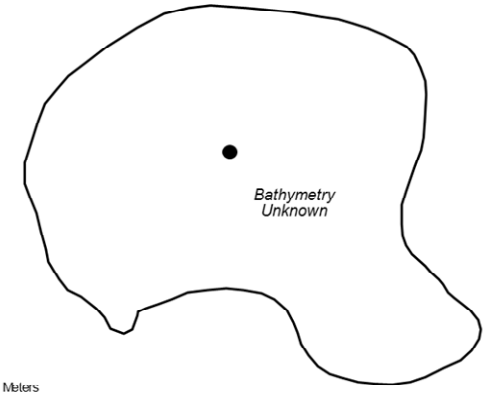
Woodpile Lake

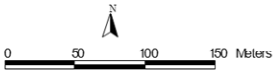
Grant, Washington Co.

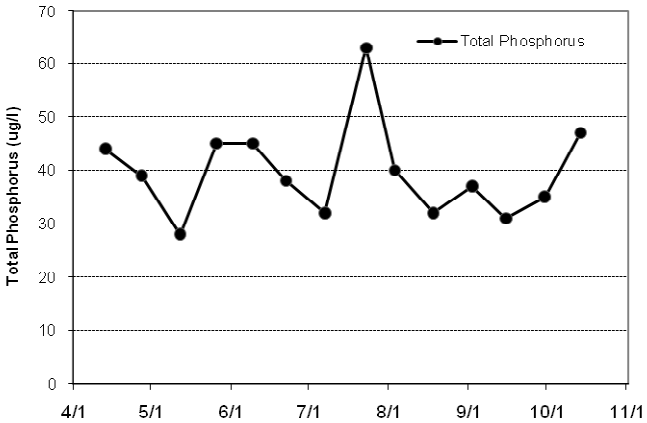
Lake ID: 820132-00
WD: Browns Creek
Volunteer: Washington Conservation District

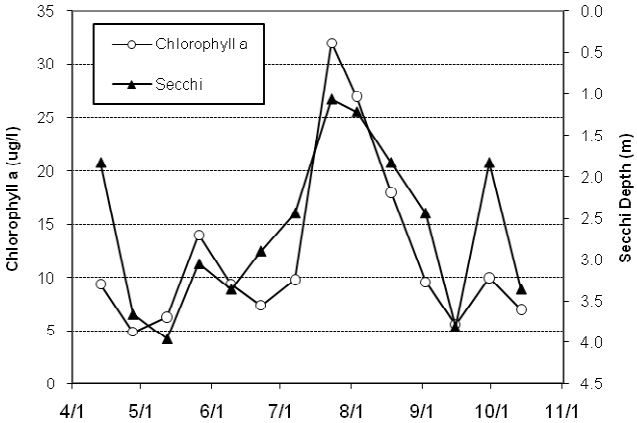
● Sampling site

Contours in meters



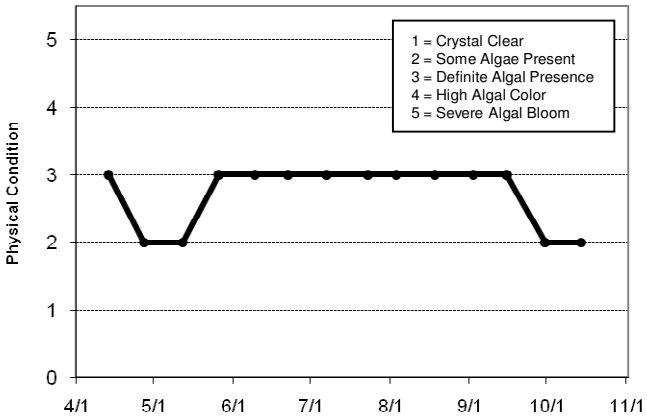






2009 Data

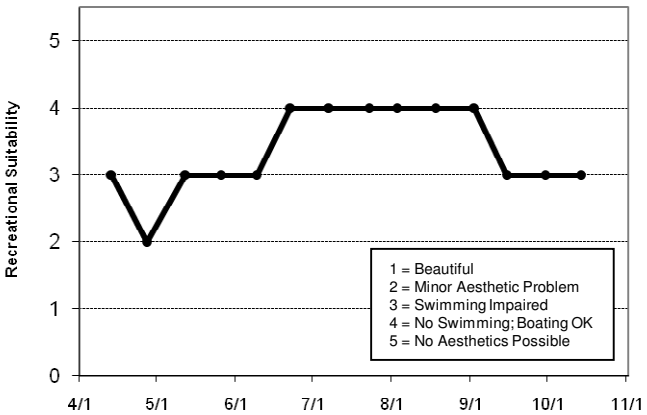
DATE	Surf Tmp (ºC)	Bot Tmp (ºC)	Surf DO (mg/L)	Bot DO (mg/L)	CLA (µg/L)	Surf TP (µg/L)	Bot TP (µg/L)	Secchi (m)	PC	RS
4/13	10.3	6.6			9.4	44		1.8	3	3
4/27	12.6	5.9	10.79	0.09	4.9	39		3.7	2	2
5/12	15.5	6.3	11.16	0.14	6.3	28		4.0	2	3
5/26	20	7.7	9.77	0.08	14	45		3.0	3	3
6/9	16.8	7.6	6.24	0.07	9.4	45		3.4	3	3
6/22	28.5	8.2	10.98	0.09	7.4	38		2.9	3	4
7/7	23.9	8.3	11.08	0.08	9.8	32		2.4	3	4
7/23	22.1	8.6	11.88	0.09	32	63		1.1	3	4
8/3	23.9	9	9.67	0.05	27	40		1.2	3	4
8/18	23.7	9.3	6.01	0.05	18	32		1.8	3	4
9/2	20.4	9.3	8.05	0.06	9.6	37		2.4	3	4
9/15	24.1	9.5	7.61	0.07	5.6	31		3.8	3	3
9/30	15.6	9.7	6.09	0.11	10	35		1.8	2	3
10/14	8	8	7.89	0.11	7	47		3.4	2	3



Lake Water Quality Grades Based on Summertime Averages

Year	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Total Phosphorus												
Chlorophyll a												
Secchi Depth												
Lake Grade												

Year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total Phosphorus												
Chlorophyll a												
Secchi Depth												
Lake Grade												

Year	2004	2005	2006	2007	2008	2009
Total Phosphorus			D	C	C	C
Chlorophyll a			B	B	C	B
Secchi Depth			C	B	C	B
Lake Grade			**C**	**B**	**C**	**B**

Source: Metropolitan Council and STORET data