Lotus Lake (10-0006) *City of Chanhassen*

While Lotus Lake has previously been monitored by Council staff (1985, 1990 and 1999-2000) and the MPCA's volunteer Secchi program (1980, 1988-1991), 2006 marks the fourth year the lake has been monitored through CAMP. Lotus Lake, with a surface area of 246 acres, is located within the City of Chanhassen (Carver County) [public access to the lake is possible on the southern end of the lake]. The lake's surface area and its 1,033-acre watershed translates to a 4:1 watershed-to-lake size ratio (the greater the ratio, the greater the potential stress on the lake from surface runoff).

The lake's maximum and mean depths of 8.9 and 4.3 (29.2 and 14.2 feet), along with its surface area, translates to a lake volume of approximately 3,500 ac-ft. Roughly 74 percent of the lake's surface area is considered littoral zone (area of aquatic plant dominance) and it does not maintain a thermocline (a density gradient owed to changing water temperatures throughout the lake's water column). The lake is considered a "Priority Lake" due to its multi-recreational uses. Eurasian Water Milfoil (*Myriophyllum spicatum*) [EWM] has been reported on the lake.

In 2006, Lotus Lake was monitored 11 times between early-May and early-October. Results are presented on graphs and data tables on the following page. During each monitoring event, the lake was monitored for TP, CLA, TKN, Secchi transparency, as well as the perceived physical condition and recreational suitability.

2006 summer (May-September) data summary

Parameter	*Mean*	*Minimum*	*Maximum*	*Grade*
TP (µg/l)	62.8	27.0	114.0	C
CLA (µg/l)	44.3	3.0	120.0	C
Secchi (m)	1.2	0.5	2.1	C
TKN (mg/l)	1.63	0.72	2.60	
			Overall Grade	C

The lake's 2006 overall grade of C is identical to those recorded in 1985, 1999-2000, and 2004-2005, and better than the D recorded in 2003.

Throughout the summer, the volunteer ranked their opinion of the lake's physical and recreational conditions on a 1-to-5 scale (see lake information sheet). The mean physical condition was 2.6 (between 2- "some algae present" and 3- "definite algae present"), while the recreational suitability ranking was 2.3 (between 2- "minor aesthetic problem" and 3- "swimming slightly impaired").

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) 297-4916 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 Kent Johnson of the Metropolitan Council at (651) 602-8117 or kent.johnson@metc.state.mn.us.

Lotus Lake

Chanhassen, Carver Co.

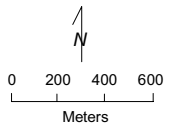
Lake ID: 100006

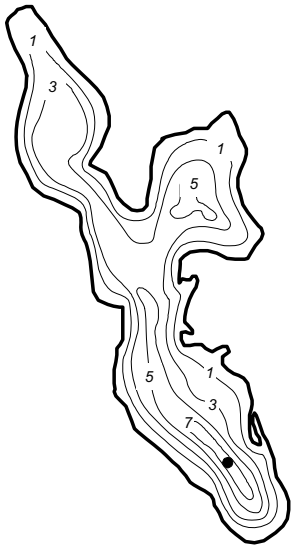
WD: Riley-Purgatory-Bluff Creek

Volunteer: Shelly Strohmaier

● Sampling site

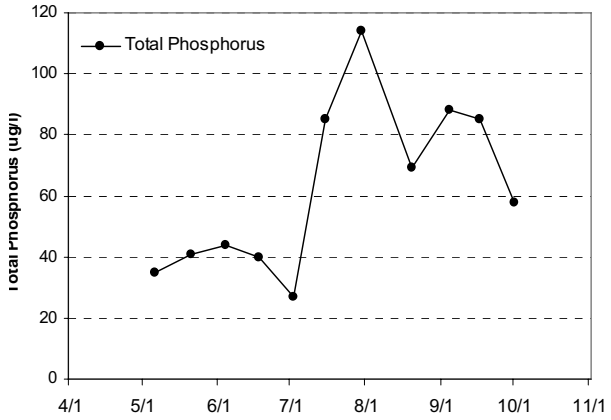
Contours in meters

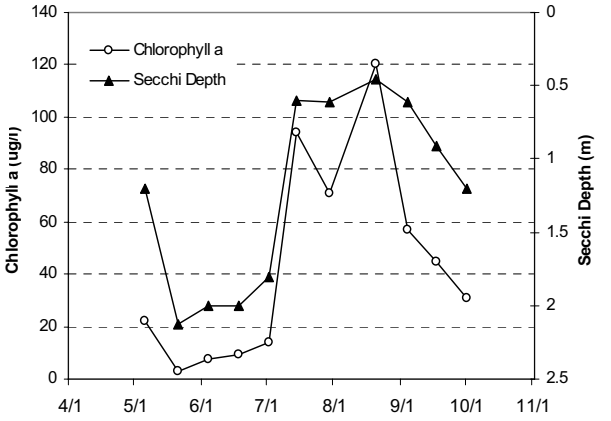


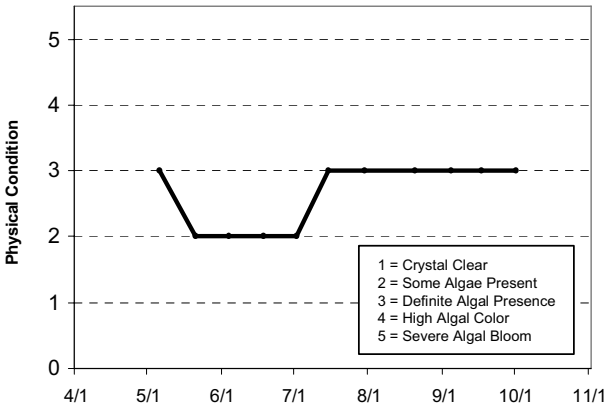


2006 Data

	Surf. Tmp	Bot. Tmp	Surf. DO	Bot. DO	CLA	Surf. TP	Bot. TP	Secchi	PC	RS
Date	C	C	mg/L	mg/L	ug/L	ug/L	ug/L	M	1 thru 5	1 thru 5
5/6/06	15.1				22	35		1.2	3	2
5/21/06	17				3	41		2.13	2	2
6/4/06	24.5				7.7	44		2	2	2
6/18/06	24.3				9.2	40		2	2	1
7/2/06	26.5				14	27		1.8	2	2
7/15/06	29.1				94	85		0.6	3	3
7/30/06	29.1				71	114		0.61	3	3
8/20/06	25				120	69		0.46	3	3
9/4/06	22.8				57	88		0.61	3	2
9/17/06	20.6				45	85		0.91	3	2
10/1/06	16.3				31	58		1.2	3	3







Lake Water Quality Grades Based on Summertime Averages

Year	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Total Phosphorus						C							
Chlorophyll a						C					C		
Secchi Depth	D					C			D	C	C	C	
Overall						**C**							

Year	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Total Phosphorus							C	C			D	C	C	C
Chlorophyll a							C	C			C	C	C	C
Secchi Depth							C	C			D	C	C	C
Overall							**C**	**C**			**D**	**C**	**C**	**C**

Source: Metropolitan Council and STORET data