

Cornelia Lake (27-0028-01) *Nine Mile Creek Watershed District*

Lake Cornelia is located in the City of Edina (Hennepin County). The lake has a surface area of approximately 52 acres, and has a maximum depth of 2.0 meters. 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. 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>
TP ($\mu\text{g/l}$)	113.4	81.0	170.0	D
CLA ($\mu\text{g/l}$)	39.9	19.0	69.0	C
Secchi (m)	0.5	0.4	0.7	F
TKN (mg/l)	1.56	1.00	2.70	
Lake Grade				D

The lake received a water quality lake grade of D for 2009. This is the second year in a row that the lake obtained a D lake grade. To better understand the lake's water quality and where it may be heading, additional years of data collection are needed.

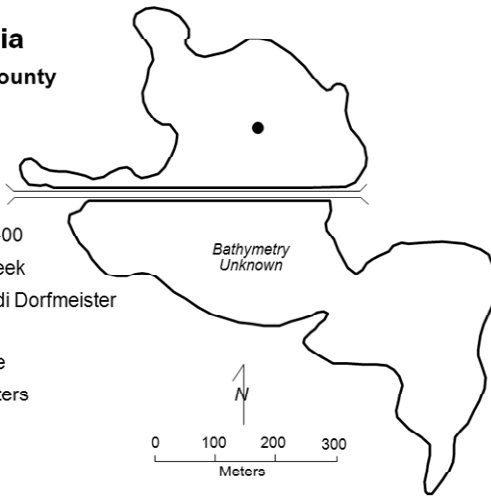
Throughout the monitoring period, the volunteer's opinions of the lake's physical condition and recreational suitability were ranked on a 1-to-5 scale. These user perception rankings are shown on the following page.

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 Cornelia
Edina, Hennepin County

Lake ID: 270028-00
WD: Nine Mile Creek
Volunteers: Jon Moon & Heidi Dorfmeister

● Sampling site
Contours in meters



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	16				14	179		0.8	1	4
5/3	15				19	92		0.7	2	4
5/17	18				22	96		0.5	2	4
5/29	22				37	170		0.4	3	4
6/12	20				28	93		0.6	2	4
6/26	31				22	92		0.6	3	4
7/10	28				42	110		0.5	2	4
7/24	26				52	141		0.5	3	4
8/7	21				69	154		0.5	2	4
8/21	20				50	130		0.5	2	4
9/5	21				68	88		0.4	2	4
9/17	26				30	81		0.4	2	4
10/3	11				52	103		0.6	2	4
10/17	8				30	59		0.9	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												F
Chlorophyll a												F
Secchi Depth												F
Lake Grade												F

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

Source: Metropolitan Council and STORET data

