

## **French Lake (27-0127) *Elm Creek Watershed Management Commission***

This was the third year that the French Lake, located within the boundaries of Dayton (Hennepin County), has been involved in CAMP. The 352-acre lake has a maximum depth of 1.0 m (roughly 3 feet). A search through the STORET nationwide water quality database for data on the lake provided limited data (just Secchi data in 1985). Therefore, the 2001- 2003 CAMP data are the only known available nutrient water quality data for the lake.

The lake was monitored seven times from early-May to early-August, 2003. The dry mid- to late-summer conditions resulted in the lake becoming un-navigable. Results are presented in both graphs and data tables on the lake's information sheet on the following page.

The summertime (May through September) means for the monitored variables were: surface '1'Y= 283.7 gg/l (minimum concentration of 136.0 p.g/l and a maximum value of 489.0 µg/l); surface chlorophyll-a= 92.1 µg/l (minimum of 27.0 p.g/l and maximum of 230.0 4 1 ); Secchi transparency= 0.3 m (minimum of 0.20 m and a maximum of 0.55 rn); and TKN= 2.74 mg/l (minimum of 1.70 mg/l and maximum of 4.80 mg/l). The lake's summer means translate to water quality grades of F for TP, F, for CLA, and F for Secchi transparency. These grades result in an overall water quality grade of F for French Lake in 2003 (similar to the overall frade recorded in 2002 and worse than that of 2001 [D]).

As mentioned earlier, there was little water quality data found for French Lake prior to the 2001 CAMP data. Therefore it is not possible to determine any long-term or short-term trends. To better understand the lake's water quality and where it may be heading, more data are needed.

The last two graphs show seasonal variation in the lake's perceived physical condition and recreational suitability. The average user perception rankings, on a 1-to-5 scale, were 3.7 for physical condition (between 3- "denfinite algae present" and 4- "high algal color"), and 4.3 for recreational suitability (between 4- "no swimming - boating ok" and 5- "no aesthics possible").

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

**French Lake**  
Dayton, Hennepin Co.

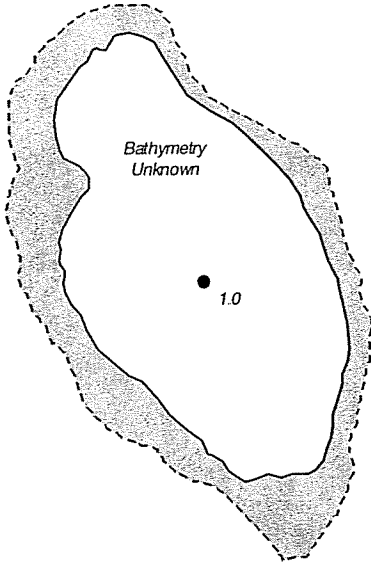
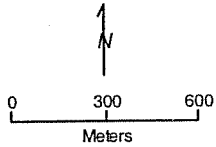
LAKE ID: 270127

WMO: Elm Creek

Volunteer: Steve Fowler

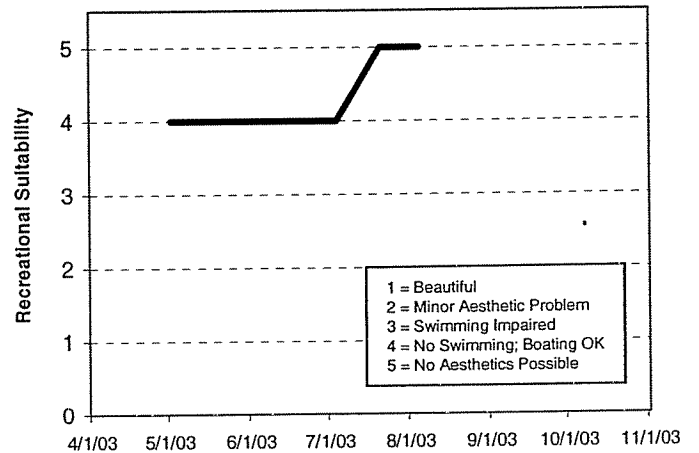
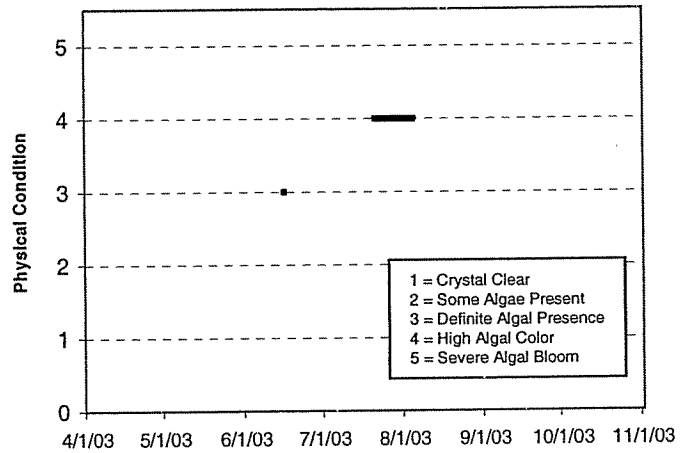
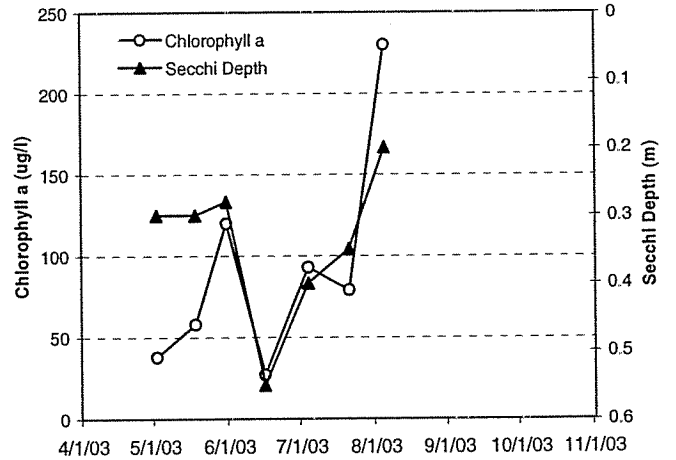
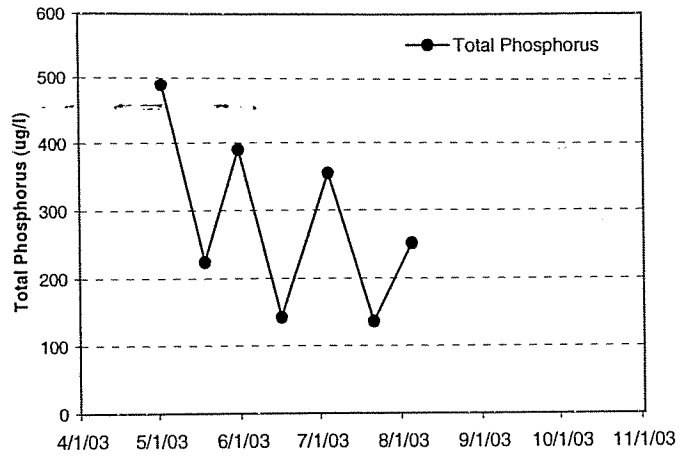
● Sampling site

Contours in meters



**2003 Data**

Date	Surf. Temp. (C)	Bot. Temp. (C)	Surf. DO (mg/l)	Bot. DO (mg/l)	CLA (ug/l)	Surf. TP (ug/l)	Bot. TP (ug/l)	Secchi (m)	PC	RS
05/02/03	16.6				38	489		0.3		4
05/18/03	21.4				58	224		0.3		4
05/31/03	17.8				120	390		0.28		4
06/16/03	29.1				27	142		0.55	3	4
07/04/03	27.6				93	354		0.4		4
07/21/03	24.3				79	136		0.35	4	5
08/05/03	24.7				230	251		0.2	4	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						F						
Overall												

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

Source: Metropolitan Council and STORET data