



## French Lake (27-0127) *Pioneer-Sarah Watershed Management Organization*

This was the first year that French Lake (a 352-acre lake located within the boundaries of Dayton [Hennepin County]), has been involved in CAMP. A search through the STORET nationwide water quality database for data on the lake provided limited data (just Secchi data in 1985). Therefore, 2001 is the only year of available nutrient water quality data for the lake.

The lake was monitored 11 times from late-April to mid-September, 2001. 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 TP= 275.5  $\mu\text{g/l}$  (minimum concentration of 50.0  $\mu\text{g/l}$  and a maximum value of 6500  $\mu\text{g/l}$ ); surface chlorophyll- $a$  = 34.5  $\mu\text{g/l}$  (minimum of 4.4  $\mu\text{g/l}$  and maximum of 12.0  $\mu\text{g/l}$ ); Secchi transparency = 0.6 m (minimum of 0.3 m and a maximum of 0.9 m); and TKN= 2.41  $\text{mg/l}$  (minimum of 1.40  $\text{mg/l}$  and maximum of 4.30  $\text{mg/l}$ ). The lake's summer means translate to water quality grades of F for TP, C for CLA, and F for Secchi transparency. These grades result in an overall water quality grade of D for French Lake in 2001.

As mentioned earlier, there was little water quality data found for French Lake prior to the 2001 CAMP data. Therefore it is impossible 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.

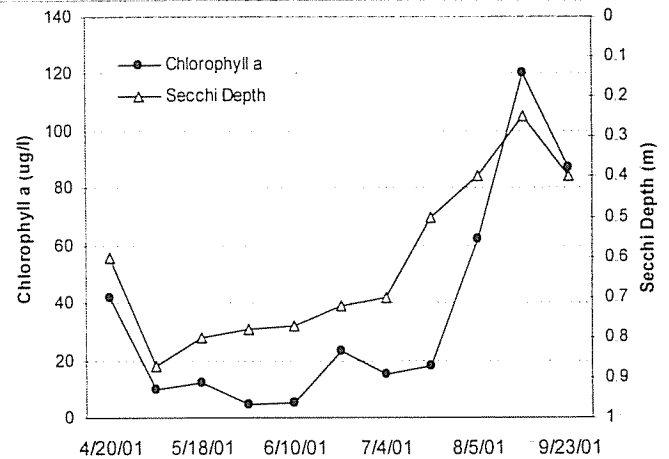
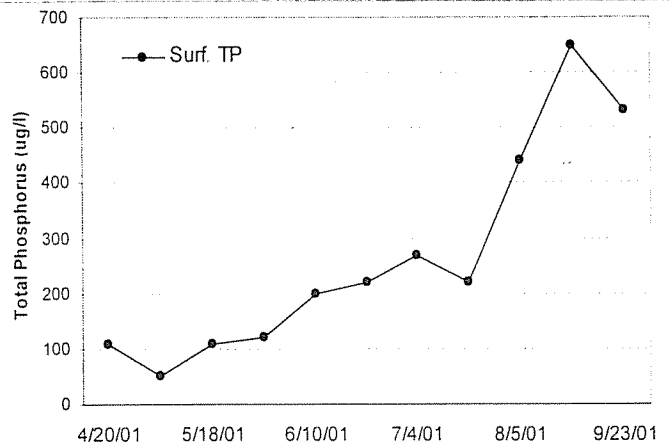
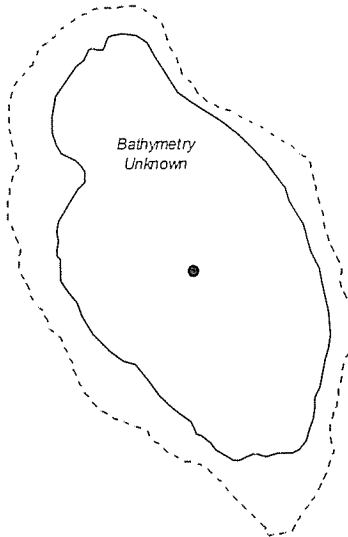
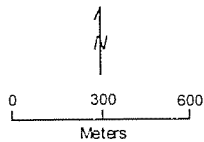
The last two graphs show seasonal variation in the lake's perceived physical condition and recreational suitability. The average user perception rankings, on a 1-to-5 scale, were 2.9 for physical condition (roughly equal to 3- "definite algal presence"), and 4.1 for recreational suitability (between 4- "no swimming - boating ok" and 5- "no aesthetics 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 [randv.anhorn@ct.metc.state.nn.us](mailto:randv.anhorn@ct.metc.state.nn.us).

**French Lake**  
Dayton, Hennepin Co.

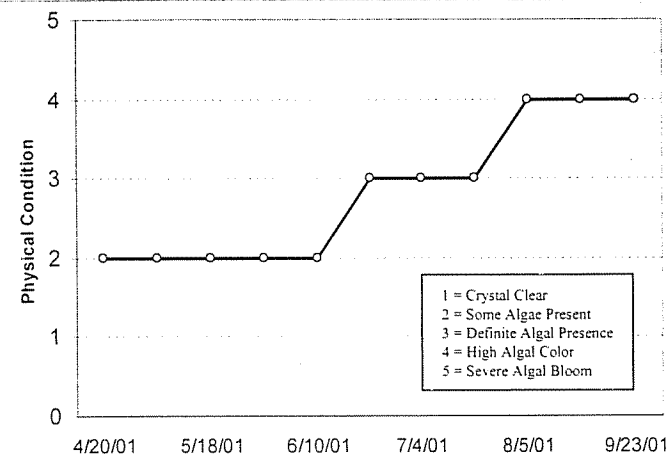
LAKE ID: 210127  
WMO: Pioneer-Sarah Creek  
Volunteer: Dick and Jean Reiersen

● Sampling site  
Contours in meters



**2001 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 1 thru 5	RC 1 thru 5
4/20	10				42	110		0.6	2	4
5/4	16				10	50		0.9	2	4
5/18	21				12	110		0.8	2	4
5/27	17				4.4	120		0.8	2	4
6/10	25				5.4	200		0.8	2	4
6/22	23				23	220		0.7	3	4
7/4	24				15	270		0.7	3	4
7/21	31				18	220		0.5	3	4
8/5	28				62	440		0.4	4	4
9/2	21				120	650		0.3	4	5
9/23	15.6				87	530		0.4	4	4



**Lake Water Quality Grades Based on Summertime Averages**

Year	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Total Phosphorus											
Chlorophyll a											
Secchi Depth						F					
Overall											

Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Total Phosphorus											F
Chlorophyll a											C
Secchi Depth											F
Overall											D

Source: Metropolitan Council and STORET data

