

# Sawyer

## Lake Overview

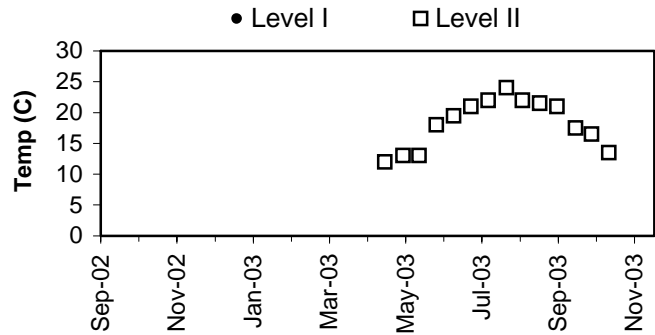
Volunteer monitoring began at Lake Sawyer in the 1980s, continuing through 2003. The data indicate this city lake (Black Diamond) is low to moderate in primary productivity (oligotrophic - mesotrophic) with very good water quality. Since the lake surface makes up only 3% of the drainage area, direct precipitation is much less important than watershed inputs. Land use analysis of 2002 aerial photographs showed slightly more than 20% of the surrounding watershed has been developed for uses other than agriculture or forestry. A Lake Management Plan has been completed (King County, 2000).

Lake Sawyer has a popular public access boat launch. Eurasian milfoil has invaded the lake and established a growing population. Residents should keep a close eye on aquatic plants growing nearshore to catch growing patches of this, Brazilian elodea, and other noxious weeds.

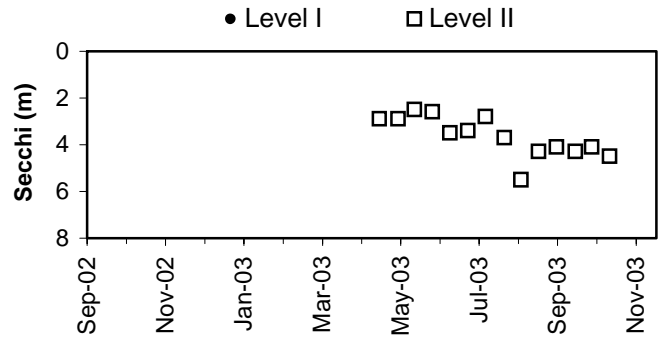
## Physical Parameters

Secchi transparency ranged from 2.5 to 5.5m from late April through October. Water temperatures during the same period reached 24.0 degrees Celsius. Excellent records were kept of local precipitation and water levels, showing that levels rose in December and remained high until August, slightly different from many lakes in the region. This may be due to lake size, since large volumes of water can be less impacted by storms.

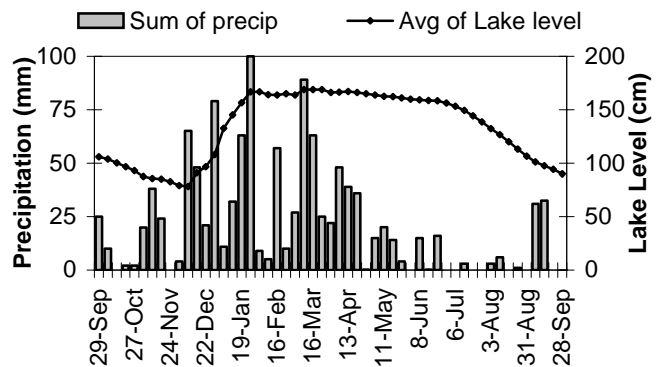
Lake Temperature



Secchi Depth

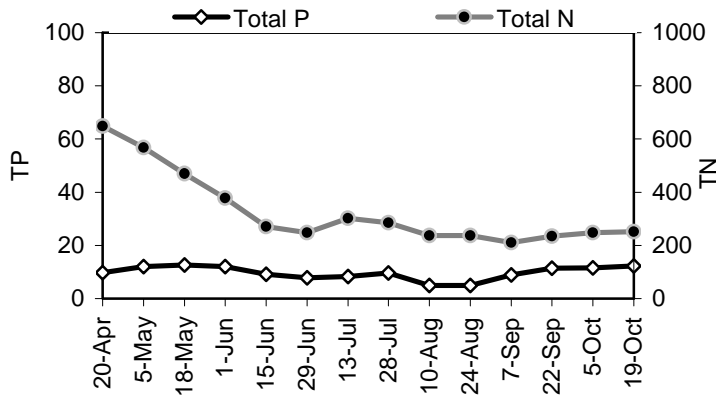


Lake Level and Precipitation

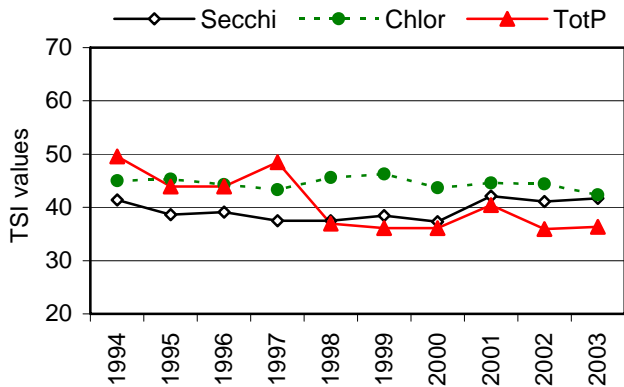


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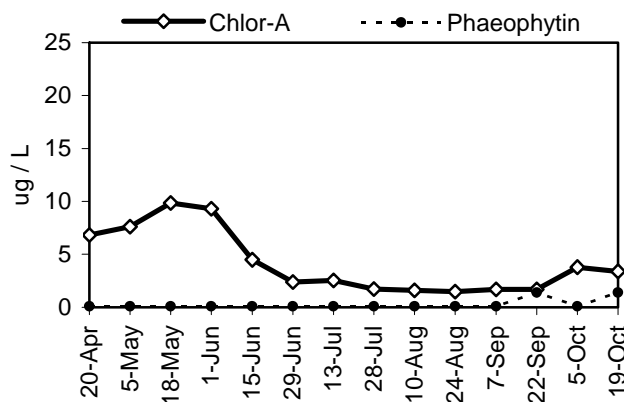
### Nutrient Analysis



### TSI Ratings



### Chlorophyll a Concentrations (ug/L)



## Nutrient Analysis and TSI Ratings

Total nitrogen decreased over spring and then remained constant relative to total phosphorus through the remaining sampling period. The N:P ratio ranged from 20 to 67. In 2003 the average TSI values were spread across the threshold between oligotrophy and mesotrophy. TSI-TP was lower than the other two average values, similar to past years since 1998.

## Chlorophyll and Algae

Chlorophyll concentrations were highest in the spring, decreasing to low values in summer and rising again slightly in October. The spring algae were dominated by the diatom-chrysophyte *Cyclotella*, with a smaller amount of the chrysophyte *Dinobryon*. The much smaller peak in the autumn was characterized by bluegreens, including *Aphanizomenon*, *Lyngbya*, and *Anabaena*.

Common algae	Group
<i>Cyclotella</i> sp.	diatom-chrysophyte
<i>Aphanizomenon flos-aquae</i>	bluegreen
<i>Dinobryon</i> spp.	chrysophyte



