

Twelve

Lake Overview

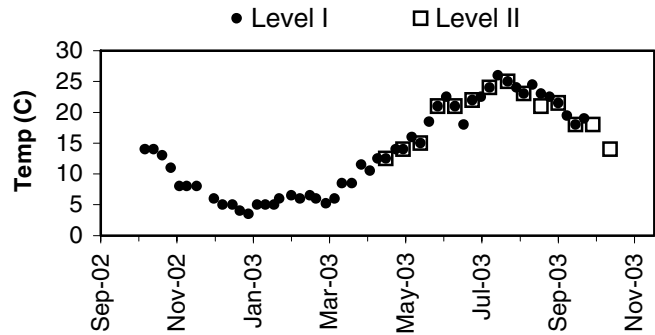
Volunteer monitoring began at Lake Twelve in the early 1980s and has continued through 2003, missing only 1997 and 1999. The data collected indicate this lake is generally moderate in primary productivity (mesotrophic) with good water quality. Since the lake surface makes up 10% of the drainage area, direct precipitation is important in addition to watershed inputs. There is a large Class 2 wetland along its eastern shoreline (King County, 1990) that may contribute water to the lake occasionally. Land use analysis of 2002 aerial photographs showed slightly more than 21% of the surrounding watershed has been developed for uses other than agriculture or forestry.

Lake Twelve has a public access boat launch, and an infestation of Eurasian milfoil was treated in the 1990s, but has since reappeared. Residents should keep an eye on this, as well as watch for other noxious weeds such as Brazilian elodea.

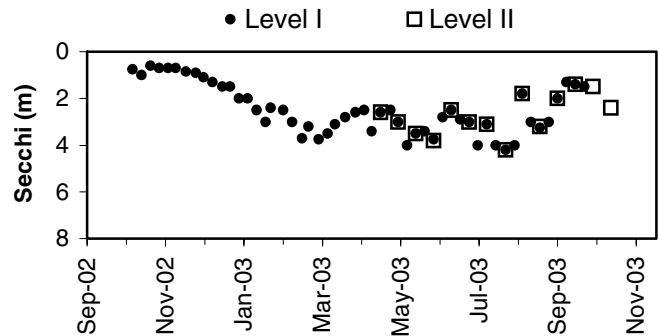
Physical Parameters

Secchi transparency ranged from 0.6 to 4.2m through the year, with the lowest transparencies in autumn 2002. Water temperatures ranged from 3.5 to 26.0 degrees Celsius. Excellent precipitation and water level records indicated a moderate winter high–summer low pattern, similar to other regional lakes.

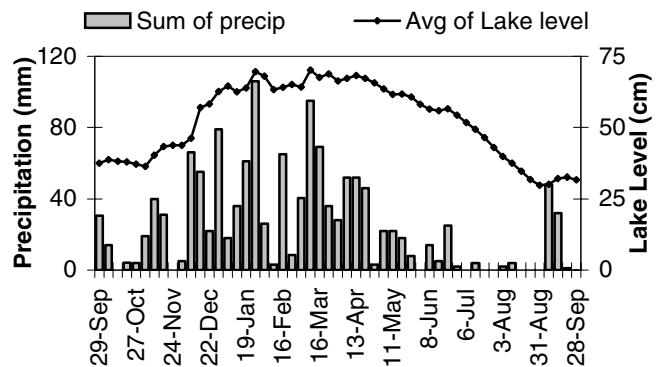
Lake Temperature



Secchi Depth

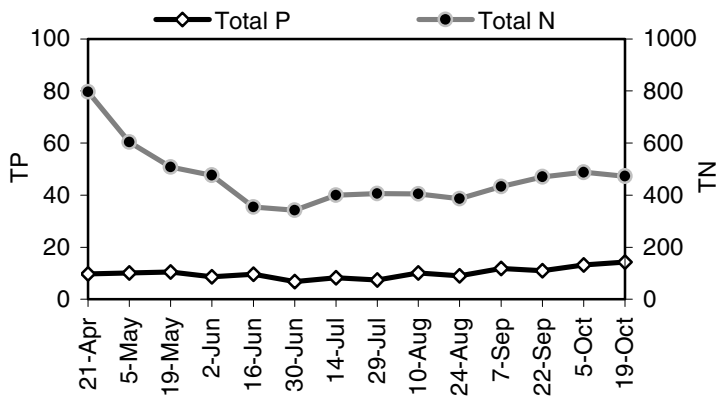


Lake Level and Precipitation

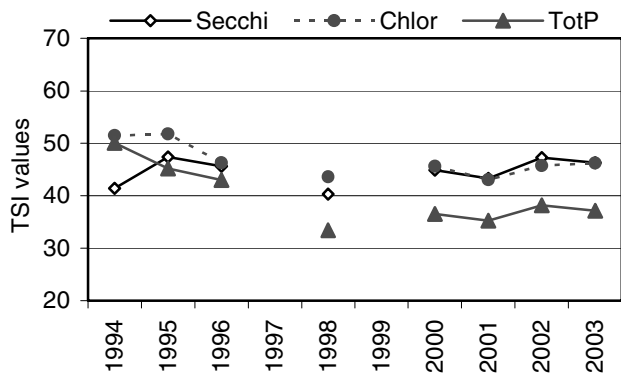


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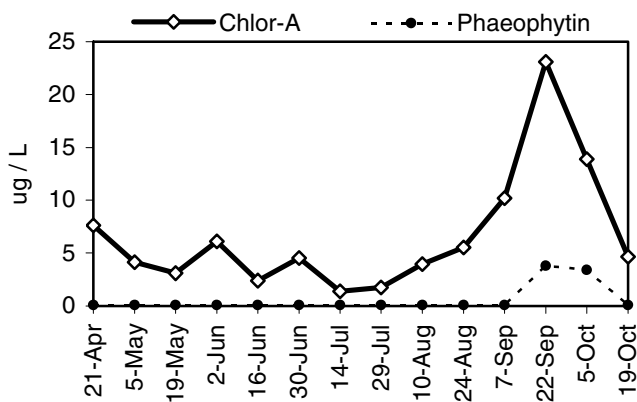
Nutrient Analysis



TSI Ratings



Chlorophyll a Concentrations (ug/L)



Nutrient Analysis and TSI Ratings

Total nitrogen decreased from an initial high value through mid-June and then rose slightly through the remaining dates. Total phosphorus was stable throughout the sample period. The N:P ratio ranged from 33 to 82. In 2003, the average TSI-chlor and TSI-Secchi were close together in the middle range for mesotrophy, while TSI-TP was significantly smaller.

Chlorophyll and Algae

Chlorophyll content varied in the moderate range through most of the sample season, but climbed to a distinctly higher peak in late September. The autumn peak was caused by the chrysophyte *Dinobryon*. Other commonly occurring algae through the season included the cryptophyte *Cryptomonas* and the dinoflagellate *Peridinium*. Bluegreens were extremely rare in the samples.

Common algae

Group

<i>Dinobryon</i> spp.	chrysophyte
<i>Cryptomonas</i> spp.	cryptophyte
<i>Peridinium</i> sp.	dinoflagellate

