

Paradise

Lake Overview

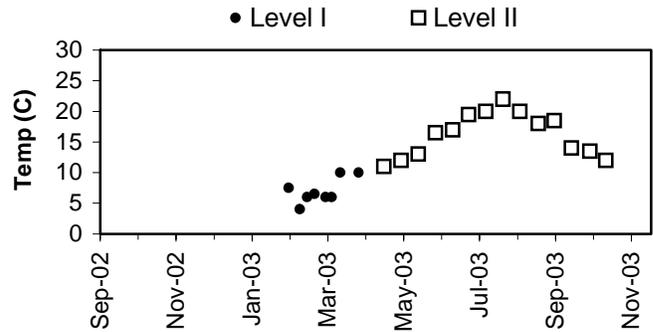
Volunteer monitoring began at Paradise Lake in 1996 and has continued through 2003. The data indicate this lake, whose watershed extends into Snohomish County, is high in primary productivity (eutrophic) with fairly good water quality. Since the lake surface makes up less than 1% of the drainage area, direct precipitation is not nearly as important as watershed inputs. Land use analysis of 2002 aerial photographs showed almost 54% of the surrounding watershed has been developed for uses other than agriculture.

Paradise Lake has no public access boat launch, but residents should watch the nearshore environment for early infestations of Eurasian milfoil, Brazilian elodea, and other noxious weeds.

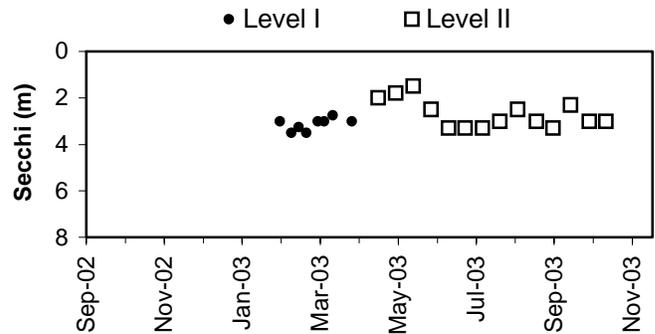
Physical Parameters

Secchi transparency ranged from 2.8 to 3.5m from February through October. Water temperatures, recorded for the same interval as Secchi, ranged from 4.0 to 22.0 degrees Celsius. Water levels were recorded only in February and March.

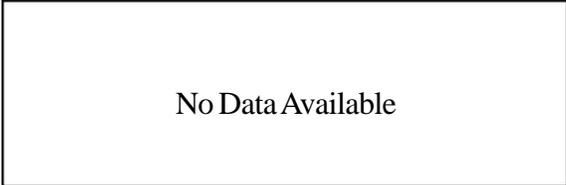
Lake Temperature



Secchi Depth

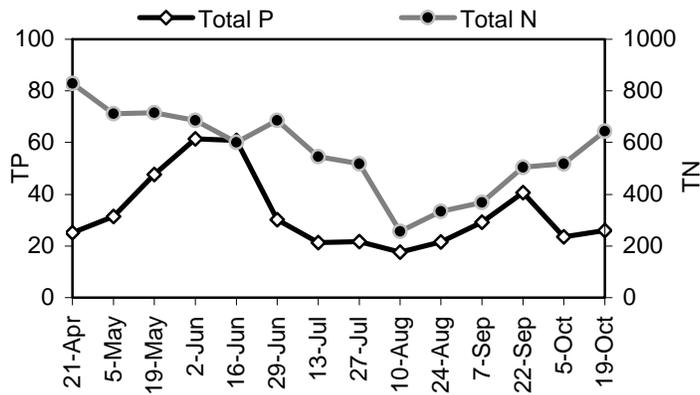


Lake Level and Precipitation

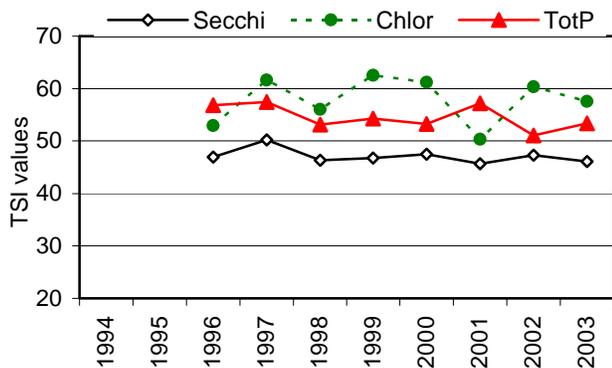


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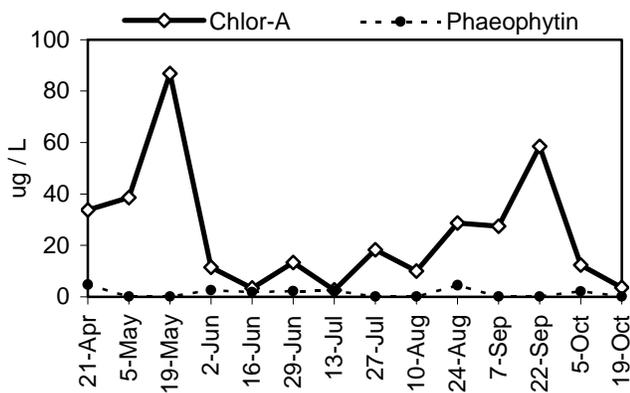
Nutrient Analysis



TSI Ratings



Chlorophyll a Concentrations (ug/L)



Common algae

Group

chrysophyte (unicell)	chrysophyte
<i>Asterionella formosa</i>	diatom-chrysophyte
<i>Dinobryon</i> spp.	chrysophyte

Nutrient Analysis and TSI Ratings

The patterns followed by total nitrogen and total phosphorus were somewhat different from each other through the season, with peaks occurring at differing times. The N:P ratio ranged from 10 to 33. In 2003 the TSI values for chlorophyll and TP indicated eutrophy, while the Secchi was in the mesotrophic range, a pattern similar to other years.

Chlorophyll and Algae

Chlorophyll concentrations reached two major peaks during the sample season, one in late May and the second in late September. Both were dominated by the chrysophyte *Dinobryon* and another unidentified chrysophyte species. Other commonly occurring algae included the diatom *Asterionella* and a variety of cryptophyte species. No bluegreens were found in the samples.

