

Killarney

Lake Overview

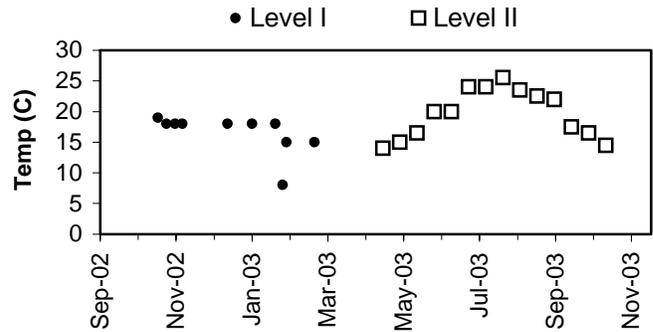
Volunteer monitoring began at Lake Killarney in the late 1980s and continued through 2003. The data indicate that this lake, partly in the city of Federal Way, is relatively high in primary productivity (borderline eutrophic) with good water quality. Since the lake surface makes up 20% of the drainage area, direct precipitation is important, in addition to watershed inputs. The northern shoreline has some wetland functions (King County, 1997). Land use analysis of 2002 aerial photographs showed almost 84% of the surrounding watershed has been developed for uses other than agriculture or forestry.

Lake Killarney has a public boat launch and in the past has been heavily infested with Eurasian water milfoil. Though herbicide treatments were successful, residents should keep an eye on aquatic plants growing nearshore to catch early new infestations.

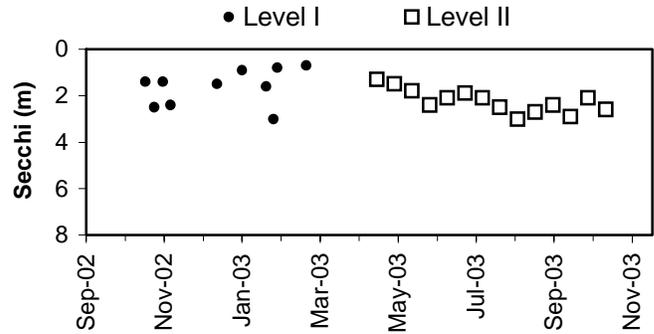
Physical Parameters

Secchi transparency ranged between 0.7 and 3.0m from January through October. Surface water temperatures ranged between 8.0 and 25.5 degrees Celsius for the same period. Water level and precipitation data were collected for October 2002 through February 2003, which showed a rise from an autumn low stand to a winter high.

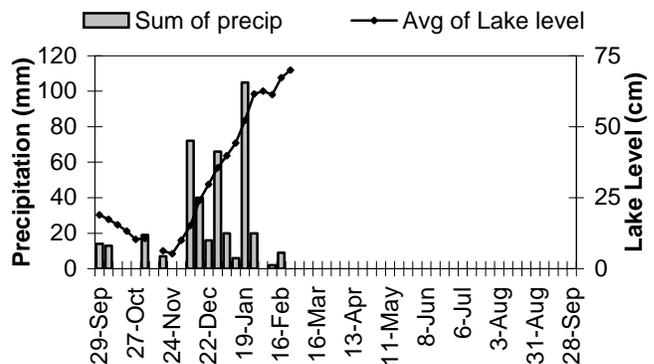
Lake Temperature



Secchi Depth

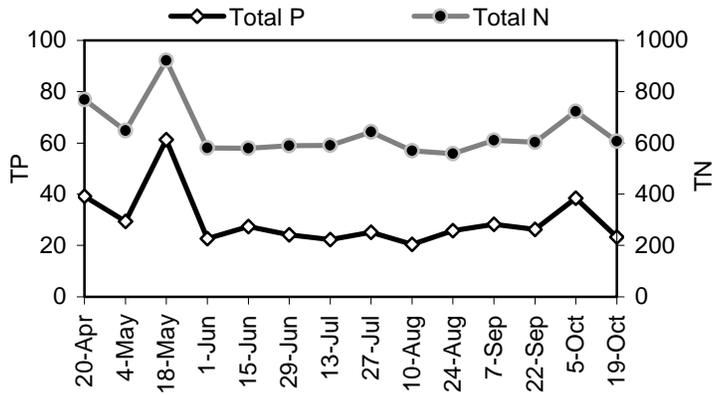


Lake Level and Precipitation

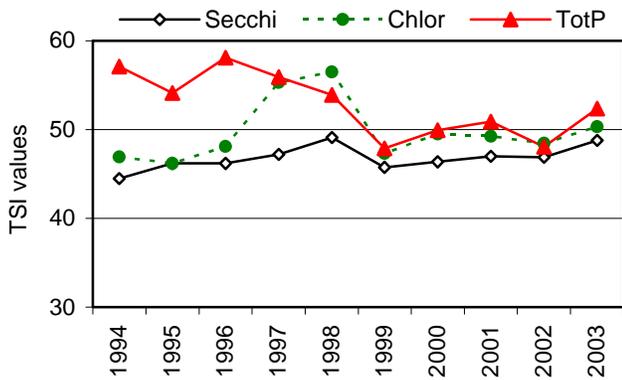


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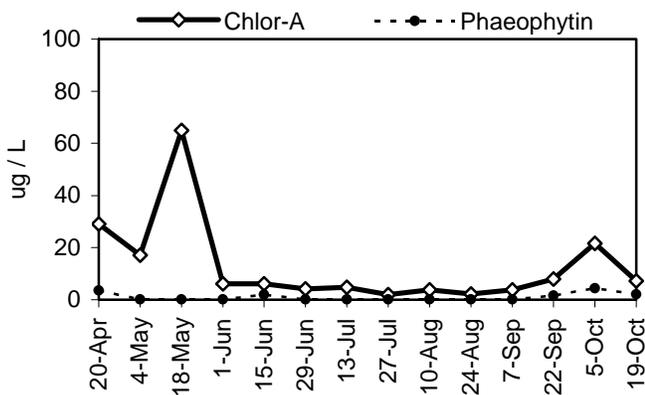
Nutrient Analysis



TSI Ratings



Chlorophyll a Concentrations (ug/L)



Common algae

Group

<i>Dinobryon</i> spp.	chrysophyte
unidentified species	chrysophyte
<i>Anacystis</i> spp.	bluegreen

Nutrient Analysis and TSI Ratings

Total phosphorus and total nitrogen remained in fairly constant proportion to each other through the sampling period. The N:P ratio ranged from 15 to 28. The 2003 TSI values were close to each other and somewhat higher than the last four years, at the threshold of eutrophy.

Chlorophyll and Algae

Chlorophyll content reached a peak in mid-May, followed by low values until October when it rose again. Algae were dominated by several species of the chrysophyte *Dinobryon*, as well as several other chrysophyte species. The colonial bluegreen *Anacystis* was also common in several samples.

Residents on Lake Killarney have controlled algae in the past, including the use of copper-based algaecides to control blooms. Copper has been found in high concentrations in the bottom sediments (King County, 1997).

