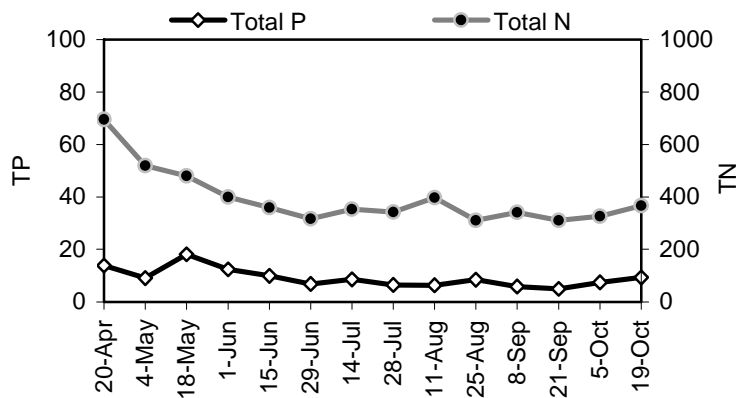


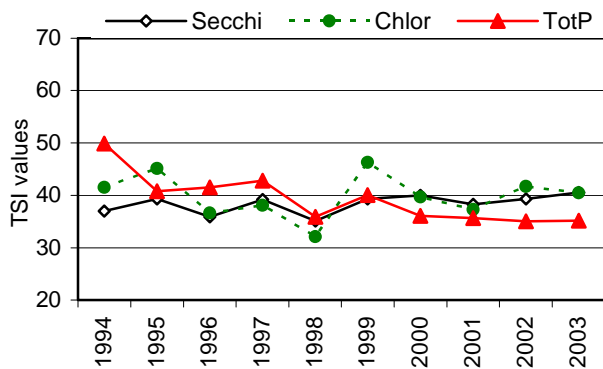


## Lucerne

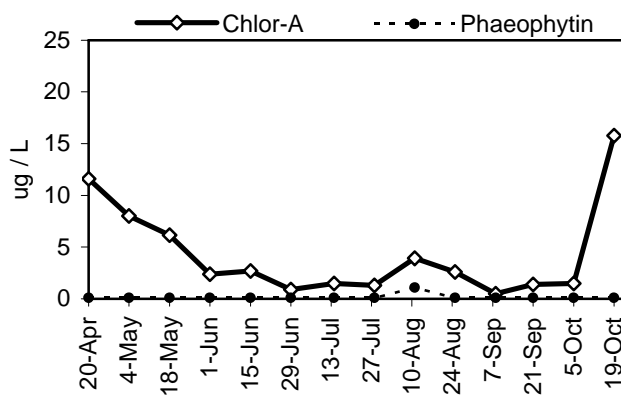
### Nutrient Analysis



### TSI Ratings



### Chlorophyll a Concentrations (ug/L)



## Nutrient Analysis and TSI Ratings

Total phosphorus and total nitrogen remained in generally consistent proportion to each other through the sampling period. The N:P ratio ranged from 27 to 63. The 2003 TSI values were slightly spread out in the upper range of oligotrophy. TSI-TotP was lower than the values for chlorophyll and Secchi, which were on the threshold of mesotrophy.

## Chlorophyll and Algae

Chlorophyll was at high values in spring and fall, but dropped considerably through the summer months. The algae in spring were dominated by an unidentified chrysophyte species and the diatom-chrysophyte *Cyclotella*. Autumn populations also included the dinoflagellate *Peridinium* and the diatom *Melosira*. Small numbers of the bluegreen *Anabaena* were found both early and late in the sampling period.

### Common algae

### Group

unidentified species	chrysophyte
<i>Dinobryon divergens</i>	chrysophyte
<i>Cyclotella</i> sp	diatom-chrysophyte

No Level I Data  
Available For This Lake

Lucerne

2003 Level II Data

Date (2003)	Temp (°C)	Secchi (m)	Chl-a (µg/l)	TP (µg/l)	TN (µg/l)	Algae Obsv.	N:P	Calculated TSI			Notes
								Secc	chl-a	TP	
20-Apr	13.5	3.2	11.6	13.8	695	3	50	43.2	54.6	42.0	Algae heavy at 1-2 ft below under surface.
4-May	15.0	3.0	8.0	9.1	520	3	57	44.1	51.0	36.0	Thick layer about 25-30 cm.
18-May	15.0	2.3	6.1	18.1	481	3	27	48.0	48.4	45.9	
1-Jun	21.0	3.8	2.4	12.3	400	1	33	40.7	39.2	40.4	
15-Jun	22.0	4.5	2.7	9.9	360	1	36	38.3	40.3	37.2	
29-Jun	25.0	5.0	0.9	6.9	317	1	46	36.8	29.5	32.0	There was a spot treatment for <i>Hydrilla</i> on 6/28.
14-Jul	23.5	5.0	1.5	8.5	353	1	42	36.8	34.5	35.0	
28-Jul	26.0	5.3	1.3	6.5	342	1	53	35.9	33.1	31.1	
11-Aug	23.5	3.5	3.9	6.3	397		63	41.9	44.0	30.7	
25-Aug	22.5	3.5	2.6	8.4	311	1	37	41.9	39.9	34.8	
8-Sep	22.5	4.0	0.6	5.9	341	1	58	40.0		29.8	Chlor-a value was <MDL. Reported as .6µg/l.
21-Sep	19.5	5.5	1.4	5.0	311	1	62	35.4	33.9		TP value was < MDL. Reported as 5µg/L.
6-Oct	19.0	4.0	1.5	7.4	327		44	40.0	34.5	33.0	
19-Oct		3.0	15.8	9.3	367	1	39	44.1	57.6	36.3	
	<b>Temp (°C)</b>	<b>Secchi (m)</b>	<b>Chl-a (µg/l)</b>	<b>TP (µg/l)</b>	<b>TN (µg/l)</b>	<b>Algae Obsv.</b>	<b>N:P</b>	<b>Calculated TSI</b>			
								<b>Secc</b>	<b>chl-a</b>	<b>TP</b>	
<b>Mean</b>	20.6	4.0	4.3	9.1	394.4	1.5	46	40.5	41.6	35.7	<b>TSI Average = 38.9</b>
<b>Median</b>	22.0	3.9	2.5	8.5	356.5	1	45	40.4	39.9	35.0	
<b>Min</b>	13.5	2.3	0.6	5.0	311.0	1	27	35.4	29.5	29.8	
<b>Max</b>	26.0	5.5	15.8	18.1	695.0	3	63	48.0	57.6	45.9	
<b>Count</b>	13	14	14	14	14	12	14	14	13	13	