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SELECTED WATER-QUALITY DATA FROM FALLEN LEAF LAKE EL DORADO COUNTY, CALIFORNIA JUNE THROUGH OCTOBER 1974

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PREPARED IN COOPERATION WITH THE
CALIFORNIA DEPARTMENT OF WATER RESOURCES

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

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SELECTED WATER-QUALITY DATA FROM FALLEN LEAF LAKE
EL DORADO COUNTY, CALIFORNIA
JUNE THROUGH OCTOBER 1974

By Richard H. Fuller

Open-File Report

Prepared in cooperation with the
California Department of Water Resources

6224-02

Menlo Park, California
November 1975

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SELECTED WATER-QUALITY DATA FROM FALLEN LEAF LAKE
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By Richard H. Fuller

In 1974 the U.S. Geological Survey entered into a cooperative agreement with the California Department of Water Resources to study the limnology of Fallen Leaf Lake and adjacent streams. The lake is in California, near the crest of the Sierra Nevada about 23 miles southwest of Reno, Nevada (fig. 1). The study was undertaken to help develop a better understanding of selected characteristics of a high-altitude dilute-solution lake-stream system and the effect of man on the system. Fallen Leaf Lake and the adjacent streams were chosen for the study because the lake represents an alpine system in a basin that has had limited development for a number of years. Recently, local and state groups have become extremely interested in the effects of man's activities on the condition of the lake.

The study was designed to:

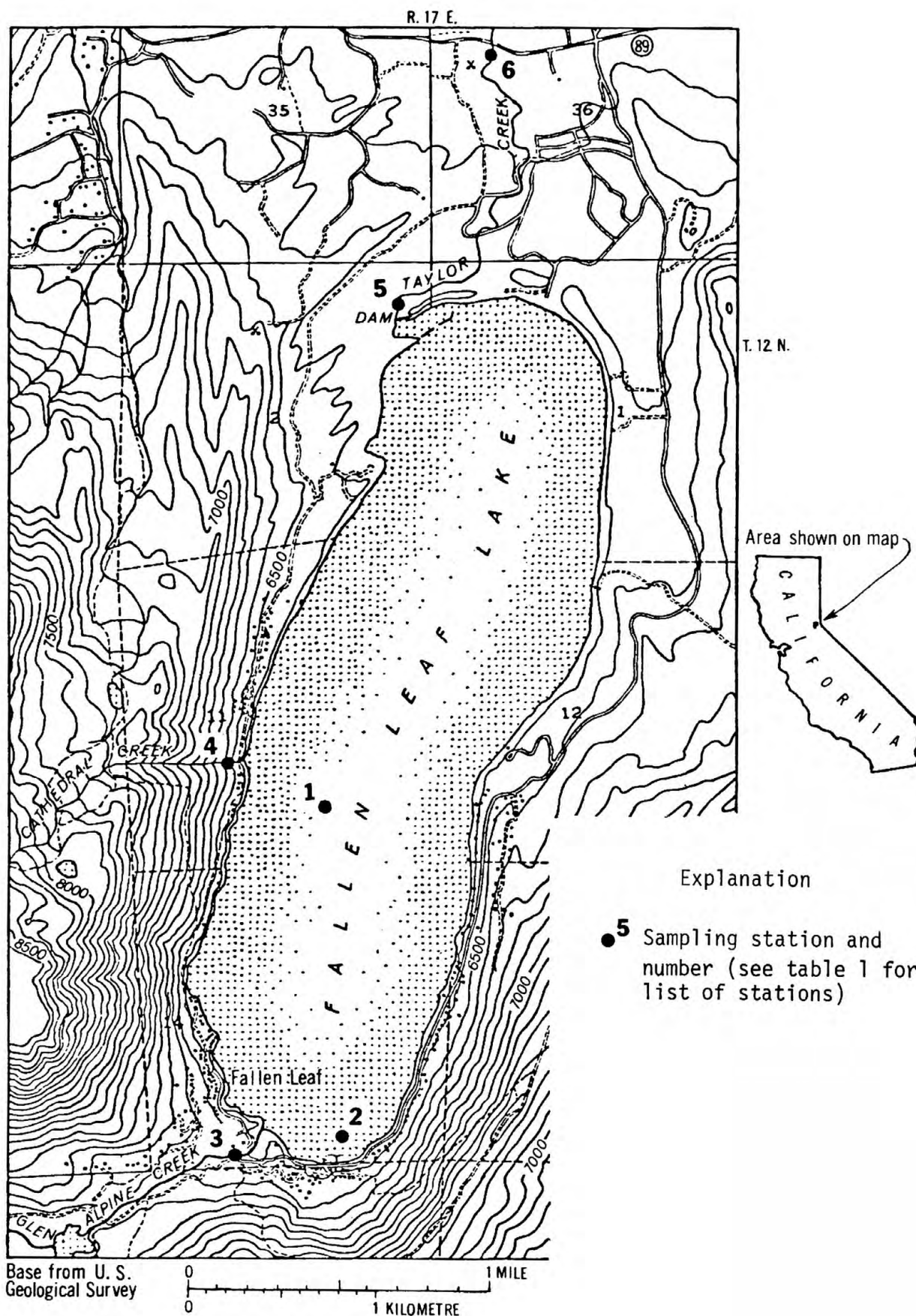
1. Provide data on selected physical, chemical, and biological characteristics of Fallen Leaf Lake and adjacent streams,
2. Determine whether the magnitude and changes in magnitude of a number of physical, chemical, and biological variables are affected by natural or cultural processes,
3. Characterize a high-altitude, dilute-solution aquatic ecosystem,
4. Compare and contrast the physical, chemical, and biological characteristics of Fallen Leaf Lake and adjacent streams with other lakes in the area.

Water samples were collected and field measurements were made regularly at two stations in Fallen Leaf Lake, one station in Glen Alpine Creek, one in Cathedral Creek, and at two stations in Taylor Creek (fig. 1 and table 1). These stations were sampled during the following periods:

June 3-4, 1974	September 4-6, 1974
June 25-26	September 25-27
July 23-25	October 21-23
August 14-16	

In addition, the Glen Alpine Creek station was sampled weekly.

Two other stations (not shown in fig. 1) at the mouth of Glen Alpine Creek and in the boat harbor at Fallen Leaf Lake Lodge were sampled for periphyton. Water samples were collected at 26 sites (fig. 2) for analysis of fecal coliform bacteria.



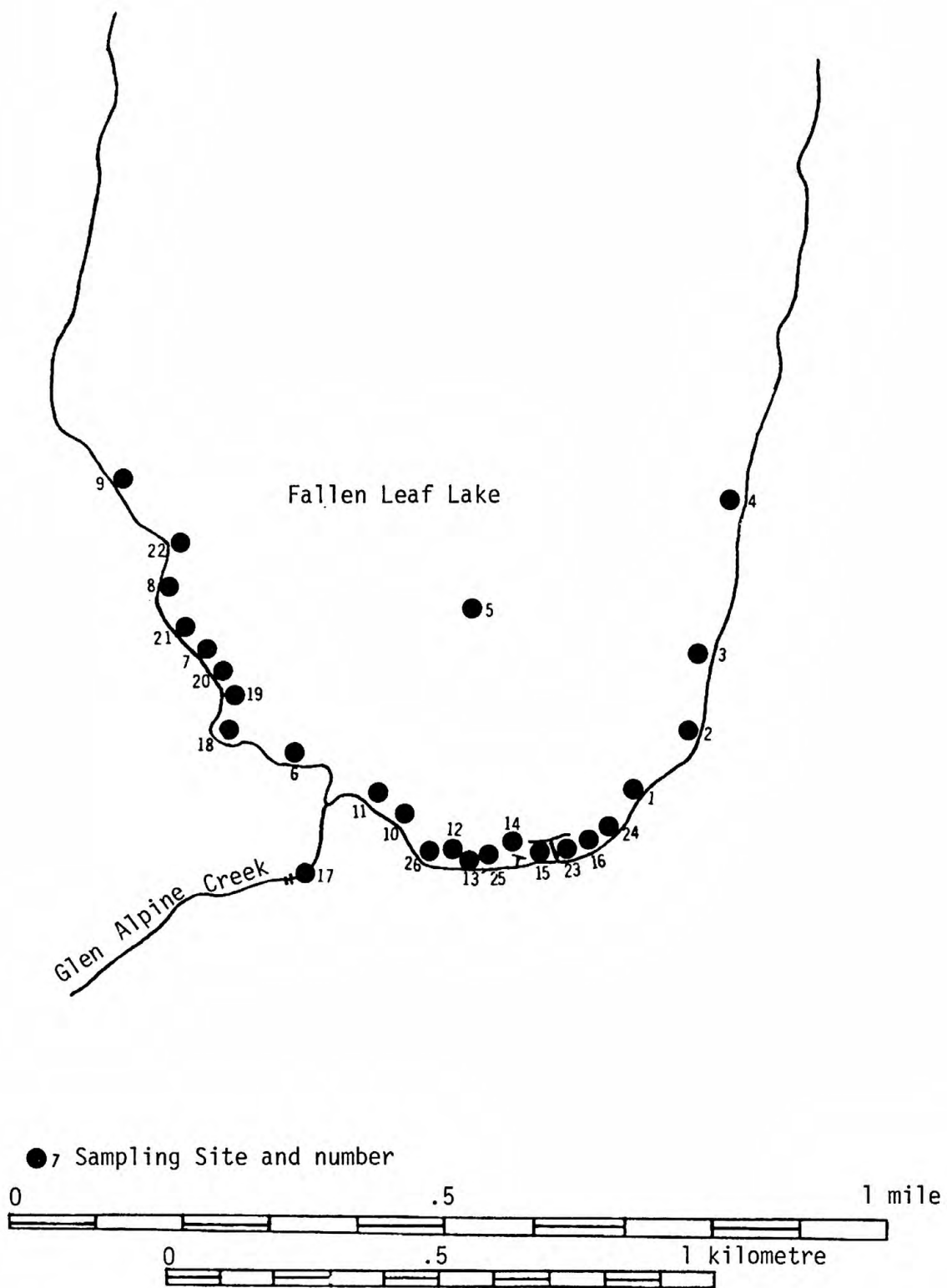


FIGURE 2.--Sites for fecal coliform bacteria samples.

Vertical profiles were measured at each lake station (table 2). The profiles included on-site measurements of specific conductance, pH, temperature, and dissolved oxygen, using a Martek Mark III, model A, Water Quality Monitoring System.¹ Light transmission was also measured on-site using a Martek instrument, model XMS, transmissometer. This instrument measures the percentage of light that is transmitted over a one-metre path by measuring the intensity of a light beam before it leaves the instrument (I_0) and after it completes 1 metre of travel (I). The percentage of light transmitted equals $(I/I_0) \times 100$.

Secchi disk transparency, measurements of light penetration using the disappearance depth of a disk 20 centimetres in diameter (Reid, 1961, p. 100), was measured on each trip to the lake. In addition, light penetration was measured (table 3), using a Montedoro-Whitney model LMT-8B submarine photometer.

Water samples were taken at various depths using a 4-litre Van Dorn bottle. Samples were analyzed for major chemical constituents (table 4) using standard procedures (Brown and others, 1970). Nitrogen and phosphorus analyses (table 5) were done with a Technicon Auto Analyzer using special low concentration standards so that concentration values can be reported to the nearest microgram per litre. Trace metals were analyzed (table 6) using standard methods (Brown and others, 1970). All samples analyzed for dissolved constituents were filtered through 0.1 micrometre pore-size membrane filters. All chemical analyses were done at the U.S. Geological Survey Central Laboratory, Salt Lake City, Utah.

Phytoplankton samples (table 7) were preserved in Lugol's solution and counted using the inverted microscope method (Slack and others, 1973). Periphyton were identified once during the study (table 8). All periphyton samples were preserved in Lugol's solution. Fecal coliform bacteria analyses (table 9) were made using the membrane-filter technique with M-FC medium, incubated at 44.5°C (American Public Health Association and others, 1971; Slack and others, 1973).

This report represents the results of data collection for the period June 1974 through October 1974.

¹The use of brand names in this report is for identification purposes only and does not imply endorsement by the U.S. Geological Survey.

Table 1.--*Sampling stations*

[See figure 1 for location of stations]

Station number	USGS reference number	Name
1	385356120035001	Fallen Leaf Lake at Fallen Leaf
2	385256120040501	Fallen Leaf Lake at Fallen Leaf
3	385248120041201	Glen Alpine Creek at Bridge at Fallen Leaf
4	385357120041601	Cathedral Creek at Fallen Leaf
5	10336626	Taylor Creek near Tahoe Valley
6	385602120031801	Taylor Creek at State Highway 89 near Camp Richardson

Table 2.--Vertical profiles

[See figure 1 for location of stations. Light measured with transmissometer.]

Depth (m)	Specific conduct- ance (μ mhos at 25°C)	pH	Temper- ature (°C)	Dis- solved oxygen (mg/l)	Light trans- mission (per- cent)	Depth (m)	Specific conduct- ance (μ mhos at 25°C)	pH	Temper- ature (°C)	Dis- solved oxygen (mg/l)	Light trans- mission (per- cent)
Station 1, June 3, 1974--0955 to 1230 hrs						94					86.5
0.5	22	7.26	11.9	9.1	82.5	96	26	6.92	3.8	9.45	86.5
1	23	7.20	11.8	9.1	82.2	98					86.5
2	23	7.14	11.6	9.15	80.0	100	26	6.90	3.8	9.4	86.5
3	24	7.06	10.9	9.3	79.2	101					86.5
4	23	6.97	10.45	9.4	78.0	102					86.0
5	22	6.90	9.8	9.5	77.5	103					85.8
6	23	6.86	9.25	9.6	77.5	104	26	6.88	3.8	9.3	85.5
7	23	6.86	8.8	9.7	76.5	105	26	6.91	3.8	9.35	85.5
8	23	6.90	8.4	9.8	76.0	106	26	6.13	3.8	7.4	85.5
9	24	6.98	8.1	9.9	76.2	107					84.5
10	22	7.07	7.9	9.9	76.0	108					84.0
11	23	7.12	7.7	9.9	76.2	109					83.0
12	24	7.15	7.2	9.9	76.0	Station 2, June 4--1350 to 1430 hrs					
13	23	7.18	6.9	9.9	76.2	0.5	23	7.13	10.9	9.1	86.0
14	24	7.19	6.7	9.85	76.2	1	23	7.09	10.8	9.3	84.0
15	24	7.19	6.7	9.9	76.2	2	23	7.05	10.6	9.3	83.0
16	24	7.19	6.7	9.8	76.2	3	24	6.98	9.0	9.1	82.0
17	24	7.18	6.6	9.9	76.2	4	23	6.94	8.5	9.15	82.0
18	23	7.17	6.4	9.9	77.5	5	24	6.92	8.0	9.1	81.5
19	24	7.19	6.1	9.9	77.0	6	23	6.92	7.5	9.3	72.0
20	24	7.20	6.0	9.9	77.0	7	23	6.93	7.4	9.3	76.0
21					77.0	8	23	6.95	7.1	9.3	75.5
22	24	7.19	5.8	9.9	77.0	9	23	7.01	6.9	9.3	75.5
23					77.0	10	23	7.03	6.8	9.25	75.0
24	24	7.18	5.5	9.9	77.5	11	23	7.07	6.5	9.3	75.5
25					77.5	12	24	7.09	6.2	9.4	76.0
26	25	7.15	5.3	9.9	77.5	13	24	7.12	6.2	9.4	76.0
27					77.5	14	24	7.11	6.0	9.5	75.5
28	25	7.14	5.2	9.9	77.5	15	24	7.11	5.9	9.4	75.5
29					77.5	16	24	7.11	5.8	9.5	75.5
30	25	7.13	5.1	9.9	77.5	17	24	7.13	5.8	9.5	75.5
32	25	7.11	4.9	9.9	78.0	18	24	7.13	5.7	9.3	75.0
34	25	7.09	4.9	9.85	80.0	19	24	7.14	5.6	9.5	75.0
36	25	7.08	4.8	9.9	80.5	20	24	7.13	5.5	9.3	75.0
38	25	7.07	4.8	9.85	81.0	21					75.0
40	26	7.06	4.6	9.85	81.5	22	25	7.13	5.4	9.4	75.0
42	26	7.05	4.6	9.85	83.0	23					75.0
44	26	7.04	4.5	9.85	83.0	24	25	7.12	5.3	9.5	75.0
46	26	7.04	4.4	9.85	84.0	25					75.0
48	26	7.03	4.3	9.85	84.0	26	25	7.11	5.2	9.45	75.5
50	26	7.02	4.3	9.8	84.0	27					75.5
52	26	7.02	4.2	9.75	84.5	28	25	7.10	5.1	9.5	76.5
54	26	7.02	4.2	9.8	84.5	29					77.5
56	26	7.02	4.1	9.8	85.0	30	25	7.09	5.0	9.5	78.0
58	26	7.02	4.1	9.8	85.0	32	25	7.06	4.9	9.5	78.5
60	26	7.01	4.1	9.8	85.5	34	25	7.05	4.8	9.5	78.5
62					85.5	36	25	7.03	4.8	9.4	78.5
64	25	7.00	4.0	9.7	85.5	38	26	7.00	4.6	9.5	79.0
66					85.5	40	26	7.01	4.6	9.4	80.0
68	25	6.98	3.9	9.65	85.5	42	26	7.01	4.5	9.4	80.0
70					85.5	44	26	6.99	4.4	9.45	81.0
72	25	6.97	3.9	9.65	85.5	46	26	6.97	4.3	9.4	81.0
74					85.5	48	26	6.96	4.2	9.3	81.5
76	25	6.96	3.9	9.5	85.5	50	26	6.95	4.1	9.3	82.0
78					86.0	52	26	6.95	4.1	9.2	82.5
80	25	6.96	3.9	9.65	86.0	54	26	6.95	4.0	9.2	83.0
82					86.0	56	26	6.95	4.0	9.3	84.0
84	25	6.94	3.9	9.6	86.0	58	26	6.95	4.0	9.3	84.0
86					86.0	60	26	6.95	3.9	9.4	85.0
88	26	6.96	3.8	9.65	86.0	62	26	6.95	3.9	9.3	85.0
92	26	6.94	3.8	9.55	86.5	64	26	6.95	3.8	9.3	85.0
						66	26	6.95	3.8	0.15	85.0

Table 2.--Vertical profiles--Continued

Depth (m)	Specific conduct- ance (μmhos at 25°C)	pH	Temper- ature (°C)	Dis- solved oxygen (mg/l)	Light trans- mission (per- cent)	Depth (m)	Specific conduct- ance (μmhos at 25°C)	pH	Temper- ature (°C)	Dis- solved oxygen (mg/l)	Light trans- mission (per- cent)
Station 1, June 26--1220 to 1445 hrs						102	25	6.60	4.45	9.6	82.5
0.5	20	7.21	14.7	8.6	75.0	104	25	6.60	4.45	9.6	82.5
1	20	7.22	14.6	8.5	74.5	106	25	6.61	4.4	9.6	81.0
2	20	7.01	14.2	8.5	74.5	107					81.0
3	20	6.51	14.1	8.4	73.5	108	25	6.60	4.4	9.45	80.5
4	20	6.61	14.1	8.5	73.0	109					80.0
5	20	6.84	14.0	8.6	72.5	110	25	6.57	4.4	9.4	79.75
6	21	7.01	13.7	8.75	72.5	Station 2, June 26--1500 to 1630 hrs					
7	21	7.02	13.6	8.8	72.5	0.5	20	6.98	14.8	8.7	74.0
8	21	7.14	13.4	8.85	72.5	1	20	6.66	14.7	8.7	74.0
9	21	6.92	13.2	8.7	72.5	2	20	6.67	14.5	8.7	73.5
10	21	6.81	13.1	8.8	72.5	3	20	6.95	14.4	8.7	73.0
11	21	6.82	12.9	8.8	72.5	4	20	7.22	14.1	8.6	73.0
12	21	6.85	12.9	8.85	71.5	5	20	6.95	14.0	8.7	73.0
13	21	6.84	12.7	8.9	71.0	6	20	6.90	13.9	8.8	72.5
14	23	6.92	10.7	9.8	71.0	7	20	6.92	13.8	8.8	72.5
15	22	6.92	10.0	9.9	72.0	8	21	6.94	13.7	8.7	72.5
16	23	6.94	9.2	10.0	72.0	9	21	6.95	13.7	8.7	72.5
17	23	6.97	8.4	10.1	72.5	10	21	6.95	13.6	8.7	72.5
18	24	6.96	7.5	10.1	73.5	11	21	6.97	13.6	8.6	72.0
19	23	6.98	7.3	10.2	74.0	12	22	6.96	11.8	9.5	70.0
20	23	6.98	7.2	10.2	74.0	13	23	7.05	9.2	10.1	72.0
22	23	6.97	6.75	10.2	74.0	14	24	7.07	8.0	10.3	72.0
24	23	6.98	6.5	10.1	74.0	15	24	7.07	7.5	10.3	72.0
26	23	7.00	6.4	10.3	74.0	16	24	7.05	7.2	10.2	72.0
28	24	6.96	6.3	10.3	75.0	17	25	6.99	6.9	10.3	72.0
30	24	6.99	6.1	10.2	75.0	18	25	6.99	6.7	10.4	71.0
32	24	6.95	6.0	10.2	75.0	19	25	7.03	6.7	10.3	71.5
34	24	6.92	5.7	10.2	74.5	20	25	7.01	6.5	10.1	72.0
36	24	6.88	5.6	10.2	74.5	21	23	7.02	6.4	10.3	72.0
38	24	6.85	5.5	10.1	74.5	22	23	7.02	6.4	10.2	72.5
40	24	6.85	5.4	10.0	74.5	23					73.0
42	24	6.83	5.35	10.0	74.0	24	24	6.93	6.0	10.2	73.0
44	25	6.80	5.3	10.1	75.0	25	24	6.95	6.0	10.2	73.0
46	25	6.79	5.1	10.0	76.0	26	24	6.94	5.9	10.3	73.0
48	25	6.77	5.1	10.0	77.0	27					73.0
50	25	6.8	5.1	10.0	78.5	28	24	6.93	5.7	10.0	73.0
52	25	6.76	5.1	10.0	79.5	29					73.5
54	25	6.77	5.05	10.0	80.0	30	24	6.92	5.6	10.2	73.5
56	24	6.75	5.0	9.9	80.0	32	24	6.91	5.5	10.2	73.5
58	24	6.75	5.0	10.0	80.5	34	24	6.89	5.45	10.2	74.0
60	24	6.73	4.9	10.0	81.0	36	24	6.85	5.3	10.1	75.0
62	24	6.73	4.9	10.0	81.5	38	25	6.83	5.2	10.1	76.5
64	24	6.72	4.9	10.0	82.0	40	25	6.83	5.1	10.1	77.0
68	24	6.70	4.8	10.0	82.0	42	25	6.79	5.1	10.0	77.5
72	24	6.71	4.8	10.0	82.5	44	25	6.80	5.0	10.0	78.5
74					83.0	46	25	6.78	4.9	9.9	77.5
76	24	6.68	4.7	10.0	83.5	48	25	6.77	4.9	10.0	77.5
78					83.5	50	25	6.77	4.9	10.0	77.0
80	24	6.70	4.65	9.9	83.5	52	25	6.77	4.9	10.0	77.5
82					83.5	54	25	6.73	4.8	10.0	77.5
84	24	6.67	4.6	9.9	83.8	56	25	6.69	4.8	10.0	79.0
86					83.8	58	25	6.71	4.75	9.9	79.0
88	25	6.62	4.5	9.8	83.0	60	25	6.70	4.7	10.0	78.5
92	25	6.6	4.45	9.7	83.0	62	25	6.70	4.7	10.0	79.0
94					83.0	64	25	6.69	4.7	10.0	78.5
96	25	6.60	4.45	9.6	82.5	66	26	6.70	4.6	9.9	68.5
98					82.5	68	26	6.68	4.6	9.8	
100	25	6.60	4.45	9.6	82.5	70	26	6.29	4.6	9.4	
						71	26	6.39	4.6	8.6	

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Table 2.--Vertical profiles--Continued

Depth (m)	Specific conduct- ance (μ mhos at 25° C)	pH	Temper- ature (°C)	Dis- solved oxygen (mg/l)	Light trans- mission (per- cent)	Depth (m)	Specific conduct- ance (μ mhos at 25°C)	pH	Temper- ature (°C)	Dis- solved oxygen (mg/l)	Light trans- mission (per- cent)
Station 1, July 23--0925 to 1155 hrs						Station 2, July 23--1245 to 1350 hrs					
0.5	20	7.48	18.7	7.8	74.0	0.5	20		18.6	8.1	73.5
1	20	7.44	18.6	7.7	74.0	1	20		18.5	8.15	73
2	20	7.42	18.5	7.7	73.0	2	20		18.0	8.4	71
3	20	7.40	18.2	7.8	71.0	3	20		17.9	8.4	70
4	21	7.39	17.5	7.9	70.0	4	21		17.7	8.4	68
5	21	7.40	17.1	8.1	70.0	5	21		17.7	8.4	67.5
6	20	7.39	16.7	8.1	71.0	6	21		17.5	8.1	68
7	20	7.36	16.5	8.0	71.5	7	20		16.7	8.4	70
8	20	7.32	16.0	8.15	71.5	8	21		15.6	8.5	70.5
9	19	7.32	15.5	8.2	71.0	9	21		15.1	8.6	69
10	20	7.30	15.3	8.2	70.0	10	20		14.6	8.7	68.5
11	20	7.29	14.7	8.4	69.5	11	20		14.3	8.7	68.5
12	20	7.22	14.3	8.5	69.0	12	20		14.0	8.8	68
13	20	7.19	14.1	8.6	68.0	13	21		13.7	9.0	68
14	21	7.22	13.6	8.7	67.0	14	21		13.6	8.8	67.5
15	21	7.20	12.5	9.2	67.0	15	21		13.3	8.8	67
16	20	7.20	12.0	9.2	67.0	16	21		12.8	9.15	66.5
17	21	7.20	11.5	9.4	67.0	17	22		12.5	9.3	66.5
18	22	7.20	10.5	9.7	67.0	18	21		11.7	9.4	66.5
19	23	7.20	9.3	9.9	68.0	19	21		11.4	9.6	67.0
20	21	7.21	9.1	9.9	69.5	20	21		10.7	9.8	67.5
21	21	7.26	8.7	10.0	69.5	21	22		10.0	9.9	68.0
22	22	7.26	8.1	10.0	70.0	22	23		9.2	10.0	69.0
23	22	7.32	7.8	10.1	71.0	23	23		8.8	10.0	69.0
24	22	7.44	7.5	10.1	71.5	24	23		8.4	10.0	69.5
25	23	7.42	7.3	10.1	71.5	25	23		8.2	10.2	70.0
26	23	7.39	7.1	10.1	72.0	26	24		7.7	10.2	70.5
27	23	7.39	6.8	10.1	72.0	27	25		7.4	10.1	71.0
28	23	7.38	6.7	9.9	72.0	28	23		7.0	10.1	71.0
29	23	7.36	6.5	9.9	72.5	29	23		6.8	10.2	71.0
30	24	7.33	6.3	10.0	73.0	30	23		6.6	10.1	71.0
32	24	7.29	6.2	10.0	73.0	32	23		6.4	10.2	72.0
34	24	7.24	5.9	10.0	74.0	34	24		6.1	10.1	72.0
36	24	7.22	5.75	10.0	74.5	36	24		5.9	10.1	72.5
38	24	7.21	5.6	10.1	75.0	38	24		5.85	10.1	73.0
40	24	7.18	5.6	10.0	74.5	40	24		5.7	10.1	73.0
42	24	7.15	5.5	10.0	74.5	42	24		5.5	10.0	75.0
44	24	7.12	5.4	10.0	76.0	44	24		5.4	10.0	76.0
46	25	7.10	5.3	10.0	77.5	46	25		5.3	10.0	76.0
48	25	7.08	5.2	9.9	78.0	48	25		5.3	10.0	77.0
50	25	7.06	5.1	9.9	80.0	50	25		5.2	10.0	77.5
52	25	7.02	5.1	9.8	80.5	52	25		5.15	9.9	78.5
54	25	7.02	5.0	9.8	81.5	54	25		5.1	9.9	79.5
56	25	7.02	5.0	9.8	82.0	56	25		5.0	9.9	80.5
58	25	7.01	4.9	9.8	82.5	58	25		5.0	9.9	81.0
60	23	7.01	4.9	9.8	83.0	60	25		4.95	9.9	81.5
62	23	7.00	4.85	9.8	83.5	62	25		4.9	9.8	81.5
64	23	6.94	4.8	9.75	84.0	64	25		4.9	9.8	82.0
68	23	6.97	4.7	9.6	84.0	66	25		4.8	9.8	81.5
72	24	6.96	4.7	9.7	84.5	68	25		4.8	9.8	--
76	24	6.96	4.6	9.6	84.5						
80	24	6.95	4.6	9.6	85.0						
84	24	6.94	4.5	9.6	85.0						
88	24	6.86	4.5	9.4	85.0						
92	24	6.83	4.4	9.15	84.0						
96	24	6.79	4.4	9.0	83.5						
100	24	6.78	4.4	9.1	83.0						
102	24	6.78	4.4	9.05	82.5						
104	24	6.76	4.35	8.9	82.0						
106	24	6.75	4.35	8.9	81.5						
107	24		4.35	8.8	81.0						
108	24		4.3	8.7	80.5						

Table 2.--Vertical profiles--Continued

Depth (m)	Specific conduct- ance (μmhos at 25°C)	pH	Temper- ature (°C)	Dis- solved oxygen (mg/l)	Light trans- mission (per- cent)	Depth (m)	Specific conduct- ance (μmhos at 25°C)	pH	Temper- ature (°C)	Dis- solved oxygen (mg/l)	Light trans- mission (per- cent)
Station 1, Aug. 14--0920 to 1145 hrs						Station 2, Aug. 14--1155 to 1330 hrs					
0.5	20	7.54	18.3	8.1	76.5	0.5	20	7.39	18.8	7.8	75.5
1	20	7.50	18.2	8.1	76.0	1	20	7.37	18.7	7.8	75.5
2	20	7.41	18.2	8.1	75.0	2	20	7.28	18.6	7.8	75.0
3	20	7.34	18.2	8.0	75.5	3	20	7.24	18.5	7.9	74.0
4	20	7.34	18.2	8.0	75.5	4	20	7.21	18.5	7.9	73.5
5	20	7.34	18.1	7.9	75.5	5	20	7.26	18.4	7.85	73.0
6	20	7.38	18.1	8.0	75.5	6	20	7.30	18.3	7.75	73.0
7	20	7.41	18.1	8.0	75.5	7	20	7.36	18.3	7.85	73.5
8	20	7.45	18.0	8.1	75.5	8	20	7.45	18.3	7.85	73.5
9	20	7.51	17.9	8.2	75.5	9	20	7.57	18.3	7.8	73.5
10	21	7.57	17.7	8.3	73.5	10	20	7.70	18.2	7.75	73.5
11	20	7.64	17.4	8.4	73.0	11	20	7.34	14.7	9.0	74.0
12	20	7.71	17.0	8.5	72.0	12	20	7.30	14.2	9.2	68.0
13	21	7.67	15.4	9.0	71.5	13	21	7.26	13.1	9.4	68.0
14	20	7.39	14.4	9.0	71.0	14	21	7.20	12.8	9.6	67.5
15	20	7.39	13.9	9.2	70.5	15	22	7.18	12.1	9.7	67.0
16	21	7.40	13.3	9.4	70.0	16	21	7.20	11.2	9.9	66.0
17	21	7.35	12.6	9.6	70.0	17	21	7.09	10.8	10.0	66.0
18	22	7.32	11.8	9.6	69.0	18	21	7.16	10.8	10.0	68.0
19	21	7.30	10.8	10.0	68.5	19	22	7.16	10.0	10.1	68.0
20	22	7.30	10.0	10.2	69.0	20	22	7.20	9.8	10.1	68.0
21	22	7.30	9.6	10.2	69.0	21	22	7.17	9.4	10.2	68.0
22	23	7.26	9.0	10.1	69.5	22	23	7.20	9.2	10.2	68.0
23	23	7.26	8.6	10.1	70.0	23	23	7.20	9.0	10.2	68.5
24	23	7.25	8.4	10.2	70.5	24	23	7.16	9.0	10.2	68.5
25	24	7.23	8.1	10.2	70.5	25	23	7.14	8.9	10.1	68.5
26	24	7.27	8.1	10.2	71.0	26	23	7.18	8.8	10.2	68.5
27	24	7.27	7.9	10.4	71.0	27	23	7.17	8.6	10.1	68.5
28	24	7.22	7.5	10.2	71.5	28	23	7.14	8.3	10.1	68.5
29	23	7.23	7.4	10.2	71.5	29	23	7.13	8.2	10.1	68.5
30	23	7.23	7.4	10.2	72.0	30	24	7.16	8.0	10.2	68.5
32	23	7.22	7.2	10.2	72.5	32	24	7.14	7.5	10.2	69.5
34	23	7.18	6.8	10.1	73.0	34	23	7.13	7.3	10.2	70.0
36	23	7.15	6.7	10.1	73.5	36	24	7.15	6.9	10.2	70.0
38	23	7.14	6.5	10.1	74.0	38	24	7.13	6.6	10.2	70.0
40	24	7.11	6.2	10.1	74.5	40	24	7.09	6.3	10.0	70.5
42	24	7.10	6.0	10.1	75.0	42	25	7.06	6.1	10.1	70.5
44	24	7.07	5.9	10.1	75.5	44	24	7.00	5.9	10.1	71.0
46	24	7.01	5.8	10.1	76.0	46	24	7.02	5.8	10.1	71.0
48	24	7.01	5.7	10.1	77.5	48	24	6.99	5.7	10.0	72.0
50	24	6.98	5.6	10.1	79.0	50	24	6.96	5.6	10.0	73.0
52	24	6.96	5.5	10.0	80.5	52	24	6.94	5.5	10.0	73.5
54	25	6.94	5.3	10.0	81.0	54	24	6.93	5.4	10.0	74.0
56	25	6.93	5.3	9.9	82.0	56	24	6.90	5.4	9.9	74.5
58	25	6.91	5.2	9.9	83.0	58	25	6.90	5.3	9.9	74.5
60	24	6.92	5.15	9.9	83.0	60	25	6.88	5.3	9.9	75.5
64	24	6.89	5.1	9.9	84.0	62	25	6.86	5.2	9.9	76.0
68	24	6.88	5.0	9.9	84.5	64	25	6.85	5.1	9.9	76.5
72	24	6.86	4.9	9.8	84.5	66	25	6.83	5.1	9.8	78.0
76	24	6.86	4.85	9.8	85.0	68	25	6.80	5.1	9.7	
80	24	6.83	4.8	9.7	85.0						
84	24	6.81	4.7	9.65	85.0						
88	24	6.79	4.7	9.6	84.5						
92	24	6.75	4.6	9.5	84.0						
96	24	6.71	4.6	9.3	83.5						
100	24	6.69	4.6	9.2	83.5						
102	24	6.68	4.55	9.1	83.0						
104	24	6.66	4.55	9.0	82.5						
106	25	6.60	4.5	8.5	81.0						
107	25	6.57	4.5	8.45	80.1						
108	25	6.55	4.5	8.3	78.5						
109	25	6.53	4.5	8.2	76.5						
110	25	6.51	4.5	8.1	76.0						
111	25										

Table 2.--Vertical profiles--Continued

Depth (m)	Specific conduct- ance (umhos at 25°C)	pH	Temper- ature (°C)	Dis- solved oxygen (mg/l)	Light trans- mission (per- cent)	Depth (m)	Specific conduct- ance (umhos at 25°C)	pH	Temper- ature (°C)	Dis- solved oxygen (mg/l)	Light trans- mission (per- cent)
Station 1, Sept. 4--0905 to 1140 hrs						102					81.0
0.5	20	7.45	19.2	8.5	78.0	104	24	6.52	4.5	8.0	80.0
1	20	7.38	19.1	8.3	78.0	106	24	6.49	4.5	7.9	79.0
2	20	7.34	19.1	8.1	78.0	107					78.5
3	20	7.25	19.1	8.1	77.5	108	24	6.47	4.5	7.8	78.0
4	20	7.23	19.0	8.1	77.0	109	24	6.46	4.5	7.6	77.5
5	20	7.32	19.0	8.1	76.5	110	24	6.82	4.5	7.55	76.5
6	20	7.36	19.0	8.1	76.0	Station 2, Sept. 4--1030 to 1110 hrs					
7	20	7.23	18.9	8.1	76.0	0.5	20	7.48	19.0	8.5	80.0
8	20	7.25	18.9	8.1	76.0	1	20	7.41	18.9	8.3	79.5
9	20	7.31	18.9	8.1	76.0	2	20	7.35	18.8	8.3	79.5
10	20	7.37	18.8	7.9	76.5	3	20	7.30	18.7	8.2	79.0
11	19	7.42	18.3	8.2	76.0	4	19	7.25	18.7	8.2	79.0
12	19	7.46	18.0	8.4	76.0	5	19	7.17	18.7	8.1	78.5
13	20	7.32	16.6	9.0	75.0	6	19	7.20	18.6	8.1	78.0
14	20	7.33	15.9	9.1	73.5	7	19	7.23	18.6	8.0	78.0
15	20	7.29	15.2	9.4	73.0	8	19	7.32	18.6	7.9	78.0
16	20	7.27	14.5	9.4	72.0	9	19	7.44	18.6	7.8	78.0
17	21	7.21	13.0	9.7	71.5	10	19	7.57	18.6	7.8	78.0
18	22	7.21	12.4	9.8	72.0	11	19	7.67	18.5	7.7	78.0
19	21	7.20	11.2	10.1	72.0	12	20	7.55	17.1	8.3	77.5
20	22	7.21	10.3	10.1	72.0	13	20	7.45	14.5	9.1	74.0
21	22	7.20	9.8	10.1	72.0	14	20	7.41	13.9	9.2	74.0
22	23	7.18	9.1	10.2	71.5	15	21	7.40	12.9	9.6	73.5
24	22	--	8.3	10.2	72.0	16	20	7.32	12.4	9.3	73.5
26	22	7.29	7.9	10.1	71.5	17	21	7.30	11.4	9.5	73.0
28	22	7.22	7.5	10.2	72.0	18	21	7.30	10.7	9.6	74.0
30	23	7.20	7.1	10.1	72.0	19	22	7.23	10.0	9.7	74.0
32	23	7.12	6.8	10.1	72.0	20	22	7.26	9.7	9.7	74.5
34	23	7.08	6.5	10.1	73.0	21	22	7.26	9.3	9.8	75.5
36	24	7.04	6.2	10.0	73.0	22	21	7.31	9.1	9.7	76.0
38	24	6.98	6.0	10.0	73.0	24	21	7.30	8.7	9.8	75.5
40	24	6.94	5.8	10.0	73.0	26	22	7.30	8.2	9.9	76.0
42	22	6.93	5.7	9.9	73.0	28	22	7.23	8.0	9.9	76.0
44	22	6.92	5.7	9.9	74.0	30	22	7.24	7.6	9.8	76.0
46	23	6.91	5.5	9.8	74.5	32	24	7.21	6.3	9.8	75.0
48	23	6.89	5.4	9.8	74.0	34	23	7.23	6.9	9.75	75.5
50	23	6.88	5.4	9.8	74.0	36	23	7.18	6.8	9.7	75.0
52	23	6.86	5.3	9.7	75.0	38	22	7.13	6.5	9.7	75.0
54	23	6.84	5.2	9.6	78.0	40	24	7.10	6.2	9.65	75.5
56	23	6.84	5.1	9.6	80.0	42	24	7.08	6.0	9.6	74.5
58	23	6.85	5.0	9.6	81.0	44	24	7.00	5.9	9.5	75.0
60	23	6.83	5.0	9.5	81.0	46	22	7.01	5.7	9.5	75.5
62					82.0	48	22	6.98	5.6	9.4	75.5
64	23	6.78	4.9	9.5	83.5	50	23	6.98	5.5	9.4	76.0
66					84.0	52	23	6.94	5.4	9.3	77.0
68	23	6.81	4.8	9.4	84.5	54	23	6.91	5.3	9.3	77.0
70					87.5	56	23	6.91	5.2	9.2	77.5
72	23	6.77	4.7	9.4	84.5	58	23	6.91	5.1	9.3	78.0
74					85.0	60	23	6.88	5.1	9.2	79.0
76	23	6.76	4.7	9.4	85.0	62	23	6.87	5.0	9.2	81.0
78					85.0	64	23	6.85	5.0	9.1	82.5
80	23	6.75	4.7	9.3	85.0	66	23	6.84	4.9	9.1	82.5
82					84.5	68	23	6.84	4.9	9.0	83.0
84	24	6.73	4.6	9.1	84.0	69	23	6.76	4.9	9.0	83.5
86					84.0						
88	24	6.71	4.5	9.1	84.0						
92	24	6.68	4.5	9.1	84.0						
94					84.0						
96	24	6.65	4.5	8.7	84.0						
98					83.0						
100	24	6.58	4.5	8.4	82.5						

Table 2.--Vertical profiles--Continued

Depth (m)	Specific conduct- ance (μ mhos at 25°C)	pH	Temper- ature (°C)	Dis- solved oxygen (mg/l)	Light trans- mission (per- cent)	Depth (m)	Specific conduct- ance (μ mhos at 25°C)	pH	Temper- ature (°C)	Dis- solved oxygen (mg/l)	Light trans- mission (per- cent)
Station 1, Sept. 25--1020 to 1245 hrs						102	24	6.56	4.2	8.1	82.0
0.5	19	7.54	18.5	7.9	78.0	104	24	6.49	4.2	7.7	81.0
1	19	7.48	18.4	7.7	77.5	106	24	6.45	4.15	7.5	79.8
2	19	7.59	18.4	7.7	77.0	107	24	6.44	4.15	7.3	79.5
3	19	7.57	18.3	7.7	76.0	108	24	6.41	4.1	7.2	79.0
4	19	7.57	18.3	7.2	75.5	109	24	6.37	4.1	6.75	78.0
5	19	7.56	18.3	7.7	75.5	110	24	6.48	4.1	6.5	77.0
6	19	7.53	18.3	7.6	75.5	Station 2, Sept. 25--1315 to 1440 hrs					
7	19	7.52	18.3	7.6	75.5	0.5	19	7.38	18.5	8.2	78.0
8	19	7.46	18.3	7.5	75.5	1	19	7.32	18.3	8.2	76.0
9	19	7.36	18.2	7.55	75.5	2	19	7.25	18.2	8.15	76.0
10	19	7.31	18.2	7.5	75.0	3	19	7.16	18.1	8.1	76.0
11	19	7.25	18.2	7.5	75.0	4	19	7.22	18.1	8.0	76.0
12	19	7.21	18.2	7.5	75.5	5	19	7.33	18.0	8.0	76.0
13	19	7.21	18.1	7.5	75.0	6	19	7.45	18.0	7.9	75.8
14	20	7.25	17.5	7.9	74.5	7	19	7.40	18.0	7.9	75.0
15	20	7.37	16.7	8.7	72.5	8	19	7.38	18.0	7.7	75.0
16	20	7.41	15.2	9.2	71.5	9	19	7.33	17.9	7.6	75.0
17	21	7.38	13.5	9.7	71.0	10	19	7.33	17.8	7.55	75.0
18	20	7.33	12.4	9.8	71.0	11	19	--	17.8	7.5	75.0
19	21	7.25	11.0	10.1	71.0	12	19	7.36	17.7	7.5	75.0
20	20	7.27	10.4	10.1	71.5	13	20	--	17.5	7.5	74.0
21	21	7.25	9.6	10.2	72.0	14	20	7.41	17.1	7.9	73.0
22	21	7.27	9.4	10.2	72.0	15	20	--	16.7	8.1	72.0
24	21	7.34	8.7	10.3	72.5	16	20	7.55	15.8	8.7	70.5
26	22	7.23	8.0	10.3	73.0	17	20	--	14.9	9.8	69.8
28	22	7.22	7.6	10.3	72.5	18	21	7.44	12.7	9.2	69.0
30	23	7.19	7.2	10.3	72.5	19	21	--	11.4	9.35	69.5
32	21	7.16	6.7	10.2	73.0	20	22	7.54	10.3	9.6	69.8
34	22	7.13	6.5	10.2	73.0	21	22	--	9.9	9.6	69.0
36	22	7.08	6.1	10.1	73.0	22	22	--	9.4	9.6	69.5
38	22	7.05	5.8	10.2	73.0	24	23	--	8.6	9.7	69.5
40	22	7.05	5.7	10.2	73.5	26	22	--	8.1	9.7	71.0
42	22	7.00	5.6	10.2	74.0	28	22	--	7.4	9.8	70.0
44	23	6.99	5.5	10.2	75.0	30	23	--	6.8	9.8	70.0
46	23	6.97	5.3	10.0	76.5	32	23	--	6.5	9.8	71.0
48	23	6.95	5.2	10.0	77.0	34	24	--	6.3	9.6	71.0
50	23	6.92	5.9	9.9	79.0	36	24	--	6.0	9.6	71.0
52	23	6.90	5.0	9.85	80.0	38	24	--	5.8	9.5	72.0
54	23	6.89	4.95	9.80	80.0	40	24	--	5.7	9.5	72.0
56	23	6.87	4.90	9.8	80.5	42	24	--	5.5	9.45	72.0
58	23	6.86	4.8	9.6	80.5	44	25	--	5.4	9.4	73.0
60	21	6.86	4.8	9.6	80.5	46	23	--	5.2	9.3	74.0
62					80.5	48	23	--	5.1	9.2	74.5
64	22	6.85	4.7	9.45	81.0	50	23	--	5.0	9.1	75.5
66					81.5	52	23	--	5.0	9.0	78.0
68	24	6.83	4.6	9.4	81.5	54	23	--	4.9	9.0	78.0
70					81.8	56	23	--	4.8	9.0	78.0
72	24	6.81	4.6	9.3	82.0	58	23	--	4.8	9.0	78.0
74					82.0	60	23	--	4.7	9.0	78.2
76	24	6.81	4.5	9.3	82.0	62	23	--	4.7	8.9	78.2
78					82.0	64	24	--	4.6	8.9	78.2
80	24	6.79	4.45	9.1	82.0	66	24	--	4.6	8.9	78.0
84	24	6.78	4.4	9.1	82.1	68	24	--	4.6	8.8	78.0
88	24	6.79	4.3	8.8	82.1	69	24	--	4.6	8.8	78.0
92	24	6.72	4.3	8.7	82.0						
96	24	6.60	4.2	8.1	--						
100	24	6.60	4.2	8.35	82.0						

Table 2.--Vertical profiles--Continued

Depth (m)	Specific conduct- ance (μ mhos at 25°C)	pH	Temper- ature (°C)	Dis- solved oxygen (mg/l)	Light trans- mission (per- cent)	Depth (m)	Specific conduct- ance (μ mhos at 25°C)	pH	Temper- ature (°C)	Dis- solved oxygen (mg/l)	Light trans- mission (per- cent)
Station 1, Oct. 21--1000 to 1310 hrs											
0.5	20	7.53	15.2	8.1	78.0	82					85.0
1	20	7.36	15.0	8.1	78.0	84	24	6.93	4.5	8.9	85.0
2	20	7.29	15.2	8.1	78.0	86					85.0
3	20	7.39	15.15	8.1	78.0	88	24	6.88	4.5	8.8	84.5
4	20	7.66	15.1	8.1	78.0	92	24	6.84	4.4	8.7	85.0
5	20	7.96	15.1	8.1	77.5	94					85.0
6	20	8.31	15.1	8.1	77.5	96	24	6.77	4.4	8.2	85.0
7	20	8.55	15.1	8.1	77.5	98					85.0
8	20	8.78	15.1	8.1	77.5	100	24	6.68	4.4	7.8	84.5
9	20	8.88	15.1	8.1	77.5	102	24	6.55	4.4	7.65	84.0
10	20	7.56	15.0	8.0	77.5	104					82.0
11	20		15.0	8.0	77.5	106					81.0
12	20		14.9	7.9	77.5	107					80.5
13	20		14.9	7.9	77.5	108					80.5
14	20		14.9	7.9	77.0	109					79.5
15	20	7.55	14.9	7.9	77.0	110					74.0
16	20		14.9	8.0	77.0						
17	20		14.9	7.9	77.0						
18	20	7.79	14.8	8.0	76.5						
19	21		12.6	9.8	74.0						
20	21		11.6	10.0	72.5						
21	21		11.0	10.0	72.5						
22	22		10.0	10.1	72.5						
24	21		9.2	10.2	72.5						
26	22		8.3	10.2	74.0						
28	22		7.8	10.1	74.5						
30	23	7.54	7.0	10.1	75.5						
32	23		6.7	9.9	74.0						
34	23		6.4	9.8	75.0						
36	24		6.1	9.8	74.5						
38	24		5.9	9.8	75.5						
40	24	7.26	5.7	9.7	76.5						
42	23	7.23	5.6	9.6	78.0						
44	23		5.5	9.6	79.0						
46	23	7.18	5.4	9.5	80.0						
48	23		5.3	9.4	80.0						
50	23	7.14	5.2	9.4	80.5						
52	23	7.1	5.1	9.3	83.0						
54	23		5.1	9.3	84.0						
56	23	7.07	5.0	9.3	84.0						
58	23		5.0	9.2	84.0						
60	23	7.07	4.9	9.3	84.0						
62					84.0						
64	23	7.04	4.8	9.2	84.0						
66					84.5						
68	23	7.05	4.7	9.2	85.0						
70					85.0						
72	23	7.01	4.7	9.1	85.0						
74					85.0						
76	24	6.98	4.6	9.0	84.0						
78					84.0						
80	24	6.97	4.6	9.0	85.0						

Table 3.--*Light penetration*

[See figure 1 for location of stations.]

Station number	Date	Depth, in metres		
		Secchi disk transparency	Photometer measurements	
			10 percent light penetration	1 percent light penetration
1	June 3, 1974	18.5	--	--
2		18.5	--	--
1	June 26	14	--	--
2		14	--	--
1	July 23	17	13.5	30.5
2		14	11	28
1	Aug. 14	18	19	35
2		15.5	17	33
1	Sept. 4	19.5	10.5	30.5
2		16.5	16	33.5
1	Sept. 25	21	15.5	33.5
2		20.5	--	--
1	Oct. 22	20	14	31
2		18	--	--

Table 4.--Major

DATE	TIME	DEPTH (M)	DIS- SOLVED SILICA (STC2) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NESIUM (MG)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	PICAR- BONATE (HCO3) (MG/L)	ALKA- LITY AS CACT? (MG/L)
STATION 1, FALLEN LEAF LAKE AT FALLEN LEAF									
JUNE, 1974									
04...	0900	.5	3.3	3.4	.3	.9	.5	12	10
04...	0930	5.0	3.3	1.8	.3	.8	.4	10	8
04...	0945	10	3.3	2.8	.3	.9	.4	10	8
04...	1000	20	3.2	2.6	.2	.8	.4	10	8
04...	1020	30	3.2	2.7	.3	1.0	.4	11	9
04...	1045	50	3.2	2.5	.2	.9	.4	11	9
04...	1110	80	3.2	2.6	.3	.8	.5	11	9
04...	1145	104	3.2	2.6	.3	.9	.5	11	9
27...	1255	.5	3.8	1.8	.0	1.0	.3	11	9
27...	1310	5.0	4.0	2.8	.4	1.1	.4	11	9
27...	1320	10	3.6	2.8	.2	1.5	.4	11	9
27...	1345	20	3.7	3.0	.5	1.1	.4	11	9
27...	1410	30	3.4	3.0	.1	1.0	.4	11	9
27...	1430	50	3.9	3.0	.1	1.1	.4	12	10
27...	1500	80	3.9	3.1	.1	1.1	.4	11	9
27...	1530	104	3.6	3.4	.1	1.1	.4	11	9
JULY									
24...	1205	.5	3.3	2.6	.2	.8	.3	10	8
24...	1215	5.0	3.3	4.1	.2	.9	.4	10	8
24...	1220	10	3.2	2.8	.2	1.0	.4	9	7
24...	1221	11	3.1	3.8	.2	.9	.4	10	8
24...	1240	20	3.2	5.7	.2	.8	.4	10	8
24...	1300	30	3.1	3.4	.2	.9	.4	10	8
24...	1310	50	3.2	3.4	.2	.9	.3	11	9
24...	1325	80	3.2	2.9	.2	1.0	.4	11	9
24...	1326	81	3.3	4.3	.2	.9	.5	11	9
24...	1327	82	3.1	2.9	.1	.9	.2	11	9
24...	1450	104	3.4	2.8	.2	1.0	.4	11	9
AUG.									
15...	1015	.5	.8	2.4	.3	1.2	.4	10	8
15...	1020	5.0	.8	2.6	.3	1.1	.4	10	8
15...	1030	13	1.8	4.1	.2	1.2	.5	10	8
15...	1035	19	.6	2.8	.3	1.1	.4	11	9
15...	1045	30	1.2	2.9	.2	1.2	.5	11	9
15...	1055	50	2.4	3.1	.6	1.3	.4	11	9
15...	1120	80	1.5	2.6	.4	1.1	.4	11	9
15...	1140	108	1.7	2.8	.5	1.3	.4	11	9
SEP.									
05...	0835	.5	3.1	3.1	.2	1.3	.4	11	9
05...	0840	5.0	3.2	3.6	.0	.6	.4	11	9
05...	0845	10	3.2	3.0	.3	.6	.4	11	9
05...	0855	20	3.0	3.0	.6	.6	.4	12	10
05...	0905	30	3.1	3.0	.4	.6	.4	11	9
05...	0915	50	3.2	3.8	.2	.5	.4	11	9
05...	0940	80	3.2	3.8	.0	.5	.4	12	10
05...	1000	108	3.3	3.2	.3	.5	.2	13	11
26...	0851	.5	3.1	2.6	.4	.8	.4	10	8
26...	0906	5.0	3.1	3.0	.8	.0	.4	10	8
26...	0946	10	3.1	4.0	.4	.7	.4	10	8
26...	0955	20	2.9	2.3	.9	1.0	.4	10	8
26...	1001	30	3.0	2.5	.5	.8	.4	11	9
26...	1016	50	3.0	2.9	.2	1.1	.4	11	9
26...	1031	80	3.1	2.7	1.3	1.1	.4	11	9
26...	1041	104	3.3	2.8	.6	1.6	.4	11	9
OCT.									
21...	1431	.5	2.2	2.6	.4	1.1	.4	11	9
21...	1441	5.0	1.6	2.7	.6	1.3	.4	11	9
21...	1451	10	1.1	3.5	.4	1.2	.2	11	9
21...	1501	20	1.2	2.9	.6	1.1	.1	12	10
21...	1511	30	2.1	3.0	.5	1.4	.2	12	10
21...	1516	50	1.9	2.8	.1	1.2	.3	11	9
21...	1526	80	2.4	3.1	.0	1.0	.1	12	10
21...	1531	104	1.8	2.9	.4	1.0	.3	12	10

chemical constituents

DIS- SOLVED SULFATE (SC4) (MG/L)	DIS- SOLVED CHLOR- IDE (CL) (MG/L)	DIS- SOLVED FLUOR- IDE (F) (MG/L)	DIS- SOLVED SOLIDS (RFSS- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTITU- TENTS) (MG/L)	HARD- NESS (CA+MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	DIS- SOL- VED ORGANIC CARBON (C) (MG/L)	SUS- PENDED ORGANIC CARBON (C) (MG/L)
STATION 1--Continued										
1.6	.3	.0	16	16	10	0	21	7.3	1.4	.2
1.5	.3	.0	9	13	6	0	20	7.0	8.4	.1
1.4	.5	.0	12	15	8	0	21	7.2	1.6	.1
1.3	.2	.0	12	14	7	0	25	7.2	.1	.2
1.4	.2	.0	14	15	8	0	23	7.2	2.0	.2
1.3	.2	.0	9	14	7	0	22	7.2	5.1	.2
1.3	.2	.0	12	14	8	0	21	7.1	1.3	.1
2.3	.7	.0	13	16	8	0	22	7.1	6.2	.2
1.8	.5	.0	24	15	5	0	20	6.8	1.2	.1
1.4	.3	.0	14	16	9	0	20	6.6	3.8	.2
1.6	.5	.0	14	16	8	0	20	7.0	1.9	.2
1.6	.6	.0	17	16	10	1	21	7.0	1.7	.2
1.6	.6	.0	14	16	8	0	21	7.1	1.6	.2
1.8	.6	.0	14	17	8	0	21	7.0	1.1	.2
1.8	.3	.0	14	16	8	0	21	6.9	1.6	.1
1.8	.6	.0	11	16	9	0	21	6.9	2.2	.2
.8	.3	--	17	13	7	0	20	6.8	1.4	.2
1.6	.3	--	16	16	11	3	20	6.9	1.5	.2
1.6	.2	--	16	14	8	0	19	7.0	1.3	.2
1.5	.3	--	21	15	10	2	20	7.0	1.0	.2
1.8	.8	--	13	18	15	7	20	7.2	1.5	.2
2.2	.3	--	19	15	9	1	21	6.8	2.0	.2
2.1	.3	--	19	16	9	0	21	6.9	2.6	.2
2.0	.3	--	19	16	8	0	21	7.1	1.7	.2
1.9	.2	--	15	17	12	3	21	7.1	1.6	.2
1.6	.1	--	17	14	8	0	21	7.1	1.6	.1
2.1	.5	--	21	17	8	0	21	6.9	1.4	.2
2.0	1.0	--	16	13	7	0	19	6.5	1.2	--
1.9	.8	--	16	13	8	0	19	6.4	1.0	--
1.9	.8	--	15	16	11	3	19	6.8	1.3	1.0
2.0	.8	--	17	14	8	0	19	6.7	2.0	1.0
2.0	.8	--	16	14	8	0	20	6.7	1.3	1.0
2.0	.8	--	14	16	10	1	21	6.9	1.6	1.0
2.5	1.0	--	16	15	8	0	21	6.8	1.8	.6
2.4	1.0	--	18	16	9	0	21	6.9	.3	.6
1.8	.6	--	19	16	9	0	21	6.8	.4	.2
2.1	.6	--	18	16	9	0	23	7.0	2.7	.1
1.9	.6	--	17	16	9	0	28	7.1	1.0	.1
1.9	.7	--	16	16	10	0	22	7.0	.6	--
1.5	.5	--	18	15	9	0	22	7.1	.8	.1
1.6	.6	--	16	16	10	1	21	7.0	2.8	.1
1.6	.6	--	15	16	10	0	22	7.0	1.1	.1
1.4	.7	--	17	16	9	0	22	6.8	4.0	.1
1.6	.1	--	17	14	8	0	20	--	2.9	.1
1.6	.2	--	19	14	11	3	20	--	.9	.1
1.6	.2	--	20	15	12	3	20	--	.8	.1
1.8	.3	--	18	15	9	1	20	--	.6	.1
1.6	.1	--	19	14	8	0	21	--	1.3	.1
1.9	.1	--	18	15	8	0	21	--	1.7	<.1
1.9	.2	--	18	16	12	3	21	--	.8	--
2.1	.3	--	19	17	9	0	21	--	1.1	.1
1.3	.5	--	--	14	8	0	20	--	.7	.4
1.4	.5	--	--	14	9	0	20	--	.9	.1
1.4	.5	--	--	14	10	1	20	--	1.2	.4
1.4	.5	--	--	14	10	0	20	--	1.9	.1
1.5	.5	--	--	15	10	0	20	--	.8	.1
1.6	.5	--	--	14	7	0	21	--	2.5	.1
1.7	.6	--	--	15	8	0	21	--	.5	.1
1.6	1.5	--	--	16	9	0	22	--	.1	.1

Table 4.--Major chemical

DATE	TIME	DEPTH (M)	DIS- SOLVED SILICA (SiO ₂) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	ALKA- LITY AS CAO ₃ (MG/L)
STATION 2, FALLEN LEAF LAKE AT FALLEN LEAF									
JUNE, 1974									
04...	1410	.5	3.3	2.6	.3	.8	.4	10	2
04...	1430	5.0	3.3	2.9	.3	.9	.4	10	2
04...	1440	10	3.3	2.7	.3	1.0	.5	10	2
04...	1455	20	3.2	2.8	.4	1.0	.4	10	2
04...	1510	30	3.2	3.2	.3	1.0	.5	10	2
04...	1530	50	3.3	3.2	.3	1.0	.4	11	2
04...	1550	68	3.2	3.0	.3	1.0	.4	11	2
26...	1735	.5	2.1	3.0	.3	1.0	.4	11	2
26...	1755	5.0	2.1	2.7	.1	1.0	.4	11	2
26...	1810	10	1.3	3.1	.1	.9	.4	11	2
26...	1830	20	2.0	2.9	.1	1.0	.4	11	2
26...	1845	30	2.5	2.9	.2	.9	.4	11	2
26...	1900	50	3.2	2.9	.1	.9	.4	11	2
26...	1925	68	3.2	3.0	.2	1.0	.4	11	2
JULY									
23...	1435	.5	3.2	2.9	.1	.9	.4	10	2
23...	1440	5.0	3.3	3.1	.2	.9	.4	10	2
23...	1450	10	3.2	3.0	.2	.8	.3	10	2
23...	1500	20	3.3	3.7	.4	.9	.4	10	2
23...	1510	30	3.2	3.2	.3	1.1	.4	11	2
23...	1520	50	3.3	2.8	.4	1.1	.4	10	2
23...	1545	68	3.0	5.3	.3	1.1	.4	11	2
AUG.									
14...	1440	.5	1.1	1.8	.2	1.2	.3	11	2
14...	1445	5.0	1.5	3.9	.4	1.2	.4	11	2
14...	1450	11	2.5	2.7	.3	1.2	.4	11	2
14...	1500	16	.8	3.1	.3	1.3	.5	11	2
14...	1510	22	.7	3.7	.3	1.2	.5	11	2
14...	1525	30	1.4	2.9	.1	1.1	.4	11	2
14...	1530	50	1.8	2.9	.3	1.2	.5	11	2
14...	1545	65	1.7	3.6	.2	1.3	.5	12	10
SEP.									
04...	1420	.5	3.2	2.9	.0	.5	.4	11	2
04...	1430	5.0	3.2	4.6	.0	.4	.4	11	2
04...	1440	15	3.5	3.1	.2	.3	.4	10	2
04...	1445	20	2.8	3.5	.3	.4	.4	11	2
04...	1455	30	3.1	2.7	.6	.6	.4	11	2
04...	1510	50	3.2	3.5	.0	.3	.4	11	2
04...	1530	68	3.1	4.4	.9	.5	.5	12	10
25...	1445	.5	3.1	3.6	.8	.7	.4	10	2
25...	1450	5.0	3.1	2.7	.8	.7	.4	10	2
25...	1500	10	3.1	3.8	.0	.7	.4	10	2
25...	1505	20	2.9	2.4	.5	.0	.4	11	2
25...	1520	30	3.1	2.5	1.0	.7	.4	11	2
25...	1525	50	3.2	2.8	.2	.9	.4	11	2
25...	1545	68	3.3	2.8	.9	.8	.4	11	2
OCT.									
22...	0935	.5	1.0	2.6	.5	1.0	.1	11	2
22...	0940	5.0	2.3	2.5	.5	1.0	.2	11	2
22...	0950	10	1.8	3.1	.2	1.0	.4	11	2
22...	0955	20	1.0	3.6	.2	1.0	.5	11	2
22...	1005	30	1.3	2.7	.2	1.0	.2	11	2
22...	1010	50	.6	2.8	.1	1.0	.3	12	10
22...	1020	68	2.0	2.7	.2	1.0	.3	12	10

constituents--Continued

DIS- SOLVED SULFATE (SO ₄) (MG/L)	DIS- SOLVED CHLORIDE (CL) (MG/L)	DIS- SOLVED FLUORIDE (F) (MG/L)	DIS- SOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	HARD- NESS (CA+MG) (MG/L)	NON- CARBONATE HARD- NESS (MG/L)	SPF- CIFIC CONDUCTANCE (MICRO- MHOS)	PH (UNITS)	DIS- SOLVED ORGANIC CARBON (C) (MG/L)	SUS- PENDED ORGANIC CARBON (C) (MG/L)
STATION 2--Continued										
2.0	.6	.0	16	15	8	0	21	7.3	3.4	.2
1.6	.6	.0	11	15	8	0	21	7.1	3.6	.3
1.9	.7	.0	14	15	8	0	20	7.2	1.8	.2
1.8	.6	.0	14	15	9	0	21	7.2	2.9	.3
1.9	.5	.0	15	16	9	1	21	7.1	3.2	.2
1.9	.6	.0	12	16	9	0	21	7.1	2.3	.3
1.9	.6	.0	17	16	9	0	21	7.1	2.4	.2
1.8	.8	.0	13	15	9	0	20	6.9	2.5	--
1.6	.8	.0	12	15	7	0	20	6.8	2.7	.2
1.6	.7	.0	12	14	8	0	20	6.8	1.7	.1
1.9	.7	.0	12	14	8	0	21	7.0	1.9	.2
2.0	1.0	.0	14	15	8	0	21	7.0	2.0	.2
1.9	.6	.0	12	15	8	0	21	7.0	1.2	.1
2.1	.7	.0	12	16	8	0	21	7.6	1.4	.1
1.9	.1	--	15	14	8	0	20	7.0	2.4	.2
1.9	.0	--	17	15	9	0	19	6.9	1.7	.2
1.3	.7	--	12	15	8	0	20	7.1	2.0	.2
1.9	.1	--	9	16	11	3	20	7.0	4.2	.3
1.3	.1	--	8	15	9	0	21	6.9	2.4	.3
2.0	.3	--	7	15	9	0	21	7.1	2.1	.2
1.5	.6	--	21	19	14	5	21	6.8	1.8	.1
2.0	.8	--	12	13	5	0	19	6.7	2.4	1.4
2.1	.6	--	16	16	11	2	19	6.9	3.0	1.5
2.1	.3	--	17	15	8	0	19	7.1	3.1	--
2.1	.3	--	18	14	9	0	19	6.5	1.3	1.5
2.1	.5	--	17	14	10	1	20	6.7	2.2	1.0
2.1	.7	--	18	14	8	0	20	6.8	1.3	1.0
2.3	.7	--	17	15	8	0	21	6.8	2.5	.6
2.2	.8	--	12	16	10	0	21	6.9	1.8	--
1.8	.5	--	21	15	7	0	21	7.1	.8	.2
2.0	.3	--	19	16	11	2	20	7.1	.6	.2
2.0	.3	--	18	15	9	0	22	7.0	3.7	.1
1.9	.5	--	17	15	10	1	20	7.0	2.0	.1
2.1	.3	--	19	15	9	0	20	7.0	4.1	.2
1.4	.5	--	20	15	9	0	21	7.0	1.1	.1
2.3	.8	--	20	19	15	5	23	7.1	4.2	.1
1.6	.2	--	21	15	12	4	20	--	2.6	.1
1.6	.2	--	19	14	10	2	20	7.0	1.5	.1
1.6	.3	--	17	15	10	1	19	7.1	.7	.1
1.6	.1	--	19	13	8	0	20	7.0	1.6	.1
1.8	.2	--	19	15	10	1	20	7.1	5.7	.1
1.8	.2	--	18	15	8	0	21	6.8	<.1	--
1.8	.2	--	17	16	11	2	21	6.9	<.1	.1
1.4	.9	--	--	13	9	0	20	6.6	1.8	.1
1.4	.8	--	--	14	8	0	20	6.9	1.1	.1
1.3	1.0	--	--	14	9	0	20	6.8	1.5	.1
1.4	1.0	--	--	14	10	1	20	6.7	2.0	.1
1.4	1.0	--	--	13	8	0	21	6.6	.9	.1
1.5	1.1	--	--	13	7	0	21	6.7	.8	.1
1.5	1.1	--	--	15	8	0	21	6.0	1.8	.1

Table 4.--Major chemical

DATE	TIME	DEPTH (M)	DIS- SOLVED SILICA (SiO ₂) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	RICAR- BONATE (HCO ₃) (MG/L)	ALKA- LITY AS CACO ₃ (MG/L)	DIS- SOLVED SULFATE (SO ₄) (MG/L)
STATION 3, GLEN ALPINE CREEK AT BRIDGE AT FALLEN LEAF										
JUNE, 1974										
05...	1300	.0	3.7	1.6	.1	.6	.3	8	7	1.5
10...	0815	.0	.0	1.6	.1	.6	.2	6	5	1.6
17...	1000	.0	.1	1.9	.2	.7	.3	7	6	1.4
25...	1215	.0	.8	1.9	.0	.7	.3	7	6	1.3
JULY										
01...	1000	.0	.5	2.0	.1	.7	.2	6	5	1.0
08...	1230	.0	1.1	2.1	.2	.9	.3	7	6	1.8
15...	1100	.0	.5	1.0	.0	.4	.2	4	3	.5
23...	1500	.0	2.9	2.2	.3	.8	.3	9	7	1.4
30...	0930	.0	.9	2.4	.2	.9	.3	9	7	1.4
AUG.										
06...	1000	.0	.5	2.6	.3	1.1	.4	11	9	1.8
12...	1000	.0	1.4	3.8	.5	1.1	.5	12	10	2.0
19...	1000	.0	3.0	4.5	.9	.6	.4	14	11	1.0
27...	1330	.0	1.9	3.9	.2	.5	.4	14	11	1.3
SEP.										
02...	1300	.0	3.9	4.1	.3	1.1	.4	14	11	2.1
09...	1330	.0	1.2	4.0	1.3	1.1	.5	16	13	2.0
16...	1330	.0	1.6	4.1	.4	.9	.4	14	11	1.3
22...	1330	.0	3.9	4.6	.6	1.2	.5	16	13	2.0
30...	1320	.0	1.8	6.4	.7	1.3	.4	17	14	1.7
OCT.										
07...	1030	.0	.8	4.4	.6	1.3	.3	17	14	1.4
14...	1300	.0	.7	4.9	.5	1.3	.3	16	13	1.5
21...	1330	.0	2.6	4.9	.2	1.5	.7	18	15	1.8
28...	1300	.0	3.0	5.2	.7	1.5	.6	21	17	1.4
STATION 4, CATHEDRAL CREEK AT FALLEN LEAF										
JUNE, 1974										
04...	1030	.0	4.1	.7	.2	.7	.3	5	4	.8
27...	1045	.0	.5	5.5	2.7	.8	.5	6	5	.9
JULY										
24...	1515	.0	4.1	1.0	.2	.8	.3	7	6	.8
AUG.										
15...	1330	.0	1.0	1.3	.4	1.0	.3	7	6	1.0
SEP.										
05...	1200	.0	6.9	1.7	1.1	.6	.4	9	7	1.0
STATION 5, TAYLOR CREEK NEAR TAHOE VALLEY										
JUNE, 1974										
05...	0900	.0	3.3	3.8	.4	1.2	.4	11	9	1.8
27...	1115	.0	2.5	3.7	.2	1.0	.4	11	9	1.8
JULY										
24...	1605	.0	2.3	2.6	.3	1.0	.4	10	8	1.4
AUG.										
15...	1355	.0	2.0	2.6	.2	1.1	.3	11	9	1.9
SEP.										
05...	1230	.0	3.1	3.0	.0	.5	.4	11	9	1.9
26...	1210	.0	3.2	3.9	.8	.7	.4	11	9	1.9
OCT.										
21...	1630	.0	1.5	2.4	.5	1.3	.3	11	9	1.4
STATION 6, TAYLOR CREEK AT STATE HIGHWAY 89 NEAR CAMP RICHARDSON										
AUG., 1974										
15...	1310	.0	4.0	3.1	.4	1.3	.4	13	11	2.1
SEP.										
05...	1150	.0	3.5	3.5	.3	.9	.4	14	11	2.1
26...	1155	.0	3.4	2.7	.7	1.0	.4	11	9	2.1
OCT.										
21...	1615	.0	1.9	3.0	.4	1.3	.3	12	10	1.4

constituents--Continued

DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	DIS- SOLVED SOLIDS (WFS)- DUE AT 100 C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTITU- ENTS) (MG/L)	HARD- NESS (CA+MG) (MG/L)	NON- CAP- PONATE HARD- NESS (MG/L)	SPF- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	DIS- SOL- VED ORGANIC CARBON (C) (MG/L)	SUS- PENDED ORGANIC CARBON (C) (MG/L)
STATION 3--Continued										
.6	.0	9	12	4	0	14	6.9	--	4.6	.2
.3	.0	3	7	4	0	11	6.3	6.0	1.0	.2
.7	.0	4	9	6	0	11	6.5	7.0	1.0	.1
.8	.0	9	9	5	0	13	6.4	10.0	1.6	.2
.0	--	6	8	5	0	13	6.6	13.0	1.1	.2
.2	--	10	11	6	0	16	6.6	12.5	2.0	.2
.1	--	1	5	3	0	8	6.6	13.0	2.2	.2
.2	--	9	13	7	0	16	7.1	18.5	1.8	.2
.8	--	14	11	7	0	16	7.0	17.0	1.4	1.0
.7	--	14	13	8	0	19	6.8	17.0	2.3	1.0
1.0	--	19	16	12	2	22	6.7	16.0	2.0	1.0
.8	--	22	18	15	3	24	6.9	17.0	7.6	.3
.7	--	22	16	11	0	26	6.9	18.0	1.9	.2
.8	--	22	20	11	0	28	6.7	17.5	1.4	.2
1.1	--	24	19	15	2	30	6.8	--	1.4	.3
.8	--	22	17	12	0	26	7.0	14.0	1.1	.4
.7	--	29	22	14	1	31	6.6	14.0	3.9	--
1.5	--	--	22	19	5	33	7.0	12.0	.9	.3
1.9	--	--	19	13	0	32	--	9.0	1.3	.3
2.3	--	--	20	14	1	30	--	9.0	1.0	.3
2.0	--	--	23	13	0	35	--	9.0	1.5	.1
1.4	--	--	24	16	0	35	--	--	1.5	.3
STATION 4--Continued										
.5	.0	8	10	3	0	8	6.9	--	--	.2
.2	.0	4	14	25	20	8	6.4	8.5	1.8	.1
.0	--	3	11	3	0	11	6.8	14.0	2.2	.3
.7	--	15	9	5	0	10	6.6	13.0	2.5	1.0
.3	--	20	17	9	1	13	6.8	13.5	2.9	.1
STATION 5--Continued										
.9	.0	16	17	11	2	20	7.2	--	2.9	--
.3	.0	14	15	10	1	20	6.6	15.5	2.4	.2
.2	--	9	13	8	0	20	6.7	23.0	2.7	.2
.7	--	16	14	7	0	20	6.8	19.5	1.7	1.1
.6	--	20	15	8	0	21	6.7	19.5	3.7	.1
.2	--	20	17	13	4	20	6.7	17.0	4.1	.1
.3	--	--	13	8	0	18	6.9	16.0	3.2	.1
STATION 6--Continued										
1.0		20	19	9	0	24	7.1	20.0	1.3	--
.3		20	18	10	0	23	6.9	18.5	1.9	.4
.3		23	16	10	1	21	6.4	16.0	2.0	.1
.5		--	15	9	0	22	6.7	13.0	2.3	.1

Table 5.--Nitrogen and phosphorus

[See figure 1 for location of stations. Depth applies only to stations in the lake]

		Concentration, in micrograms per litre													
Station number	Date	Depth (m)	Dis-solved nitrite (N)	Nitrite plus nitrate (N)		Ammonia (N)		Kjeldahl nitrogen (N)		Phosphorus (P)		Ortho-phosphate (P)		Hydrolyzable phosphorus (P)	
				Total	Dis-solved	Total	Dis-solved	Total	Dis-solved	Total	Dis-solved	Total	Dis-solved	Total	Dis-solved
1	1974 June 5	0.5	<1	2	<1	20	15	470	190	10	4	1	<1	7	2
		5	1	4	<1	24	10	520	150	9	3	<1	<1	7	4
		10	1	1	1	12	7	450	180	13	3	<1	1	8	1
		20	1	2	1	6	5	510	150	11	3	<1	<1	10	1
		30	<1	1	1	10	7	550	200	11	4	<1	1	6	0
		50	<1	2	1	23	5	630	170	12	4	2	3	7	0
		80	1	1	1	8	5	690	200	11	5	2	<1	12	3
		104	1	2	<1	12	8	540	140	12	4	3	<1	10	2
2	June 4	.5	1	1	1	10	8	510	210	13	4	1	4	10	3
		5	2	2	2	10	8	600	290	4	12	4	3	10	5
		10	<1	3	<1	6	5	530	200	9	5	2	3	7	1
		20	<1	2	<1	8	6	560	210	9	6	4	<1	9	4
		30	<1	4	<1	35	11	530	250	7	6	2	2	8	3
		50	<1	1	<1	10	6	540	230	4	2	4	1	5	6
20		68	1	2	1	11	9	530	90	5	11	3	2	5	4
3	June 5	--	<1	13	1	18	11	520	10	7	12	5	<1	12	9
4	June 5	--	<1	2	<1	76	18	470	290	8	13	3	<1	11	5
5	June 5	--	<1	3	<1	86	13	630	210	10	12	5	1	9	11

Table 5.--*Nitrogen and phosphorus*--Continued

Station number	Date	Depth (m)	Concentration of dissolved constituents, in micrograms per litre						
			Nitrite (N)	Nitrite plus nitrate (N)	Ammonia (N)	Kjeldahl nitrogen (N)	Total phosphorus (P)	Ortho-phosphate (P)	Dissolved hydrolyzable phosphorus (P)
1	June 27, 1974	0.5	1	2	47	60	6	5	<1
		5	1	1	4	60	9	6	<1
		10	1	1	2	10	5	5	<1
		20	1	1	20	30	6	5	<1
		30	1	1	2	0	15	6	1
		50	1	1	<1	40	16	7	4
		80	1	1	<1	0	8	7	<1
		104	2	7	<1	30	19	6	2
2	June 26	.5	2	10	35	130	8	6	<1
		5	1	1	11	150	5	5	<1
		10	1	1	21	40	<1	<1	<1
		20	2	4	<1	0	<1	<1	<1
		30	1	1	26	160	1	1	<1
		50	1	1	20	20	1	1	<1
		68	1	1	20	80	3	2	2
3	June 10	--	1	--	23	40	<1	6	1
	17	--	1	9	6	20	<1	6	1
	25	--	2	6	9	170	2	6	<1
4	June 27	--	1	1	30	90	6	<1	1
5	June 27	--	1	1	12	240	5	3	<1

Table 5.--*Nitrogen and phosphorus*--Continued

Station number	Date	Depth (m)	Concentration of dissolved constituents, in micrograms per litre						
			Nitrite (N)	Nitrite plus nitrate (N)	Ammonia (N)	Kjeldahl nitrogen (N)	Total phosphorus (P)	Ortho-phosphate (P)	Dissolved hydrolyzable phosphorus (P)
1	July 25, 1974	0.5	<1	9	35	10	<1	<1	<1
		5	<1	3	2	50	11	3	<1
		10	<1	2	9	0	1	1	<1
		20	1	3	20	20	<1	<1	<1
		30	1	<1	6	0	<1	<1	<1
		50	1	8	3	430	3	3	<1
		80	1	6	11	0	<1	<1	<1
		104	2	16	16	0	<1	<1	<1
2	July 24	.5	1	2	<1	0	<1	<1	<1
		5	1	7	7	0	<1	<1	<1
		10	3	10	6	0	<1	<1	<1
		20	<1	4	7	10	<1	<1	<1
		30	1	5	2	80	<1	<1	<1
		50	1	7	11	20	<1	<1	<1
		68	<1	15	30	50	2	2	<1
3	July 1	--	<1	11	7	0	<1	<1	<1
	8	--	3	14	43	140	<1	<1	<1
	15	--	<1	8	4	0	1	<1	<1
	23	--	1	14	2	0	<1	<1	<1
4	July 25	--	1	8	11	20	<1	<1	<1
5	July 25	--	1	5	7	0	<1	<1	<1

Table 5.--*Nitrogen and phosphorus*--Continued

Station number	Date	Depth (m)	Concentration of dissolved constituents, in micrograms per litre						
			Nitrite (N)	Nitrite plus nitrate (N)	Ammonia (N)	Kjeldahl nitrogen (N)	Total phosphorus (P)	Ortho- phosphate (P)	Dissolved hydrolyzable phosphorus (P)
1	Aug. 15, 1974	0.5	19	28	61	260	9	8	<1
		5	4	8	<1	230	5	5	<1
		13	10	10	4.0	220	6	6	<1
		19	<1	<1	60	160	9	9	<1
		30	<1	<1	<1	170	6	6	<1
		50	<1	<1	<1	120	5	<1	<1
		80	<1	<1	6.0	120	4	<1	<1
		108	1	1	<1	490	4	<1	<1
2	Aug. 14	.5	<1	<1	8.0	420	2	<1	<1
		5	<1	<1	2.0	190	4	<1	<1
		11.5	<1	<1	2.0	310	5	<1	<1
		16.5	<1	<1	<1	190	6	<1	<1
		22	<1	<1	1.0	320	10	<1	<1
		30	<1	<1	22	120	8	<1	<1
		50	<1	<1	21	210	9	<1	<1
		65	<1	<1	44	240	8	2	<1
3	July 30	--	2	6	2.0	180	4	<1	<1
	Aug. 6	--	10	10	48	280	6	<1	<1
	12	--	6	6	3.0	210	4	<1	<1
4	Aug. 15	--	<1	<1	5	200	7	3	<1
5	Aug. 15	--	<1	<1	17	180	7	4	<1
6	Aug. 15	--	2	3	<1	310	7	7	<1

Table 5.--Nitrogen and phosphorus--Continued

Station number	Date	Depth (m)	Concentration of dissolved constituents, in micrograms per litre						
			Nitrite (N)	Nitrite plus nitrate (N)	Ammonia (N)	Kjeldahl nitrogen (N)	Total phosphorus (P)	Ortho-phosphate (P)	Dissolved hydrolyzable phosphorus (P)
1	Sept. 5, 1974	0.5	2	14	<1	180	5	5	<1
		5	1	13	<1	430	5	5	<1
		10	1	10	2	230	5	5	<1
		20	3	9	3	190	6	6	<1
		30	10	13	6	280	7	7	<1
		50	5	17	9	170	12	10	<1
		80	1	7	12	280	11	9	<1
		108	4	24	7	100	12	11	<1
2	Sept. 4	.5	2	10	11	40	11	9	<1
		5	3	9	12	80	14	9	<1
		15	3	29	17	170	25	10	<1
		20	0	10	1	80	12	8	<1
		30	1	11	15	260	10	10	<1
		50	0	11	13	60	10	7	<1
		68	1	17	21	230	9	8	<1
3	Aug. 19	--	6	31	10	170	14	11	<1
	27	--	2	25	11	130	7	6	<1
	Sept. 2	--	6	46	12	60	8	8	<1
4	Sept. 5	--	3	13	15	110	12	9	<1
5	Sept. 5	--	4	15	9	100	7	6	<1
6	Sept. 5	--	5	14	9	170	9	9	<1

Table 5.--Nitrogen and phosphorus--Continued

Station number	Date	Depth (m)	Concentration, in micrograms per litre												
			Dis- solved nitrite (N)	Nitrite plus nitrate (N)		Ammonia (N)		Kjeldahl nitrogen (N)		Phosphorus (P)		Ortho- phosphate (P)		Hydrolyzable phosphorus (P)	
				Total	Dis- solved	Total	Dis- solved	Total	Dis- solved	Total	Dis- solved	Total	Dis- solved	Total	Dis- solved
1	1974 Sept. 26	0.5	<1	<1	<1	4	3	70	60	11	5	6	2	<1	<1
		5	<1	<1	<1	2	2	110	110	11	8	5	1	1	<1
		10	<1	<1	<1	4	2	90	10	9	8	6	1	2	<1
		20	<1	<1	<1	6	<1	90	10	10	6	4	1	1	<1
		30	<1	<1	<1	1	<1	60	70	8	6	3	1	1	<1
		50	<1	<1	<1	<1	<1	40	10	9	2	2	1	7	<1
		80	<1	5.0	4.0	<1	<1	10	10	9	4	1	<1	<1	<1
		104	<1	17.0	15.0	<1	<1	10	10	9	1	1	<1	<1	<1
2	Sept. 25	.5	<1	<1	<1	7	5	70	50	9	8	7	3	3	<1
		5	<1	1.0	1.0	4	<1	140	150	7	4	6	<1	<1	<1
		10	<1	1.0	1.0	5	<1	20	10	7	3	3	3	2	<1
		20	1.0	1.0	1.0	5	1	10	10	9	6	7	5	<1	<1
		30	<1	<1	<1	4	3	80	20	11	2	4	2	4	<1
		50	<1	<1	<1	7	<1	20	10	8	2	7	4	1	<1
		68	1.0	4.0	4.0	9	<1	10	10	5	1	2	2	1	<1
3	Sept. 9	--	2.0	--	--	--	<1	---	50	--	8	--	<1	--	<1
		13	2.0	--	--	--	<1	---	30	--	9	--	<1	--	<1
		23	2.0	32	31	1	<1	20	10	7	7	5	4	<1	<1
5	Sept. 26	--	1.0	1	<1	3	<1	40	20	6	2	2	2	<1	<1
6	Sept. 26	--	<1	2.0	2.0	7	<1	50	30	4	4	3	3	1	<1

Table 5.--*Nitrogen and phosphorus*--Continued

Station number	Date	Depth (m)	Concentration of dissolved constituents, in micrograms per litre						
			Nitrite (N)	Nitrite plus nitrate (N)	Ammonia (N)	Kjeldahl nitrogen (N)	Total phosphorus (P)	Ortho-phosphate (P)	Dissolved hydrolyzable phosphorus (P)
1	Oct. 23, 1974	0.5	2	2	2	460	8	4	<1
		5	3	7	7	180	7	3	<1
		10	1	1	10	210	17	2	16
		20	1	1	<1	280	7	4	<1
		30	1	1	4	280	7	4	<1
		50	1	1	7	70	8	7	<1
		80	2	11	9	280	8	6	7
		104	5	19	5	170	9	6	<1
2	Oct. 22	.5	1	4	2	230	7	1	<1
		5	2	2	<1	170	8	2	<1
		10	2	2	<1	160	7	2	<1
		20	2	3	4	140	6	3	<1
		30	1	1	<1	150	6	2	<1
		50	1	3	6	110	6	3	<1
		68	2	5	6	210	7	4	<1
3	Sept. 30	--	2	36	<1	230	37	26	16
	Oct. 7	--	3	14	4	220	24	9	23
	14	--	3	17	6	160	29	23	5
	21	--	2	17	6	180	9	7	<1
5	Oct. 23	--	1	1	1	60	10	5	<1
6	Oct. 23	--	4	6	2	290	8	4	<1

Table 6.--Trace elements

STATION 1 - FALLEN LEAF LAKE AT FALLEN LEAF

DATE	TIME	DEPTH (M)	TOTAL	DIS-	TOTAL	DIS-	TOTAL	DIS-	TOTAL	DIS-	TOTAL
			ALUM-	SOLVED	IRON	SOLVED	MANG-SE	SOLVED	ARSENIC	SOLVED	PCBPCN
			(AL)	(AL)	(FE)	(FE)	(MN)	(MN)	(AS)	(AS)	(R)
			(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)
JUNE, 1974											
04...	0900	.5	<100	0	70	50	0	10	0	0	10
04...	0945	10	<100	10	40	20	0	10	0	0	20
04...	1020	30	<100	0	50	30	0	0	0	0	9
04...	1110	80	<100	0	50	30	0	0	0	1	10
27...	1255	.5	--	--	--	30	--	--	--	1	--
27...	1320	10	--	20	--	20	--	0	--	1	--
27...	1410	30	--	10	--	20	--	10	--	1	--
27...	1500	80	--	0	--	0	--	20	--	1	--
SFP.											
05...	0835	.5	--	10	60	40	0	0	0	--	20
05...	0845	10	--	0	50	20	0	0	0	--	10
05...	0905	30	--	0	30	20	0	0	0	--	10
05...	0940	80	--	10	60	20	0	0	0	--	10
OCT.											
21...	1431	.5	--	10	--	10	--	--	--	--	--
21...	1441	5.0	--	10	--	20	--	--	--	--	--
21...	1451	10	--	10	--	10	--	--	--	--	--
21...	1501	20	--	0	--	10	--	--	--	--	--
21...	1511	30	--	10	--	20	--	--	--	--	--
21...	1516	50	--	10	--	20	--	--	--	--	--
21...	1526	80	--	20	--	20	--	--	--	--	--
21...	1531	104	--	20	--	20	--	--	--	--	--

DATE	DIS-	TOTAL	DIS-	TOTAL	DIS-	TOTAL	DIS-	TOTAL	DIS-	TOTAL
	SOLVED	CAD-	SOLVED	CHRO-	SOLVED	CHRO-	SOLVED	COPPER	SOLVED	LEAD
	BORON	MIUM	CAD-	MIUM	CHRO-	MIUM	CORALT	CORALT	COPPER	LEAD
(R)	(CD)	(CD)	(CD)	(CR)	(CR)	(CO)	(CO)	(CU)	(CU)	(PR)
(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)
JUNE, 1974										
04...	8	0	0	0	0	0	0	12	9	12
04...	10	0	0	0	0	0	0	12	3	8
04...	5	0	0	0	0	1	0	5	9	10
04...	10	0	0	0	0	0	0	6	2	1
27...	3	--	--	--	--	--	--	--	--	--
27...	10	--	0	--	0	--	0	--	0	--
27...	7	--	0	--	0	--	0	--	0	--
27...	4	--	0	--	0	--	0	--	0	--
SFP.										
05...	10	--	--	--	--	--	--	<10	0	<100
05...	10	--	--	--	--	--	--	<10	0	<100
05...	10	--	--	--	--	--	--	<10	0	<100
05...	20	--	--	--	--	--	--	<10	0	<100
OCT.										
21...	--	--	1	--	--	--	--	--	1	--
21...	--	--	1	--	--	--	--	--	1	--
21...	--	--	0	--	--	--	--	--	1	--
21...	--	--	0	--	--	--	--	--	1	--
21...	--	--	1	--	--	--	--	--	1	--
21...	--	--	0	--	--	--	--	--	0	--
21...	--	--	0	--	--	--	--	--	1	--
21...	--	--	0	--	--	--	--	--	1	--

DATE	DIS-	TOTAL	DIS-	TOTAL	DIS-	TOTAL	DIS-	DIS-	TOTAL	DIS-
	SOLVED LEAD (PR) (UG/L)	MOLYB- DENIUM (MO) (UG/L)	SOLVED MOLYB- DENIUM (MO) (UG/L)	NICKEL (NI) (UG/L)	SOLVED NICKEL (NI) (UG/L)	SELE- NIUM (SE) (UG/L)	SOLVED SELE- NIUM (SE) (UG/L)	SOLVED VANAD- IUM (V) (UG/L)	ZINC (ZN) (UG/L)	SOLVED ZINC (ZN) (UG/L)
JUNE, 1974										
04...	4	0	0	11	3	2	5	.0	40	10
04...	4	0	1	16	6	1	2	.0	30	0
04...	2	0	1	12	6	2	2	.0	20	0
04...	0	0	1	12	0	2	3	.5	10	0
27...	--	--	--	--	--	--	0	1.4	--	--
27...	4	--	0	--	0	--	0	1.2	--	0
27...	2	--	0	--	0	--	0	.1	--	0
27...	2	--	0	--	0	--	1	.0	--	0
SFP.										
05...	1	--	0	<50	0	0	0	--	20	0
05...	0	--	0	<50	1	0	0	--	10	0
05...	1	--	0	<50	13	0	0	--	10	0
05...	2	--	0	<50	1	0	0	--	0	0
OCT.										
21...	4	--	--	--	--	--	--	--	--	20
21...	7	--	--	--	--	--	--	--	--	40
21...	3	--	--	--	--	--	--	--	--	20
21...	3	--	--	--	--	--	--	--	--	30
21...	4	--	--	--	--	--	--	--	--	30
21...	3	--	--	--	--	--	--	--	--	10
21...	1	--	--	--	--	--	--	--	--	10
21...	1	--	--	--	--	--	--	--	--	10

Table 6.--Trace elements--Continued

STATION 2 - FALLEN LEAF LAKE AT FALLEN LEAF													
DATE	TIME	DEPTH- (M)	TOTAL ALUM- INUM (AL) (UG/L)	DIS- SOLVED ALUM- INUM (AL) (UG/L)	TOTAL IRON (FF) (UG/L)	DIS- SOLVED IRON (FF) (UG/L)	TOTAL MANG- GANESE (MA) (UG/L)	DIS- SOLVED MANG- GANESE (MN) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	DIS- SOLVED ARSENIC (AS) (UG/L)	TOTAL RODUM (R) (UG/L)		
JUNE, 1974													
04....	1410	.5	<100	0	50	20	0	10	0	0	7		
04....	1440	10	<100	10	30	20	0	0	0	0	10		
04....	1510	30	<100	10	20	20	0	0	0	2	10		
04....	1550	68	<100	20	30	20	10	0	0	0	5		
26....	1735	.5	--	20	--	20	--	20	--	1	--		
26....	1810	10	--	10	--	10	--	20	--	2	--		
26....	1845	30	--	10	--	80	--	20	--	1	--		
26....	1925	68	--	10	--	40	--	20	--	2	--		
SEP.													
04....	1420	.5	--	30	40	20	0	0	0	--	20		
04....	1440	15	--	20	20	20	140	0	0	--	10		
04....	1455	30	--	0	20	20	0	0	0	--	20		
04....	1530	68	--	0	20	20	0	0	0	--	20		
OCT.													
22....	0935	.5	--	10	--	60	--	--	--	--	--		
22....	0940	5.0	--	20	--	10	--	--	--	--	--		
22....	0950	10	--	20	--	10	--	--	--	--	--		
22....	0955	20	--	10	--	10	--	--	--	--	--		
22....	1005	30	--	20	--	10	--	--	--	--	--		
22....	1010	50	--	10	--	10	--	--	--	--	--		
22....	1020	68	--	30	--	0	--	--	--	--	--		
DATE			DIS- SOLVED RODUM (R) (UG/L)	TOTAL CAD- MIUM (CD) (UG/L)	DIS- SOLVED CAD- MIUM (CD) (UG/L)	TOTAL CHRO- MIUM (CR) (UG/L)	DIS- SOLVED CHRO- MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)	DIS- SOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	DIS- SOLVED COPPER (CU) (UG/L)	TOTAL LEAD (PP) (UG/L)	
JUNE, 1974													
04....	10	0	0	0	0	0	0	0	6	4	53		
04....	6	0	0	0	0	0	0	0	5	2	2		
04....	9	0	0	0	0	0	0	1	8	2	4		
04....	10	0	0	0	0	0	0	0	6	2	3		
26....	8	--	1	--	0	--	0	--	0	1	--		
26....	10	--	1	--	0	--	0	--	0	0	--		
26....	5	--	0	--	0	--	0	--	0	0	--		
26....	3	--	0	--	0	--	0	--	0	0	--		
SEP.													
04....	10	--	--	--	--	--	--	--	<10	1	<100		
04....	10	--	--	--	--	--	--	--	<10	1	<100		
04....	10	--	--	--	--	--	--	--	<10	0	<100		
04....	10	--	--	--	--	--	--	--	<10	0	<100		
OCT.													
22....	--	--	1	--	--	--	--	--	--	2	--		
22....	--	--	4	--	--	--	--	--	--	2	--		
22....	--	--	1	--	--	--	--	--	--	2	--		
22....	--	--	0	--	--	--	--	--	--	2	--		
22....	--	--	0	--	--	--	--	--	--	1	--		
22....	--	--	0	--	--	--	--	--	--	4	--		
22....	--	--	0	--	--	--	--	--	--	1	--		
DATE			DIS- SOLVED LEAD (PP) (UG/L)	TOTAL MOLYB- DENIUM (MO) (UG/L)	DIS- SOLVED MOLYB- DENIUM (MO) (UG/L)	TOTAL NICKEL (NI) (UG/L)	DIS- SOLVED NICKEL (NI) (UG/L)	TOTAL SELE- NIUM (SE) (UG/L)	DIS- SOLVED SELE- NIUM (SE) (UG/L)	TOTAL VANA- DIUM (V) (UG/L)	DIS- SOLVED VANA- DIUM (V) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)
JUNE, 1974													
04....	3	0	0	9	2	3	3	.0	310	0	0		
04....	1	0	1	10	1	2	3	.0	10	0	0		
04....	0	0	2	11	0	3	2	.0	0	0	0		
04....	3	0	1	10	2	3	3	.0	0	0	0		
26....	3	--	0	--	0	--	1	.5	--	10	--		
26....	4	--	0	--	0	--	0	.0	--	0	--		
26....	3	--	0	--	0	--	0	1.0	--	0	--		
26....	4	--	0	--	0	--	0	.0	--	0	--		
SEP.													
04....	2	--	0	<50	0	0	0	--	0	0	0		
04....	2	--	0	<50	0	0	0	--	0	0	0		
04....	1	--	0	<50	0	0	0	--	0	0	0		
04....	1	--	0	<50	0	0	0	--	0	0	0		
OCT.													
22....	3	--	--	--	--	--	--	--	--	--	0		
22....	5	--	--	--	--	--	--	--	--	--	20		
22....	3	--	--	--	--	--	--	--	--	--	20		
22....	3	--	--	--	--	--	--	--	--	--	10		
22....	3	--	--	--	--	--	--	--	--	--	10		
22....	3	--	--	--	--	--	--	--	--	--	10		
22....	3	--	--	--	--	--	--	--	--	--	10		

Table 6.--Trace elements--Continued

STATION 3 - GLEN ALPINE CREEK AT FALLEN LEAF

DATE	TIME	DEPTH (M)	TOTAL ALUM- INUM (AL) (UG/L)	DIS- SOLVED ALUM- INUM (AL) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS- SOLVED IRON (FE) (UG/L)	TOTAL MANG- NESE (MN) (UG/L)	DIS- SOLVED MANG- NESE (MN) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	DIS- SOLVED ARSENIC (AS) (UG/L)	TOTAL CHROM (CR) (UG/L)
JUNF. 1974											
05...	1300	.0	<100	0	50	30	0	0	0	0	9
SEP.											
02...	1300	.0	--	20	120	20	0	0	0	--	20
30...	1320	.0	--	10	--	30	--	--	--	--	--
OCT.											
07...	1030	.0	--	10	--	0	--	--	--	--	--
14...	1300	.0	--	10	--	10	--	--	--	--	--
21...	1330	.0	--	20	--	90	--	--	--	--	--
28...	1300	.0	--	10	--	20	--	--	--	--	--

DATE	DIS- SOLVED ROBON (R) (UG/L)	TOTAL CAD- MIUM (CD) (UG/L)	DIS- SOLVED CAD- MIUM (CD) (UG/L)	TOTAL CHRO- MIUM (CR) (UG/L)	DIS- SOLVED CHRO- MIUM (CR) (UG/L)	TOTAL CORALT (CC) (UG/L)	DIS- SOLVED CORALT (CC) (UG/L)	TOTAL COPPER (CU) (UG/L)	DIS- SOLVED COPPER (CU) (UG/L)	TOTAL LEAD (PB) (UG/L)
JUNE, 1974										
05...	5	0	0	0	0	0	0	6	2	2
SEP.										
02...	20	--	--	--	--	--	--	<10	1	<100
30...	--	--	0	--	--	--	--	--	1	--
OCT.										
07...	--	--	0	--	--	--	--	--	1	--
14...	--	--	0	--	--	--	--	--	1	--
21...	--	--	0	--	--	--	--	--	2	--
28...	--	--	0	--	--	--	--	--	1	--

DATE	DIS- SOLVED LEAD (PB) (UG/L)	TOTAL MOLYB- DENUM (MC) (UG/L)	DIS- SOLVED MOLYB- DENUM (MC) (UG/L)	TOTAL NICKEL (NI) (UG/L)	DIS- SOLVED NICKEL (NI) (UG/L)	TOTAL SFL- NIUM (SF) (UG/L)	DIS- SOLVED SFL- NIUM (SE) (UG/L)	DIS- SOLVED VANA- DIUM (V) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)
JUNE, 1974										
05...	2	0	1	7	0	2	2	.0	10	10
SEP.										
02...	2	--	0	<50	1	0	0	--	30	10
30...	3	--	--	--	--	--	--	--	--	0
OCT.										
07...	3	--	--	--	--	--	--	--	--	10
14...	3	--	--	--	--	--	--	--	--	10
21...	6	--	--	--	--	--	--	--	--	10
28...	0	--	--	--	--	--	--	--	--	<10

STATION 4 - CATHEDRAL CREEK AT FALLEN LEAF

DATE	TIME	DEPTH (M)	TOTAL ALUM- INUM (AL) (UG/L)	DIS- SOLVED ALUM- INUM (AL) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS- SOLVED IRON (FE) (UG/L)	TOTAL MANG- NESE (MN) (UG/L)	DIS- SOLVED MANG- NESE (MN) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	DIS- SOLVED ARSENIC (AS) (UG/L)	TOTAL CHROM (CR) (UG/L)
JUNE, 1974											
04...	--	--	<100	40	40	20	0	10	0	0	8
SEP.											
05...	1200	--	--	50	50	20	0	0	0	--	30

DATE	DIS- SOLVED LEAD (PB) (UG/L)	TOTAL MOLYB- DENUM (MC) (UG/L)	DIS- SOLVED MOLYB- DENUM (MC) (UG/L)	TOTAL NICKEL (NI) (UG/L)	DIS- SOLVED NICKEL (NI) (UG/L)	TOTAL SFL- NIUM (SF) (UG/L)	DIS- SOLVED SFL- NIUM (SE) (UG/L)	DIS- SOLVED VANA- DIUM (V) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)
JUNE, 1974										
04...	3	0	0	9	1	3	1	.0	0	0
SEP.										
05...	12	--	0	<50	0	0	0	--	0	0

DATE	DIS- SOLVED ROBON (R) (UG/L)	TOTAL CAD- MIUM (CD) (UG/L)	DIS- SOLVED CAD- MIUM (CD) (UG/L)	TOTAL CHRO- MIUM (CR) (UG/L)	DIS- SOLVED CHRO- MIUM (CR) (UG/L)	TOTAL CORALT (CC) (UG/L)	DIS- SOLVED CORALT (CC) (UG/L)	TOTAL COPPER (CU) (UG/L)	DIS- SOLVED COPPER (CU) (UG/L)	TOTAL LEAD (PB) (UG/L)
JUNE, 1974										
04...	6	0	0	0	0	0	0	7	5	5
SEP.										
05...	10	--	--	--	29	--	--	<10	4	<100

Table 6.--Trace elements--Continued

STATION 5 - TAYLOR CREEK NEAR TAHOE VALLEY

DATE	TIME	DEPTH (M)	TOTAL ALUM- INUM (AL) (UG/L)	DIS- SOLVED ALUM- INUM (AL) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS- SOLVED IRON (FE) (UG/L)	TOTAL MANG- GANESE (MN) (UG/L)	DIS- SOLVED MANG- GANESE (MN) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	DIS- SOLVED ARSENIC (AS) (UG/L)	TOTAL PCPOM (P) (UG/L)
JUNE, 1974											
05...	0900	.0	<100	50	20	20	0	0	0	0	5
OCT.											
21...	1630	.0	--	10	--	20	--	--	--	--	--

DATE	TIME	DEPTH (M)	DIS- SOLVED BORON (B) (UG/L)	TOTAL CAD- MIUM (CD) (UG/L)	DIS- SOLVED CAD- MIUM (CD) (UG/L)	TOTAL CHRO- MIUM (CR) (UG/L)	DIS- SOLVED CHRO- MIUM (CR) (UG/L)	TOTAL CORALT (CC) (UG/L)	DIS- SOLVED CORALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	DIS- SOLVED COPPER (CU) (UG/L)	TOTAL LEAD (PB) (UG/L)
JUNE, 1974												
05...		4		0	0	0	0	0	1	9	4	4
OCT.												
21...		--	--	--	1	--	--	--	--	--	3	--

DATE	TIME	DEPTH (M)	DIS- SOLVED LEAD (PB) (UG/L)	TOTAL MOLYB- DENIUM (MO) (UG/L)	DIS- SOLVED MOLYB- DENIUM (MO) (UG/L)	TOTAL NICKEL (NI) (UG/L)	DIS- SOLVED NICKEL (NI) (UG/L)	TOTAL SELF- NIUM (SE) (UG/L)	DIS- SOLVED SELF- NIUM (SE) (UG/L)	DIS- SOLVED VANA- NIUM (V) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)
JUNE, 1974												
05...		2		0	2	12	2	2	1	.0	20	0
OCT.												
21...		2	--	--	--	--	--	--	--	--	--	10

STATION 6 - TAYLOR CREEK AT STATE HIGHWAY 89 NEAR CAMP RICHARDSON

DATE	TIME	DEPTH (M)	TOTAL ALUM- INUM (AL) (UG/L)	DIS- SOLVED ALUM- INUM (AL) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS- SOLVED IRON (FE) (UG/L)	TOTAL MANG- GANESE (MN) (UG/L)	DIS- SOLVED MANG- GANESE (MN) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	DIS- SOLVED ARSENIC (AS) (UG/L)	TOTAL PCPOM (P) (UG/L)
SEP., 1974											
05...	1150	.0	--	20	40	20	0	0	0	--	20
OCT.											
21...	1615	.0	--	0	--	10	--	--	--	--	--

DATE	TIME	DEPTH (M)	DIS- SOLVED BORON (B) (UG/L)	TOTAL CAD- MIUM (CD) (UG/L)	DIS- SOLVED CAD- MIUM (CD) (UG/L)	TOTAL CHRO- MIUM (CR) (UG/L)	DIS- SOLVED CHRO- MIUM (CR) (UG/L)	TOTAL CORALT (CC) (UG/L)	DIS- SOLVED CORALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	DIS- SOLVED COPPER (CU) (UG/L)	TOTAL LEAD (PB) (UG/L)
SEP., 1974												
05...		10	--	--	--	--	--	--	--	<10	0	<100
OCT.												
21...		--	--	--	0	--	--	--	--	--	1	--

DATE	TIME	DEPTH (M)	DIS- SOLVED LEAD (PB) (UG/L)	TOTAL MOLYB- DENIUM (MO) (UG/L)	DIS- SOLVED MOLYB- DENIUM (MO) (UG/L)	TOTAL NICKEL (NI) (UG/L)	DIS- SOLVED NICKEL (NI) (UG/L)	TOTAL SELF- NIUM (SE) (UG/L)	DIS- SOLVED SELF- NIUM (SE) (UG/L)	DIS- SOLVED VANA- NIUM (V) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)
SEP., 1974												
05...		1	--	0	<50	1	0	0	0	--	0	0
OCT.												
21...		1	--	--	--	--	--	--	--	--	--	0

Table 7.--*Phytoplankton counts*
[See figure 1 for location of stations.]

Organisms	Depth, in metres														
	0.5	5.0	10.0	20.0	30.0	50.0	80.0	104.0	0.5	5.0	10.0	20.0	30.0	50.0	68.0
	Concentration, in cells per millilitre														
	Station 1, June 4, 1974							Station 2, June 4, 1974							
CHRYSTOPHYTA															
Colonies, 4-8 cells	4	--	14	38	21	5	--	--	3	10	19	36	19	--	--
Chrysophyceae															
<i>Chrysochromulina parva</i>	96	292	99	101	96	40	21	6	166	135	79	154	117	73	41
<i>Chrysoikos</i> sp.						18								13	18
<i>Dinobryon bavaricum</i>	7	--	26	--	--	--	--	--	4	8	12	--	--	--	--
Bacillariophyceae (diatoms)															
<i>Cyclotella bodanica</i>	4	--	7	9	13	8	4	9	3	9	1	3	16	21	14
<i>Melosira italica</i>	--	--	--	--	7	4	4	14	--	--	--	--	8	17	20
<i>Nitzschia filiformis</i>	--	--	--	--	--	--	6	8	--	--	--	--	--	--	11
<i>Rhizosolenia</i> sp.	--	--	--	17	17	43	--	3	--	3	--	59	16	52	26
<i>Synedra radians</i>	--	6	2	4	--	8	4	3	--	--	1	5	7	12	7
<i>S. tenera</i>	2	11	--	6	12	13	2	1	4	3	5	32	11	20	6
<i>S. uvella</i>	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--
PYRROPHYTA															
Dinophyceae (dinoflagellates)															
<i>Glenodinium</i> sp.	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Peridinium</i> sp.	--	--	3	7	--	--	--	--	--	--	--	--	4	--	5
CILIATES (Actinopoda and Rhizopoda)	--	--	4	--	--	--	--	1	--	2	1	--	5	--	2
TOTALS	117	309	155	182	167	139	41	55	180	170	118	289	203	208	150
	Station 1, June 26							Station 2, June 27							
CHRYSTOPHYTA															
Chrysophyceae															
<i>Chrysochromulina parva</i>	287	174	73	69	56	41	15	8	97	158	114	137	143	137	70
<i>Chrysoikos</i> sp.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	13
<i>Dinobryon bavaricum</i>	14	16	6	18	--	--	--	--	14	20	38	14	27	--	--
Bacillariophyceae (diatoms)															
<i>Cyclotella bodanica</i>	5	3	4	6	10	8	2	--	3	3	--	6	--	10	13
<i>Melosira italica</i>	--	--	--	--	10	3	2	2	--	--	--	--	--	--	11
<i>Nitzschia filiformis</i>	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--
<i>Rhizosolenia</i> sp.	--	--	--	9	--	--	--	9	--	--	--	--	162	109	30
<i>Synedra radians</i>	--	--	--	--	6	10	2	--	5	--	--	--	10	--	13
<i>S. tenera</i>	--	6	6	20	26	12	3	2	8	3	11	25	41	36	26
PYRROPHYTA															
Dinophyceae (dinoflagellates)															
<i>Peridinium</i> sp.	--	--	--	--	--	--	--	--	5	--	--	12	--	14	--
ZOOFLAGELLATES	--	--	--	--	--	--	--	8	--	--	--	--	--	--	--
TOTALS	306	199	89	122	108	74	25	29	132	184	163	194	383	306	176

Table 7.--Phytoplankton counts--Continued

Organisms	Depth, in metres														
	0.5	5.0	10.0	20.0	30.0	50.0	80.0	104.0	0.5	5.0	10.0	20.0	30.0	50.0	68.0
Concentration, in cells per millilitre															
	Station 1, July 24, 1974								Station 2, July 24, 1974						
CHLOROPHYTA (green algae)															
Chlorophyceae															
<i>Cosmarium</i> sp.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1
<i>Elakotothrix gelatinosa</i>	--	--	--	--	--	--	--	--	30	11	48	11	--	--	--
CHRYSTOPHYTA															
Colonies, 4-8 cells	--	--	--	17	24	2	3	3	--	3	5	8	25	1	5
Chrysophyceae															
<i>Chrysochromulina parva</i>	--	--	3	17	15	--	--	8	27	70	--	29	--	--	--
<i>Diceras (Brittrichia) sp.</i>	--	3	--	--	--	--	--	--	--	--	1	--	--	--	--
<i>D. chodati</i>	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--
<i>Dinobryon (cysts)</i>	--	--	33	58	--	--	--	--	14	--	--	35	--	--	--
<i>D. bavaricum</i>	--	--	--	19	3	--	--	--	--	--	6	12	--	--	--
Bacillariophyceae (diatoms)															
<i>Cyclotella bodanica</i>	--	--	5	11	7	10	7	--	--	1	2	4	9	10	3
<i>Fragilaria</i> sp.	--	--	--	--	--	--	2	--	--	--	--	--	--	--	--
<i>Melosira italica</i>	--	--	--	--	--	6	12	7	--	--	--	--	2	1	4
<i>Rhizosolenia</i> sp.	--	--	--	10	91	2	1	6	--	--	10	14	15	--	--
<i>R. eriensis</i>	--	--	1	--	--	--	--	--	2	2	--	--	--	--	2
<i>Synedra radians</i>	--	--	2	--	3	5	2	3	--	--	2	3	6	4	3
<i>S. tenera</i>	--	--	--	24	46	9	2	2	--	2	4	14	40	3	6
Flagellates (uniflagellates)	--	--	--	15	15	--	--	--	1	4	--	18	--	--	--
PYRROPHYTA															
Dinophyceae (dinoflagellates)															
<i>Gymnodinium</i> sp.	--	--	2	31	19	3	1	9	38	49	--	28	--	1	2
<i>Peridinium</i> sp.	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cryptophyceae															
Flagellates--misc.	--	--	4	6	--	3	2	3	--	10	193	4	25	3	15
Cryptomonadaceae (Cryptomonad type)	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--
CILIATES (Actinopoda and Rhizopoda)	--	--	--	--	--	--	--	--	--	2	5	--	4	1	--
TOTALS	3	3	51	208	223	40	32	42	112	154	276	180	126	24	41

Table 7.--Phytoplankton counts--Continued

Organisms	Depth, in metres														
	0.5	5.0	10.0	20.0	30.0	50.0	80.0	108.0	0.5	5.0	10.0	20.0	30.0	50.0	68.0
	Concentration, in cells per millilitre														
	Station 1, Aug. 5, 1974							Station 2, Aug. 4, 1974							
CHLOROPHYTA (green algae)															
Chlorophyceae															
<i>Elakotothrix gelatinosa</i>	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Oocystis</i>	--	--	--	5	--	--	--	--	--	--	--	--	--	--	--
CHRYSTOPHYTA															
Colonies, 4-8 cells	4	5	4	--	7	8	--	--	5	--	12	--	--	--	--
Chrysophyceae															
<i>Chrysochromulina parva</i>	2	5	15	4	--	3	--	--	33	19	45	42	4	14	2
<i>Dinobryon (cysts)</i>	--	1	--	22	8	--	1	--	--	--	7	14	8	--	2
<i>D. bavaricum</i>	--	--	--	--	--	--	--	--	8	4	9	9	--	--	--
Bacillariophyceae (diatoms)															
<i>Cyclotella bodanica</i>	--	--	--	5	12	--	3	1	--	--	8	3	12	5	4
<i>Melosira italica</i>	--	--	--	--	3	--	3	4	--	--	--	6	2	--	4
<i>Rhizosolenia</i> sp.	--	--	--	--	--	--	--	--	--	--	--	--	--	5	--
<i>Synedra radians</i>	--	--	--	5	5	--	4	2	--	--	--	4	4	5	5
<i>S. tenera</i>	1	--	--	7	18	3	2	2	--	2	--	--	19	11	2
Flagellates (uniflagellates)	--	--	--	2	--	--	--	--	--	--	--	--	13	--	--
PYRROPHYTA															
Dinophyceae (dinoflagellates)															
<i>Gymnodinium</i> sp.	3	31	27	10	3	23	--	--	53	45	25	18	21	--	--
<i>Peridinium</i> sp.	5	4	5	--	--	3	1	--	--	4	--	--	--	3	--
Cryptophyceae															
Flagellates--misc.	3	8	5	--	5	8	--	--	13	21	19	30	11	18	14
Cryptomonadaceae (Crypomonad)	--	--	--	--	3	--	3	--	--	--	3	--	--	--	25
CILIATES (Actinopoda and Rhizopoda)	--	2	1	2	--	3	1	--	2	--	--	3	6	4	2
TOTALS	19	57	57	62	64	51	18	26	114	95	128	129	100	65	60
Zooplankton eggs															242

Table 7.--Phytoplankton counts--Continued

Organisms	Depth, in metres															
	0.5	5.0	13.0	19.0	30.0	50.0	80.0	108.0	0.5	5.0	11.5	17.5	22.0	30.0	50.0	65.0
	Concentration, in cells per millilitre															
	Station 1, Aug. 15, 1974								Station 2, Aug. 14, 1974							
CHLOROPHYTA (green algae)																
Chlorophyceae																
<i>Cosmarium</i> sp.	--	--	--	--	--	2	1	3	--	--	--	--	--	--	4	--
CHRYSTOPHYTA																
Colonies, 4-8 cells	5	6			16	4	1					6	10	13	4	
Chrysophyceae																
<i>Chrysochromulina parva</i>	34	55	93	73	45	13	5	5	42	46	78	117	66	99	18	5
<i>Diceras (Brittrichia)</i> sp.	5	3	--	--	--	--	--	--	3	7	5	--	--	--	--	--
<i>Dinobryon</i> (cysts)	4	4	20	21	7	--	5	7	--	4	2	38	25	43	2	2
<i>D. bavaricum</i>	9	15	12	--	--	--	--	--	11	--	22	--	--	--	3	--
Bacillariophyceae (diatoms)																
<i>Cyclotella bodanica</i>	--	--	3	3	7	5	1	--	--	--	--	4	8	10	9	3
<i>Fragilaria brevisstrata</i>	--	--	--	--	--	1	--	--	--	--	--	--	--	--	7	--
<i>Melosira italica</i>	--	--	--	--	3	--	1	18	--	--	--	3	5	6	1	9
<i>Nitzschia filiformis</i>	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--
<i>Rhizosolenia</i> sp.	--	--	--	--	--	11	1	--	--	--	--	--	--	--	--	--
<i>Synedra radians</i>	--	--	4	1	6	8	3	3	--	--	--	3	2	8	10	3
<i>S. tenera</i>	--	--	--	2	30	6	4	4	--	--	--	2	4	7	6	2
Flagellates (uniflagellates)	--	--	--	9	6	--	--	2	9	--	--	12	7	15	--	--
PYRRROPHYTA																
Dinophyceae (dinoflagellates)																
<i>Gymnodinium</i> sp.	18	21	--	6	31	--	--	--	12	31	16	--	8	4	--	--
<i>Peridinium</i> sp.	36	5	--	--	--	--	--	--	52	16	5	3	--	--	--	--
Cryptophyceae																
Cryptomonadaceae																
(Cryptomonad)	--	--	--	7	3	2	1	--	--	--	--	7	5	11	5	4
CILIATES (Actinopoda and Rhizopoda)	--	7	8	2	3	5	1	1	6	--	3	--	--	12	9	3
TOTALS	111	116	140	124	157	57	25	43	135	104	131	195	140	255	78	31

Table 7.--Phytoplankton counts--Continued

Organisms	Depth, in metres														
	0.5	5.0	10.0	20.0	30.0	50.0	80.0	104.0	0.5	5.0	10.0	20.0	30.0	50.0	68.0
Concentration, in cells per millilitre															
	Station 1, Sept. 26, 1974							Station 2, Sept. 25, 1974							
CHLOROPHYTA (green algae)															
Chlorophyceae															
<i>Golenkinia radiata</i>	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--
CHRYSTOPHYTA															
Colonies, 4-8 cells	37	23	15	9	7	--	--	--	34	27	33	17	--	30	3
Chrysophyceae															
<i>Chrysochromulina parva</i>	72	15	25	50	14	3	--	--	7	28	43	46	42	13	3
<i>Chrysoikos</i> sp.	--	--	--	--	--	--	--	--	--	--	--	--	--	6	--
<i>C. angulata</i>	--	--	--	--	--	4	--	--	--	--	--	--	--	--	--
<i>Dinobryon</i> (cysts)	--	--	--	--	--	--	--	--	--	--	--	--	4	--	--
<i>D. bavaricum</i>	3	--	--	--	--	--	2	--	--	3	5	--	--	--	--
Bacillariophyceae (diatoms)															
<i>Cyclotella bodanica</i>	--	--	--	9	18	4	--	--	--	--	--	7	10	--	2
<i>Melosira italica</i>	--	--	--	--	3	--	5	16	--	--	--	--	--	3	2
<i>Rhizosolenia</i> sp.	--	--	--	--	18	15	--	1	--	--	--	--	--	22	--
<i>Synedra radians</i>	--	--	--	4	4	6	3	2	--	--	--	--	4	5	4
<i>S. tenera</i>	--	3	--	3	17	3	2	--	5	--	--	--	2	4	2
PYRROPHYTA															
Dinophyceae (dinoflagellates)															
<i>Gymnodinium</i> sp.	25	21	17	111	59	3	2	--	33	22	45	95	57	11	--
<i>Peridinium</i> sp.	9	6	4	--	--	--	--	--	51	6	4	--	--	--	--
<i>Ceratium</i> sp.	--	--	1	--	--	--	--	--	--	1	--	--	--	--	--
Cryptophyceae															
Flagellates	20	--	--	42	--	6	7	--	--	--	--	24	29	--	10
Cryptomonadaceae (Cryptomonad type)	--	--	--	27	15	11	7	2	--	--	--	30	18	27	18
ZOOFLAGELLATES	--	--	--	--	--	--	--	8	--	--	--	--	--	7	--
CILIATES (Actinopoda and Rhizopoda)	--	--	--	--	--	2	2	--	--	--	--	--	4	7	2
TOTALS	166	68	62	255	156	57	30	29	130	87	130	219	170	135	46
ROTIFERA															
<i>Keratella</i> sp.					1										

Table 7.--*Phytoplankton counts*--Continued

Organisms	Depth, in metres														
	0.5	5.0	10.0	20.0	30.0	50.0	80.0	104.0	0.5	5.0	10.0	20.0	30.0	50.0	68.0
Concentration, in cells per millilitre															
	Station 1, Oct. 21, 1974							Station 2, Oct. 22, 1974							
CHRYSTOPHYTA															
Colonies, 4-8 cells	5	12	12	41	--	17	10	3	28	4	16	78	--	26	3
Chrysophyceae															
<i>Chrysochromulina parva</i>	41	21	21	18	13	28	8	--	31	11	32	54	11	13	--
<i>Chrysoikos</i> sp.						2									
<i>Dinobryon</i> (cysts)	18	4	8	--	--	--	--	--	9	3	9	--	--	--	--
Bacillariophyceae (diatoms)															
<i>Cyclotella bodanica</i>	--	--	--	9	5	8	3	1	--	--	--	9	23	7	6
<i>Melosira italica</i>	--	--	--	--	--	--	4	16	--	--	--	--	--	--	--
<i>Rhizosolenia</i> sp.	--	--	--	11	10	11	--	--	--	--	2	11	11	7	1
<i>Synedra radians</i>	--	--	--	--	--	--	--	--	--	--	--	--	4	3	2
<i>S. tenera</i>	--	2	--	--	7	--	--	--	--	2	--	--	5	--	--
PYRROPHYTA															
Dinophyceae (dinoflagellates)															
<i>Gymnodinium</i> sp.	27	16	14	13	30	5	--	--	19	15	10	12	36	4	--
<i>Peridinium</i> sp.	--	9	5	5	--	--	--	--	12	6	12	--	--	--	--
Cryptophyceae															
Flagellates--misc.	--	3	--	--	5	--	7	2	--	3	--	11	13	--	--
Cryptomonadaceae (Cryptomonad type)	14	5	5	52	29	4	16	3	6	--	14	97	71	41	35
CILIATES (Actinopoda and Rhizopoda)	--	2	--	--	7	--	3	2	3	--	4	21	13	--	3
ZOOPLANKTON flagellates	--	--	--	--	--	--	--	2	--	--	--	--	--	--	--
TOTALS	105	74	65	149	106	75	51	29	108	44	99	293	187	101	50
Zooplankton eggs				42											

Table 8.--*Periphyton identification*

[See figure 1 for location of stations.]

Organism	Percent present in sample	Organism	Percent present in sample
<u>Station 4, Aug. 15, 1974</u>		<u>Station 3, Oct. 22, 1974</u>	
<i>Zygnema</i> sp.	Dominant species, prolific zoospore formation in progress	<i>Achnanthes microcephala</i>	67
		<i>Anomoeonies</i> sp.	10
		<i>Tabellaria flocculosa</i>	7
		<i>Cymbella cistula</i>	4.4
		<i>Cymbella</i> sp.	3.3
		<i>Tabellaria fenestrata</i>	3
		<i>Synedra ulna</i>	1.9
		<i>Melosira italica</i>	1.9
		<i>Gomphonema olivaceum</i>	.2
		<i>Gomphoneis</i> sp.	.2
		<i>Mougeotia</i> sp. (<i>Zygnematales</i>)	.5
		<u>Glen Alpine Creek Mouth¹, Oct. 22</u>	
		<i>Spirogyra</i> sp. (2 species)	very prolific
		<i>Tabellaria flocculosa</i>	45
		<i>Anomoeonies</i> sp.	26
		<i>Achnanthes microcephala</i>	21.3
		<i>Synedra rumpens</i>	4.3
		<i>Tabellaria fenestrata</i>	1.7
<u>Station 6, Sept. 26</u>			
<i>Synechococcus</i> sp.	61.6		
(<i>Cyanophyta</i>)			
<i>Cymbella cistula</i>	18		
<i>Synedra ulna</i>	11		
<i>Gomphonema olivaceum</i>	9		
<i>Spirogyra</i> sp.	Both in moderate		
<i>Mougeotia</i> sp.	quantities; <i>Spirogyra</i>		
	the most numerous		
<u>Station 6, 5-m depth, Sept. 26</u>			
<i>Achnanthes microcephala</i>	78		
<i>Tabellaria flocculosa</i>	13.4		
<i>Synedra ulna</i>	8.4		
<u>Fallen Leaf Lake Lodge Boat Harbor², Sept. 6</u>			
<i>Zygnema</i> sp.	70		
<i>Spirogyra</i> sp.	30		

¹Not shown as a station in figure 1.²Corresponds approximately with site 15 in figure 2.

Table 9.--*Fecal coliform bacteria*

[See figure 2 for location of sites.]

Site number	Concentration, in cells per 100 millilitres					
	June 28	July 25	Aug. 16	Sept. 6	Sept. 27	Oct. 23
1	0	0	0	0	0	0
2	0	0	0	0	0	0
3	0	0	0	0	0	0
4	0	--	--	0	0	0
5	0	--	0	1	0	0
6	0	1	0	0	0	0
7	0	12	0	0	0	1
8	0	0	15	1	1	4
9	0	0	1	0	0	0
10	0	0	0	0	0	0
11	0	0	0	0	0	1
12	0	0	1	1	0	0
13	0	0	--	1	0	0
14	0	0	1	1	0	0
15	0	0	0	0	0	0
16	0	3	1	0	0	0
17	0	2	3	2	12	1
18	--	--	1	0	0	0
19	--	--	0	5	0	0
20	--	--	1	3	0	0
21	--	--	3	0	1	2
22	--	--	--	0	0	1
23	--	--	0	0	0	0
24	--	--	0	0	1	0
25	--	--	0	0	1	0
26	--	--	0	0	0	0

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