OPEN-FILE REPORT 80-1178

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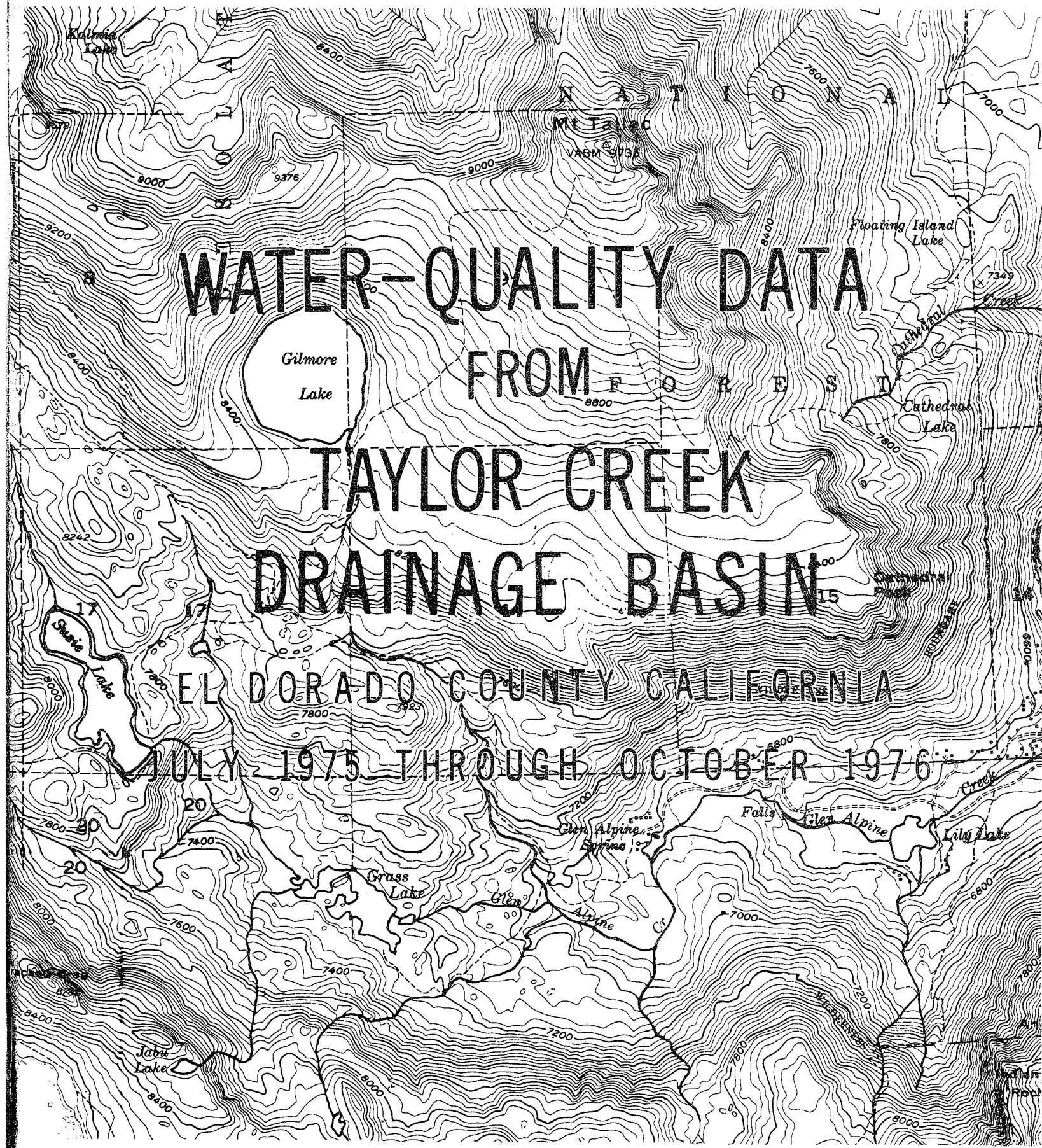

WATER-QUALITY DATA FROM FOREST TAYLOR CREEK DRAINAGE BASIN

EL DORADO COUNTY CALIFORNIA

JULY 1975 THROUGH OCTOBER 1976

PREPARED IN COOPERATION WITH THE
CALIFORNIA DEPARTMENT OF WATER RESOURCES

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

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By William E. Templin, D. Brady Green, and Rodger F. Ferreira

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U.S. GEOLOGICAL SURVEY

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CONVERSION FACTORS

Within this report, consistency in reporting units was maintained as follows, based on the units used in measurement. For lake sites, metric (SI, International System) units were used. For stream sites, water-quality parameters were in metric units; physical measurements of depth, velocity, discharge, and altitude were in inch-pound units. For readers who may prefer to use them, the conversion factors for the terms used in this report are listed below.

Metric Unit (A) (A=CxD)	(B)	(C)	Inch-pound Unit (D) (D=AxB)
millimeter (mm)	0.039	25.4	inch
centimeter (cm)	0.39	2.54	inch
square centimeter (cm^2)	0.155	6.452	square inch (in^2)
cubic hectometer (hm^3)	810.7	0.001	acre-foot (acre-ft)
kilometer (km)	0.621	1.609	mile (mi)
square kilometer (km^2)	0.386	2.590	square mile (mi^2)
liter per second (L/s)	0.035	28.32	cubic foot per second (ft^3/s)
meter (m)	3.281	0.305	foot (ft)
meter per second (m/s)	3.281	0.305	foot per second (ft/s)
square meter (m^2)	10.76	0.093	square foot (ft^2)
cubic meter (m^3)	35.31	0.028	cubic foot (ft^3)
cubic meter per second (m^3/s)	35.31	0.028	cubic foot per second (ft^3/s)

Explanation of abbreviations: mg/L = milligrams per liter

Degrees Celsius are converted to degrees Fahrenheit by using the formula:

Temp °F = 1.8 temp °C + 32

Degrees Fahrenheit are converted to degrees Celsius by using the formula:

Temp °C =(temp °F-32)/1.8

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

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EL DORADO COUNTY, CALIFORNIA, JULY 1975 THROUGH OCTOBER 1976

By William E. Templin, D. Brady Green, and Rodger F. Ferreira

ABSTRACT

Data were collected from July 1975 through October 1976 to establish benchmark water-quality conditions in the Taylor Creek drainage basin. The Taylor Creek drainage basin is a high-altitude system of lakes and streams which forms one of the tributaries to Lake Tahoe in the Sierra Nevada of California and Nevada.

Sampling sites were distributed between the upper and lower reaches of the basin. Streamflow and water-quality data were collected at 13 stream sites. Water-quality and depth profiles were collected at six lake sites. The reconnaissance included measurement and evaluation of the following selected characteristics: major chemicals, nutrients, fecal coliform bacteria, phytoplankton, periphytic algae, benthic macroinvertebrates, primary productivity, and stream community diversity.

INTRODUCTION

As a result of improved transportation, a higher standard of living, and more leisure time, more people are using high-altitude wilderness areas, where activities are generally concentrated along lakes and streams. Because many high-altitude lakes and streams are chemically dilute and have low buffering capacities, the chemical and biological balance of their aquatic ecosystems is easily affected by the activities of man. High-altitude sierran lake and stream systems collect and transport water for agricultural, domestic, industrial, and recreational use in many parts of California and Nevada. Therefore, it is necessary to understand the relation between man's activities and dilute-solution, high-altitude aquatic ecosystems to maintain water quality.

The Taylor Creek drainage basin, a high-altitude lake and stream system typical of the Sierra Nevada, is a heavily used recreational area. Although visitor use of the area has grown almost exponentially in the last few years, some of the more remote lakes and streams are still virtually unaffected by man. Water-quality data collected from these remote areas can be compared to data from the more accessible areas to provide information on man's impact.

Some data for the study area have been published. A water-quality reconnaissance by Fuller (1975) included measurements and evaluations of selected physical, chemical, and biological characteristics of the lower part of the Taylor Creek drainage.

The purpose of this report is to present water-quality data collected from selected parts of the Taylor Creek drainage basin in 1975 and 1976. The purpose of the study was to collect data which would provide baseline water-quality information on the upper and lower parts of the Taylor Creek drainage basin.

A 2-year sampling period was used to define the seasonal variations that must be considered in evaluating the effect of man on the ecosystem. A longer period of record would improve the reliability of this definition.

The data presented can be interpreted to provide:

1. Further insight into the physical, chemical, and biological characterization of a high-altitude, dilute-solution stream and lake system, with emphasis on the changes that occur as water flows along a reach of a stream from one lake to another.

2. Information on changes in the water quality of the Taylor Creek drainage with respect to time of year and duration of recreational use.

Acknowledgments.-- The authors acknowledge the significant contributions of J. M. Shay and S. K. Sorenson for collecting and identifying benthic organisms and M. K. Shay for assisting in the computation of the data tables.

STUDY AREA

The Taylor Creek drainage basin is located in California near the crest of the Sierra Nevada and about 37 km (23 mi) southwest of Reno, Nev. (fig. 1). Altitudes range from 1,900 m (6,230 ft) at the mouth of Taylor Creek to 3,043 m (9,980 ft) at the top of Dicks Peak. Mean daily minimum winter air temperatures are about -8°C (17°F) at the 1,921-m (6,300-foot) level. The maximum summer temperature seldom exceeds 27°C (80°F), and lows below 4°C (40°F) are not uncommon on summer nights (Tahoe Regional Planning Agency, 1971b). Snow usually covers the ground at lower altitudes between December and June and at higher altitudes between November and July. On high slopes that face north, some snow patches remain year round.

Mean annual precipitation in the basin ranges from approximately 76 cm (30 inches) at the lowest altitudes to 178 cm (70 inches) at altitudes of 2,439 m (8,000 ft) and above (Rantz, 1969). At the lower altitudes, probably at least 50 percent of the precipitation is snow, and at altitudes above 2,439 m (8,000 ft), 90 percent or more is snow.

The geology of the Taylor Creek drainage basin is fairly typical of Sierra Nevada glaciated areas (Loomis, 1964). The entire area was glaciated, leaving terminal and lateral moraines and glacial outwash deposits. Most of the glacial deposits are concentrated in the Fallen Leaf Lake area (fig. 2).

Most of the study area is in the Canadian life zone (lodgepole pine-red fir belt) (Storer and Usinger, 1971). The overstory is composed mainly of conifers concentrated on the glacial deposits and in the well-drained parts of meadows and sheltered valleys.

The basin is a dendritic system of tributaries with 14 recognized lakes and many small ponds (fig. 1). Its drainage area, approximately 50.8 km^2 (19.6 mi^2), is the third largest of the basins tributary to Lake Tahoe (Tahoe Regional Planning Agency, 1971a). The drainage area of Glen Alpine Creek comprises about two-thirds of the Taylor Creek drainage basin.

Glen Alpine Creek, which flows into Fallen Leaf Lake, has two main forks. The west fork drains Half Moon Lake, Susie Lake, and Grass Lake, and the east fork drains Gilmore Lake. Two unnamed small tributaries of upper Glen Alpine Creek drain Alta Morris Lake and Heather Lake. Taylor Creek drains Fallen Leaf Lake and empties into the south end of Lake Tahoe, approximately 2.4 km (1.5 mi) west of the city of South Lake Tahoe. Taylor Creek contributes about 30 hm^3 (30,000 acre-ft) of inflow per year to Lake Tahoe (Crippen and Pavelka, 1970).

Thirteen stream sites in the Taylor Creek drainage basin (table 1), ranging in altitude from 1,906 m (6,250 ft, site S13) to 2,530 m (8,300 ft, site S8), were selected for sampling. Sampling sites were selected that would best typify the riffle habitat of each stream so that future comparisons to similar benthic macroinvertebrate communities could be made. Sites were selected just above and below major lakes to describe the water quality in the lake-stream system.

Substrates at most stream sites consisted of small boulders, cobbles, gravels, and coarse sand. At most sites the rocks were angular in form except those at sites S6 and S13, which were more rounded.

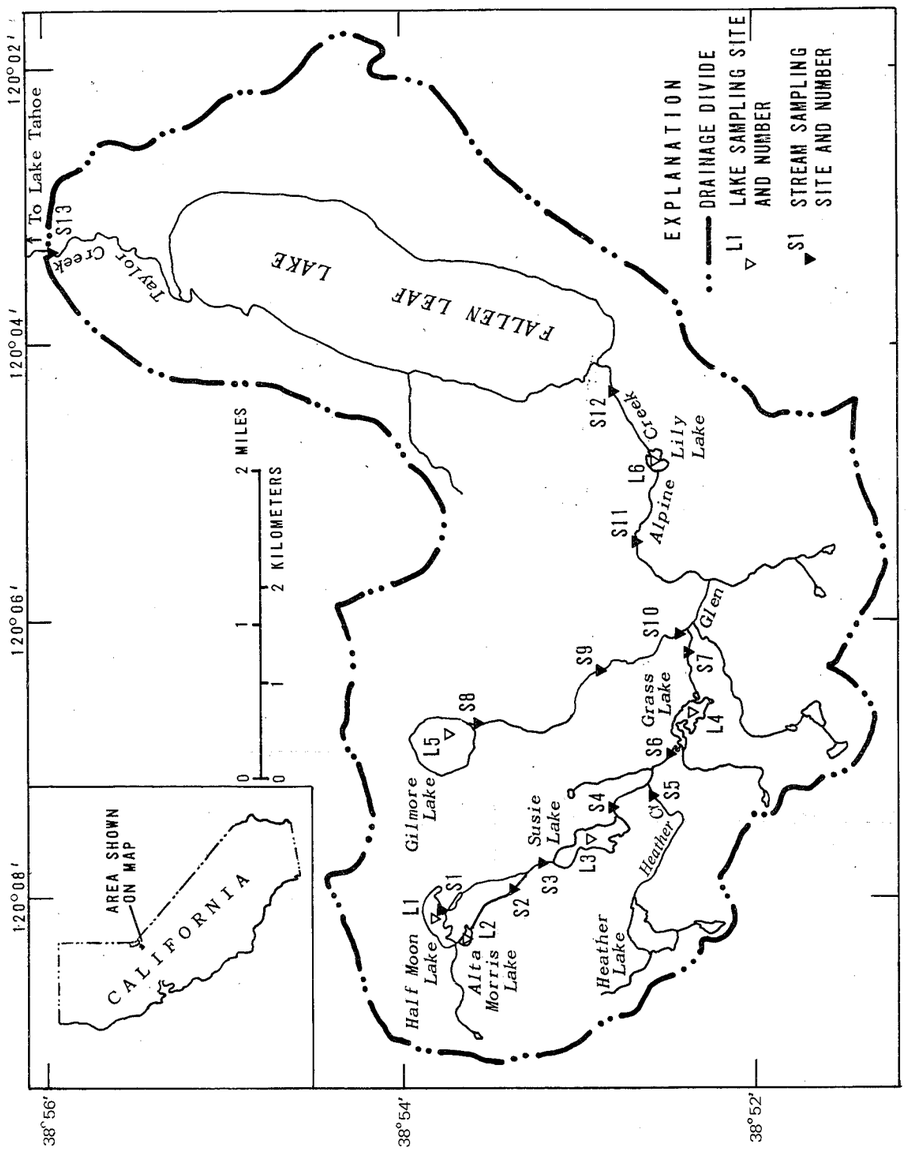

FIGURE 1.—Index map

METHODS

Samples were collected in July, August, and October in 1975 and June-October in 1976.

Physical and Chemical

Field measurements for specific conductance, pH, temperature, and dissolved-oxygen concentration were made with a Martek water-quality instrument at 1-m (3.3-foot) intervals in the middle of each lake (table 2). Transparency at each lake station was measured with a 203-mm (8-inch) diameter Secchi disk (table 2).

Field measurements for stream temperature were made with a mercury-filled thermometer. Specific conductance and pH measurements were made by using portable meters. All measurements were taken at midstream or at the centroid of flow. Stream discharge was measured at each site, using standard methods described by Corbett and others (1943).

Samples of stream water for chemical analysis (tables 4 and 6) were collected at the centroid of flow at each site. A Van Dorn sampler was used to collect lake water samples for chemical analysis (tables 3 and 5) from the epilimnion, metalimnion, and hypolimnion at a depth of 1 m (3.3 ft) in stratified lakes and near the bottom in nonstratified lakes. These samples were field treated when necessary, and analyzed in the field or at the U.S. Geological Survey Central Laboratory, Arvada, Colo., using methods described by Brown and others (1970).

EXPLANATION

Glacial deposits of Quaternary age
Moraines and outwash gravels

Igneous rocks of Cretaceous age
Granodiorites, diorites, gabbros, quartz monzonite and granitic rocks

Metavolcanic deposits of Jurassic-Triassic age
(Originally basalt and andesite flows)

Metavolcanic deposits of Jurassic-Triassic age
(Originally tuff, tuffaceous sandstone and tuff breccia)

Metamorphic rocks of Jurassic-Triassic age
Metasediments, undifferentiated

Geologic contact
Long dashes where located; short dashes where inferred; dots where concealed

Fault
Dashes where inferred; dotted where concealed; U indicates upthrown block; D indicates downthrown block

End moraine

Boundary of Fallen Leaf Lake drainage area

Geology from A. A. Loomis (1964)

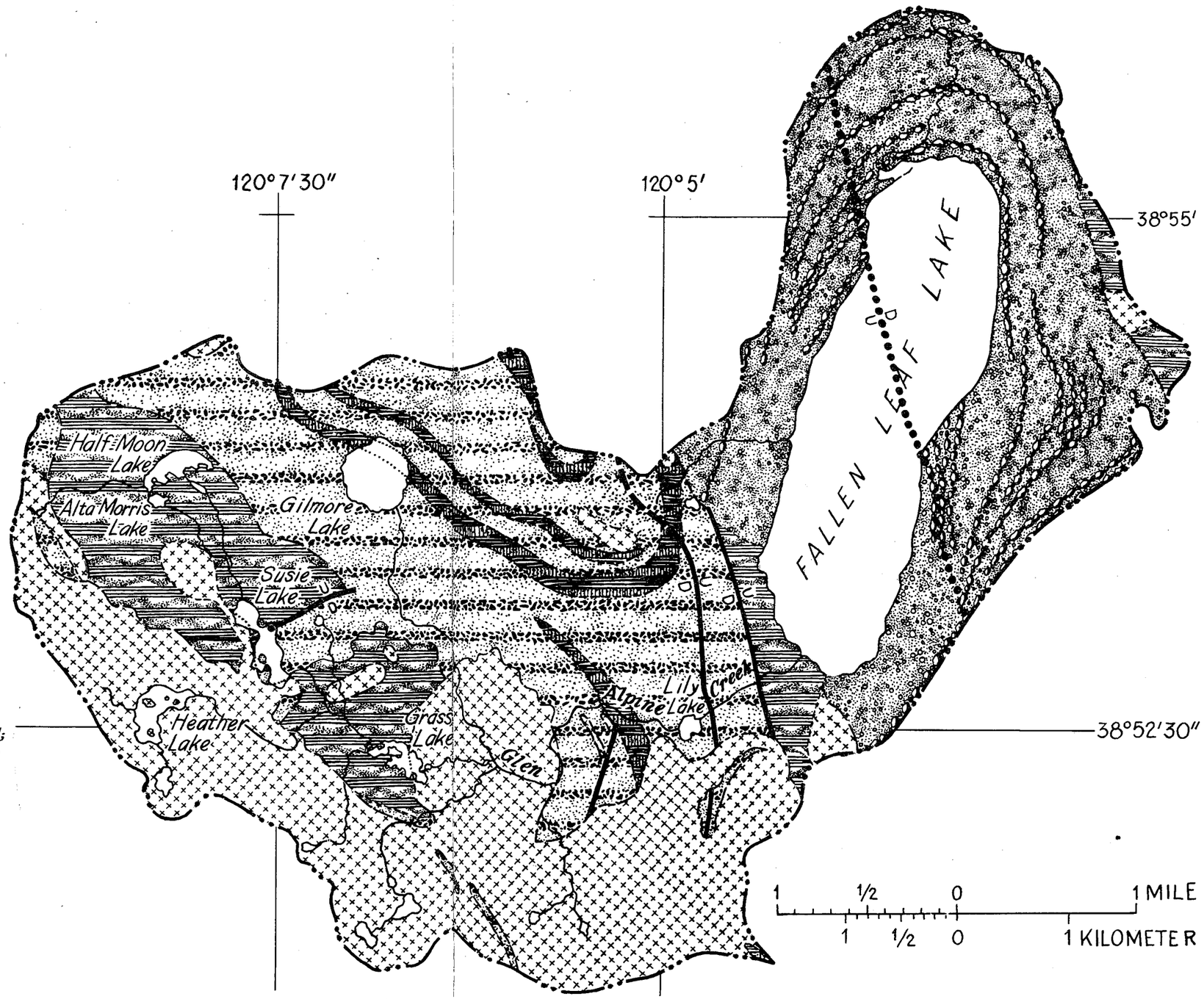

FIGURE 2.— Geologic map.

Biological

Primary productivity (table 7) was measured in Grass, Gilmore, and Lily Lakes, using the carbon-14 method for phytoplankton (Slack and others,1973). Fecal coliform bacteria samples (table 8) were collected at each stream and lake site and incubated in the field, using techniques described by Slack and others (1973). Procedures described by Slack and others (1973) were followed for the collection, preservation, and analysis of phytoplankton and periphyton. Phytoplankton were sampled by using a Van Dorn sampler in the epilimnion, metalimnion, and hypolimnion of the lakes (table 9) and by using a sample bottle at midstream or the centroid of flow at each stream site (table 10). Periphyton samples were collected from artificial and natural substrates at lake sites (table 11) and stream sites (table 12).

In each lake, three samples of benthic macroinvertebrates (table 13) were collected near the outlet, using an Ekman grab sampler with a jaw opening of 232 cm^2 (36 in^2). At each stream site, three samples of benthic macroinvertebrates (table 14) were collected in riffles, using a Surber sampler with a 0.09 m^2 (1 ft^2) opening and a 0.21-mm (0.0083-inch) mesh net. Three individual samples were usually collected along a transect perpendicular to the streamflow and designated 1, 2, and 3 from left bank to right bank, looking in the downstream direction (table 15). In late summer, when streams were narrow due to low water levels, it was not always possible to collect samples along such a transect, so they were collected along a diagonal. Collected samples were washed through a 0.21-mm (0.0083-inch; U.S. No. 70) screen and then preserved in a 10 percent formalin solution. The samples were analyzed according to the methods of Slack and others (1973). Selected chironomid (midge) larvae were "cleared" and mounted on slides for identification, using the method described by Tilley and Hahn (1974).

Adult insects were collected from riparian vegetation by hand and with a sweep net. These specimens were used to verify the identification of some of the immature aquatic forms.

Diversity for each benthic invertebrate sample (table 16) was expressed by using an adjusted community diversity index (Hutcheson, 1970; Poole, 1974):

$$EH' = [-\Sigma(X/XN)\log_2 (X/XN)]-[(XS-1)/2XN]$$

where X = number of individuals per taxon,
XN = total number of individuals, and
XS = number of taxa in each sample.

This equation corrects for the bias of the diversity estimate ($\bar{d}$) derived from "Information Theory" by Margalef (1956) and proposed by Wilhm and Dorris (1968):

$$\bar{d} = \Sigma(X/XN) \log_2 (X/XN).$$

Diversity index ($\log_2 (X/XN)$) values less than 1 have been found in areas of heavy pollution, values from 1 to 3 in areas of moderate pollution, and values exceeding 3 in unpolluted water (Wilhm and Dorris, 1968).

The diversity index can range from 0 to any positive number. When all individuals in a sample belong to the same species, the diversity index will equal 0. When each individual in a sample belongs to a different species, a maximum diversity index will be obtained.

HMAX (the theoretical maximum diversity) and HMIN (the theoretical minimum diversity) (Pielou, 1969) were calculated. The HMIN equation was modified (Dr. H. W. Kerster, Environmental Studies Center, California State University at Sacramento, written commun., September 1975) as follows:

$$HMAX = \log_2 XS$$

$$HMIN = (XS-1)[(1/XN)\log_2 (1/XN)] + \left\{[XN-(XS-1)]/XN\right\}\log_2\left\{[XN-(XS-1)]/XN\right\}.$$

Abundance relationships in the benthic invertebrate community were expressed in terms of EVENES (evenness component of the diversity index). EVENES expresses the degree to which the proportions of the species approach equality (Brown, 1973), and the maximum value is obtained when the individuals are divided among the species as evenly as possible.

$$EVENES = EH'/HMAX \text{ (Pielou, 1969).}$$

SEHP (the standard error of the estimate) (Lloyd and others, 1968) was calculated to measure how much EH' (the sample diversity) varied and to provide information on how much error is inherent in the EH' estimates.

$$SEHP = (X/XN)\sqrt{\Sigma(X/XN) \log_2^2 (X/XN)- \left\{[\Sigma(X/XN) \log_2 (X/XN)]^2/XN\right\}}.$$

A summary of community parameters for individual Surber samples, computed by using the above formulas, is compiled in this report (table 16) to aid researchers in evaluating the biological data.

SUMMARY

The data presented in this report represent the final product of the U.S. Geological Survey and California Department of Water Resources cooperative program in the Taylor Creek drainage basin. Data were collected between the higher and lower reaches of the northern parts of the basin. Except for the higher altitude (2,410-2,577 m, or 7,900-8,450 ft) lakes and streams in the southern part of the basin, the baseline data for the basin are fairly complete. Parts of the southern basin not sampled were Heather Lake, Lake LaConte, Jabu Lake, Lake Lucille, Lake Margery, Lost Lake, Triangle Lake, and the streams connecting them to the lower basin.

SELECTED REFERENCES

Baumann, R. W., 1975, Revision of the stonefly family Nemouridae (Plecoptera): A study of the world fauna at the generic level: Smithsonian Contributions to Zoology, no. 211, Washington, D.C., Smithsonian Institution Press, 74 p.

Brinkhurst, R. O., 1965, Studies on the North American aquatic Oligochaeta, II--Tubificidae: Proceedings of Academy of Natural Science, Philadelphia, v. 117, no. 4, p. 117-172.

Brown, Eugene, Skougstad, M. W., and Fishman, M. J., 1970, Methods for collection and analysis of water samples for dissolved minerals and gases: U.S. Geological Survey Techniques Water-Resources Investigations, book 5, chap. A1, 160 p.

Brown, H. P., 1972, Biota of freshwater ecosystems, identification manual number 6; aquatic dryopoid beetles (Coleoptera) of the United States: Department of Zoology, University of Oklahoma for U.S. Environmental Protection Agency, Water Pollution Control Research Series, 18050ELD04/72, 82 p.

Brown, S. D., 1973, Species diversity of periphyton communities in the littoral of a temperate lake: Internationale Revue der Gesamten Hydrobiologie, v. 58, no. 6, p. 787-800.

Corbett, D. M., and others, 1945, Stream-gaging procedure, a manual describing methods and practices of the Geological Survey: U.S. Geological Survey Water-Supply Paper 888, 245 p.

Crippen, J. R., and Pavelka, B. R., 1970, The Lake Tahoe Basin, California-Nevada: U.S. Geological Survey Water-Supply Paper 1972, 56 p.

Edmondson, W. T., and others, 1959, Freshwater biology (2d ed.): New York, John Wiley, 1,248 p.

Fuller, R. H., 1975, Selected water-quality data from Fallen Leaf Lake, El Dorado County, California, June through October 1974: U.S. Geological Survey open-file report, 38 p.

Hutcheson, K., 1970, A test for comparing diversities based on the Shannon Formula: Journal of Theoretical Biology, v. 29, p. 151-154.

Johannsen, O. A., and Thomsen, L. C., 1969, Aquatic Diptera: Reprints of 1934-37 articles of Cornell University Agricultural Experiment Station, Entomological Reprint Specialists, Los Angeles, 297 p.

Lloyd, Monte, Zar, J. H., and Karr, J. R., 1968, On the calculation of information-theoretical measures of diversity: American Midland Naturalist, v. 79, no. 2, p. 257-272.

Loomis, A. A., 1964, Geology of the Fallen Leaf Quadrangle: California State Division of Mines and Geology Open-File Report 156.

Margalef, D. R., 1956, Informacion y diversidad especifica en las communidades de organismos: Investigacion pesquera, v. 3, p. 99-106.

Mason, W. T., Jr., 1973, An introduction to the identification of Chironomid larvae: Analytical Quality Control Laboratory, National Environmental Research Center, U.S. Environmental Protection Agency, Cincinnati, 90 p.

Pennak, R. W., 1953, Freshwater invertebrates of the United States: New York, Ronald Press Co., 768 p.

Pielou, E. C., 1969, An introduction to mathematical ecology: New York, John Wiley, 279 p.

Poole, R. W., 1974, An introduction to quantitative ecology: McGraw-Hill series in Population Biology, 532 p.

Rantz, S. E., 1969, Mean annual precipitation in the California Region: U.S. Geological Survey open-file map.

Roback, S. S., 1957, Immature tendipedids of the Philadelphia area (Diptera: Tendipedidae): Monographs of Academy of Natural Sciences of Philadelphia, no. 9, Philadelphia, 152 p.

Ross, H. H., 1944, The caddis flies, or Trichoptera, of Illinois: Illinois Natural History Survey Bulletin, v. 23, art. 1, August 1944, 326 p.

Slack, K. V., Averett, R. C., Greeson, P. E., and Lipscomb, R. G., 1973, Methods for collection and analysis of aquatic biological and microbiological samples: U.S. Geological Survey Techniques Water-Resources Investigations, book 5, chap. A4, 165 p.

Smith, S. O., 1968, The Rhyacophila of the Salmon River drainage of Idaho with special reference to larvae: Annals of Entomological Society of America, v. 61, no. 3, p. 655-674.

Storer, T. I., and Usinger, R. L., 1971, Sierra Nevada natural history: University of California Press, 374 p.

Tahoe Regional Planning Agency, 1971a, Hydrology and water resources of the Lake Tahoe Region--a guide for planning: Tahoe Regional Planning Agency and U.S. Forest Service, South Lake Tahoe, Calif., June 1971, 22 p.

_____1971b, Limnology and water quality of the Lake Tahoe Region--a guide for planning: Tahoe Regional Planning Agency and U.S. Forest Service, South Lake Tahoe, Calif., July 1971, 13 p.

Tilley, L. J., and Hahn, S. S., 1974, "Permanent slide method for larvae of the family Chironomidae": U.S. Geological Survey, Quality of Water Branch Techniques Memorandum 74-08, 10 p.

Usinger, R. L., and others, 1956, Aquatic insects of California: University of California Press, 508 p.

Villee, C. A., Walker, W. F., and Smith, F. E., 1968, General zoology: W. B. Saunders Co., 844 p.

Wilhm, J. L., and Dorris, T. C., 1968, Biological parameters for water quality criteria: BioScience, v. 18, p. 477-481.

TABLES

Table 1.--*Sampling sites*

[See figure 1 for location of sites. USGS reference No. is latitude and longitude followed by 2-digit sequence number]

Site No.	USGS reference No.	Name
L1	385344120080601	Half Moon Lake
L2	385340120081201	Alta Morris Lake
S1	385343120080501	West Fork Glen Alpine Creek below Half Moon Lake
S2	385325120075401	West Fork Glen Alpine Creek below Alta Morris Lake
S3	385310120074401	West Fork Glen Alpine Creek above Susie Lake
L3	385247120072401	Susie Lake
S4	385248120072401	West Fork Glen Alpine Creek below Susie Lake
S5	385236120071301	Heather Creek near West Fork Glen Alpine Creek
S6	385230120065901	West Fork Glen Alpine Creek above Grass Lake
L4	385226120063601	Grass Lake
S7	385227120060601	West Fork Glen Alpine Creek below Grass Lake
L5	385337120064401	Gilmore Lake
S8	385334120064601	East Fork Glen Alpine Creek below Gilmore Lake
S9	385302120064101	East Fork Glen Alpine Creek near Gilmore Lake
S10	385232120060801	East Fork Glen Alpine Creek above West Fork confluence
S11	385234120053901	Glen Alpine Creek above Lily Lake
L6	385236120044801	Lily Lake
S12	385248120041201	Glen Alpine Creek at bridge at Fallen Leaf Lake
S13	385602120031801	Taylor Creek at State Highway 89 near Camp Richardson

Table 2.--*Vertical profiles of lakes*

DATE	SAMPLING DEPTH (M)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	TRANSPARENCY (SECCHI DISK) (M)
385344120080601 - HALF MOON LAKE - SITE L1						
JUL , 1975						
09...	0.5	13	6.6	13.4	9.9	--
09...	1.0	14	6.4	10.9	9.8	--
09...	2.0	14	6.4	9.7	9.8	--
09...	3.0	13	6.2	8.7	9.6	--
09...	4.0	12	6.2	7.5	9.3	--
AUG						
26...	.5	12	6.6	15.5	8.7	--
26...	1.0	12	6.5	15.4	8.5	--
26...	2.0	12	6.5	15.0	8.4	--
26...	3.0	13	6.5	14.5	8.3	--
26...	4.0	13	6.6	14.4	8.1	--
JUN , 1976						
29...	.5	13	6.4	16.3	7.9	--
29...	1.0	13	6.4	16.3	7.8	--
29...	2.0	13	6.3	16.1	7.8	--
29...	3.0	13	6.2	16.0	7.8	--
29...	4.0	13	6.2	15.9	7.8	--
29...	4.5	13	6.2	15.9	7.7	--
AUG						
31...	.5	15	7.4	17.3	8.2	--
31...	1.0	15	7.3	16.8	8.1	--
31...	2.0	15	7.2	15.8	8.2	--
31...	3.0	16	7.1	15.5	8.2	--
31...	4.0	16	7.9	15.2	7.8	--
385340120081201 - ALTA MORRIS LAKE - SITE L2						
JUL , 1975						
09...	.5	9	6.3	2.9	11.8	--
09...	1.0	8	6.2	3.3	11.0	--
09...	2.0	8	6.0	3.7	10.6	--
09...	3.0	8	5.9	3.9	10.2	--
09...	4.0	8	5.8	3.9	10.0	--
AUG						
26...	.5	6	6.6	16.1	7.3	--
26...	1.0	6	6.7	15.9	7.3	--
26...	2.0	6	6.5	15.8	7.1	--
26...	3.0	6	6.3	15.7	7.1	--
26...	4.0	6	6.2	15.6	7.1	--
26...	6.0	6	6.0	15.4	7.1	--
JUN , 1976						
29...	.5	7	6.2	15.9	9.5	--
29...	1.0	7	6.0	15.9	9.4	--
29...	2.0	7	5.8	15.9	9.3	--
29...	3.0	7	5.8	15.9	9.3	--
29...	3.5	7	5.7	15.9	9.4	--
AUG						
31...	.5	8	6.3	16.3	7.9	--
31...	1.0	8	6.2	16.3	7.9	--
31...	2.0	8	6.1	16.3	7.9	--
31...	3.0	8	6.0	16.2	7.9	--
31...	3.5	8	5.8	16.1	7.9	--

Table 2.--*Vertical profiles of lakes*--Continued

DATE	SAMPLING DEPTH (M)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	TRANSPARENCY (SECCHI DISK) (M)
385247120072401 - SUSIE LAKE - SITE L3						
JUL , 1975						
08...	0.5	13	6.8	11.9	8.8	9.5
08...	1.0	13	6.6	11.7	8.7	--
08...	2.0	13	6.2	11.4	8.4	--
08...	3.0	13	6.3	10.0	8.7	--
08...	4.0	14	6.3	9.2	8.9	--
08...	5.0	15	6.4	8.3	8.9	--
08...	6.0	15	6.4	7.8	9.0	--
08...	7.0	16	6.4	7.3	9.0	--
08...	8.0	16	6.5	6.7	8.9	--
08...	9.0	16	6.5	6.5	8.9	--
08...	10.0	16	6.4	6.3	8.7	--
08...	11.0	16	6.4	6.2	8.7	--
08...	12.0	16	6.4	6.1	8.5	--
08...	13.0	17	6.3	6.0	8.5	--
08...	14.0	17	6.3	5.9	8.5	--
AUG						
25...	.5	13	7.3	16.4	8.6	--
25...	1.0	13	7.3	16.1	8.2	--
25...	2.0	13	7.1	15.5	7.6	--
25...	3.0	13	6.9	15.3	7.2	--
25...	4.0	13	6.7	15.2	7.1	--
25...	5.0	13	6.6	15.0	7.1	--
25...	6.0	13	6.6	14.8	7.1	--
25...	7.0	13	6.5	14.7	6.9	--
25...	8.0	13	6.5	14.6	6.9	--
25...	9.0	14	6.9	12.6	9.6	--
25...	10.0	16	6.8	10.2	9.5	--
25...	11.0	18	6.7	9.1	9.3	--
25...	12.0	20	6.5	8.2	8.9	--
25...	13.0	22	6.4	7.9	8.4	--
25...	14.0	23	6.1	8.8	6.3	--
25...	15.0	27	--	6.5	5.2	--
25...	16.0	31	5.9	5.9	3.8	--
25...	17.0	32	5.8	5.6	2.3	--
25...	18.0	36	5.7	5.1	1.6	--
JUN , 1976						
28...	.5	15	7.0	16.3	6.9	11.0
28...	1.0	15	7.0	16.3	6.9	--
28...	2.0	15	7.0	16.3	6.9	--
28...	3.0	15	6.9	16.2	7.0	--
28...	4.0	15	7.0	15.8	7.0	--
28...	5.0	15	6.6	15.4	7.0	--
28...	6.0	15	7.0	14.8	7.2	--
28...	6.5	16	7.2	13.9	7.8	--
28...	8.0	14	7.5	11.5	8.8	--
28...	9.0	15	7.7	10.2	9.4	--
28...	10.0	16	7.4	9.1	10.0	--
28...	11.0	16	7.4	8.4	10.0	--
28...	12.0	17	7.2	7.6	10.0	--
28...	13.0	17	6.8	7.4	9.8	--
28...	14.0	17	6.7	7.2	9.8	--
28...	15.0	17	6.5	7.2	9.6	--
28...	16.0	17	6.4	7.1	9.4	--
28...	17.0	17	6.2	7.1	9.4	--
28...	18.0	17	5.6	7.1	.8	--

Table 2.--*Vertical profiles of lakes*--Continued

DATE	SAMPLING DEPTH (M)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	TRANSPARENCY (SECCHI DISK) (M)
385247120072401 - SUSIE LAKE - SITE L3						
AUG, 1976						
30...	0.5	17	7.1	16.8	9.4	9.0
30...	1.0	17	7.0	16.6	9.4	--
30...	2.0	18	7.0	15.7	10.1	--
30...	3.0	18	6.8	15.4	10.2	--
30...	4.0	17	7.0	15.1	10.0	--
30...	5.0	17	6.9	15.0	10.0	--
30...	6.0	17	6.9	14.7	10.0	--
30...	6.5	17	6.9	14.4	10.0	--
30...	8.0	17	7.2	14.2	10.4	--
30...	9.0	16	7.3	13.6	10.9	--
30...	10.0	16	7.5	13.4	11.2	--
30...	11.0	16	7.4	13.1	11.4	--
30...	12.0	17	7.3	12.8	11.4	--
30...	13.0	17	7.0	12.6	11.5	--
OCT						
12...	.5	16	7.3	13.4	8.6	10.0
12...	1.0	16	7.3	13.4	8.6	--
12...	2.0	16	7.3	13.4	8.6	--
12...	3.0	16	7.3	13.4	8.5	--
12...	4.0	16	7.3	13.4	8.5	--
12...	5.0	16	7.3	13.2	8.4	--
12...	6.0	16	7.3	13.2	8.5	--
12...	7.0	16	7.3	13.1	8.4	--
12...	8.0	16	7.3	13.0	8.4	--
12...	9.0	16	7.3	13.0	8.4	--
12...	10.0	16	7.3	13.0	8.4	--
12...	11.0	16	7.4	13.0	8.4	--
12...	12.0	17	7.5	12.8	8.5	--
385226120063601 - GRASS LAKE - SITE L4						
JUL , 1975						
11...	.5	15	6.3	14.8	7.7	9.0
11...	1.0	14	6.4	13.0	7.6	--
11...	2.0	14	6.2	12.4	7.6	--
11...	3.0	15	6.0	11.6	7.5	--
11...	4.0	16	6.1	9.9	8.0	--
11...	5.0	15	6.1	8.7	8.3	--
11...	6.0	15	6.1	7.9	8.4	--
11...	7.0	16	6.1	7.1	8.4	--
11...	8.0	18	6.1	6.6	8.3	--
11...	9.0	20	6.2	6.4	8.4	--
11...	10.0	20	6.2	6.1	8.1	--
11...	11.0	26	6.2	6.0	7.5	--
11...	12.0	24	6.2	6.0	7.5	--
11...	13.0	28	6.2	6.0	7.4	--
11...	14.0	28	6.0	6.0	7.1	--
AUG						
28...	.5	18	6.6	15.6	7.6	--
28...	1.0	18	6.6	15.6	7.6	--
28...	2.0	21	6.5	15.5	7.6	--
28...	3.0	21	6.5	15.2	7.6	--
28...	4.0	21	6.5	14.8	7.6	--
28...	5.0	22	6.6	14.2	7.6	--
28...	6.0	21	6.6	13.4	7.7	--
28...	7.0	20	6.7	12.4	8.1	--
28...	8.0	21	6.8	11.7	8.7	--
28...	9.0	27	6.8	9.9	8.1	--
28...	10.0	36	6.8	9.1	7.0	--
28...	11.0	41	6.7	8.9	6.3	--
28...	12.0	49	6.7	8.7	5.0	--
28...	13.0	58	6.6	8.6	4.4	--
28...	14.0	61	6.6	8.6	4.4	--

Table 2.--*Vertical profiles of lakes*--Continued

DATE	SAMPLING DEPTH (M)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	TRANSPARENCY (SECCHI DISK) (M)
385226120063601 - GRASS LAKE - SITE L4						
JUL , 1976						
01...	0.5	25	6.8	16.4	7.7	8.0
01...	1.0	25	6.8	16.4	7.7	--
01...	2.0	25	6.7	16.4	7.7	--
01...	3.0	26	6.7	16.0	7.7	--
01...	4.0	26	6.7	15.4	7.6	--
01...	5.0	26	6.6	15.1	7.6	--
01...	6.0	27	6.8	13.7	8.8	--
01...	7.0	30	6.6	11.2	9.0	--
01...	8.0	31	6.6	10.2	8.9	--
01...	9.0	30	6.5	9.4	8.8	--
01...	10.0	31	6.4	8.7	8.3	--
01...	11.0	35	6.6	8.0	7.7	--
SEP						
02...	.5	24	7.0	17.9	7.6	7.5
02...	1.0	24	6.9	17.6	7.6	--
02...	2.0	25	6.9	17.0	7.6	--
02...	3.0	25	6.7	16.7	7.2	--
02...	4.0	26	6.6	14.0	8.7	--
02...	5.0	24	6.5	12.7	8.4	--
02...	6.0	23	6.4	11.6	8.2	--
02...	7.0	24	6.3	11.0	8.0	--
02...	8.0	25	6.2	10.4	7.5	--
02...	9.0	25	6.1	9.7	7.0	--
02...	10.0	25	6.1	9.5	6.6	--
02...	11.0	32	6.0	9.4	5.8	--
02...	12.0	36	6.0	9.2	5.0	--
02...	13.0	32	6.1	9.1	4.7	--
02...	14.0	32	6.1	9.1	4.5	--
02...	14.5	49	6.2	9.1	.2	--
OCT						
14...	.5	32	7.2	13.4	9.2	8.5
14...	1.0	32	7.2	13.0	10.0	--
14...	2.0	33	7.2	12.8	10.0	--
14...	3.0	33	7.2	12.6	9.9	--
14...	4.0	33	7.1	12.4	9.8	--
14...	5.0	33	7.1	12.2	9.5	--
14...	6.0	33	7.1	12.2	9.7	--
14...	7.0	33	7.0	12.0	9.8	--
14...	8.0	34	7.0	11.9	9.3	--
14...	9.0	34	6.9	11.7	8.2	--
14...	10.0	37	6.6	10.7	7.1	--
14...	11.0	44	6.5	10.0	3.6	--
14...	12.0	60	6.6	9.6	1.8	--
385337120064401 - GILMORE LAKE - SITE L5						
JUL , 1975						
10...	.5	12	6.5	12.1	7.8	12.0
10...	1.0	12	6.4	11.8	7.7	--
10...	2.0	13	6.2	9.7	7.9	--
10...	3.0	13	6.1	8.9	8.0	--
10...	4.0	13	5.9	7.0	7.8	--
10...	5.0	13	5.9	6.3	7.8	--
10...	6.0	13	5.9	5.7	7.7	--
10...	7.0	13	5.9	5.4	7.7	--
10...	8.0	13	5.8	5.2	7.7	--
10...	9.0	13	5.8	5.0	7.6	--
10...	10.0	14	5.8	4.8	7.6	--
10...	11.0	14	5.8	4.6	7.6	--
10...	12.0	14	5.8	4.5	7.6	--
10...	13.0	14	5.8	4.4	7.5	--

Table 2.--*Vertical profiles of lakes*--Continued

DATE	SAMPLING DEPTH (M)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	TRANSPARENCY (SECCHI DISK) (M)
385337120064401 - GILMORE LAKE - SITE L5						
JUL , 1975						
10...	14.0	14	5.8	4.4	7.4	--
10...	15.0	14	5.8	4.3	7.4	--
10...	16.0	14	5.9	4.2	7.4	--
10...	17.0	14	5.8	4.2	7.4	--
10...	18.0	14	5.9	4.2	7.3	--
10...	19.0	14	5.9	4.1	7.3	--
10...	20.0	14	5.9	4.1	7.2	--
10...	21.0	14	5.9	4.1	7.1	--
10...	22.0	14	5.9	4.1	7.1	--
10...	23.0	14	5.9	4.0	7.0	--
10...	24.0	14	5.9	4.0	6.9	--
10...	25.0	14	5.9	4.0	6.9	--
10...	26.0	14	5.8	4.0	6.8	--
10...	27.0	14	5.8	4.0	6.7	--
10...	28.0	14	5.8	3.9	6.6	--
10...	29.0	14	5.8	3.9	6.5	--
10...	30.0	14	5.8	3.9	6.4	--
10...	31.0	14	5.8	3.8	6.4	--
AUG						
27...	.5	10	6.6	13.8	7.8	--
27...	1.0	10	6.5	13.8	7.8	--
27...	2.0	10	6.4	13.8	7.6	--
27...	3.0	11	6.4	13.8	7.5	--
27...	4.0	11	6.4	13.8	7.5	--
27...	5.0	11	6.3	13.8	7.4	--
27...	6.0	11	6.5	13.7	7.4	--
27...	7.0	11	6.6	13.7	7.4	--
27...	8.0	12	6.5	11.5	8.4	--
27...	9.0	12	6.5	10.2	8.5	--
27...	10.0	13	6.6	9.1	8.7	--
27...	11.0	12	6.6	8.7	8.6	--
27...	12.0	12	6.6	8.0	8.6	--
27...	13.0	12	6.5	7.2	8.7	--
27...	14.0	13	6.5	6.6	8.7	--
27...	15.0	13	6.4	6.5	8.6	--
27...	16.0	13	6.3	6.2	8.6	--
27...	17.0	11	6.3	5.8	8.6	--
27...	18.0	11	6.2	5.6	8.6	--
27...	19.0	11	6.2	5.4	8.6	--
27...	20.0	11	6.3	5.3	8.6	--
27...	21.0	11	6.2	5.1	8.5	--
27...	22.0	12	6.2	4.9	8.5	--
27...	23.0	12	6.2	4.8	8.4	--
27...	24.0	12	6.2	4.6	8.4	--
27...	25.0	12	6.1	4.5	8.3	--
27...	26.0	12	6.1	4.4	8.3	--
27...	27.0	12	6.1	4.4	8.2	--
27...	28.0	12	6.1	4.3	8.1	--
27...	29.0	12	6.1	4.3	8.0	--
27...	30.0	12	6.1	4.2	8.0	--
JUN , 1976						
30...	.5	10	7.1	13.6	7.7	14.0
30...	1.0	10	7.0	13.6	7.7	--
30...	2.0	10	6.9	13.6	7.7	--
30...	3.0	10	6.8	13.6	7.7	--
30...	4.0	10	6.7	13.6	7.7	--
30...	5.0	10	6.7	13.6	7.7	--
30...	6.0	10	6.6	13.6	7.7	--
30...	7.0	10	6.6	13.6	7.7	--
30...	8.0	10	6.6	13.6	7.8	--

Table 2.--*Vertical profiles of lakes*--Continued

DATE	SAMPLING DEPTH (M)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	TRANSPARENCY (SECCHI DISK) (M)
385337120064401 - GILMORE LAKE - SITE L5						
JUN , 1976						
30...	9.0	10	6.6	12.0	8.3	--
30...	10.0	11	6.7	9.3	8.6	--
30...	11.0	12	6.6	8.4	8.8	--
30...	12.0	12	6.5	7.3	8.8	--
30...	13.0	12	6.4	6.7	8.8	--
30...	14.0	12	6.4	6.4	8.8	--
30...	15.0	13	6.3	6.2	8.7	--
30...	16.0	13	6.3	6.1	8.7	--
30...	17.0	13	6.2	5.7	8.7	--
30...	18.0	13	6.2	5.6	8.7	--
30...	19.0	13	6.2	5.5	8.6	--
30...	20.0	13	6.2	5.4	8.5	--
30...	21.0	13	6.2	5.2	8.4	--
30...	22.0	13	6.2	5.1	8.4	--
30...	23.0	13	6.1	5.0	8.4	--
30...	24.0	13	6.1	5.0	3.0	--
30...	25.0	13	6.2	5.0	2.2	--
SEP						
01...	.5	10	6.4	15.7	7.2	14.0
01...	1.0	10	6.3	15.4	7.1	--
01...	2.0	10	6.2	15.1	7.2	--
01...	3.0	10	6.0	15.0	7.0	--
01...	4.0	10	6.0	15.0	7.2	--
01...	5.0	11	5.8	14.9	7.2	--
01...	6.0	11	5.8	14.8	7.2	--
01...	7.0	11	5.8	14.6	7.2	--
01...	8.0	11	5.8	14.5	7.3	--
01...	9.0	11	5.7	14.4	7.3	--
01...	10.0	11	5.7	14.3	7.3	--
01...	11.0	11	5.7	14.1	7.3	--
01...	12.0	11	5.7	14.0	7.3	--
01...	13.0	11	5.7	13.6	7.4	--
01...	14.0	12	5.7	12.2	8.6	--
01...	15.0	12	5.6	10.7	8.8	--
01...	16.0	13	6.2	8.4	8.8	--
01...	17.0	13	6.2	8.0	8.8	--
01...	18.0	14	6.2	7.6	8.9	--
01...	19.0	14	6.0	7.4	8.8	--
01...	20.0	14	6.0	7.0	8.6	--
01...	21.0	14	6.0	6.6	8.8	--
01...	22.0	15	6.0	6.1	8.7	--
01...	23.0	15	6.0	5.8	8.6	--
01...	24.0	15	6.0	5.6	8.5	--
01...	25.0	15	5.9	5.0	8.2	--
01...	26.0	15	5.9	4.9	8.0	--
01...	27.0	16	5.8	4.8	7.9	--
01...	28.0	16	5.8	4.8	7.9	--
01...	29.0	16	5.8	4.7	7.8	--
01...	30.0	16	5.8	4.6	8.0	--
OCT , 1976						
13...	.5	8	7.0	13.1	8.4	17.5
13...	1.0	8	7.0	12.8	8.4	--
13...	2.0	9	7.0	12.6	8.5	--
13...	3.0	9	7.0	12.5	8.8	--
13...	4.0	9	7.0	12.5	8.6	--
13...	5.0	9	7.0	12.4	8.4	--
13...	6.0	9	7.0	12.4	8.8	--
13...	7.0	9	7.0	12.4	8.6	--
13...	8.0	9	7.0	12.4	8.6	--
13...	9.0	9	7.0	12.4	8.7	--

Table 2.--*Vertical profiles of lakes*--Continued

DATE	SAMPLING DEPTH (M)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	TRANSPARENCY (SECCHI DISK) (M)
385337120064401 - GILMORE LAKE - SITE L5						
OCT, 1976						
13...	10.0	9	7.0	12.4	8.5	--
13...	11.0	9	7.0	12.4	8.5	--
13...	12.0	9	7.0	12.4	8.6	--
13...	13.0	9	7.0	12.4	8.5	--
13...	14.0	9	7.0	12.4	8.6	--
13...	15.0	9	7.0	12.2	8.6	--
13...	16.0	9	7.0	12.2	8.6	--
13...	17.0	9	7.0	11.4	9.1	--
13...	18.0	10	6.9	8.4	9.7	--
13...	19.0	10	6.8	8.0	9.8	--
13...	20.0	10	6.8	7.6	10.0	--
13...	21.0	10	6.8	7.2	9.7	--
13...	22.0	11	6.2	6.6	9.7	--
13...	23.0	11	5.8	6.6	1.4	--
385236120044801 - LILY LAKE - SITE L6						
AUG , 1975						
29...	.5	27	6.4	14.5	6.9	--
29...	1.0	27	6.4	14.3	6.8	--
29...	2.0	27	6.2	14.0	6.8	--
29...	2.5	27	6.1	13.8	6.3	--
29...	3.0	28	6.0	13.4	5.9	--
29...	3.5	28	5.9	13.3	5.8	--
29...	4.0	28	5.8	13.0	5.6	--
29...	4.5	28	5.8	12.9	5.4	--
29...	5.0	26	5.8	12.5	4.8	--
29...	5.5	25	5.8	12.2	4.2	--
29...	6.0	25	5.7	11.9	3.6	--
29...	6.5	22	5.6	11.4	3.4	--
29...	7.0	22	5.5	10.4	2.1	--
29...	7.5	22	5.5	9.6	1.4	--
29...	8.0	23	5.5	9.0	.2	--
JUL , 1976						
02...	.5	29	6.8	16.0	7.9	4.3
02...	1.0	29	6.8	16.0	7.9	--
02...	2.0	31	6.6	14.6	7.4	--
02...	3.0	31	6.5	14.2	7.4	--
02...	4.0	30	6.6	13.9	7.4	--
02...	5.0	30	6.5	11.8	9.8	--
02...	6.0	26	6.5	10.3	10.0	--
SEP						
03...	.5	34	5.6	17.2	6.4	6.0
03...	1.0	34	5.4	17.0	6.5	--
03...	2.0	35	5.2	16.2	4.8	--
03...	3.0	37	5.1	15.2	4.8	--
03...	4.0	34	4.8	14.4	4.9	--
03...	5.0	29	4.8	13.2	6.5	--
03...	6.0	29	4.8	12.2	6.4	--
03...	7.0	27	4.5	10.7	5.8	--
03...	8.0	29	4.4	9.6	1.2	--
OCT						
15...	.5	35	6.3	11.6	6.9	--
15...	1.0	36	6.3	11.2	6.3	--
15...	2.0	37	6.3	10.7	6.2	--
15...	3.0	37	6.2	10.6	6.0	--
15...	4.0	37	6.2	10.5	4.1	--
15...	5.0	37	6.2	10.4	3.7	--
15...	6.0	37	6.2	10.3	3.6	--
15...	7.0	37	6.1	10.2	3.7	--
15...	8.0	37	6.2	10.1	4.2	--

Table 3.--*Major chemical constituents of lakes*

DATE	TIME	SAMPLING DEPTH (M)	TEMPERATURE (DEG C)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CAC03)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)
385344120080601 - HALF MOON LAKE (LAT 38 53 44 LONG 120 08 06.01)- SITE L1										
JUL , 1975										
09...	1330	0.5	13.4	5	0	1.5	.3	.6	.1	.2
09...	1345	3.0	8.7	5	0	1.5	.4	.4	.1	.2
AUG										
26...	1345	1.0	15.4	7	2	2.8	.0	.6	.1	.1
26...	1350	3.0	14.5	5	0	1.8	.0	.5	.1	.1
AUG , 1976										
31...	1420	1.0	16.8	6	0	2.2	.0	.2	.0	.2
31...	1425	4.0	15.2	5	0	2.1	.0	.2	.0	.2
385340120081201 - ALTA MORRIS LAKE (LAT 38 53 40 LONG 120 08 12.01) - SITE L2										
JUL , 1975										
09...	1500	2.0	3.7	4	0	.9	.4	.3	.1	.1
AUG										
26...	1255	3.0	15.7	3	0	.8	.2	.6	.2	.0
AUG , 1976										
31...	1109	1.0	16.3	3	0	1.0	.0	.1	.0	.2
31...	1114	3.0	16.2	3	0	1.0	.0	.1	.0	.2
385247120072401 - SUSIE LAKE (LAT 38 52 47 LONG 120 07 24.01)- SITE L3										
JUL , 1975										
08...	1030	1.0	11.7	6	2	1.9	.2	.4	.1	.2
08...	1040	5.0	8.3	5	0	1.8	.2	.5	.1	.2
08...	1050	12.0	6.1	8	1	1.8	.8	.4	.1	.2
AUG										
25...	1641	1.0	16.1	4	0	1.7	.0	.7	.1	.1
25...	1650	10.0	10.2	10	4	3.4	.3	.6	.1	.1
25...	1655	14.0	8.8	13	4	4.4	.4	.6	.1	.2
25...	1700	17.0	5.6	13	1	4.2	.6	.8	.1	.3
AUG , 1976										
30...	1633	1.0	16.6	6	0	2.1	.1	.3	.1	.3
30...	1644	12.0	12.8	6	0	2.1	.1	.2	.0	.2
OCT										
12...	1530	1.0	13.4	7	0	2.5	.2	.4	.1	.2
12...	1538	9.0	13.0	6	0	2.3	.1	.4	.1	.2
385226120063601 - GRASS LAKE (LAT 38 52 26 LONG 120 06 36.01)- SITE L4										
JUL , 1975										
11...	1320	1.0	13.0	7	2	1.6	.7	.5	.1	.2
11...	1325	5.0	8.7	11	1	3.3	.7	.5	.1	.2
11...	1340	13.0	6.0	10	1	2.7	.9	.6	.1	.3
AUG										
28...	1425	2.0	15.5	9	0	2.9	.4	.9	.1	.2
28...	1435	7.0	12.4	8	1	3.2	.0	.8	.1	.2
28...	1450	13.0	8.6	14	0	5.5	.1	1.1	.1	.2
OCT										
23...	1420	.0	4.5	7	2	2.6	.0	.4	.1	.3
JUL , 1976										
01...	1438	1.0	16.4	9	0	3.3	.1	.4	.1	.3
01...	1446	7.0	11.2	8	0	3.1	.1	.4	.1	.2
01...	1451	10.0	8.7	14	2	5.0	.3	.8	.1	.3
SEP										
02...	1210	1.0	17.6	11	4	4.2	.1	.5	.1	.3
02...	1215	5.0	12.7	7	0	2.8	.0	.4	.1	.3
02...	1220	10.0	9.5	10	2	3.8	.1	.6	.1	.3
OCT										
14...	1320	1.0	13.0	12	0	4.4	.3	.9	.1	.4
14...	1329	10.0	10.7	14	1	5.3	.3	1.0	.1	.4

Table 3.--*Major chemical constituents of lakes*--Continued

DATE	TIME	BICARBONATE (MG/L AS HCO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)
385344120080601 - HALF MOON LAKE (LAT 38 53 44 LONG 120 08 06.01) - SITE L1											
JUL , 1975											
09...	1330	6	5	2.4	.7	.0	1.8	13	8	.7	.2
09...	1345	8	7	7.5	.6	.0	1.4	8	9	.7	.2
AUG											
26...	1345	6	5	3.0	1.2	.1	.9	7	9	1.0	.2
26...	1350	6	5	3.0	.9	.2	.7	10	7	1.7	.3
AUG , 1976											
31...	1420	8	7	.6	1.9	.5	.5	--	10	2.4	.5
31...	1425	8	7	.2	1.9	.6	.5	--	10	1.8	.6
385340120081201 - ALTA MORRIS LAKE (LAT 38 53 40 LONG 120 08 12.01) - SITE L2											
JUL , 1975											
09...	1500	6	5	9.6	.6	.0	.2	1	6	4.0	.2
AUG											
26...	1255	3	2	2.4	1.0	.6	.3	3	5	1.2	.3
AUG , 1976											
31...	1109	10	8	10	1.5	.5	1.1	--	9	1.3	.5
31...	1114	3	2	4.8	1.5	.5	1.2	--	6	1.9	.4
385247120072401 - SUSIE LAKE (LAT 38 52 47 LONG 120 07 24.01) - SITE L3											
JUL , 1975											
08...	1030	4	3	1.6	1.0	.6	1.5	11	8	1.6	.3
08...	1040	8	7	5.1	1.1	.2	1.8	10	10	1.3	--
08...	1050	8	7	5.1	1.1	.8	1.3	13	10	.9	.3
AUG											
25...	1641	8	7	.6	.8	.8	.9	8	9	1.7	.2
25...	1650	7	6	1.8	1.0	.7	.7	11	10	1.8	.2
25...	1655	11	9	14	1.3	.7	1.3	15	14	1.4	.3
25...	1700	14	11	36	1.9	.5	2.0	21	17	2.4	.5
AUG , 1976											
30...	1633	9	7	1.4	1.9	.5	.3	--	10	8.6	.4
30...	1644	8	7	.6	1.3	.3	.3	--	8	2.3	1.2
OCT											
12...	1530	9	7	.7	2.1	.1	1.1	--	11	12	.2
12...	1538	10	8	.8	1.6	.9	1.9	--	12	.6	--
385226120063601 - GRASS LAKE (LAT 38 52 26 LONG 120 06 36.01) - SITE L4											
JUL , 1975											
11...	1320	6	5	3.8	.6	.0	1.7	17	8	1.0	.2
11...	1325	12	10	15	.7	.0	1.4	11	13	.7	.3
11...	1340	11	9	11	1.5	.6	2.7	17	15	1.2	.2
AUG											
28...	1425	11	9	5.6	1.7	.1	1.2	14	13	1.5	.4
28...	1435	9	7	2.9	1.7	.1	1.5	12	12	1.3	.2
28...	1450	17	14	6.8	3.6	.2	3.0	25	22	1.7	.2
OCT											
23...	1420	6	5	--	1.4	.0	.6	11	8	1.1	.1
JUL , 1976											
01...	1438	10	8	2.5	1.5	.0	.6	--	11	1.4	--
01...	1446	10	8	4.0	1.5	.1	2.1	--	12	1.4	.3
01...	1451	14	16	8.9	5.0	.0	3.8	--	22	.9	--
SEP											
02...	1210	8	11	1.6	4.1	.6	2.4	--	16	3.7	.5
02...	1215	9	8	4.6	3.5	.5	2.3	--	14	1.3	.4
02...	1220	10	20	13	5.0	.5	2.7	--	18	1.4	.5
OCT											
14...	1320	16	13	1.6	3.1	.2	2.8	--	20	5.2	.1
14...	1329	17	16	6.8	4.4	.2	4.5	--	25	4.2	.1

Table 3.--*Major chemical constituents of lakes*--Continued

DATE	TIME	SAMPLING DEPTH (M)	TEMPERATURE (DEG C)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)
385337120064401 - GILMORE LAKE (LAT 38 53 37 LONG 120 06 44.01) - SITE L5										
JUL , 1975										
10...	1255	1.0	11.8	6	0	1.3	.7	1.1	.2	.3
10...	1300	3.0	8.9	4	0	1.2	.3	.7	.1	.2
10...	1305	8.0	5.2	5	0	1.2	.5	.8	.2	.3
10...	1307	10.0	4.8	5	0	1.2	.5	.8	.2	.3
10...	1310	13.0	4.4	5	0	1.3	.4	.7	.1	.3
10...	1322	25.0	4.0	5	0	1.3	.4	.7	.1	.3
AUG										
27...	1125	2.0	13.8	6	1	1.4	.5	.8	.1	.2
27...	1135	9.0	10.2	3	0	1.2	.1	.9	.2	.1
27...	1150	24.0	4.6	3	0	1.2	.1	.8	.2	.1
27...	1151	25.0	4.5	3	0	1.2	.1	.8	.2	.1
OCT										
21...	1200	.0	9.0	3	0	1.2	.0	.7	.2	.2
SEP , 1976										
01...	1230	5.0	14.9	3	0	1.1	.0	.5	.1	.3
01...	1239	14.0	12.2	5	0	1.9	.0	.4	.1	.3
01...	1250	25.0	5.0	7	3	2.7	.0	.4	.1	.3
OCT										
13...	1304	5.0	12.4	3	0	1.2	.1	.8	.2	.3
13...	1316	17.0	11.4	3	0	1.0	.2	.7	.2	.2
13...	1319	20.0	7.6	10	4	3.8	.0	.7	.1	.2
385236120044801 - LILY LAKE (LAT 38 52 36 LONG 120 04 48.01) - SITE L6										
JUL , 1975										
11...	1505	0.5	--	11	1	2.9	.9	1.0	.1	.5
AUG										
29...	1139	1.0	14.3	12	1	3.8	.5	1.2	.2	.3
29...	1145	4.0	13.0	12	1	4.0	.5	1.2	.2	.3
29...	1155	7.0	9.6	8	0	2.5	.4	.9	.1	.2
OCT										
22...	1015	.0	6.0	9	1	3.6	.0	1.1	.2	.4
JUL , 1976										
02...	1200	1.0	16.0	10	0	3.6	.3	.9	.1	.4
02...	1205	5.0	11.8	8	0	2.9	.1	.7	.1	.3
SEP										
03...	1133	1.0	17.0	11	1	4.1	.3	1.2	.2	.4
03...	1138	5.0	13.2	9	0	3.1	.3	.8	.1	.4
OCT										
15...	1216	1.0	11.2	12	0	4.2	.3	1.4	.2	.6
15...	1221	5.0	10.4	11	0	4.1	.3	1.4	.2	.5

Table 3.--*Major chemical constituents of lakes*--Continued

DATE	TIME	BICARBONATE (MG/L AS HCO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)
385337120064401 - GILMORE LAKE (LAT 38 53 37 LONG 120 06 44.01) - SITE L5											
JUL , 1975											
10...	1255	8	7	5.0	.8	.6	1.4	12	10	1.4	.2
10...	1300	6	5	7.6	.1	.0	1.3	10	7	1.9	.2
10...	1305	10	8	23	.8	.9	1.2	13	11	1.0	.2
10...	1307	10	8	23	.8	.9	1.2	13	11	1.0	.2
10...	1310	6	5	12	.0	.0	1.7	14	7	1.4	.2
10...	1322	6	5	12	.0	.0	1.7	14	7	1.4	.2
AUG											
27...	1125	6	5	3.8	.4	.2	.6	8	7	1.6	.3
27...	1135	6	5	3.0	.4	.1	.5	5	6	.9	.5
27...	1150	7	6	8.3	.3	.1	1.0	8	7	.9	.3
27...	1151	7	6	8.3	.3	.1	1.0	8	7	.9	.3
OCT											
21...	1200	9	7	--	.3	.0	.7	11	8	2.8	.4
SEP , 1976											
01...	1230	11	9	28	.8	.5	2.2	--	11	4.8	--
01...	1239	10	8	32	.8	.5	2.0	--	11	8.8	2.0
01...	1250	4	3	8.1	.8	.5	2.1	--	9	7.7	.5
OCT											
13...	1304	8	7	1.3	1.6	.1	3.3	--	11	10	.1
13...	1316	8	7	1.3	1.3	.1	1.6	--	9	.2	.0
13...	1319	7	7	1.8	1.0	.2	3.1	--	13	.4	.1
385236120044801 - LILY LAKE (LAT 38 52 36 LONG 120 04 48.01) - SITE L6											
JUL , 1975											
11...	1505	12	10	--	.4	.1	2.6	19	14	2.6	1.1
AUG											
29...	1139	13	11	8.3	1.2	1.0	1.9	18	16	1.6	.2
29...	1145	13	11	33	1.0	1.0	1.6	16	16	1.7	.0
29...	1155	11	9	56	.8	.9	.6	18	12	1.9	.3
OCT											
22...	1015	10	8	--	1.8	.7	1.1	20	14	1.7	.2
JUL , 1976											
02...	1200	12	13	3.0	1.1	.7	.5	--	13	1.1	.5
02...	1205	10	10	5.1	1.0	.4	1.3	--	12	1.5	.5
SEP											
03...	1133	13	21	83	2.3	1.3	3.2	--	19	5.7	.4
03...	1138	14	11	355	2.6	.8	3.1	--	18	8.3	.9
OCT											
15...	1216	16	21	13	1.8	1.4	4.5	--	22	2.3	.2
15...	1221	16	16	16	2.4	1.4	4.7	--	23	.6	.2

Table 4.--*Major chemical constituents of streams*

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO
385343120080501 - SITE S1 (LAT 38 53 43 LONG 120 08 05.01)											
JUL , 1975											
09...	1030	11	--	--	12.0	6	0	1.6	.4	1.7	.3
AUG											
26...	1105	1.9	--	--	16.0	6	1	2.2	.2	.5	.1
JUL , 1976											
01...	1005	1.3	11	6.6	14.5	5	1	1.7	.1	.2	.0
AUG											
31...	0942	.42	19	6.8	16.5	7	4	2.1	.4	.2	.0
OCT											
13...	0955	.20	19	7.5	10.6	7	0	2.6	.1	.5	.1
385325120075401 - SITE S2 (LAT 38 53 25 LONG 120 07 54.01)											
JUL , 1975											
09...	1230	3.3	7	--	7.5	4	0	1.2	.3	.4	.1
AUG											
26...	1305	.12	13	--	17.0	5	0	1.9	.0	.5	.1
JUL , 1976											
01...	1200	.50	6	6.1	13.1	5	3	1.9	.1	.1	.0
AUG											
31...	1115	.20	26	6.9	18.3	8	0	2.9	.3	.3	.0
385310120074401 - SITE S3 (LAT 38 53 10 LONG 120 07 44.01)											
JUL , 1975											
09...	1405	14	10	--	11.8	4	0	1.3	.2	.7	.2
AUG											
26...	1500	2.0	15	--	16.0	7	1	2.4	.3	.3	.0
JUL , 1976											
01...	1310	1.9	14	6.6	--	6	0	2.4	.1	.2	.0
AUG											
31...	1300	.65	26	6.5	14.9	10	0	3.4	.3	.3	.0
OCT											
13...	1130	.30	26	7.4	9.0	11	0	4.0	.2	.6	.1
385248120072201 - SITE S4 (LAT 38 52 48 LONG 120 07 22.01)											
JUL , 1975											
08...	1030	12	12	--	11.5	5	0	1.6	.3	.7	.1
AUG											
28...	0945	.95	12	--	13.0	4	0	1.7	.0	.4	.1
AUG , 1976											
30...	1520	2.4	20	6.7	18.3	6	0	2.1	.1	.2	.0
OCT											
13...	1315	.59	25	7.2	14.5	7	0	2.5	.2	.4	.1
385236120071301 - SITE S5 (LAT 38 52 36 LONG 120 07 13.01)											
JUL , 1975											
08...	1240	8.5	7	--	10.4	4	2	1.1	.3	.6	.1
AUG											
28...	1120	.68	10	--	10.2	4	0	1.3	.3	.4	.1
OCT											
23...	1310	--	9	--	4.2	4	0	1.5	.0	.3	.1
SEP , 1976											
02...	0950	.42	19	6.1	12.9	4	0	1.4	.1	.4	.1
OCT											
14...	0900	.26	19	7.2	6.0	5	0	1.9	.1	.6	.1

Table 4.--*Major chemical constituents of streams*--Continued

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)
385343120080501 - SITE S1 (LAT 38 53 43 LONG 120 08 05.01)											
JUL , 1975											
09...	.7	10	8	--	.7	.7	1.2	10	12	1.8	.2
AUG											
26...	.1	7	6	--	.9	.6	.9	7	9	1.4	.2
JUL , 1976											
01...	.2	4	3	1.6	.9	.0	1.7	--	7	--	--
AUG											
31...	.2	4	3	1.0	1.5	.6	1.2	--	8	4.1	--
OCT											
13...	.2	9	7	.5	2.4	.3	1.4	--	12	.9	.1
385325120075401 - SITE S2 (LAT 38 53 25 LONG 120 07 54.01)											
JUL , 1975											
09...	.2	7	6	--	.5	.6	.3	11	7	1.6	.2
AUG											
26...	.0	7	6	--	.9	.8	1.1	7	9	1.6	.2
JUL , 1976											
01...	.1	3	2	3.8	.8	.0	1.1	--	6	--	--
AUG											
31...	.2	12	10	2.4	1.6	.6	.5	--	12	1.6	.7
385310120074401 - SITE S3 (LAT 38 53 10 LONG 120 07 44.01)											
JUL , 1975											
09...	.4	6	5	--	.8	.2	1.2	6	8	1.1	.2
AUG											
26...	.1	7	6	--	1.1	.2	1.4	10	9	1.4	.1
JUL , 1976											
01...	.2	11	9	4.4	1.0	.0	1.9	--	11	--	--
AUG											
31...	.3	12	10	6.1	1.8	.5	2.1	--	15	1.8	.5
OCT											
13...	.3	13	11	.8	2.3	.2	3.3	--	18	.1	.3
385248120072201 - SITE S4 (LAT 38 52 48 LONG 120 07 22.01)											
JUL , 1975											
08...	.4	7	6	--	.7	.0	1.4	8	9	4.0	.2
AUG											
28...	.1	5	4	--	.8	.3	.9	7	7	1.3	.2
AUG , 1976											
30...	.2	12	10	3.8	1.3	.5	.4	--	11	1.4	.7
OCT											
13...	.2	9	7	.9	2.1	.2	4.9	--	15	.7	.1
385236120071301 - SITE S5 (LAT 38 52 36 LONG 120 07 13.01)											
JUL , 1975											
08...	.2	3	2	--	.7	.0	.3	4	5	3.5	--
AUG											
28...	.1	5	4	--	.8	.1	.5	6	6	1.4	.1
OCT											
23...	.3	9	7	--	.8	.2	.3	12	8	1.1	.1
SEP , 1976											
02...	.3	11	9	14	1.4	.5	2.2	--	12	2.3	.3
OCT											
14...	.3	7	6	.7	2.1	.3	.9	--	10	.4	.2

Table 4.--*Major chemical constituents of streams* --Continued

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO
385230120065901 - SITE S6 (LAT 38 52 30 LONG 120 06 59.01)											
JUL , 1975											
08...	1435	25	10	--	12.7	4	0	1.4	.2	.5	.1
AUG											
28...	1330	1.6	13	--	11.5	5	0	2.1	.0	.4	.1
OCT											
23...	1115	13	11	--	4.0	5	0	1.8	.0	.4	.1
SEP , 1976											
02...	1110	2.8	20	7.0	14.5	6	0	2.1	.3	.3	.1
OCT											
14...	1005	.68	21	7.4	8.5	7	0	2.5	.1	.7	.1
385227120060601 - SITE S7 (LAT 38 52 27 LONG 120 06 06.01)											
JUL , 1975											
11...	1130	24	11	--	13.0	5	0	1.6	.3	6	.1
AUG											
27...	1005	1.5	20	--	14.2	8	0	3.0	.2	.6	.1
OCT											
21...	1530	30	23	--	8.0	9	0	3.6	.0	.5	.1
SEP , 1976											
02...	1250	3.1	24	6.9	18.6	9	0	3.2	.3	.4	.1
OCT											
14...	1130	1.6	36	7.2	11.2	12	0	4.5	.3	.9	.1
385334120064601 - SITE S8 (LAT 38 53 34 LONG 120 06 46.01)											
JUL , 1975											
10...	0950	8.4	14	--	11.2	6	0	1.5	.6	1.1	.2
AUG											
25...	1500	1.0	11	--	16.5	5	0	1.1	.6	.8	.2
OCT											
21...	1200	12	13	--	10.0	4	0	1.6	.0	.5	.1
SEP , 1976											
01...	0900	.06	20	7.8	11.2	7	0	2.3	.3	.7	.1
OCT											
12...	1400	.40	17	5.7	13.2	4	0	1.3	.3	.9	.2
385302120064101 - SITE S9 (LAT 38 53 02 LONG 120 06 41.01)											
JUL , 1975											
10...	1425	6.3	10	--	13.5	5	0	1.2	.4	.7	.1
AUG											
25...	1645	1.0	13	--	14.5	6	0	1.4	.6	1.1	.2
OCT											
21...	1340	.50	15	--	5.0	5	0	2.0	.0	.8	.2
SEP , 1976											
01...	1050	.06	20	7.8	14.9	6	0	2.0	.3	1.0	.2
OCT											
12...	1550	.36	16	5.3	8.5	4	0	1.4	.1	.7	.2
385232120060801 - SITE S10 (LAT 38 52 32 LONG 120 06 08.01)											
JUL , 1975											
10...	1250	8.4	12	--	12.5	6	0	1.5	.5	.9	.2
AUG											
27...	1115	1.0	18	--	11.0	8	0	2.4	.4	.9	.1
OCT											
21...	1445	12	28	--	8.5	11	0	4.1	.1	.9	.1
SEP , 1976											
01...	1230	.06	40	7.2	12.5	15	0	5.0	.5	1.5	.2
OCT											
14...	1235	.40	23	7.7	9.8	8	0	2.7	.2	.9	.1

Table 4.--*Major chemical constituents of streams*--Continued

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)
385230120065901 - SITE S6 (LAT 38 52 30 LONG 120 06 59.01)											
JUL , 1975											
08...	.2	5	4	--	.8	.5	1.1	8	7	3.1	.2
AUG											
28...	.2	6	5	--	1.0	.2	1.3	6	8	.9	.2
OCT											
23...	.3	9	7	--	.9	.0	.5	11	8	1.2	.1
SEP , 1976											
02...	.3	9	7	1.4	1.4	.4	2.1	--	11	4.8	.3
OCT											
14...	.3	10	8	.6	1.7	.2	2.4	--	13	1.0	.0
385227120060601 - SITE S7 (LAT 38 52 27 LONG 120 06 06.01)											
JUL , 1975											
11...	.3	7	6	--	1.1	.5	1.4	5	9	.8	.2
AUG											
27...	.2	10	8	--	1.7	.1	1.8	13	13	1.3	.1
OCT											
21...	.3	15	12	--	2.2	.1	1.7	18	16	1.7	.1
SEP , 1976											
02...	.3	11	9	2.2	2.3	.4	2.2	--	15	6.7	.2
OCT											
14...	.4	16	13	1.6	3.5	.2	2.7	--	20	1.4	.1
385334120064601 - SITE S8 (LAT 38 53 34 LONG 120 06 46.01)											
JUL , 1975											
10...	.6	10	8	--	.0	.2	1.8	10	11	1.8	.3
AUG											
25...	.2	6	5	--	.1	.7	1.4	6	8	1.3	.2
OCT											
21...	.4	11	9	--	.4	.3	.5	13	9	1.8	.6
SEP , 1976											
01...	.4	12	10	.3	.7	.6	3.9	--	15	1.0	--
OCT											
12...	.4	8	7	26	1.3	1.0	4.7	--	14	2.5	.1
385302120064101 - SITE S9 (LAT 38 53 02 LONG 120 06 41.01)											
JUL , 1975											
10...	.3	6	5	--	.6	.0	2.2	9	8	.8	.3
AUG											
25...	.3	7	6	--	.3	1.6	1.7	8	11	1.5	.2
OCT											
21...	.4	11	9	--	.9	.3	1.4	13	11	1.8	.3
SEP , 1976											
01...	.4	8	7	.2	1.2	.6	5.3	--	15	2.9	--
OCT											
12...	.3	9	7	72	1.3	.3	2.2	--	11	.6	.1
385232120060801 - SITE S10 (LAT 38 52 32 LONG 120 06 08.01)											
JUL , 1975											
10...	.4	10	8	--	.4	.6	2.9	12	12	1.9	.2
AUG											
27...	.3	10	8	--	.7	.3	3.3	11	13	1.6	.2
OCT											
21...	.5	17	14	--	2.0	.1	4.0	23	20	1.8	.1
SEP , 1976											
01...	.7	19	16	1.9	4.1	.6	6.8	--	29	1.5	.6
OCT											
14...	.4	12	10	.4	2.5	.3	4.3	--	17	.3	.0

Table 4.--*Major chemical constituents of streams*--Continued

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO
385234120053901 - SITE S11 (LAT 38 52 34 LONG 120 05 39.01)											
JUL , 1975											
11...	1320	32	11	--	14.9	5	0	1.8	.2	.6	.1
AUG											
29...	1100	2.5	29	--	12.0	10	0	3.8	.0	1.5	.2
OCT											
22...	0900	46	19	--	5.0	7	7	2.7	.0	.8	.1
JUL , 1976											
02...	1150	3.3	75	6.8	13.5	11	1	4.0	.3	1.3	.2
SEP											
03...	1110	3.5	37	6.6	16.5	13	2	4.4	.4	1.4	.2
OCT											
15...	1130	3.1	25	6.8	8.5	15	0	5.3	.5	2.2	.2
385248120041201 - SITE S12 (LAT 38 52 48 LONG 120 04 12.01)											
JUL , 1975											
11...	1420	52	14	--	16.0	8	2	2.2	.6	.7	.1
AUG											
29...	1225	3.0	28	--	14.5	10	0	4.0	.1	1.2	.2
OCT											
22...	1200	41	26	--	6.0	9	0	3.6	.1	1.0	.1
JUL , 1976											
02...	1030	2.4	28	6.9	14.2	10	0	3.8	.2	1.0	.1
SEP											
03...	1230	3.5	30	7.4	17.5	11	0	4.0	.3	1.2	.2
OCT											
15...	1015	3.5	27	6.7	17.0	15	1	5.3	.5	1.6	.2
385602120031801 - SITE S13 (LAT 38 56 02 LONG 120 03 18.01)											
JUL , 1975											
11...	1855	53	21	--	19.5	8	0	2.6	.3	1.0	.2
AUG											
29...	1400	6.1	23	--	18.0	9	0	2.9	.5	1.2	.2
OCT											
22...	1425	102	20	--	11.5	7	0	2.8	.0	.7	.1
JUL , 1976											
02...	0900	3.2	32	6.6	12.5	10	0	3.6	.3	.8	.1
SEP											
03...	0915	3.6	25	7.1	15.5	10	2	3.2	.4	.9	.1
OCT											
15...	0905	9.9	22	6.5	11.0	9	0	3.1	.2	1.0	.1

Table 4.--*Major chemical constituents of streams*--Continued

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)
385234120053901 - SITE S11 (LAT 38 52 34 LONG 120 05 39.01)											
JUL , 1975											
11...	.3	9	7	--	.9	.7	1.5	11	10	1.1	.2
AUG											
29...	.3	14	11	--	1.4	1.0	2.3	14	17	1.8	.2
OCT											
22...	.3	0	0	--	1.7	.9	.9	19	7	3.0	.2
JUL , 1976											
02...	.4	13	11	3.3	2.8	1.3	.5	--	17	--	--
SEP											
03...	.4	13	11	5.2	1.9	1.4	2.4	--	19	1.6	.6
OCT											
15...	.5	19	16	4.8	2.7	2.2	3.2	--	26	1.0	.2
385248120041201 - SITE S12 (LAT 38 52 48 LONG 120 04 12.01)											
JUL , 1975											
11...	.3	7	6	--	1.1	.9	2.3	11	12	1.1	.2
AUG											
29...	.4	13	11	--	1.8	.8	3.1	18	18	1.9	.1
OCT											
22...	.4	14	11	--	2.2	.9	1.5	19	17	3.7	.3
JUL , 1976											
02...	.5	13	11	2.6	2.0	.6	3.3	--	18	2.0	.4
SEP											
03...	.5	15	12	1.0	1.9	1.0	3.0	--	19	6.5	.3
OCT											
15...	.6	18	15	5.7	4.5	1.3	4.0	--	27	.9	.1
385602120031801 - SITE S13 (LAT 38 56 02 LONG 120 03 18.01)											
JUL , 1975											
11...	.5	9	7	--	1.5	.6	2.9	14	14	1.0	.2
AUG											
29...	.3	11	9	--	1.6	.5	2.7	17	15	1.4	.0
OCT											
22...	.4	9	7	--	1.2	.2	1.6	16	11	1.2	.2
JUL , 1976											
02...	.5	15	12	6.0	1.8	.2	.9	--	16	--	--
SEP											
03...	.5	9	7	1.1	1.6	.6	3.2	--	15	1.1	.2
OCT											
15...	.4	12	10	6.1	3.4	.4	2.8	--	17	.3	--

Table 5.--*Nitrogen and phosphorus in lakes*

DATE	TIME	SAMPLING DEPTH (M)	TEMPERATURE (DEG C)	NITROGEN, NITRATE DISSOLVED (MG/L AS N)	NITROGEN, NITRATE DISSOLVED (MG/L AS NO3)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS NO2)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)
385344120080601 - HALF MOON LAKE (LAT 38 53 44 LONG 120 08 06.01) - SITE L1															
JUL - 1975															
09...	1330	0.5	13.4	.02	.09	<.00	.00	.02	.02	.00	.00	.00	.16	.08	.16
09...	1345	3.0	8.7	.02	.09	<.00	.00	.03	.02	.00	.00	.00	.21	.02	.21
AUG															
26...	1345	1.0	15.4	.00	.00	<.01	.03	.00	<.00	.00	.06	.08	.16	.06	.16
26...	1350	3.0	14.5	.00	.00	<.01	.03	.00	.00	.05	.13	.17	.11	.00	.16
AUG - 1976															
31...	1420	1.0	16.8	.02	.09	<.00	.00	.03	.03	--	.00	.00	--	--	.11
31...	1425	4.0	15.2	.01	.04	<.01	.03	.03	.03	--	.00	.00	--	--	.09
385340120081201 - ALTA MORRIS LAKE (LAT 38 53 40 LONG 120 08 12.01) - SITE L2															
JUL - 1975															
09...	1500	2.0	3.7	.02	.09	<.00	.00	.04	.02	.00	.00	.00	.19	.02	.19
AUG															
26...	1255	3.0	15.7	.00	.00	.01	.03	.00	.01	.01	.09	.12	.07	.03	.08
AUG - 1976															
31...	1109	1.0	16.3	.00	.00	.00	.00	.00	.00	--	.00	.00	--	--	.05
31...	1114	3.0	16.2	.00	.00	.00	.00	.00	.00	--	.00	.00	--	--	.04
385247120072401 - SUSIE LAKE (LAT 38 52 47 LONG 120 07 24.01) - SITE L3															
JUL - 1975															
08...	1030	1.0	11.7	.02	.09	.00	.00	.02	.02	.00	.00	.00	.25	.12	.25
08...	1040	5.0	8.3	.02	.09	.00	.00	.02	.02	.00	.00	.00	.16	.04	.16
08...	1050	12.0	6.1	.02	.09	.00	.00	.02	.02	.00	.00	.00	.21	.04	.21
AUG															
25...	1641	1.0	16.1	.00	.00	<.00	.00	.00	.00	.07	.14	.18	.09	.00	.16
25...	1650	10.0	10.2	.00	.00	.01	.03	.00	.00	.02	.08	.10	.08	.04	.10
25...	1655	14.0	8.8	.00	.00	<.01	.03	.00	.00	.01	.08	.10	.15	.13	.16
25...	1700	17.0	5.6	.00	.00	<.00	.00	.00	.00	.08	.12	.15	.08	.00	.16
AUG - 1976															
30...	1633	1.0	16.6	.00	.00	<.00	.00	.00	.00	--	.00	.00	--	--	.00
30...	1644	12.0	12.8	.00	.00	<.00	.00	.00	.00	--	.00	.00	--	--	.02
OCT															
12...	1530	1.0	13.4	.00	.00	<.00	.00	.00	.00	--	.00	.00	--	--	.07
385226120063601 - GRASS LAKE (LAT 38 52 26 LONG 120 06 36.01) - SITE L4															
JUL - 1975															
11...	1320	1.0	13.0	.02	.09	.00	.00	.02	.02	.00	.00	.00	.08	.08	.08
11...	1325	5.0	8.7	.02	.09	.00	.00	.02	.02	.00	.00	.00	.12	.08	.12
11...	1340	13.0	6.0	.02	.09	<.00	.00	.02	.02	.00	.00	.00	.12	.04	.12
AUG															
28...	1425	2.0	15.5	.00	.00	.01	.03	.00	.00	.02	.07	.09	.28	.03	.30
28...	1435	7.0	12.4	.00	.00	.01	.03	.01	.00	.02	.07	.09	.19	.05	.21
28...	1450	13.0	8.6	.00	.00	.01	.03	.00	.00	.03	.07	.09	.11	.00	.14
OCT															
23...	1420	.0	4.5	.01	.04	<.00	.00	.01	.01	.06	.05	.06	.08	.00	.14

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

DATE	TIME	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)	PHOSPHORUS, HYDROLYZABLE TOTAL (MG/L AS P)	PHOSPHORUS, HYDROLYZABLE DIS. (MG/L AS P)	PHOSPHORUS, ORGANIC TOTAL (MG/L AS P)	PHOSPHORUS, ORGANIC DISSOLVED (MG/L AS P)
385344120080601 - HALF MOON LAKE (LAT 38 53 44 LONG 120 08 06.01) - SITE L1													
JUL - 1975													
09...	1330	.08	.08	.18	.80	.01	.00	.00	.00	.00	.00	.01	.01
09...	1345	.19	.02	.24	1.1	.02	.00	.00	.00	.01	.00	<.01	.01
AUG													
26...	1345	.04	.12	.16	.70	.01	.00	.00	.00	.00	.00	.01	.00
26...	1350	.04	.12	.16	.70	.05	.00	.00	.00	.00	.00	.05	.01
AUG - 1976													
31...	1420	--	--	.14	.60	.02	--	.00	.00	--	--	--	--
31...	1425	--	--	.12	.50	.01	--	.00	.00	--	--	--	--
385340120081201 - ALTA MORRIS LAKE (LAT 38 53 40 LONG 120 08 12.01) - SITE L2													
JUL - 1975													
09...	1500	.17	.02	.23	1.0	.02	<.00	<.00	.00	.00	.00	<.02	.01
AUG													
26...	1255	.00	.12	.08	.40	.01	<.00	<.00	.00	.01	.00	<.00	.00
AUG - 1976													
31...	1109	--	--	.05	.22	.00	--	.00	.00	--	--	--	--
31...	1114	--	--	.04	.20	.00	--	.00	.00	--	--	--	--
385247120072401 - SUSIE LAKE (LAT 38 52 47 LONG 120 07 24.01) - SITE L3													
JUL - 1975													
08...	1030	.13	.12	.27	1.2	.04	.00	.00	.00	.01	.00	.03	.02
08...	1040	.12	.04	.18	.80	.01	.00	.00	.00	.01	.01	.00	.00
08...	1050	.17	.04	.23	1.0	.01	.00	.00	.00	.00	.00	<.01	.01
AUG													
25...	1641	.04	.12	.16	.70	.01	.01	.00	.00	.00	.00	<.00	.05
25...	1650	.00	.12	.10	.40	.01	.00	.00	.00	.01	.00	<.00	.04
25...	1655	.00	.21	.16	.70	.01	.00	.00	.00	.00	.00	<.01	.04
25...	1700	.06	.10	.16	.70	.06	.01	.01	.03	.00	.00	<.05	.00
AUG - 1976													
30...	1633	--	--	.00	.00	.00	--	<.00	.00	--	--	--	--
30...	1644	--	--	.02	.09	.00	--	.00	.00	--	--	--	--
OCT													
12...	1530	--	--	.07	.31	.01	--	.00	.00	--	--	--	--
385226120063601 - GRASS LAKE (LAT 38 52 26 LONG 120 06 36.01) - SITE L4													
JUL - 1975													
11...	1320	.00	.08	.10	.40	.01	.00	.00	.00	.00	.00	<.01	.01
11...	1325	.04	.08	.14	.60	.01	.00	.00	.00	.00	.00	<.01	.01
11...	1340	.08	.04	.14	.60	.01	.00	.00	.00	.00	.00	.01	.01
AUG													
28...	1425	.20	.10	.30	1.3	.01	<.01	.00	.00	.00	.00	<.00	.01
28...	1435	.09	.12	.22	1.0	.01	<.01	.00	.00	.00	.00	<.00	.01
28...	1450	.12	.02	.14	.60	.01	<.01	.00	.00	.00	.00	<.00	.01
OCT													
23...	1420	.11	.03	.15	.70	.00	<.00	.00	.00	.02	.01	.00	.00

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

DATE	TIME	SAMPLING DEPTH (M)	TEMPERATURE (DEG C)	NITROGEN, NITRATE DISSOLVED (MG/L AS N)	NITROGEN, NITRATE DISSOLVED (MG/L AS NO3)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS NO2)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)
385226120063601 - GRASS LAKE - SITE L4 (CONTINUED)															
JUL , 1976															
01...	1438	1.0	16.4	.04	.18	.00	.00	.00	.04	--	.00	.00	--	--	.02
01...	1446	7.0	11.2	.00	.00	.00	.00	.00	.00	--	.01	.01	--	--	.02
01...	1451	10.0	8.7	.00	.00	.00	.00	.00	.00	--	.00	.00	--	--	.02
SEP															
02...	1210	1.0	17.6	.00	.00	.00	.00	.00	.00	--	.00	.00	--	--	.13
02...	1215	5.0	12.7	.00	.00	.00	.00	.00	.00	--	.00	.00	--	--	.01
02...	1220	10.0	9.5	.00	.00	.01	.03	.02	.01	--	.00	.00	--	--	.09
OCT															
14...	1329	10.0	10.7	.03	.13	.01	.03	.05	.04	--	.01	.01	--	--	.08
385337120064401 - GILMORE LAKE (LAT 38 53 37 LONG 120 06 44.01) - SITE L5															
JUL , 1975															
10...	1255	1.0	11.8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.21	.08	.21
10...	1300	3.0	8.9	.00	.00	.00	.00	.01	.00	.00	.00	.00	.16	.06	.16
10...	1305	8.0	5.2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.12	.02	.12
10...	1307	10.0	4.8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.12	.02	.12
10...	1310	13.0	4.4	.02	.09	.00	.00	.01	.02	.00	.00	.00	.12	.08	.12
10...	1322	25.0	4.0	.02	.09	.00	.00	.01	.02	.00	.00	.00	.12	.08	.12
AUG															
27...	1125	2.0	13.8	.00	.00	.01	.03	.00	.00	.00	.10	.13	.06	.02	.06
27...	1135	9.0	10.2	.00	.00	.01	.03	.00	.00	.00	.06	.08	.08	.08	.08
27...	1150	24.0	4.6	.00	.00	.01	.03	.00	.00	.00	.03	.04	.12	.09	.12
27...	1151	25.0	4.5	.00	.00	.01	.03	.00	.00	.00	.03	.04	.12	.09	.12
OCT															
21...	1200	.0	9.0	.01	.04	.00	.00	.01	.01	.05	.06	.08	.00	.00	.00
SEP , 1976															
01...	1230	5.0	14.9	.00	.00	.00	.00	.03	.00	--	.00	.00	--	--	.05
01...	1239	14.0	12.2	.00	.00	.00	.00	.00	.00	--	.00	.00	--	--	.02
01...	1250	25.0	5.0	.00	.00	.00	.00	.00	.00	--	.00	.00	--	--	.04
OCT															
13...	1304	5.0	12.4	.02	.09	.00	.00	.01	.02	--	.00	.00	--	--	.18
13...	1316	17.0	11.4	.00	.00	.01	.03	.02	.01	--	.00	.00	--	--	.21
13...	1319	20.0	7.6	.01	.04	.00	.00	.00	.01	--	.00	.00	--	--	--
385236120044801 - LILY LAKE (LAT 38 52 36 LONG 120 04 48.01) - SITE L6															
JUL , 1975															
11...	1505	.0	--	.00	.00	.00	.00	.02	.00	.00	.00	.00	.30	.16	.30
AUG															
29...	1139	1.0	14.3	.00	.00	.00	.00	.01	.00	.03	.11	.14	.09	.01	.12
29...	1145	4.0	13.0	.00	.00	.00	.00	.01	.00	.03	.05	.06	.18	.05	.21
29...	1155	7.0	9.6	.00	.00	.00	.00	.01	.00	.30	.36	.46	.04	.00	.34
OCT															
22...	1015	.0	6.0	.00	.00	.00	.00	.00	.00	.06	.04	.05	.04	.04	.10
JUL , 1976															
02...	1200	1.0	16.0	.00	.00	.00	.00	.00	.00	--	.00	.00	--	--	.02
02...	1205	5.0	11.8	.00	.00	.00	.00	.00	.00	--	.00	.00	--	--	.02
SEP															
03...	1133	1.0	17.0	.00	.00	.00	.00	.00	.00	--	.00	.00	--	--	.03
03...	1138	5.0	13.2	.00	.00	.00	.00	.00	.00	--	.00	.00	--	--	.25
OCT															
15...	1216	1.0	11.2	.02	.09	.00	.00	.03	.02	--	.03	.04	--	--	.54
15...	1221	5.0	10.4	.03	.13	.01	.03	.02	.04	--	.08	.10	--	--	.25

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

DATE	TIME	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)	PHOSPHORUS, HYDROLYZABLE TOTAL (MG/L AS P)	PHOSPHORUS, HYDROLYZABLE DIS. (MG/L AS P)	PHOSPHORUS, ORGANIC TOTAL (MG/L AS P)	PHOSPHORUS, ORGANIC DISSOLVED (MG/L AS P)
385226120063601 - GRASS LAKE - SITE L4 (CONTINUED)													
JUL , 1976													
01...	1438	--	--	.02	.09	.00	--	.00	.00	--	--	--	--
01...	1446	--	--	.02	.09	.15	--	.00	.00	--	--	--	--
01...	1451	--	--	.02	.09	.01	--	.00	.00	--	--	--	--
SEP													
02...	1210	--	--	.13	.58	.00	--	.00	.00	--	--	--	--
02...	1215	--	--	.01	.04	.00	--	.00	.00	--	--	--	--
02...	1220	--	--	.11	.49	.00	--	.00	.00	--	--	--	--
OCT													
14...	1329	--	--	.13	.58	.01	--	.01	.03	--	--	--	--
385337120064401 - GILMORE LAKE (LAT 38 53 37 LONG 120 06 44.01)- SITE L5													
JUL , 1975													
10...	1255	.13	.08	.21	.90	.03	.00	.00	.00	.01	.00	.02	.01
10...	1300	.10	.06	.17	.80	.02	.00	.00	.00	.00	.00	.02	.01
10...	1305	.10	.02	.12	.50	.01	.00	.00	.00	.00	.00	.01	.01
10...	1307	.10	.02	.12	.50	.01	.00	.00	.00	.00	.00	.01	.01
10...	1310	.04	.08	.13	.60	.01	.00	.00	.00	.00	.00	.01	.01
10...	1322	.04	.08	.13	.60	.01	.00	.00	.00	.00	.00	.01	.01
AUG													
27...	1125	.00	.12	.06	.30	.01	.00	.00	.00	.00	.00	.01	.00
27...	1135	.00	.14	.08	.40	.01	.00	.00	.00	.00	.00	.01	.00
27...	1150	.00	.12	.12	.50	.01	.00	.00	.00	.00	.00	.01	.00
27...	1151	.00	.12	.12	.50	.01	.00	.00	.00	.00	.00	.01	.00
OCT													
21...	1200	.00	.01	.01	.00	.01	.00	.00	.00	.01	.01	.00	.00
SEP , 1976													
01...	1230	--	--	.08	.35	.00	--	.00	.00	--	--	--	--
01...	1239	--	--	.02	.09	.00	--	.00	.00	--	--	--	--
01...	1250	--	--	.04	.18	.00	--	.01	.03	--	--	--	--
OCT													
13...	1304	--	--	.19	.84	.01	--	.00	.00	--	--	--	--
13...	1316	--	--	.23	1.0	.01	--	.00	.00	--	--	--	--
13...	1319	--	--	--	--	--	--	.00	.00	--	--	--	--
385236120044801 - LILY LAKE (LAT 38 52 36 LONG 120 04 48.01) - SITE L6													
JUL , 1975													
11...	1505	.14	.16	.32	1.4	.03	.01	.00	.00	.00	.00	.02	.01
AUG													
29...	1139	.00	.12	.13	.60	.01	.01	.00	.00	.00	.00	.00	.01
29...	1145	.11	.10	.22	1.0	.02	.01	.00	.00	.00	.00	.01	.01
29...	1155	.20	.14	.35	1.5	.02	.00	.00	.00	.00	.00	.02	.00
OCT													
22...	1015	.02	.08	.10	.40	.02	.00	.00	.00	.01	.01	.01	.00
JUL , 1976													
02...	1200	--	--	.02	.09	.00	--	.00	.00	--	--	--	--
02...	1205	--	--	.02	.09	.00	--	.00	.00	--	--	--	--
SEP													
03...	1133	--	--	.03	.13	.00	--	.00	.00	--	--	--	--
03...	1138	--	--	.25	1.1	.00	--	.00	.00	--	--	--	--
OCT													
15...	1216	--	--	.57	2.5	.01	--	.00	.00	--	--	--	--
15...	1221	--	--	.27	1.2	.01	--	.01	.03	--	--	--	--

Table 6.--*Nitrogen and phosphorus in streams*

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	TEMPER-ATURE (DEG C)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS NO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)
385343120080501 - SITE 1 (LAT 38 53 43 LONG 120 08 05.01)															
JUL , 1975															
09...	1030	11	12.0	.02	.09	.00	.00	.02	.02	.00	.00	.00	.70	.55	.70
AUG															
26...	1105	1.9	16.0	.00	.00	.00	.00	.00	.00	.04	.12	.15	.21	.18	.25
JUL , 1976															
01...	1005	1.3	14.5	.00	.00	.00	.00	.00	.00	--	.00	.00	--	--	.02
AUG															
31...	0942	.42	16.5	.03	.13	.00	.00	.03	.03	--	.00	.00	--	--	.11
OCT															
13...	0955	.20	10.6	.01	.04	.01	.03	.05	.02	--	.01	.01	--	--	.20
385325120075401 - SITE 2 (LAT 38 53 25 LONG 120 07 54.01)															
JUL , 1975															
09...	1230	3.3	7.5	.02	.09	.00	.00	.03	.02	.00	.00	.00	.25	.08	.25
AUG															
26...	1305	.12	17.0	.00	.00	.00	.00	.00	.00	.02	.05	.06	.19	.16	.21
JUL , 1976															
01...	1200	.50	13.1	.00	.00	.00	.00	.00	.00	--	.01	.01	--	--	.02
AUG															
31...	1115	.20	18.3	.00	.00	.00	.00	.00	.00	--	.00	.00	--	--	.04
385310120074401 - SITE 3 (LAT 38 53 10 LONG 120 07 44.01)															
JUL , 1975															
09...	1405	14	11.8	.03	.13	.00	.00	.02	.03	.00	.00	.00	.34	.12	.34
AUG															
26...	1500	2.0	16.0	.02	.09	.00	.00	.03	.02	.02	.04	.05	.12	.08	.14
JUL , 1976															
01...	1310	1.9	--	.03	.13	.00	.00	.06	.03	--	.00	.00	--	--	.02
AUG															
31...	1300	.65	14.9	.09	.40	.01	.03	.10	.10	--	.00	.00	--	--	.01
OCT															
13...	1130	.30	9.0	.10	.44	.00	.00	.08	.10	--	.01	.01	--	--	.05
385248120072201 - SITE 4 (LAT 38 52 48 LONG 120 07 22.01)															
JUL , 1975															
08...	1030	12	11.5	.03	.13	.00	.00	.02	.03	.00	.00	.00	.34	.25	.34
AUG															
28...	0945	.95	13.0	.00	.00	.00	.00	.00	.00	.02	.05	.06	.10	.16	.12
AUG , 1976															
30...	1520	2.4	18.3	.00	.00	.00	.00	.00	.00	--	.00	.00	--	--	.01
OCT															
13...	1315	.59	14.5	.05	.22	.00	.00	.01	.05	--	.01	.01	--	--	.20

Table 6.--*Nitrogen and phosphorus in streams*--Continued

DATE	TIME	NITRO-GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	PHOS-PHORUS, HYDRO-LYZABLE TOTAL (MG/L AS P)	PHOS-PHORUS, HYDRO-LYZABLE DIS. (MG/L AS P)	PHOS-PHORUS, ORGANIC TOTAL (MG/L AS P)	PHOS-PHORUS, ORGANIC DIS-SOLVED (MG/L AS P)
385343120080501 - SITE 1 (LAT 38 53 43 LONG 120 08 05.01)														
JUL , 1975														
09...	1030	.15	.55	.72	3.2	.05	.01	.03	.01	.03	.01	.00	.01	.00
AUG														
26...	1105	.00	.30	.25	1.1	.01	.02	.01	.00	.00	.00	.01	.00	.01
JUL , 1976														
01...	1005	--	--	.02	.09	.00	--	--	.00	.00	--	--	--	--
AUG														
31...	0942	--	--	.14	.62	.00	--	--	.00	.00	--	--	--	--
OCT														
13...	0955	--	--	.25	1.1	.02	--	--	.00	.00	--	--	--	--
385325120075401 - SITE 2 (LAT 38 53 25 LONG 120 07 54.01)														
JUL , 1975														
09...	1230	.17	.08	.28	1.2	.01	.01	.00	.00	.00	.00	.00	.01	.01
AUG														
26...	1305	.00	.21	.21	.90	.01	.04	.00	.00	.00	.00	.00	.01	.04
JUL , 1976														
01...	1200	--	--	.02	.09	.00	--	--	.02	.06	--	--	--	--
AUG														
31...	1115	--	--	.04	.18	.00	--	--	.00	.00	--	--	--	--
385310120074401 - SITE 3 (LAT 38 53 10 LONG 120 07 44.01)														
JUL , 1975														
09...	1405	.22	.12	.36	1.6	.02	.01	.01	.00	.00	.01	.00	.00	.01
AUG														
26...	1500	.02	.12	.17	.80	.01	.01	.01	.00	.00	.00	.00	.00	.01
JUL , 1976														
01...	1310	--	--	.08	.35	.00	--	--	.00	.00	--	--	--	--
AUG														
31...	1300	--	--	.11	.49	.00	--	--	.00	.00	--	--	--	--
OCT														
13...	1130	--	--	.13	.58	.01	--	--	.01	.03	--	--	--	--
385248120072201 - SITE 4 (LAT 38 52 48 LONG 120 07 22.01)														
JUL , 1975														
08...	1030	.09	.25	.36	1.6	.03	.02	.00	.00	.00	.01	.00	.02	.02
AUG														
28...	0945	.00	.21	.12	.50	.01	.01	.01	.00	.00	.00	.00	.00	.01
AUG , 1976														
30...	1520	--	--	.01	.04	.00	--	--	.00	.00	--	--	--	--
OCT														
13...	1315	--	--	.21	.93	.01	--	--	.01	.03	--	--	--	--

Table 6.--*Nitrogen and phosphorus in streams*--Continued

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	TEMPER-ATURE (DEG C)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS NO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)
385236120071301 - SITE 5 (LAT 38 52 36 LONG 120 07 13.01)															
JUL , 1975															
08...	1240	8.5	10.4	.03	.13	.00	.00	.03	.03	.00	.00	.00	.12	.10	.12
AUG															
28...	1120	.68	10.2	.00	.00	.01	.03	.02	.01	.03	.06	.08	.09	.02	.12
OCT															
23...	1310	--	4.2	.01	.04	.00	.00	.01	.01	.08	.08	.10	.08	.00	.16
SEP , 1976															
02...	0950	.42	12.9	.00	.00	.00	.00	.01	.01	--	.00	.00	--	--	.00
OCT															
14...	0900	.26	6.0	.03	.13	.00	.00	.04	.03	--	.01	.01	--	--	.26
385230120065901 - SITE 6 (LAT 38 52 30 LONG 120 06 59.01)															
JUL , 1975															
08...	1435	25	12.7	.03	.13	.00	.00	.02	.03	.00	.00	.00	.25	.08	.25
AUG															
28...	1330	1.6	11.5	.02	.09	.00	.00	.02	.02	.02	.03	.04	.14	.13	.16
OCT															
23...	1115	13	4.0	.01	.04	.00	.00	.01	.01	.08	.03	.04	.25	.00	.33
SEP , 1976															
02...	1110	2.8	14.5	.02	.09	.00	.00	.02	.03	--	.00	.00	--	--	.03
385227120060601 - SITE 7 (LAT 38 52 27 LONG 120 06 06.01)															
JUL , 1975															
11...	1130	24	13.0	.02	.09	.00	.00	.02	.02	.00	.00	.00	.25	.08	.25
AUG															
27...	1005	1.5	14.2	.01	.04	.00	.00	.01	.01	.02	.05	.06	.19	.07	.21
OCT															
21...	1530	30	8.0	.00	.00	.00	.00	.00	.00	.06	.05	.06	.00	.03	.02
SEP , 1976															
02...	1250	3.1	18.6	.00	.00	.00	.00	.01	.01	--	.00	.00	--	--	.00
OCT															
14...	1130	1.6	11.2	.00	.00	.00	.00	.02	.00	--	.01	.01	--	--	.13
385334120064601 - SITE 8 (LAT 38 53 34 LONG 120 06 46.01)															
JUL , 1975															
10...	0950	8.4	11.2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.47	.25	.47
AUG															
25...	1500	1.0	16.5	.00	.00	.00	.00	.00	.00	.12	.14	.18	.09	.11	.21
OCT															
21...	1200	12	10.0	.02	.09	.00	.00	.00	.02	.16	.15	.19	.48	.46	.64
SEP , 1976															
01...	0900	.06	11.2	.00	.00	.00	.00	.00	.00	--	.00	.00	--	--	.00
OCT															
12...	1400	.40	13.2	.06	.27	.00	.00	.01	.06	--	.05	.06	--	--	.57

Table 6.--*Nitrogen and phosphorus in streams*--Continued

DATE	TIME	NITRO-GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	PHOS-PHORUS, HYDRO-LYZABLE TOTAL (MG/L AS P)	PHOS-PHORUS, HYDRO-LYZABLE DIS. (MG/L AS P)	PHOS-PHORUS, ORGANIC TOTAL (MG/L AS P)	PHOS-PHORUS, ORGANIC DIS-SOLVED (MG/L AS P)
385236120071301 - SITE 5 (LAT 38 52 36 LONG 120 07 13.01)														
JUL , 1975														
08...	1240	.02	.10	.15	.70	.01	.01	.00	.00	.00	.00	.00	.01	.01
AUG														
28...	1120	.04	.08	.14	.60	.05	.00	.00	.00	.00	.00	.00	.05	.00
OCT														
23...	1310	.10	.06	.17	.80	.01	.01	.00	.00	.00	.01	.01	.00	.00
SEP , 1976														
02...	0950	--	--	.01	.00	.00	--	--	.00	.00	--	--	--	--
OCT														
14...	0900	--	--	.30	1.3	.01	--	--	.00	.00	--	--	--	--
385230120065901 - SITE 6 (LAT 38 52 30 LONG 120 06 59.01)														
JUL , 1975														
08...	1435	.17	.08	.27	1.2	.01	.01	.00	.00	.00	.00	.00	.01	.01
AUG														
28...	1330	.00	.16	.18	.80	.01	.01	.01	.00	.00	.00	.00	.00	.01
OCT														
23...	1115	.33	.00	.34	1.5	.02	.01	.00	.00	.00	.01	.01	.01	.00
SEP , 1976														
02...	1110	--	--	.05	.22	.00	--	--	.00	.00	--	--	--	--
385227120060601 - SITE 7 (LAT 38 52 27 LONG 120 06 06.01)														
JUL , 1975														
11...	1130	.17	.08	.27	1.2	.01	.00	.00	.00	.00	.00	.00	.01	.00
AUG														
27...	1005	.09	.12	.22	1.0	.01	.00	.01	.00	.00	.00	.00	.00	.00
OCT														
21...	1530	.00	.08	.02	.10	.01	.01	.00	.00	.00	.01	.01	.00	.00
SEP , 1976														
02...	1250	--	--	.01	.04	.00	--	--	.00	.00	--	--	--	--
OCT														
14...	1130	--	--	.15	.66	.01	--	--	.00	.00	--	--	--	--
385334120064601 - SITE 8 (LAT 38 53 34 LONG 120 06 46.01)														
JUL , 1975														
10...	0950	.22	.25	.47	2.1	.01	.01	.00	.00	.00	.00	.00	.01	.01
AUG														
25...	1500	.00	.25	.21	.90	.01	.01	.01	.00	.00	.00	.00	.00	.01
OCT														
21...	1200	.03	.61	.64	2.8	.03	.02	.00	.00	.00	.02	.02	.01	.00
SEP , 1976														
01...	0900	--	--	.00	.00	.00	--	--	.00	.00	--	--	--	--
OCT														
12...	1400	--	--	.58	2.6	.01	--	--	.01	.03	--	--	--	--

Table 6.--*Nitrogen and phosphorus in streams*--Continued

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	TEMPER-ATURE (DEG C)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS NO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)
385302120064101 - SITE 9 (LAT 38 53 02 LONG 120 06 41.01)															
JUL , 1975															
10...	1425	6.3	13.5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.30	.12	.30
AUG															
25...	1645	1.0	14.5	.00	.00	.01	.03	.01	.00	.05	.08	.10	.25	.08	.30
OCT															
21...	1340	.50	5.0	.01	.04	.00	.00	.01	.01	.05	.03	.04	.13	.15	.18
SEP , 1976															
01...	1050	.06	14.9	.01	.04	.00	.00	.02	.02	--	.00	.00	--	--	.01
OCT															
12...	1550	.36	8.5	.01	.04	.00	.00	.03	.01	--	.02	.03	--	--	.25
385232120060801 - SITE 10 (LAT 38 52 32 LONG 120 06 08.01)															
JUL , 1975															
10...	1250	8.4	12.5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.21	.10	.21
AUG															
27...	1115	1.0	11.0	.00	.00	.00	.00	.01	.00	.02	.03	.04	.06	.11	.08
OCT															
21...	1445	12	8.5	.01	.04	.00	.00	.01	.01	.03	.03	.04	.00	.00	.00
SEP , 1976															
01...	1230	.06	12.5	.03	.13	.00	.00	.04	.04	--	.00	.00	--	--	.00
OCT															
14...	1235	.40	9.8	.00	.00	.00	.00	.02	.00	--	.01	.01	--	--	.12
385234120053901 - SITE 11 (LAT 38 52 34 LONG 120 05 39.01)															
JUL , 1975															
11...	1320	32	14.9	.01	.04	.00	.00	.02	.01	.00	.00	.00	.16	.02	.16
AUG															
29...	1100	2.5	12.0	.02	.09	.00	.00	.02	.02	.03	.07	.09	.09	.09	.12
OCT															
22...	0900	46	5.0	.03	.13	.00	.00	.03	.03	.07	.04	.05	.19	.04	.26
JUL , 1976															
02...	1150	3.3	13.5	.02	.09	.00	.00	.02	.02	--	.01	.01	--	--	.07
SEP															
03...	1110	3.5	16.5	.00	.00	.01	.03	.01	.01	--	.00	.00	--	--	.04
OCT															
15...	1130	3.1	8.5	.01	.04	.00	.00	.02	.01	--	.01	.01	--	--	.27

Table 6.--*Nitrogen and phosphorus in streams*--Continued

DATE	TIME	NITRO-GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	PHOS-PHORUS, HYDRO-LYZABLE TOTAL (MG/L AS P)	PHOS-PHORUS, HYDRO-LYZABLE DIS. (MG/L AS P)	PHOS-PHORUS, ORGANIC TOTAL (MG/L AS P)	PHOS-PHORUS, ORGANIC DIS-SOLVED (MG/L AS P)
385302120064101 - SITE 9 (LAT 38 53 02 LONG 120 06 41.01)														
JUL , 1975														
10...	1425	.18	.12	.30	1.3	.01	.01	.00	.00	.00	.00	.00	.01	.01
AUG														
25...	1645	.14	.16	.31	1.4	.01	.01	.01	.00	.00	.00	.00	.00	.01
OCT														
21...	1340	.00	.18	.19	.80	.01	.01	.00	.00	.00	.01	.01	.00	.00
SEP , 1976														
01...	1050	--	--	.02	.09	.00	--	--	.00	.00	--	--	--	--
OCT														
12...	1550	--	--	.28	1.2	.00	--	--	.00	.00	--	--	--	--
385232120060801 - SITE 10 (LAT 38 52 32 LONG 120 06 08.01)														
JUL , 1975														
10...	1250	.11	.10	.21	.90	.01	.01	.00	.00	.00	.00	.00	.01	.01
AUG														
27...	1115	.00	.14	.09	.40	.01	.01	.01	.00	.00	.00	.00	.00	.01
OCT														
21...	1445	.00	.00	.01	.00	.00	.01	.00	.00	.00	.01	.01	.00	.00
SEP , 1976														
01...	1230	--	--	.04	.20	.00	--	--	.00	.00	--	--	--	--
OCT														
14...	1235	--	--	.14	.62	.00	--	--	.00	.00	--	--	--	--
385234120053901 - SITE 11 (LAT 38 52 34 LONG 120 05 39.01)														
JUL , 1975														
11...	1320	.14	.02	.18	.80	.01	.00	.00	.00	.00	.00	.00	.01	.00
AUG														
29...	1100	.00	.16	.14	.60	.01	.00	.01	.00	.00	.00	.00	.00	.00
OCT														
22...	0900	.18	.08	.29	1.3	.01	.01	.00	.00	.00	.01	.01	.00	.00
JUL , 1976														
02...	1150	--	--	.09	.40	.02	--	--	.00	.00	--	--	--	--
SEP														
03...	1110	--	--	.05	.22	.00	--	--	.00	.00	--	--	--	--
OCT														
15...	1130	--	--	.29	1.3	.01	--	--	.00	.00	--	--	--	--

Table 6.--*Nitrogen and phosphorus in streams*--Continued

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	TEMPER-ATURE (DEG C)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS NO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)
385248120041201 - SITE 12 (LAT 38 52 48 LONG 120 04 12.01)															
JUL , 1975															
11...	1420	52	16.0	.02	.09	.00	.00	.01	.02	.00	.00	.00	.34	.25	.34
AUG															
29...	1225	3.0	14.5	.02	.09	.00	.00	.02	.02	.02	.08	.10	.23	.08	.25
OCT															
22...	1200	41	6.0	.01	.04	.00	.00	.01	.01	.04	.03	.04	.32	.00	.36
JUL , 1976															
02...	1030	2.4	14.2	.01	.04	.00	.00	.02	.02	--	.00	.00	--	--	.02
SEP															
03...	1230	3.5	17.5	.01	.04	.00	.00	.02	.01	--	.00	.00	--	--	.09
OCT															
15...	1015	3.5	17.0	.03	.13	.00	.00	.03	.03	--	.01	.01	--	--	.34
385602120031801 - SITE 13 (LAT 38 56 02 LONG 120 03 18.01)															
JUL , 1975															
11...	1855	53	19.5	.02	.09	.00	.00	.02	.02	.00	.00	.00	.25	.08	.25
AUG															
29...	1400	6.1	18.0	.00	.00	.01	.03	.01	.00	.04	.02	.03	.21	.10	.25
OCT															
22...	1425	102	11.5	.00	.00	.00	.00	.00	.00	.04	.05	.06	.01	.03	.05
JUL , 1976															
02...	0900	3.2	12.5	.03	.13	.00	.00	.03	.03	.04	.00	.00	--	--	.02
SEP															
03...	0915	3.6	15.5	.01	.04	.00	.00	.01	.00	--	.01	.01	--	--	.00
OCT															
15...	0905	9.9	11.0	.00	.00	.00	.00	.00	.00	--	.01	.01	--	--	.10

Table 6.--*Nitrogen and phosphorus in streams*--Continued

DATE	TIME	NITRO-GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	PHOS-PHORUS, HYDRO-LYZABLE TOTAL (MG/L AS P)	PHOS-PHORUS, HYDRO-LYZABLE DIS. (MG/L AS P)	PHOS-PHORUS, ORGANIC TOTAL (MG/L AS P)	PHOS-PHORUS, ORGANIC DIS-SOLVED (MG/L AS P)
385248120041201 - SITE 12 (LAT 38 52 48 LONG 120 04 12.01)														
JUL , 1975														
11...	1420	.09	.25	.35	1.5	.01	.01	.00	.00	.00	.00	.00	.01	.01
AUG														
29...	1225	.09	.16	.27	1.2	.01	.01	.01	.00	.00	.00	.00	.00	.01
OCT														
22...	1200	.36	.00	.37	1.6	.02	.01	.00	.00	.00	.01	.01	.01	.00
JUL , 1976														
02...	1030	--	--	.04	.20	.10	--	--	.01	.03	--	--	--	--
SEP														
03...	1230	--	--	.11	.49	.00	--	--	.00	.00	--	--	--	--
OCT														
15...	1015	--	--	.37	1.6	.00	--	--	.00	.00	--	--	--	--
385602120031801 - SITE 13 (LAT 38 56 02 LONG 120 03 18.01)														
JUL , 1975														
11...	1855	.17	.08	.27	1.2	.01	.01	.00	.00	.00	.00	.00	.01	.01
AUG														
29...	1400	.13	.12	.26	1.2	.05	.01	.01	.01	.03	.00	.00	.04	.00
OCT														
22...	1425	.00	.08	.05	.20	.01	.01	.00	.00	.00	.01	.01	.00	.00
JUL , 1976														
02...	0900	--	--	.04	.18	.01	--	--	.00	.00	--	--	--	--
SEP														
03...	0915	--	--	.01	.04	.00	--	--	.00	.00	--	--	--	--
OCT														
15...	0905	--	--	.10	.40	.01	--	--	.00	.00	--	--	--	--

Table 7.--*Primary productivity of Grass, Gilmore, and Lily Lakes in 1976*

Depth (m)	Primary productivity (in milligrams carbon per cubic meter per day)		
	Grass Lake (Site L4)		
	July 1	September 2	October 14
1	8.6	7.5	5.8
3	10.2	7.9	4.5
5	11.2	2.9	3.2
8	7.4	1.2	5.9
10	7.8	.5	1.7
	Gilmore Lake (Site L5)		
	June 30	September 1	October 13
1	1.3	2.0	1.5
5	3.2	1.4	1.2
10	2.0	2.1	1.4
15	1.4	.7	1.2
20	-	.8	1.1
25	1.0	-	-
	Lily Lake (Site L6)		
	July 2	September 3	October 15
1	16.8	12.1	18.0
2	25.1	10.7	12.5
3	26.2	8.4	12.3
4	13.6	6.6	7.7
5	-	9.6	2.5

Table 8.--*Fecal coliform bacteria in lakes and streams*

Sampling site and number	Concentration, in cells per 100 milliliters					
	1975			1976		
	July	Aug.	Oct.	June-July	Aug.-Sept.	Oct.
Half Moon L. (L1)						
-near middle	0	0	-	0	0	-
-near shore	-	0	-	0	1	-
S1	0	0	-	0	1	1
Alta Morris L. (L2)						
-near middle	0	0	-	0	0	-
-near shore	-	0	-	0	0	-
S2	0	0	-	0	0	-
S3	0	0	-	-	2	0
Susie L. (L3)						
-near middle	0	0	-	0	0	0
-near shore	0	0	-	0	0	([1])
S4	0	0	-	0	0	0
S5	0	0	2	0	0	0
S6	0	0	0	0	1	1
Grass L. (L4)						
-near middle	0	0	-	0	0	0
-near shore	0	0	0	0	0	0
S7	0	0	0	2	0	0
Gilmore L. (L5)						
-near middle	0	0	-	0	0	0
-near shore	0	0	0	0	0	0
S8	0	0	0	0	0	0
S9	0	([2])	0	0	1	0
S10	0	0	0	0	1	0
S11	0	0	7	0	1	1
Lily L. (L6)						
-near middle	0	0	-	0	0	0
-near shore	0	0	1	0	0	0
S12	0	0	4	0	1	2
S13	0	0	18	0	3	0

[1]Sample on Aug. 25 was 22 cells; followup on Aug. 27 was 3 cells.
[2]Sample on Oct. 12 was 21 cells; followup on Oct. 14 was 0 cells.

Table 9.--*Phytoplankton in lakes*

Taxa	Date:	Cells per milliliter 7-09-75		8-26-75		6-29-76		8-31-76	
	Depth:	1m	3m	1m	3m	1m	4m	1m	4m
Half Moon Lake (L1)									
CHLOROPHYTA (grass-green algae)									
Chlorophyceae									
Ankistrodesmus falcatus		<1	1	83	72	-	-	-	-
Arthrodesmus sp.		-	-	-	-	-	-	-	2
Cosmarium contractum		-	-	-	-	-	-	3	-
C. sp.		-	-	1	-	-	-	-	-
Oocystis submarina		-	-	92	111	-	-	-	-
Scenedesmus denticulatus		-	-	-	-	-	-	18	-
Spaerocystis schroeter		-	-	-	-	-	-	146	388
Staurastrum sp.		-	1	-	-	-	-	-	-
Treubaria setigarum		<1	-	-	-	-	-	-	-
CHRYSOPHYTA									
Bacillariophyceae (diatoms)									
Cyclotella stelligera		1	-	23	32	547	518	123	102
Cymbella sp.		-	-	1	1	-	-	-	-
Nitzschia filiformis		-	1	-	-	-	-	-	-
Synedra filiformis		-	1	-	-	-	-	-	-
S. rumpens		-	-	-	-	-	2	-	-
Chrysophyceae (golden or yellow-brown algae)									
Bitrichia chodati		<1	-	1	2	-	-	3	-
Chrysococcus sp.		-	-	-	2	-	-	-	-
Chryscikos angulatus		-	-	-	-	-	-	3	-
C. sp.		-	1	-	-	-	-	-	-
Dinobryon elegantissima		<1	3	-	-	-	-	-	6
D. sertularia		2	33	-	-	-	-	-	-
Mallomonas sp.		-	1	1	5	3	-	17	24
Pseudopedinella sp.		-	-	10	12	-	-	-	-
CRYPTOPHYTA									
Chroomonas sp.		-	2	2	16	22	35	482	282
Cryptomonas sp.		-	1	2	9	-	-	-	9
CYANOPHYTA (blue-green algae)									
Myxophyceae									
Anabaena sp.		-	-	34	-	-	-	-	-
Merismopedia sp.		-	-	-	-	-	27	-	-
PYRRHOPHYTA									
Dinophyceae (dinoflagellates)									
Glenodinium sp.		-	-	3	-	-	-	-	-
Gymnodinium sp.		5	27	42	13	5	-	117	52
Peridinium sp.		-	5	-	-	-	-	-	-
TOTAL NO. OF CELLS/ML.		9	77	295	274	577	582	912	865
TOTAL NO. OF TAXA		7	12	13	11	4	4	9	8

Table 9.--*Phytoplankton in lakes*--Continued

Taxa	Date:	Cells per milliliter 7-09-75	8-26-75	6-29-76		8-31-76	
	Depth:	2m	3m	1m	3m	1m	3m
Alta Morris Lake (L2)							
CHLOROPHYTA (grass-green algae)							
Chlorophyceae							
Ankistrodesmus falcatus		-	47	-	-	-	-
Cosmarium staurastroides		17	-	-	-	-	-
Crucigenia rectangularis		-	-	-	-	1552	873
Oocystis sp.		-	9	-	-	5	14
Scenedesmus spp.		-	-	-	2	-	-
Spaerocystis schroeter		-	-	-	-	412	412
CHRYSOPHYTA							
Bacillariophyceae (diatoms)							
Cymbella ventricosa		-	-	<1	-	-	-
Melosira italica		-	-	-	7	-	-
Nitzschia filiformis		-	-	-	3	-	-
N. sp.		-	-	<1	-	-	-
Surirella ovata		-	-	-	1	-	-
Synedra filiformis		13	-	-	-	-	-
S. radians		4	-	-	-	-	-
Chrysophyceae (golden or yellow-brown algae)							
Bitrichia chodati		4	-	-	-	2	-
Chrysococcus sp.		-	-	-	-	-	14
Dinobryon elegantissima		-	-	-	2	-	2
D. sertularia		-	28	-	-	-	-
Mallomonas sp.		-	-	3	2	-	-
Pseudopedinella sp.		11	-	-	-	-	-
CRYPTOPHYTA							
Chroomonas sp.		2	<1	3	4	18	11
Cryptomonas sp.		-	1	-	-	-	-
PYRRHOPHYTA							
Dinophyceae (dinoflagellates)							
Glenodinium sp.		2	13	-	-	21	24
Gymnodinium sp.		48	-	17	27	11	5
TOTAL NO. OF CELLS/ML.		101	98	24	48	2021	1355
TOTAL NO. OF TAXA		8	6	5	8	7	8

Table 9.--*Phytoplankton in lakes*--Continued

Susie Lake (L3)

Taxa	Date:	7-08-75			8-25-75				6-28-76			8-30-76		10-12-76	
	Depth:	1m	5m	12m	1m	10m	14m	17m	1m	8m	15m	1m	12m	1m	10m
		Cells per milliliter													
CHLOROPHYTA (grass-green algae)															
Chlorophyceae															
Ankistrodesmus falcatus		<1	3	1	-	-	-	-	-	11	33	-	-	-	-
Arthrodesmus sp.		<1	<1	-	-	-	-	-	5	-	-	8	9	1	-
Cosmarium sp.		-	-	-	-	-	-	-	-	-	-	-	-	1	-
C. spp.		<1	-	-	-	-	-	-	-	-	-	-	-	-	-
C. staurastroides		1	3	3	-	5	4	3	-	-	73	-	-	-	-
Dictyosphaerium pulchellum		-	-	4	4	-	-	-	-	-	-	-	-	-	-
Euastrum sp.		-	-	-	-	-	-	-	-	-	-	-	-	1	-
Oocystis sp.		-	-	-	6	-	-	-	-	-	-	-	-	8	8
Quadrigula chodatii		-	-	-	-	-	-	-	-	-	-	-	-	-	18
Scenedesmus denticulatus		-	-	-	-	-	-	-	-	-	-	-	4	-	-
S. sp.		-	-	-	-	-	-	-	-	-	-	-	-	8	8
Staurastrum sp.		-	-	-	-	2	-	-	-	1	-	-	-	-	-
CHRYSOPHYTA															
Bacillariophyceae (diatoms)															
Achnanthes minutissima		-	-	-	-	-	-	-	-	-	-	-	-	-	1
Cyclotella stelligera		-	-	-	-	-	-	-	-	-	-	145	44	8	6
Cymbella sp.		<1	-	-	-	-	-	-	-	-	-	-	-	-	-
Eunotia sp.		-	-	-	-	-	-	-	-	-	-	-	-	1	-
Frustulia rhomboides		-	-	-	-	-	-	-	-	-	2	-	-	-	-
Gomphonema olivaceum		-	-	-	-	-	-	-	-	-	-	-	2	-	-
Melosira varians		-	-	-	-	-	-	-	-	-	-	4	-	-	-
Rhizosolenia eriensis		-	-	-	-	<1	-	-	-	-	-	-	-	-	-
R. longiseta		-	5	-	-	-	-	-	-	-	-	-	-	-	-
Synedra delicatissima		-	-	-	-	-	-	-	-	-	-	-	-	11	9
S. filiformis		-	12	-	<1	12	-	-	-	-	-	-	-	-	-
S. radians		-	3	-	3	29	12	-	-	-	-	-	-	-	-
S. rumpens		-	<1	-	-	-	-	-	-	2	-	-	-	-	-
S. sp.		-	-	-	-	-	-	-	-	-	-	-	5	-	-
Chrysophyceae (golden or yellow-brown algae)															
Arachnochloris sp.		1	-	9	-	-	-	-	-	-	-	-	-	-	-
Bitrichia chodati		-	-	1	3	1	-	2	-	4	8	11	3	2	1
Chrysococcus sp.		-	-	-	-	-	-	-	33	35	5	-	-	-	-
Chrysoikos angulatus		-	-	-	-	-	-	-	1	1	2	-	-	-	-
C. sp.		2	2	-	-	-	2	-	-	-	-	-	-	-	-
Chrysolykos sp.		-	-	-	-	-	-	2	-	-	-	-	-	-	-
Dinobryon bavaricum		-	-	-	6	21	145	116	-	3	9	-	-	-	-
D. elegantissima		1	3	-	3	1	2	-	8	6	-	5	-	-	-
D. sertularia		3	15	42	-	-	-	-	-	-	-	-	-	-	-
Mallomonas sp.		-	<1	-	-	-	7	75	-	-	-	-	-	2	2
Pseudopedinella sp.		-	-	-	<1	6	-	-	-	-	-	-	-	-	-
CRYPTOPHYTA															
Chroomonas sp.		-	-	<1	-	34	1	-	-	-	-	-	133	20	16
Cryptomonas sp.		<1	2	8	-	<1	11	247	-	-	-	-	-	4	17
CYANOPHYTA (blue-green algae)															
Myxophyceae															
Anabaena sp.		-	-	19	-	-	-	-	-	-	-	-	-	-	-
Chroococcus prescottii		-	-	-	-	-	-	-	-	-	-	282	176	144	180
Cyanarcua sp.		-	-	-	-	-	-	-	-	-	-	-	-	86	67
Oscillatoria sp.		-	-	-	-	-	-	330	-	-	-	-	-	-	-
Rhabdoderma sp.		-	-	-	-	-	-	-	6	-	-	-	-	-	-
PYRRHOPHYTA															
Dinophyceae (dinoflagellates)															
Glenodinium sp.		2	3	1	13	3	2	95	-	-	-	-	-	-	-
Gymnodinium sp.		1	4	2	159	18	73	194	25	18	59	120	74	102	60
Peridinium sp.		-	<1	9	3	<1	-	-	-	-	6	6	2	13	24
TOTAL NO. OF CELLS/ML.		12	57	100	202	134	259	1064	53	81	197	581	452	412	417
TOTAL NO. OF TAXA		12	15	11	11	14	10	9	6	9	9	8	10	16	14

Table 9.--*Phytoplankton in lakes*--Continued

Grass Lake (L4)

Taxa	Date:	7-11-75			8-28-75			10-23-75	7-1-76			9-02-76			10-14-76	
	Depth:	1m	5m	13m	2m	7m	13m	1m	1m	7m	10m	1m	5m	10m	1m	10m
		Cells per milliliter														
CHLOROPHYTA (grass-green algae)																
Chlorophyceae																
Ankistrodesmus falcatus		-	-	-	-	-	-	41	11	20	12	-	-	-	-	-
Arthrodesmus sp.		-	-	-	-	-	1	1	-	4	-	-	-	-	-	-
Botrycoccus sudeticus		-	-	-	-	-	-	-	-	-	-	-	-	-	-	100
Coelastrum microsporum		-	-	-	-	-	-	-	-	-	-	12	-	16	-	
Cosmarium sp.		<1	-	-	1	-	-	-	-	-	-	-	-	-	-	
C. staurastroides		<1	-	1	-	-	1	-	-	-	12	-	-	-	-	-
Oocystis sp.		<1	-	-	14	-	-	3	-	-	-	-	8	-	5	12
Quadrigula chodatii		-	-	-	-	-	-	-	-	-	-	-	-	-	27	12
Scenedesmus denticulatus		-	-	-	4	-	-	-	-	-	-	4	-	8	-	-
S. sp.		-	-	-	4	-	-	8	-	-	-	-	-	-	-	-
Spaerocystis schroeter		-	-	-	-	-	-	-	-	-	-	-	-	-	24	-
Treubaria setigarum		<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CHRYSOPHYTA																
Bacillariophyceae (diatoms)																
Achnanthes minutissima		1	-	-	1	1	-	-	2	-	2	-	-	-	-	-
Cyclotella stelligera		-	-	-	-	-	10	1	-	-	17	2	6	5	2	-
Cymbella ventricosa		-	-	-	-	-	-	-	-	1	-	2	5	-	-	-
Diatoma hiemale		-	-	-	-	-	-	-	-	-	-	-	-	-	-	11
Melosira sp.		-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitzschia spp.		<1	-	11	-	-	-	-	-	-	-	-	-	-	-	-
Synedra filiformis		-	-	-	-	-	6	-	-	-	-	-	-	-	-	-
S. radians		-	1	4	-	-	3	-	-	-	-	-	-	-	-	-
S. rumpens		-	-	-	-	-	56	-	-	-	-	-	-	-	-	-
S. sp.		-	-	-	-	-	-	-	-	-	-	2	-	-	-	-
S. spp.		2	3	-	-	-	37	-	-	-	-	-	-	-	-	-
Tabellaria flocculosa		<1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Chrysophyceae (golden or yellow-brown algae)																
Bitrichia chodati		-	-	-	-	-	1	-	-	1	-	11	2	5	2	-
Chrysochromulina parva		-	-	-	-	-	41	-	-	-	-	-	-	-	-	-
Chrysococcus sp.		-	-	-	-	-	-	-	-	-	-	-	2	-	-	-
Chrysoikos angulatus		-	-	-	-	-	-	-	-	-	-	-	-	-	2	-
C. sp.		-	-	3	-	-	1	-	-	-	-	-	-	-	-	-
Chrysolykos planktonicus		-	-	-	-	-	-	-	-	-	11	-	-	-	-	-
Dinobryon bavaricum		-	-	-	-	-	2	1	5	-	20	-	2	-	10	-
D. elegantissima		<1	1	-	2	-	1	1	-	-	8	4	1	-	1	-
D. sertularia		-	-	8	-	-	-	-	-	-	5	-	-	-	-	-
Mallomonas akrokomas		-	-	-	2	11	13	-	-	-	-	-	-	6	-	-
M. sp.		-	2	-	-	5	2	-	-	5	3	-	4	111	-	2
Pseudopedinella sp.		-	-	-	1	1	-	-	-	-	2	-	-	14	-	-
CRYPTOPHYTA																
Chroomonas sp.		<1	-	44	1	42	11	4	-	118	92	-	58	-	-	21
Cryptomonas sp.		-	11	8	14	26	38	2	5	4	18	1	1	17	-	11
CYANOPHYTA (blue-green algae)																
Myxophyceae																
Anabaena sp.		-	-	-	-	34	-	-	-	-	-	-	-	-	-	-
Aphanocapsa sp.		-	-	-	-	-	-	-	-	-	-	-	106	-	-	
Chroococcus prescottii		-	-	-	-	-	-	-	-	-	-	24	24	12	24	
Merismopedia sp.		-	-	-	-	-	-	-	-	-	-	-	-	1	1	
PYRRHOPHYTA																
Dinophyceae (dinoflagellates)																
Glenodinium sp.		2	-	2	1	-	-	1	-	-	-	-	-	-	-	-
Gymnodinium sp.		10	42	27	4	6	1	8	32	27	100	101	34	14	44	6
Peridinium sp.		-	-	4	-	-	-	-	-	-	-	2	-	-	1	-
TOTAL NO. OF CELLS/ML.		18	62	113	49	126	225	71	55	180	302	129	157	312	123	200
TOTAL NO. OF TAXA		12	7	10	12	8	17	11	5	8	13	9	12	11	13	10

Table 9.--*Phytoplankton in lakes*--Continued

Taxa	Date:	7-10-75				8-27-75			10-21-75	6-30-76			9-1-76			10-13-76		
	Depth:	1m	3m	10m	25m	2m	9m	25m	1m	5m	10m	25m	5m	14m	25m	5m	17m	20m
		Cells per milliliter																
		Gilmore Lake (L5)																
CHLOROPHYTA (grass-green algae)																		
Chlorophyceae																		
Ankistrodesmus falcatus		8	-	-	-	-	1	28	10	-	-	-	-	-	-	-	-	-
A. spiralis		-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-
Arthrodesmus sp.		-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	2
Cosmarium sp.		1	2	2	-	2	21	20	4	1	2	15	-	-	15	-	-	11
C. staurastroides		-	-	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Crucigenia tetrapedia		-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-
Dictyosphaerium pulchellum		-	-	-	-	-	-	-	11	-	-	-	-	-	-	-	-	-
Pandorina morum		-	-	-	-	-	-	-	-	-	-	16	-	-	-	-	-	-
Staurastrum sp.		-	-	-	-	-	-	3	-	-	<1	-	-	-	-	-	-	-
Tetraedron sp.		-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-
CHRYSOPHYTA																		
Bacillariophyceae (diatoms)																		
Achnanthes minutissima		-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-
Cocconeis sp.		1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyclotella stelligera		114	216	333	362	2	17	556	5	23	85	424	-	-	570	-	-	5
Cymbella sp.		1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gomphonema sp.		-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
Melosira italica		-	-	12	9	-	29	11	20	4	26	48	3	59	24	11	141	184
Rhizosolenia eriensis		-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	15	23
R. longiseta		-	-	-	-	-	-	-	-	<1	4	-	-	-	-	-	-	-
Synedra filiformis		-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. rumpens		-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-
Tabellaria flocculosa		-	-	-	3	-	1	-	-	-	-	-	-	-	-	-	-	-
Chrysophyceae (golden or yellow-brown algae)																		
Arachnochloris sp.		-	5	21	14	-	-	-	-	-	-	-	-	-	-	-	-	-
Bitrichia chodati		-	-	-	-	1	-	-	3	-	-	-	2	1	3	<1	-	1
Chrysoikos sp.		-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Dinobryon elegantissima		-	2	-	-	<1	-	-	1	1	<1	<1	-	2	42	-	-	1
D. sertularia		-	-	21	-	-	5	-	-	-	3	20	-	-	-	-	-	-
Pseudopedinella sp.		-	-	3	14	1	1	-	1	-	-	-	-	-	-	-	-	-
CHRYPTOPHYTA																		
Chroomonas sp.		1	-	77	11	1	4	21	1	-	-	-	-	-	-	-	-	-
Cryptomonas sp.		-	-	3	76	-	-	16	-	-	-	-	-	-	-	-	-	-
PYRRHOPHYTA																		
Dinophyceae (dinoflagellates)																		
Gymnodinium sp.		6	8	55	155	6	8	36	6	14	-	21	11	29	26	23	17	13
Peridinium sp.		-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-
TOTAL NO. OF CELLS/ML.		132	233	532	656	13	87	693	67	43	123	576	16	95	680	35	173	240
TOTAL NO. OF TAXA		6	5	11	11	7	10	9	12	6	8	8	3	5	6	4	3	8

Table 9.--*Phytoplankton in lakes*--Continued

Taxa	Date:	8-29-75			10-22-75	7-2-76		9-3-76		10-15-76	
	Depth:	1m	4m	7.5m	1m	1m	5m	1m	5m	1m	6m
		Cells per milliliter									
		Lily Lake (L6)									
CHLOROPHYTA (grass-green algae)											
Chlorophyceae											
Ankistrodesmus falcatus		1	-	4	<1	-	-	-	-	2	2
Arthrodesmus sp.		-	-	2	-	-	-	2	-	2	1
Coelastrum microsporum		-	-	-	-	-	-	8	-	-	-
Cosmarium sp.		-	-	-	-	5	2	6	-	-	-
C. spp.		1	-	11	<1	-	-	-	-	-	-
Pandorina morum		-	-	-	-	-	16	-	-	-	-
Pediastrum tetras		-	-	4	-	-	-	-	-	24	-
Scenedesmus armatus		-	-	4	-	-	-	-	-	-	-
S. denticulatus		-	-	12	-	-	-	-	-	-	-
S. sp.		-	-	8	-	-	-	-	-	8	4
S. spp.		-	-	-	-	8	-	-	-	-	-
Selenastrum sp.		-	-	-	-	-	-	-	-	6	-
Spondylosium sp.		-	-	-	-	-	-	4	-	17	-
Staurastrum sp.		-	-	2	-	-	-	-	-	-	-
Tetraedron regulare		-	-	-	-	-	-	1	-	2	-
CHRYSOPHYTA											
Bacillariophyceae (diatoms)											
Achnanthes minutissima		-	-	-	-	6	-	-	-	-	-
Eunotia sp.		-	-	-	-	9	2	2	-	3	-
Melosira italica		-	-	2	-	-	-	-	-	-	-
Nitzschia sp.		-	-	5	-	-	-	-	-	-	-
Synedra filiformis		2	3	103	-	3	20	-	-	-	-
S. radians		-	-	10	-	-	-	-	-	-	-
S. sp.		-	-	-	-	-	-	4	-	-	-
Tabellaria flocculosa		-	-	-	-	3	-	2	-	-	-
Chrysophyceae (golden or yellow-brown algae)											
Bitrichia chodati		-	-	-	-	-	-	10	2	-	-
Chrysococcus sp.		-	-	1	-	-	-	-	-	-	-
Chrysoikos angulatus		-	-	-	-	-	3	-	-	-	-
Chrysosphaerella longispina		14	-	-	241	227	5	-	388	-	-
Dinobryon bavaricum		-	-	-	-	189	33	28	127	58	14
D. elegantissima		-	-	5	<1	9	6	-	-	-	-
D. flagellate		-	-	-	-	15	15	-	-	-	-
D. sertularia		-	-	-	3	-	85	6	264	153	76
D. sp.		-	-	-	1	-	-	-	73	-	-
Mallomonas akrokomas		-	-	-	<1	-	-	-	23	-	-
M. sp.		-	-	16	4	-	3	6	21	8	4
Pseudopedinella sp.		-	-	-	4	-	-	-	-	-	-
Synura uvella		64	3152	30	10	-	-	-	-	2	-
Urogleniopsis americana		-	-	-	-	-	-	-	-	2	-
CRYPTOPHYTA											
Chroomonas sp.		-	-	-	2	-	12	-	39	-	-
Cryptomonas sp.		7	12	4	3	38	30	11	14	85	38
EUGLENOPHYTA (euglenoids)											
Euglena sp.		-	-	1	-	-	-	-	-	-	-
Trachelomonas sp.		-	-	-	-	-	-	-	-	-	2
PYRRHOPHYTA											
Dinophyceae (dinoflagellates)											
Glenodinium sp.		31	58	11	-	-	-	-	-	-	-
Gymnodinium sp.		44	71	38	18	45	124	75	47	192	65
Peridinium sp.		28	76	11	-	18	27	16	-	9	6
TOTAL NO. OF CELLS/ML.		192	3372	284	288	566	383	179	998	573	212
TOTAL NO. OF TAXA		9	6	21	13	13	15	15	10	16	10

Table 10.--*Phytoplankton in streams*

Taxa	Date (1976):	Cells per milliliter							
		Site S1			Site S2		Site S3		
		7-01	8-31	10-13	7-01	8-31	7-01	8-31	10-13
CHLOROPHYTA (grass-green algae)									
Chlorophyceae									
Ankistrodesmus falcatus		-	33	31	-	-		-	-
A. spiralis		-	-	-	-	4		-	-
Cosmarium sp.		-	-	-	3	-		-	1
C. spp.		-	3	-	-	5		-	-
Crucigenia crucifera		-	-	8	-	-		-	-
C. tetrapedia		-	-	-	4	-		-	-
Euastrum sp.		-	-	-	<1	-		-	-
Golenkinia radiata		-	-	-	-	1		-	-
Micrasterias sp.		-	-	-	-	4		-	-
Oocystis sp.		-	6	2	-	5		-	-
Pediastrum tetras		-	-	-	-	8		-	-
Quadrigula chodatii		-	-	9	-	-		-	-
Scenedesmus sp.		-	-	8	-	-		-	-
Spaerocystis schroeter		-	-	15	-	32		-	-
Staurastrum sp.		-	-	-	<1	-		-	1
CHRYSOPHYTA									
Bacillariophyceae (diatoms)									
Achnanthes minutissima		3	3	-	10	5		2	10
Cyclotella stelligera		538	81	-	-	-		-	-
Cymbella cistula		-	2	-	-	-		3	-
C. ventricosa		-	-	-	<1	-		5	2
Eunotia sp.		-	-	-	1	-		-	-
Fragilaria sp.		-	-	-	-	-		-	3
Frustulia rhomboides		-	-	-	<1	-		-	-
Gomphonema olivaceum		-	2	-	-	-		<1	-
G. sp.		-	-	-	1	-		-	1
Hannea arcus		-	-	-	-	-		17	72
Nitzschia sp.		-	-	-	3	-		-	-
Synedra radians		-	-	-	3	2		-	-
S. rumpens		-	-	-	2	-		-	-
S. spp.		-	-	-	-	9		2	-
S. ulna		-	-	-	-	-		-	4
Tabellaria flocculosa		-	-	-	3	5		-	-
CHRYSOPHYTA									
Chrysophyceae (golden or yellow-brown algae)									
Bitrichia chodati		2	2	-	-	-		-	-
Chrysococcus sp.		-	9	-	-	-		-	-
Chrysoikos angulatus		-	-	2	-	-		-	-
Dinobryon elegantissima		-	2	-	-	6		-	-
D. sertularia		-	-	-	-	4		-	-
Mallomonas sp.		-	3	2	-	2		-	-
CRYPTOPHYTA									
Chroomonas sp.		18	189	75	-	-		-	-
Cryptomonas sp.		-	3	-	1	-		-	-
CYANOPHYTA (blue-green algae)									
Myxophyceae									
Chroococcus prescottii		-	-	11	-	-		-	-
PYRRHOPHYTA									
Dinophyceae (dinoflagellates)									
Gymnodinium sp.		9	42	83	-	41		<1	-
Peridinium sp.		1	2	-	-	2		-	-
TOTAL NO. OF CELLS/ML.		571	382	246	33	135		30	94
TOTAL NO. OF TAXA		6	15	11	14	16		7	8

No live cells

Table 10.--*Phytoplankton in streams*--Continued

Taxa	Date (1976):	Cells per milliliter								
		Site S4			Site S5			Site S6		
		6-28	8-30	10-31	6-29	9-02	10-14	6-29	9-02	10-14
CHLOROPHYTA (grass-green algae)										
Chlorophyceae										
Ankistrodesmus falcatus		7	-	-	-	-	-	2	-	-
Arthrodesmus sp.		<1	-	-	-	-	-	-	-	-
Closterium sp.		-	-	-	-	-	<1	-	-	-
Cosmarium sp.		-	-	1	-	-	-	-	-	-
Oocystis sp.		-	1	-	-	-	-	-	-	-
Quadrigula chodatii		-	-	2	-	-	-	-	-	-
Scenedesmus sp.		-	-	8	-	-	-	-	-	-
S. spp.		2	-	-	-	-	-	2	-	-
Selenastrum sp.		-	-	25	-	-	-	-	-	-
Spirotaenia sp.		-	-	-	-	-	-	-	-	<1
Staurastrum sp.		-	-	-	-	-	1	-	-	-
Zygnema sp.		-	-	-	-	-	-	-	-	<1
CHRYSOPHYTA										
Bacillariophyceae (diatoms)										
Achnanthes lanceolata		-	-	-	<1	-	<1	-	-	-
A. minutissima		7	-	2	3	8	7	11	11	3
Cyclotella stelligera		10	185	-	-	-	-	-	8	-
Cymbella sp.		<1	-	-	-	-	-	-	-	-
C. ventricosa		-	-	-	-	-	-	-	<1	-
Eunotia sp.		-	-	-	<1	<1	1	-	-	-
Fragilaria sp.		-	-	-	-	-	5	-	2	-
Gomphonema lanceolatum		-	-	-	-	-	-	-	1	-
G. olivaceum		-	-	-	-	1	-	-	-	-
G. sp.		-	-	-	-	-	1	<1	-	4
Hannea arcus		-	-	1	1	7	4	1	2	1
Navicula cryptocephala		-	-	-	-	<1	-	-	-	-
N. sp.		-	-	-	<1	-	-	-	-	6
Synedra delicatissima		-	-	14	-	-	-	-	-	-
S. rumpens		3	-	-	<1	-	-	<1	-	-
S. spp.		-	-	-	-	3	-	-	3	2
S. ulna		-	-	-	-	-	-	-	-	<1
Tabellaria flocculosa		<1	7	2	-	-	-	-	1	2
Chrysophyceae (golden or yellow-brown algae)										
Bitrichia chodati		<1	11	-	-	-	-	-	-	-
Chrysococcus sp.		29	-	-	-	-	-	1	-	-
Dinobryon elegantissima		5	2	-	-	-	-	-	-	-
Mallomonas sp.		-	-	-	<1	-	-	-	-	-
CRYPTOPHYTA										
Chroomonas sp.		-	-	-	-	-	-	-	-	<1
CYANOPHYTA (blue-green algae)										
Anabaena sp.		-	34	-	-	-	-	-	-	-
Aphanocapsa sp.		-	76	-	-	-	-	-	-	-
Chroococcus prescottii		-	176	11	-	-	-	-	16	-
Dactylococcopis sp.		-	5	-	-	-	-	-	-	-
Merismopedia sp.		-	-	-	-	-	-	-	-	<1
Rhabdoderma sp.		-	2	-	-	-	-	-	-	-
PYRRHOPHYTA										
Dinophyceae (dinoflagellates)										
Gymnodinium sp.		19	7	62	-	-	-	2	2	-
Peridinium sp.		3	-	6	-	-	-	-	-	-
TOTAL NO. OF CELLS/ML.		87	506	134	5	20	19	20	46	19
TOTAL NO. OF TAXA		13	11	11	7	6	8	8	10	11

Table 10.--*Phytoplankton in streams*--Continued

Taxa	Date (1976):	Cells per milliliter											
		Site S7			Site S8			Site S9			Site S10		
		6-29	9-02	10-14	6-30	9-01	10-12	6-30	9-01	10-12	6-28	9-01	10-14
CHLOROPHYTA (grass-green algae)													
Chlorophyceae													
Ankistrodesmus falcatus		5	-	-	-	-	-	3	-	-	-	-	-
Cosmarium sp.		<1	-	-	7	-	<1	-	-	-	<1	-	-
C. spp.		-	1	-	-	<1	-	-	<1	-	-	-	-
C. staurastroides		2	-	-	-	-	-	-	-	-	-	-	-
Mougeotia sp.		-	-	-	-	-	-	-	-	-	-	-	3
Oocystis sp.		-	-	<1	-	-	-	-	-	-	-	1	-
Scenedesmus denticulatus		-	8	-	-	-	-	-	-	-	-	-	-
S. sp.		-	-	8	-	-	-	-	-	-	-	-	-
S. spp.		4	-	-	-	-	-	-	-	-	-	-	-
Selenastrum sp.		-	-	8	-	-	-	-	-	-	-	-	-
Spaerocystis schroeter		-	-	2	-	-	-	-	-	-	-	32	-
Staurastrum sp.		<1	-	-	<1	-	-	-	-	<1	-	-	-
CHRYSOPHYTA													
Bacillariophyceae (diatoms)													
Achnanthes minutissima		22	1	4	3	1	2	5	22	1	21	51	14
Cyclotella stelligera		-	-	-	18	-	-	44	-	-	-	1	-
Cymbella cistula		-	1	-	-	-	-	-	2	<1	-	<1	-
C. ventricosa		1	1	<1	-	-	-	1	8	-	<1	1	1
Diatoma hiemale		-	-	-	-	-	-	-	-	-	-	1	<1
D. vulgare		-	-	-	-	-	-	-	<1	-	-	-	-
Eunotia sp.		-	-	<1	1	-	-	-	<1	<1	1	-	-
Fragilaria sp.		-	-	-	-	-	-	-	5	-	-	-	-
Gomphoneis herculeana		-	-	-	-	-	-	-	<1	-	-	<1	-
G. olivaceum		-	1	-	-	6	-	-	-	-	-	3	-
G. sp.		<1	-	-	-	-	2	-	-	<1	-	-	5
Hannea arcus		<1	1	-	-	-	-	1	18	2	1	4	7
Melosira italica		-	-	-	-	1	20	-	-	-	-	-	-
Meridion circulare		-	-	-	-	-	-	<1	-	-	-	-	-
Navicula sp.		-	-	6	<1	-	2	-	-	-	-	-	5
Synedra radians		-	-	-	-	-	-	-	-	-	1	-	-
S. rumpens		-	-	-	1	-	-	-	-	-	-	-	-
S. spp.		-	-	-	-	<1	1	-	-	-	-	2	3
S. ulna		-	-	<1	-	-	-	-	-	-	-	1	<1
S. ulna var. *contracta*		-	-	-	-	-	-	-	2	11	-	-	-
Tabellaria flocculosa		-	-	-	-	<1	<1	-	1	-	-	1	-
Chrysophyceae (golden or yellow-brown algae)													
Bitrichia chodati		-	-	<1	<1	-	-	-	-	-	-	-	-
Chrysococcus sp.		2	-	-	-	-	-	-	-	-	-	-	-
Dinobryon bavaricum		1	-	-	-	-	-	-	-	-	-	-	-
D. elegantissima		-	1	-	1	-	-	-	-	-	-	-	-
Mallomonas sp.		-	-	1	4	-	-	-	-	-	-	-	-
CRYPTOPHYTA													
Cryptomonas sp.		1	-	-	-	2	-	-	-	-	-	-	-
CYANOPHYTA (blue-green algae)													
Myxophyceae													
Chroococcus prescottii		-	-	-	-	8	-	-	-	-	-	-	-
PYRRHOPHYTA													
Dinophyceae (dinoflagellates)													
Gymnodinium sp.		3	11	7	27	3	2	-	-	-	-	-	<1
Peridinium sp.		<1	-	-	1	1	7	-	-	-	-	-	-
TOTAL NO. OF CELLS/ML.		43	26	38	64	23	37	54	59	15	25	99	39
TOTAL NO. OF TAXA		14	9	12	11	10	9	6	11	7	6	13	10

Table 10.--*Phytoplankton in streams*--Continued

Taxa	Date (1976):	Cells per milliliter								
		Site S11			Site S12			Site S13		
		7-02	9-03	10-15	7-02	9-03	10-15	7-02	9-03	10-15
CHLOROPHYTA (grass-green algae)										
Chlorophyceae										
Ankistrodesmus falcatus		5	2	-	1	<1	2	-	3	-
Arthrodesmus sp.		-	-	-	-	-	1	-	-	-
Cosmarium sp.		-	-	-	<1	-	<1	-	-	-
Pediastrum tetras		-	-	-	-	4	3	-	4	-
Scenedesmus denticulatus		-	4	-	-	4	-	-	4	-
S. sp.		-	-	-	-	-	1	-	-	-
S. spp.		24	-	-	4	-	-	-	-	-
CHRYSOPHYTA										
Bacillariophyceae (diatoms)										
Achnanthes minutissima		4	5	2	26	18	5	7	3	3
Cyclotella stelligera		-	-	-	-	-	-	24	-	-
Cymbella cistula		-	3	-	1	5	2	18	2	-
C. sp.		-	-	-	-	-	-	-	7	-
C. ventricosa		-	4	-	-	1	-	8	-	1
Diatoma vulgare		-	-	-	-	<1	-	-	-	-
Eunotia sp.		2	-	-	1	-	-	-	-	-
Frustulia rhomboides		1	-	-	-	-	-	-	-	-
Gomphoneis herculeana		-	-	-	<1	-	-	3	-	-
Gomphonema olivaceum		-	1	-	-	<1	-	-	-	-
G. sp.		-	-	-	-	-	-	1	-	1
G. sphaerophorum		-	-	-	-	-	-	-	-	2
Hannea arcus		-	-	-	-	-	1	2	-	-
Navicula cryptocephala		-	-	-	-	-	-	-	9	6
N. menisculus		-	-	-	-	-	-	-	-	3
N. sp.		-	-	-	<1	-	<1	-	-	-
Nitzschia acicularis		-	-	-	-	-	-	-	-	<1
N. sp.		-	<1	-	-	1	-	-	-	-
Pinnularia sp.		-	-	1	-	-	-	-	-	-
Synedra radians		-	-	-	-	-	-	-	-	3
S. rumpens		2	-	-	6	-	-	<1	-	-
S. spp.		-	-	-	-	6	2	-	-	2
S. ulna		-	1	11	4	3	1	-	1	-
S. ulna var. *contracta*		-	-	-	-	-	-	3	-	-
Tabellaria flocculosa		1	<1	21	11	24	25	-	-	-
Chrysophyceae (golden or yellow-brown algae)										
Bitrichia chodati		-	-	-	-	-	<1	-	-	-
Chrysosphaerella longispina		-	-	-	-	2	-	-	-	-
Dinobryon elegantissima		-	<1	-	-	-	3	-	-	2
D. sertularia		-	<1	2	-	-	13	-	-	-
D. sp.		15	<1	2	-	-	4	-	-	-
Mallomonas sp.		1	<1	-	<1	4	1	-	-	-
Synura uvella		-	-	8	-	-	-	-	-	-
CRYPTOPHYTA										
Chroomonas sp.		-	-	-	-	-	-	-	-	12
Cryptomonas sp.		-	-	-	-	<1	-	-	-	-
CYANOPHYTA (blue-green algae)										
Myxophyceae										
Oscillatoria sp.		-	-	-	-	-	-	-	-	1
PYRRHOPHYTA										
Dinophyceae (dinoflagellates)										
Gymnodinium sp.		2	-	-	1	6	3	-	-	10
Peridinium sp.		<1	-	-	1	3	3	-	2	2
TOTAL NO. OF CELLS/ML.		57	22	47	57	82	71	67	35	48
TOTAL NO. OF TAXA		11	13	7	14	17	19	9	8	14

Table 11.--*Periphytic algae in lakes*

[Identification by Jan Brockson, Susswasser Freshwater Invertebrate Algae Analyses, Paso Robles, Calif.]

Taxa	Sampling site L1 6-29-76	L1 8-31-76	L2 7-09-75	L2 8-31-76	L3 7-09-75	L3 6-28-76	L3 8-30-76	L4 10-23-75	L4 7-1-76	L4 9-02-76	L5 10-21-75	L5 10-22-75	L6 9-03-76
CHLOROPHYTA (grass-green algae)													
Chlorophyceae													
Ankistrodesmus falcatus	-	x	-	-	-	-		-	-	x	-	-	-
Arthrodesmus sp.	-	x	-	-	-	-		-	-	-	-	-	-
Bulbocheate sp.	-	-	-	x	-	-		-	-	x	-	-	-
Coelastrum microsporum	-	x	-	-	-	-		-	-	-	-	-	-
Cosmarium sp.	-	-	x	-	x	-		-	-	-	-	-	-
C. spp.	x	x	-	x	-	-		-	-	x	-	-	-
Crucigenia rectangularis	-	-	-	x	-	-		-	-	-	-	-	-
Euastrum sp.	x	x	-	x	x	-		-	-	x	-	-	-
Gloeocystis vesiculosa	-	-	-	x	-	-		-	-	-	-	-	-
Mougeotia sp.	-	x	-	x	-	-		-	-	x	x	-	-
Netrium sp.	x	-	-	-	-	-		-	-	-	-	-	-
Oocystis sp.	-	x	-	x	-	-		-	-	x	-	-	-
Pediastrum boryanum	-	-	-	-	-	-		-	-	-	x	-	-
P. tetras	-	x	-	-	-	-		-	-	x	-	-	-
Rayssiella hemisphaerka	-	x	-	-	-	-		-	-	-	-	-	-
Scenedesmus denticulatus	-	x	-	-	-	-		-	-	-	-	-	-
S. sp.	-	-	-	x	-	-		-	-	x	-	-	x
Spirogyra sp.	-	-	-	-	-	-		-	-	-	x	-	-
Spondylosium sp.	-	x	-	x	-	-		-	-	-	-	-	-
Staurastrum sp.	-	x	-	-	-	-		-	-	x	-	-	-
Zygnema sp.	x	x	-	x	-	-		-	-	-	-	-	-
CHRYSOPHYTA													
Bacillariophyceae (diatoms)													
Achnanthes linearis	-	-	-	-	-	-		-	-	x	-	-	x
A. minutissima	x	x	x	x	x	-		x	-	x	-	-	x
A. sp.	-	-	-	x	-	-		-	-	-	-	-	-
Anomoensis sp.	x	-	-	-	-	-		-	-	-	-	-	-
Anomoeoneis serians	-	-	-	-	-	-		-	-	-	-	-	x
Cyclotella sp.	-	-	x	-	-	-		-	-	-	-	-	-
C. stelligera	-	-	-	-	-	-		-	-	-	x	-	-
Cymbella cistula	x	x	-	-	-	-		x	x	-	-	-	-
C. heteropleura	-	-	-	-	-	-		-	-	-	-	-	x
C. lunata	-	-	-	x	-	-		-	-	-	-	-	-
C. minuta	-	x	-	-	-	-		-	-	-	-	-	-
C. muelleri	x	-	-	-	-	-		-	-	-	-	-	-
C. sp.	-	-	x	-	x	x		-	-	x	x	x	-
C. spp.	x	-	-	-	-	-		-	-	-	-	-	-
C. turgida	-	-	x	x	-	-		-	-	-	-	-	-
C. ventricosa (minuta)	x	-	-	-	x	-		-	-	x	-	-	-
Diatoma hiemale	-	-	-	-	-	-		-	-	-	x	-	-
Diploneis finnica	x	-	-	-	-	-		-	-	-	-	-	-
Eunotia lunaris	-	-	-	-	x	-		-	-	-	-	-	-
E. robusta	x	-	-	-	-	-		-	-	-	-	-	-
E. sp.	-	x	x	x	-	-		-	-	x	x	-	-
Fragilaria sp.	x	-	-	-	-	-		-	-	x	x	-	-
F. virescens	x	-	-	-	-	-		-	-	-	-	-	-
Frustulia rhomboides	-	-	x	-	x	-		-	-	x	-	-	x
Gomphonema angustatum	-	-	-	-	-	-		-	-	x	-	-	-
G. constrictum	-	-	-	-	x	-		-	-	-	-	-	-
G. parvulum	-	-	-	-	-	-		x	-	-	-	-	-
G. sp.	-	x	x	x	-	x		-	-	x	x	x	-
Hannea arcus	-	-	-	-	-	-		-	-	-	x	x	-

No live cells

Table 11.--*Periphytic algae in lakes*--Continued

Taxa	Sampling site L1 6-29-76	L1 8-31-76	L2 7-09-75	L2 8-31-76	L3 7-09-75	L3 6-28-76	L3 8-30-76	L4 10-23-75	L4 7-1-76	L4 9-02-76	L5 10-21-75	L5 10-22-75	L6 9-03-76
CHRYSOPHYTA--Continued													
Bacillariophyceae (diatoms)--Continued													
Melosira distans	-	-	x	-	-	-		-	-	-	x	-	-
M. italica	x	-	-	x	-	-		-	-	x	-	-	-
Meridion circulare	-	-	-	-	-	-		-	-	-	x	-	-
Navicula pupula	-	-	-	-	-	-		-	-	x	-	-	-
N. radiosa	-	-	-	-	-	-		-	-	x	-	-	-
N. sp.	x	-	x	-	x	-		x	-	-	x	x	-
N. spp.	-	x	-	x	-	-		-	-	x	-	-	-
Nitzschia filiformis	x	-	x	x	-	-		-	-	x	-	-	-
N. fonticola	x	-	-	-	-	-		-	-	-	-	-	-
N. palea	-	-	-	-	-	-		-	-	x	-	-	-
N. sp.	-	x	x	-	-	-		-	-	x	x	-	-
Pinnularia microstauron	-	-	x	-	-	-		-	-	-	-	-	-
P. sp.	x	-	x	-	x	-		-	-	x	x	-	-
Stauroneis sp.	x	-	-	-	-	-		-	-	-	-	-	-
Surirella sp.	-	-	-	-	-	-		-	-	x	-	-	-
Synedra filiformis	-	-	-	-	x	-		-	-	-	-	-	-
S. radians	-	-	x	-	x	-		x	-	-	x	-	-
S. rumpens	x	-	-	-	-	-		x	-	x	-	-	x
S. sp.	-	x	x	-	-	-		-	-	x	x	-	-
S. spp.	-	-	-	-	-	x		-	-	-	-	-	-
S. ulna	-	-	-	-	-	-		-	-	x	-	-	-
Tabellaria flocculosa	x	x	x	x	x	x		x	x	x	x	x	x
Chrysophyceae (golden or yellow-brown algae)													
Dinobryon sp. (cysts)	-	-	-	-	x	-		-	-	-	-	-	-
CYANOPHYTA (blue-green algae)													
Myxophyceae													
Anabaena sp.	-	-	-	-	-	-		-	-	x	-	-	-
Aphanothece sp.	-	-	-	-	-	-		-	-	-	x	-	-
Entophysalis sp.	-	-	-	-	-	-		-	-	-	x	-	-
Gloecapsa sp.	-	-	-	-	-	-		-	-	-	x	-	-
Merismopedia sp.	x	x	-	x	-	-		-	-	x	-	-	-
Nostoc verrucosum	x	-	-	-	-	-		-	-	-	-	-	-
Oscillatoria sp.	-	-	x	-	-	-		-	-	x	-	-	-
Scytonema sp.	-	-	x	-	-	-		-	-	-	-	-	-
PYRRHOPHYTA													
Dinophyceae (dinoflagellates)													
Peridinium sp.	-	-	-	x	x	-		-	-	-	x	-	x

No live cells

Table 12.--*Periphytic algae in streams*
[Identification by Jan Brockson, Susswasser Freshwater Invertebrate Algae Analyses, Paso Robles, Calif.]

Taxa	Sampling site S1 7-09-75	S1 7-01-76	S1 8-31-76	S2 7-09-75	S2 8-31-76	S3 7-09-75	S3 7-01-76	S4[1] 7-08-75	S4[1] 6-28-76	S4[1] 8-30-76
CHLOROPHYTA (grass-green algae)										
Chlorophyceae										
Ankistrodesmus falcatus	-	-	-	x	x	-	-	-	-	-
Arthrodesmus sp.	-	-	x	-	x	-	-	-	x	-
Closterium sp.	-	x	-	-	-	-	-	-	x	-
Coelastrum microsporum	-	-	x	-	-	-	-	-	-	-
Cosmarium sp.	x	x	-	-	-	-	-	-	-	-
C. spp.	-	-	x	-	x	-	-	-	-	-
Crucigenia sp.	-	-	x	-	-	-	-	-	-	-
Euastrum sp.	x	x	-	-	x	-	-	-	-	-
Franceia sp.	-	-	-	-	x	-	-	-	-	-
Micrasterius sp.	-	-	-	-	x	-	-	-	-	-
Mougeotia sp.	-	-	x	-	-	-	-	-	-	-
Oocystis sp.	x	x	-	-	x	-	-	-	-	-
Pediastrum boryanum	-	-	x	-	-	-	-	-	-	-
P. sp.	-	x	-	-	-	-	-	-	-	-
P. tetras	x	-	x	-	x	-	-	-	-	-
Penium sp.	x	-	-	-	-	-	-	-	-	-
Scenedesmus denticulatus	-	-	x	-	-	-	-	-	-	-
S. sp.	-	-	-	-	x	-	-	-	x	-
Spirogyra sp.	-	-	-	-	x	-	-	-	-	-
Staurastrum sp.	x	x	-	-	x	-	-	-	-	-
Zygnema sp.	-	x	x	-	-	x	x	x	x	x
CHRYSOPHYTA										
Bacillariophyceae (diatoms)										
Achnanthes minutissima	x	x	x	-	x	x	x	x	x	x
Cymbella lunata	-	x	-	-	x	-	-	-	x	-
C. minuta	-	-	x	-	-	-	-	-	-	-
C. sp.	x	-	x	x	-	-	x	-	-	-
Diatoma anceps	x	-	-	-	-	-	-	-	-	-
D. hiemale	-	x	-	-	-	-	-	-	-	-
Eunotia lunaris	-	-	-	-	-	-	-	x	-	-
E. sp.	x	x	-	-	x	-	-	-	x	-
Fragilaria sp.	x	x	x	-	-	-	-	-	-	-
Frustulia rhomboides	-	-	x	-	-	-	-	x	-	-
Gomphonema angustatum	-	-	-	-	-	-	-	-	-	x
G. sp.	x	x	x	-	x	x	-	x	x	-
Hannea arcus	-	x	-	-	-	x	x	-	-	-
Melosira distans	x	-	-	-	-	-	-	-	-	-
Navicula sp.	x	-	-	-	-	-	-	x	-	-
N. spp.	-	x	-	-	-	-	-	-	x	x
Nitzschia filiformis	-	x	-	-	-	-	-	-	-	-
N. fonticola	-	-	-	-	x	-	-	-	-	-
N. sp.	x	-	-	x	x	x	-	-	-	-
Pinnularia brauni	x	-	-	-	-	-	-	-	-	-
P. sp.	x	x	-	-	-	-	-	-	-	-
Synedra filiformis	x	-	-	x	-	-	-	-	-	-
S. rumpens	-	x	x	-	x	-	-	-	x	-
S. sp.	x	-	-	-	-	-	-	-	-	x
S. spp.	-	x	-	-	-	-	x	-	-	-
S. ulna	x	-	-	-	-	-	-	-	x	-
S. vaucheriae	-	-	-	-	-	-	-	x	-	-
Tabellaria flocculosa	x	x	x	x	x	-	-	x	x	x
Chrysophyceae (golden or yellow-brown algae)										
Dinobryon sp. (cysts)	-	-	-	-	-	-	-	x	-	-
CYANOPHYTA (blue-green algae)										
Myxophyceae										
Merismopedia sp.	x	-	x	-	-	-	-	-	-	-
Oscillatoria sp.	-	x	x	-	-	-	-	-	-	-
PHAEOPHYTA										
Pleurocladia sp.	-	-	x	-	-	-	-	-	-	-
PYRRHOPHYTA										
Dinophyceae (dinoflagellates)										
Peridinium sp.	-	-	-	-	-	-	-	x	-	-

[1]Although not an alga, the moss *Drepanocladus* sp. was abundant at site 4 in June 1976.

Table 12.--*Periphytic algae in streams*--Continued

Taxa	Sampling site S5 7-08-75	S5 10-23-75	S5 6-29-76	S5 9-02-76	S5 10-14-76	S6 7-08-75	S6 10-23-75	S6 6-29-76	S6 9-02-76	S6 10-14-76	S7 7-11-75	S7 10-21-75	S7 6-29-76	S7 9-02-76	S7 10-14-76
CHLOROPHYTA (grass-green algae)															
Chlorophyceae															
Closterium sp.	-	-	-	-	-	-	-	-	-	-	-	-	x	-	-
Coelastrum microsporum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x
Cosmarium sp.	-	x	-	-	-	x	x	-	-	-	-	-	-	-	-
C. spp.	-	-	-	-	-	-	-	-	-	-	-	-	-	x	-
Mougeotia sp.	-	-	-	-	-	-	x	-	-	-	-	-	x	-	-
Penium sp.	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Scenedesmus sp.	-	-	-	-	x	-	-	-	-	-	-	-	-	-	-
Spirogyra sp.	-	-	-	-	x	-	x	-	-	x	x	x	x	-	-
Staurastrum sp.	-	-	-	-	x	-	-	-	x	-	-	-	x	-	-
Zygnema sp.	-	x	x	-	-	-	x	x	-	-	-	-	-	-	-
CHRYSOPHYTA															
Bacillariophyceae (diatoms)															
Achnanthes minutissima	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Cyclotella sp.	-	-	-	-	-	-	x	-	-	-	-	-	-	-	-
Cymbella cistula	-	-	-	x	-	-	-	-	x	x	x	x	x	x	-
C. sp.	-	x	-	-	-	x	x	x	-	-	-	-	-	-	-
C. ventricosa (minuta)	-	-	-	-	x	-	x	-	-	-	x	-	x	-	-
Diatoma sp.	-	-	-	-	-	-	-	-	x	-	-	-	-	-	-
Eunotia lunaris	-	-	-	-	-	x	x	-	-	-	-	-	-	-	-
E. sp.	x	x	x	x	x	-	-	-	x	-	x	x	x	-	-
Fragilaria sp.	-	-	-	-	x	-	-	-	x	-	-	-	x	-	-
F. vaucheriae	-	-	-	-	-	-	-	-	-	-	x	-	-	-	-
Frustulia rhomboides	-	-	-	-	-	-	-	-	x	-	-	-	-	-	-
F. sp.	-	-	-	-	-	-	-	-	-	-	x	-	-	-	-
Gomphonema parvulum	-	x	x	-	-	-	-	-	-	-	-	-	-	-	-
G. sp.	-	x	-	x	x	x	x	x	x	-	x	-	x	x	x
G. spp.	-	-	-	-	-	-	-	-	-	-	-	x	-	-	-
Hannea arcus	x	x	x	x	x	x	x	x	x	-	x	x	x	x	x
Lyngbya sp.	-	-	-	-	-	-	-	-	-	-	x	-	-	-	-
Melosira distans	-	x	-	-	-	-	-	-	-	-	-	-	-	-	-
Navicula gottlandica	-	-	-	-	-	-	x	-	-	-	-	-	-	-	-
N. sp.	-	x	-	-	-	-	-	-	-	-	x	-	-	-	-
N. spp.	-	-	x	-	x	-	-	-	x	-	-	-	x	-	-
Nitzschia paradoxa	-	-	-	-	-	-	-	-	-	-	-	-	x	-	-
N. sp.	-	-	-	-	-	-	-	-	x	-	-	-	-	-	-
Pinnularia sp.	-	x	-	-	-	x	-	-	-	-	x	-	-	-	-
Synedra actinastroides	-	-	-	-	-	-	-	-	-	-	-	-	x	x	-
S. acus	-	-	-	-	-	-	-	-	-	-	x	x	-	-	-
S. amphicephala	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. delicatissima	-	-	-	-	-	-	-	-	-	-	-	-	x	x	-
S. filiformis	-	-	-	-	-	x	-	-	-	-	x	-	-	-	-
S. rumpens	-	x	-	x	-	-	-	x	-	x	-	-	-	-	x
S. sp.	x	x	-	-	-	x	-	-	x	-	x	x	-	-	-
S. spp.	-	-	x	-	-	-	-	-	-	-	-	-	-	-	-
S. ulna	-	x	-	-	x	x	-	-	x	x	x	x	x	x	x
S. vaucheriae	-	x	-	-	-	x	x	x	-	-	x	-	x	x	-
Tabellaria flocculosa	x	x	-	x	x	x	x	x	x	x	x	x	x	x	-
CYANOPHYTA (blue-green algae)															
Myxophyceae															
Merismopedia sp.	-	-	-	-	-	-	-	-	x	-	-	-	-	-	-
Oscillatoria sp.	-	-	-	-	-	-	-	-	-	-	x	-	-	-	-
PYRRHOPHYTA															
Dinophyceae (dinoflagellates)															
Peridinium sp.	-	-	-	-	-	x	-	-	-	-	-	-	-	-	-

Table 12.--*Periphytic algae in streams*--Continued

Taxa	Sampling site S8 7-10-75	S8 10-21-75	S8 6-30-76	S8 9-01-76	S8 10-12-76	S9 7-10-75	S9 10-21-75	S9 6-30-76	S9 9-01-76	S10 7-10-75	S10 10-21-75	S10 6-30-76	S11 7-11-75	S11 10-22-75	S11 7-02-76	S11 9-03-76	S11 10-15-76
CHLOROPHYTA (grass-green algae)																	
Chlorophyceae																	
Ankistrodesmus falcatus	-	-	-	-	x	-	-	-	-	-	-	-	-	-	-	-	-
Closterium sp.	-	-	-	-	x	-	x	-	-	-	-	x	-	x	-	-	x
Cosmarium sp.	-	x	-	-	-	-	-	-	-	-	-	-	-	x	-	-	-
C. spp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x
Microspora sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	x	x	-	-
Mougeotia sp.	x	x	-	-	x	-	-	-	-	-	-	x	-	-	-	-	-
Pediastrum tetras	-	-	-	x	-	-	-	-	-	-	-	-	-	-	-	-	x
Scenedesmus dimorphus	-	-	-	-	-	-	-	-	-	-	-	-	-	x	-	-	-
Spirogyra sp.	-	-	-	-	-	-	x	-	-	-	-	-	-	x	-	-	-
Staurastrum sp.	-	x	-	-	-	-	-	-	x	-	-	x	-	-	-	-	x
Zygnema sp.	-	-	-	-	-	-	-	x	-	-	x	-	-	-	-	-	-
CHRYSOPHYTA																	
Bacillariophyceae (diatoms)																	
Achnanthes minutissima	x	-	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Anomoeoneis serians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	x
Cocconeis placentula	-	-	-	x	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyclotella stelligera	x	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cymbella cistula	-	-	-	-	-	-	-	-	x	-	x	x	-	-	-	-	-
C. lunata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x
C. sp.	-	x	-	-	-	-	x	x	-	-	x	x	x	x	-	-	-
C. ventricosa (minuta)	-	-	-	-	x	-	-	-	x	-	-	-	-	-	-	-	-
Diatoma anceps	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
D. hiemale	-	-	-	-	-	-	x	x	-	-	-	x	-	-	-	-	-
Eunotia naegelia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	-
E. sp.	-	x	-	x	x	-	-	-	x	-	-	-	x	x	x	x	x
Fragilaria sp.	-	x	-	-	x	-	-	x	-	-	-	x	-	-	-	-	-
Frustulia rhomboides	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	x
Gomphoneis herculeana	-	-	-	-	-	-	-	-	-	-	-	x	-	-	-	-	-
Gomphonema olivaceum	-	-	-	-	x	-	-	-	-	-	-	-	-	-	-	-	-
G. sp.	-	x	-	x	-	-	x	-	x	-	x	x	x	-	-	x	x
G. truncatum	-	-	-	x	x	-	-	-	-	-	-	-	-	-	-	-	-
Hannea arcus	-	-	x	-	-	x	x	x	x	-	x	x	-	x	-	-	-
Melosira distans	-	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
M. italica	x	-	-	x	x	-	-	-	-	-	-	-	-	-	-	-	-
Meridion circulare	-	-	-	-	x	-	-	-	-	-	-	-	-	-	-	-	-
Navicula cryptocephala	-	-	-	x	-	-	-	-	-	-	-	-	-	-	-	-	-
N. gottlandica	x	-	-	-	-	-	-	-	-	-	-	-	x	-	-	-	-
N. sp.	-	-	-	-	-	-	-	-	-	-	-	-	x	x	-	-	-
Nitzschia acicularis	-	-	-	-	x	-	-	-	-	-	-	-	-	-	-	-	-
N. palea	-	-	-	x	-	-	-	-	-	-	-	-	-	-	-	-	-
N. sp.	-	-	-	x	-	-	-	-	-	-	-	-	x	x	-	-	-
Pinnularia sp.	-	x	-	x	x	-	x	-	-	-	-	-	-	x	-	-	-
Synedra amphicephala	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	-	-
S. famelica	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	-	-
S. filiformis	-	x	-	-	-	-	-	-	-	-	x	-	-	x	-	-	-
S. radians	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. rumpens	-	-	x	-	-	-	-	x	-	-	x	x	-	-	-	x	x
S. sp.	-	x	-	-	x	-	x	-	-	-	-	-	x	x	-	-	-
S. ulna	-	-	-	-	-	-	-	-	-	-	-	x	-	x	-	-	x
S. vaucheriae	x	-	-	-	-	-	-	x	-	-	-	-	x	x	-	-	-
Tabellaria flocculosa	x	x	x	-	x	-	x	-	x	-	x	x	x	x	x	x	x
CRYPTOPHYTA																	
Cryptomonas sp.	-	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PHAEOPHYTA																	
Pleurocladia sp.	-	-	-	-	-	-	-	-	x	-	-	-	-	-	-	-	-

Table 12.--*Periphytic algae in streams*--Continued

Taxa	Sampling site S12 7-11-75	S12 10-22-75	S12 7-02-76	S12 9-03-76	S12 10-15-76	S13 7-11-75	S13 10-22-75	S13 7-02-76	S13 9-03-76	S13 10-15-76
CHLOROPHYTA (grass-green algae)										
Chlorophyceae										
Ankistrodesmus sp.	-	x	-	-	-	-	-	-	-	-
Closterium sp.	x	x	x	-	-	-	-	-	-	-
Cosmarium sp.	-	x	-	-	-	x	x	-	-	-
Euastrum sp.	-	x	-	-	-	-	-	-	-	-
Mougeotia sp.	-	x	-	-	-	-	x	-	-	x
Pediastrum boryanum	-	x	-	-	-	-	-	-	-	-
P. tetras	-	-	-	-	x	-	-	-	-	-
Scenedesmus dimorphus	-	x	-	-	-	-	-	-	-	-
Spirogyra sp.	-	-	-	-	-	x	x	-	-	x
Staurastrum sp.	-	x	-	-	-	-	-	x	-	-
Ulothrix sp.	-	-	-	-	-	-	x	-	x	-
U. zonata	-	-	-	-	-	-	-	x	-	x
Zygnema sp.	-	x	x	-	-	-	-	-	-	-
CHRYSOPHYTA										
Bacillariophyceae (diatoms)										
Achnanthes linearis	-	-	-	-	-	-	-	-	x	x
A. minutissima	x	x	-	x	x	x	x	x	x	x
Cocconeis placentula	-	-	-	-	-	-	-	-	x	x
Cymbella cistula	x	x	-	x	x	x	x	x	x	x
C. lunata	-	-	-	x	-	-	-	x	-	-
C. sp.	x	x	x	-	-	x	-	-	-	-
C. ventricosa (minuta)	-	-	-	x	-	-	-	-	x	x
Eunotia sp.	-	-	-	-	x	-	-	-	-	-
Fragilaria sp.	-	-	-	-	-	-	x	x	x	x
Gomphoneis herculeana	-	x	-	-	-	-	x	x	-	x
Gomphonema parvulum	-	-	-	-	-	-	-	-	x	x
G. sp.	x	-	x	-	x	x	x	x	-	-
Hannea arcus	-	x	x	-	-	x	-	x	-	-
Meridion circulare	-	-	-	-	-	-	-	-	-	x
Navicula gottlandica	x	-	-	-	-	-	-	-	-	-
N. radiosa	-	-	-	-	-	-	-	-	x	-
N. sp.	x	x	-	-	-	x	x	-	-	-
N. spp.	-	-	-	-	-	-	-	-	-	x
Nitzschia spp.	-	-	-	x	-	-	-	-	-	-
Synedra radians	x	-	-	-	-	-	-	-	-	-
S. rumpens	-	-	x	x	x	-	-	-	-	-
S. sp.	-	x	-	-	-	x	-	-	x	x
S. ulna	-	x	x	x	x	x	x	x	x	x
Tabellaria fenestrata	-	-	-	-	-	-	-	-	-	x
T. flocculosa	x	x	x	x	x	-	x	-	-	x
Chrysophyceae (golden or yellow-brown algae)										
Dinobryon sertularia	-	-	-	-	x	-	-	-	-	-
CYANOPHYTA (blue-green algae)										
Myxophyceae										
Microcystis sp.	-	-	-	-	-	x	-	-	-	-
Oscillatoria sp.	x	x	-	-	-	-	x	-	x	x

Table 13.--*Benthic macroinvertebrates in lakes*

PHYLUM / CLASS / Order / Family / Genus species	Site:	L1		L2		L4		L5		L6	
	Date (1976):	6-29	8-31	6-29	8-31	7-01	9-01	6-30	9-01	7-02	9-03
	Depth (m):	2.0	4.0	2.5	1.0	1.5	3.0	3.5	1.0	3.0	3.0
	No. of samples combined from site:	3	3	3	3	1	2	2	1	1	2
		Number of organisms									
COELENTERATA											
HYDROZOA											
Hydroidea											
Hydridae											
Hydra sp.		-	-	-	-	-	1	-	-	-	-
NEMATA, unidentified species		3	-	-	-	-	2	-	-	-	-
ANNELIDA											
OLIGOCHAETA											
Plesiopora											
Tubificidae											
Ilyodrilus sp.		-	-	-	-	7	2	5	-	-	-
Limnodrilus sp.		1	-	3	-	3	-	-	-	-	-
Naididae											
Chaetogaster sp.		1	-	-	-	-	-	-	-	-	-
Nais sp.		-	2	-	3	-	2	-	-	-	-
Opisthopora, unident. sp.		-	-	-	-	-	1	-	1	-	2
ARTHROPODA											
CRUSTACEA											
Malacostraca (subclass)											
Amphipoda											
Taltridae											
Hyalella azteca		8	-	-	-	17	34	-	-	-	-
INSECTA											
Ephemeroptera											
Baetidae											
Baetis sp.		-	21	-	1	-	-	-	-	-	-
Leptophlebiidae											
Paraleptophlebia pallipes		-	1	-	-	-	-	1	-	-	-
Neuroptera											
Sialidae											
Sialis occidens		-	-	4	4	-	1	-	-	-	-
Trichoptera											
Calamoceratidae											
Heteroplectron californicum		-	-	-	-	-	1	-	-	-	-
Leptoceridae											
Mystacides sp.		-	-	-	-	-	1	-	-	-	-
Sericostomatidae											
Sericostoma sp.		-	-	-	-	1	3	-	1	-	-
Diptera											
Chironomidae											
Tanypodinae (subfamily)											
Ablabesmyia sp.		24	29	29	51	51	17	-	1	-	-
Procladius sp.		16	13	2	2	5	-	-	-	14	14
Diamesinae (subfamily)											
Diamesa sp.		-	1	-	-	-	-	-	-	-	-
Orthocladiinae (subfamily)											
Corynoneura sp.		-	2	-	2	-	-	-	-	-	-
Cricotopus sp.		-	-	-	-	-	-	-	1	-	-
Psectrocladius sp.		-	-	-	-	-	3	-	-	-	-
Thienemanniella sp.		-	1	-	-	-	-	-	-	-	-
Trichocladius sp. 1		83	10	7	65	8	13	-	1	-	-
Trichocladius sp. 2		-	-	-	2	-	-	-	-	-	-
Chironominae (subfamily)											
Chironomini (tribe)											
Chironomus sp.		-	-	-	-	-	-	-	-	-	1
Cryptochironomus sp.		-	-	-	-	1	14	28	-	-	2
Dicrotendipes sp.		3	30	2	6	-	24	-	3	-	-
Microtendipes sp.		3	10	-	2	66	1	-	-	-	-
Paracladopelma sp.		-	-	-	-	-	-	1	-	-	-
Paratendipes sp.		-	-	-	-	5	-	-	-	-	-
Phaenopsectra sp.		-	-	-	-	-	-	-	4	-	1
Polypedilum sp.		13	2	-	-	3	-	-	-	-	-
Tribelos sp.		-	-	1	-	-	4	-	6	-	-
Tanytarsini (tribe)											
Calopsectra sp.		387	229	36	28	4	10	-	7	-	3
Rheotanytarsus sp.		6	1	147	147	-	4	-	3	-	-
Ceratopogonopidae											
Dasyhelea sp.		19	79	3	22	-	-	-	-	-	-
Probezzia sp.		-	-	1	-	-	-	-	-	-	-
ARACHNIDA											
Acari											
Acari sp. 2		-	3	-	-	-	-	-	-	-	-
Acari sp. 4		5	21	-	1	-	2	-	-	-	-
MOLLUSCA											
GASTROPODA											
Physidae											
Physa sp.		-	9	-	-	-	-	-	-	-	-
Planorbidae											
Gyraulus sp.		1	-	-	-	-	-	-	-	-	-
PELECYPODA											
Pisidiidae											
Pisidium sp.		29	-	26	19	87	2	-	-	1	-
TOTAL NUMBER OF SPECIMENS		602	464	261	355	258	142	35	28	15	23
TOTAL NUMBER OF TAXA		16	18	12	15	13	21	4	10	2	6

Table 14.--*Benthic macroinvertebrates in streams*

[Percents and numbers shown relate to combined totals of individuals from three samples at each site along a transect near left bank, middle, and right bank]

CLASS / Order / Family / Genus species	July 1975																			
	Site S1		Site S2		Site S3		Site S4		Site S5		Site S6		Site S7		Site S8		Site S9		Site S10	
	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number
COELENTERATA (phylum), Hydra sp.	0.0	1	--	--	--	--	0.0	3	--	--	--	--	--	--	0.0	1	--	--	--	--
TURBELLARIA, Tricladida, Planariidae (flatworms)	--	--	--	--	1.2	5	--	--	2.2	17	--	--	1.2	17	.5	19	1.8	46	1.9	23
Dugesia sp.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polycelis sierrensis (Kenk) 1973	--	--	--	--	1.2	5	--	--	2.2	17	--	--	1.2	17	.5	19	1.8	46	1.9	23
NEMATA (phylum), unident. nemas (unsegmented roundworms)	.0	1	2.4	6	.2	1	.1	18	.1	1	--	--	1.2	16	.2	7	--	--	.1	1
OLIGOCHAETA (segmented worms)	.5	14	18.6	47	.2	1	--	--	.9	7	2.8	12	2.4	33	1.2	42	.3	7	1.1	13
Plesiopora	.5	14	18.6	47	--	--	--	--	.9	7	--	--	.5	7	.9	33	.2	4	1.0	12
Naididae	.5	14	.4	1	--	--	--	--	--	--	--	--	.5	7	.3	10	.0	1	1.0	12
Chaetogaster spp.	.2	6	--	--	--	--	--	--	--	--	--	--	--	--	.0	1	--	--	1.0	12
Nais spp.	.3	8	.4	1	--	--	--	--	--	--	--	--	.5	7	.2	9	.0	1	--	--
Tubificidae	--	--	18.2	46	--	--	--	--	.9	7	--	--	--	--	.6	23	.1	3	--	--
Ilyodrilus sp.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	.2	8	--	--	--	--
Limnodrilus sp.	--	--	18.2	46	--	--	--	--	.9	7	--	--	--	--	.4	15	.1	3	--	--
Opisthopora, unident. true earthworms	--	--	--	--	.2	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Prosopora	--	--	--	--	--	--	--	--	--	--	2.8	12	1.9	26	.2	9	.1	3	.1	1
Lumbriculidae	--	--	--	--	--	--	--	--	--	--	2.8	12	1.9	26	.2	9	.1	3	.1	1
Rhynchelmis sp.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	.1	3	--	--
Unident. lumbriculid	--	--	--	--	--	--	--	--	--	--	2.8	12	1.9	26	.2	9	--	--	.1	1
CRUSTACEA, Ostracoda (subclass), unident. cyprid (seed shrimp)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.5	18
INSECTA (insects)	76.9	2,057	75.5	191	97.6	389	99.7	13,958	96.0	753	96.0	408	85.4	1,193	88.1	3,180	95.4	2,444	93.8	1,120
Ephemeroptera (mayflies)	3.7	98	7.9	20	46.1	184	1.0	135	18.6	146	30.6	130	20.9	292	3.6	130	8.8	225	12.9	154
Siphlonuridae, Ameletus sp.	--	--	--	--	--	--	.0	1	--	--	--	--	.1	1	--	--	--	--	1.0	12
Baetidae, Baetis spp.	.3	8	--	--	11.0	44	.3	40	4.8	38	6.6	28	11.8	165	.8	29	3.4	86	3.2	38
Heptageniidae	--	--	7.9	20	32.6	130	.1	16	10.6	83	21.2	90	4.5	63	1.2	45	3.9	101	8.0	96
Cinygmula sp.	--	--	7.9	20	10.0	40	.0	4	4.8	38	6.6	28	.2	3	.6	23	1.5	38	2.8	33
Epeorus (Ironodes) lepidus Traver 1935	--	--	--	--	--	--	.0	1	.1	1	--	--	1.0	14	--	--	--	--	--	--
Epeorus (Iron) longimanus (Eaton) 1881	--	--	--	--	20.3	81	.1	11	3.4	27	14.1	60	3.2	44	.1	2	1.4	36	5.1	61
Heptagenia elegantula (Eaton) 1885	--	--	--	--	2.3	9	--	--	2.2	17	.5	2	.1	2	.6	20	1.0	27	.2	2
Rhithrogena morrisoni (Banks) 1924	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Leptophlebiidae, Paraleptophlebia pallipes (Hagen) 1875	1.9	51	--	--	1.8	7	.4	63	3.1	24	.2	1	2.3	32	1.6	56	1.5	38	.7	8
Ephemerellidae	1.5	39	--	--	.8	3	.1	15	.1	1	2.6	11	2.2	31	--	--	--	--	--	--
Ephemerella doddsi Needham 1927	.7	19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ephemerella flavilinea McDunnough 1926	--	--	--	--	.5	2	.1	14	--	--	1.9	8	1.4	20	--	--	--	--	--	--
Ephemerella inermis Eaton 1884	.6	15	--	--	.2	1	--	--	--	--	.7	3	--	--	--	--	--	--	--	--
Ephemerella infrequens McDunnough 1924	.2	5	--	--	--	--	.0	1	.1	1	--	--	.1	1	--	--	--	--	--	--
Ephemerella tibialis McDunnough 1924	--	--	--	--	--	--	--	--	--	--	--	--	.7	10	--	--	--	--	--	--
Plecoptera (stoneflies)	1.1	30	7.1	18	2.2	9	.1	17	11.5	90	2.6	11	12.5	175	7.1	255	12.8	329	6.1	73
Peltoperlidae (roachlike stoneflies)																				
Peltoperla brevis Banks 1907	--	--	--	--	--	--	--	--	--	--	--	--	7.3	102	--	--	.0	1	--	--
Nemouridae (spring stoneflies)	.8	20	6.7	17	1.0	4	.1	17	4.0	31	.5	2	2.4	33	4.6	167	9.6	247	1.2	14
Malenka spp.	.8	20	--	--	--	--	.1	16	3.7	29	.5	2	2.4	33	4.5	162	--	--	--	--
Prostoia besametsa (Ricker) 1952	--	--	6.7	17	--	--	--	--	--	--	--	--	--	--	.1	5	--	--	--	--
Visoka cataractae (Neave) 1933	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6.0	154	.2	3
Zapada spp.	--	--	--	--	1.0	4	.0	1	.3	2	--	--	--	--	--	--	3.6	93	.9	11
Leuctridae (rolled-winged stoneflies)																				
Leuctra (Paraleuctra) sara Claassen 1937	--	--	--	--	--	--	--	--	--	--	--	--	--	--	.2	8	.0	1	.2	2
Taeniopterygidae (winter stoneflies), Brachyptera sp.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	.0	1	--	--
Perlodidae (perlodid stoneflies)																				
Isogenus (Kogotus) nonus (Needham and Claassen) 1925	--	--	.4	1	--	--	--	--	--	--	--	--	--	--	.1	2	--	--	--	--
Chloroperlidae (green stoneflies)																				
Alloperla (exquisita, fidelis, and severa) spp.	--	--	--	--	1.2	5	--	--	5.2	41	2.1	9	1.2	16	1.5	54	2.3	57	3.8	45
Perlidae (common stoneflies)																				
Acroneuria californica (Banks) 1905	.4	10	--	--	--	--	--	--	2.3	18	--	--	1.7	24	.7	24	.9	22	1.0	12
Neuroptera	.0	1	.4	1	--	--	.0	4	.3	2	--	--	.4	5	.0	1	.2	4	.0	1
Sialidae (alderflies), Sialis occidens Ross 1937	.0	1	.4	1	--	--	--	--	--	--	--	--	--	--	.0	1	--	--	--	--
Corydalidae (dobson and fishflies)																				
Dysmicohermes crepusculus Chandler 1954	--	--	--	--	--	--	.0	4	.3	2	--	--	.4	5	--	--	.2	4	.1	1
Trichoptera (caddisflies)	3.0	80	--	--	2.5	10	.5	75	8.7	68	3.1	13	7.5	105	6.8	244	2.6	67	3.4	40
Rhyacophilidae (primitive caddisflies)	.1	2	--	--	.2	1	.0	4	.4	3	.2	1	2.0	28	.3	12	.4	10	.3	4
Rhyacophila acropedes Banks 1914	.0	1	--	--	--	--	--	--	--	--	--	--	1.2	16	.3	11	.1	3	--	--
Rhyacophila angelita Banks 1911	--	--	--	--	--	--	--	--	--	--	--	--	.1	2	--	--	--	--	--	--
Rhyacophila tucula Ross 1950	--	--	--	--	--	--	.0	3	--	--	.2	1	--	--	.0	1	.0	1	--	--
Rhyacophila vaccua Milne 1936	.0	1	--	--	.2	1	.0	1	.4	3	--	--	.7	10	--	--	.2	6	.3	4
Glossosomatidae	--	--	--	--	--	--	--	--	.1	1	.9	4	--	--	--	--	.1	2	.8	9
Agapetus (nr. malleatus Banks 1914 and taho Ross 1947) sp.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anagapetus chandleri Ross 1951	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Glossosoma orbgonense Ling 1938	--	--	--	--	--	--	--	--	.1	1	.9	4	--	--	--	--	.1	2	.8	9
Philopotamidae (finger-net caddisflies or silken-tube spinners)																				
Wormaldia gabriella Banks 1930	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Psychomyiidae (tube-making and trumpet-net caddisflies)																				
Polycentropus halidus Milne 1936	2.7	72	--	--	--	--	.4	60	.3	2	--	--	.4	5	.9	33	.6	16	.4	5
Hydropsychidae (net-spinning caddisflies)	.2	6	--	--	.8	3	.0	1	1.8	14	.7	3	3.5	79	.3	11	.3	7	.7	8
Hydropsyche occidentalis Banks 1900	.2	6	--	--	.5	2	.0	1	.6	5	.2	1	3.5	79	.3	11	.3	7	.7	8
Parapsyche sp.	--	--	--	--	.2	1	--	--	1.2	9	.5	2	--	--	--	--	--	--	--	--

CLASS / Order / Family / Genus species	July 1975									
	Site S10		Site S11		Site S12		Site S13			
	Percent	Number	Percent	Number	Percent	Number	Percent	Number		
COELENTERATA (phylum), Hydra sp.	--	--	--	--	--	--	0.1	1		
TURBELLARIA, Tricladida, Planariidae (flatworms)	1.9	23	--	--	0.1	1	8.6	123		
Dugesia sp.	--	--	--	--	.1	1	8.6	123		
Polycelis sierrensis (Kenk) 1973	1.9	23	--	--	--	--	--	--		
NEMATA (phylum), unident. nemas (unsegmented roundworms)	.1	1	--	--	--	--	.4	6		
OLIGOCHAETA (segmented worms)	1.1	13	2.0	9	.5	6	6.9	99		
Plesiopora	1.0	12	.4	2	.5	6	4.9	70		
Naididae	1.0	12	.4	2	.5	6	4.9	70		
Chaetogaster spp.	1.0	12	--	--	.1	1	1.1	16		
Nais spp.	--	--	.4	2	.4	5	3.8	54		
Tubificidae	--	--	--	--	--	--	--	--		
Ilyodrilus sp.	--	--	--	--	--	--	--	--		
Limnodrilus sp.	--	--	--	--	--	--	--	--		
Opisthopora, unident. true earthworms	--	--	--	--	--	--	1.4	20		
Prosopora	.1	1	1.6	7	--	--	.6	9		
Lumbriculidae	.1	1	1.6	7	--	--	.6	9		
Rhynchelmis sp.	--	--	1.1	5	--	--	.4	5		
Unident. lumbriculid	--	--	.4	2	--	--	.3	4		
CRUSTACEA, Ostracoda (subclass), unident. cyprid (seed shrimp)	93.8	1,120	94.6	419	96.3	1,128	74.4	1,067		
INSECTA (insects)	12.9	154	34.6	153	37.2	436	23.5	337		
Ephemeroptera (mayflies)	1.0	12	.2	1	.3	4	--	--		
Siphlonuridae, Ameletus sp.	3.2	38	9.8	43	8.4	99	6.6	94		
Baetidae, Baetis spp.	8.0	96	12.4	55	25.8	302	16.1	231		
Heptageniidae	2.8	33	1.1	5	--	--	--	--		
Cinygmula sp.	--	--	--	--	--	--	--	--		
Epeorus (Ironodes) lepidus Traver 1935	5.1	61	10.6	47	25.8	302	3.4	49		
Epeorus (Iron) longimanus (Eaton) 1881	.2	2	.2	1	--	--	12.7	182		
Heptagenia elegantula (Eaton) 1885	--	--	.4	2	--	--	--	--		
Rhithrogena morrisoni (Banks) 1924	.7	8	11.5	51	.8	10	--	--		
Leptophlebiidae, Paraleptophlebia pallipes (Hagen) 1875	--	--	.7	3	1.8	21	.8	12		
Ephemerellidae	--	--	--	--	--	--	--	--		
Ephemerella doddsi Needham 1927	--	--	.7	3	1.5	18	.1	2		
Ephemerella flavilinea McDunnough 1926	--	--	--	--	--	--	--	--		
Ephemerella inermis Eaton 1884	--	--	.3	3	.7	10	--	--		
Ephemerella infrequens McDunnough 1924	--	--	--	--	--	--	--	--		
Ephemerella tibialis McDunnough 1924	6.1	73	9.5	42	2.5	29	7.5	107		
Plecoptera (stoneflies)										
Peltoperlidae (roachlike stoneflies)	--	--	--	--	--	--	--	--		
Peltoperla brevis Banks 1907	1.2	14	2.3	10	1.8	21	5.9	85		
Nemouridae (spring stoneflies)	--	--	2.3	10	1.8	21	5.9	85		
Malenka spp.	--	--	--	--	--	--	--	--		
Prostoia besametsa (Ricker) 1952	--	--	--	--	--	--	--	--		
Visoka cataractae (Neave) 1933	.9	11	--	--	--	--	--	--		
Zapada spp.										
Leuctridae (rolled-winged stoneflies)	.2	2	--	--	--	--	--	--		
Leuctra (Paraleuctra) sara Claassen 1937	.2	3	--	--	--	--	--	--		
Taeniopterygidae (winter stoneflies), Brachyptera sp.										
Perlodidae (perlodid stoneflies)	--	--	--	--	--	--	--	--		
Isogenus (Kogotus) nonus (Needham and Claassen) 1925										
Chloroperlidae (green stoneflies)	3.8	45	6.3	28	.1	1	.1	1		
Alloperla (exquisita, fidelis, and severa) spp.										
Perlidae (common stoneflies)	1.0	12	.7	3	.6	7	1.5	21		
Acroneuria californica (Banks) 1905	.0	1	1.4	6	--	--	.1	2		
Neuroptera	--	--	1.4	6	--	--	--	--		
Sialidae (alderflies), Sialis occidens Ross 1937										
Corydalidae (dobson and fishflies)	.1	1	--	--	--	--	.1	2		
Dysmicohermes crepusculus Chandler 1954	10.8	48	12.6	148	13.2	189				
Trichoptera (caddisflies)	.3	4	.9	4	.2	2	.4	5		
Rhyacophilidae (primitive caddisflies)	--	--	--	--	.2	2	--	--		
Rhyacophila acropedes Banks 1914	--	--	--	--	--	--	.1	2		
Rhyacophila angelita Banks 1911	--	--	--	--	--	--	--	--		
Rhyacophila tucula Ross 1950	.9	4	--	--	.2	2	.3	3		
Rhyacophila vaccua Milne 1936	.9	4	--	--	.2	2	6.8	91		
Glossosomatidae	--	--	--	--	.2	2	5.3	76		
Agapetus (nr. malleatus Banks 1914 and taho Ross 1947) sp.	--	--	--	--	--	--	--	--		
Anagapetus chandleri Ross 1951	.2	1	--	--	--	--	--	--		
Glossosoma orbgonense Ling 1938	--	--	--	--	--	--	1.5	22		
Philopotamidae (finger-net caddisflies or silken-tube spinners)										
Wormaldia gabriella Banks 1930	--	--	--	--	.5	6	2.1	30		
Psychomyiidae (tube-making and trumpet-net caddisflies)										
Polycentropus halidus Milne 1936	5.6	25	.1	1	.5	7				
Hydropsychidae (net-spinning caddisflies)	.4	2	.8	10	3.7	53				
Hydropsyche occidentalis Banks 1900	.4	2	.8	10	3.7	53				
Parapsyche sp.	--	--	--	--	--	--				

Table 14.--*Benthic macroinvertebrates in streams*--Continued

CLASS / Order / Family / Genus species	July 1975																	
	Site S1		Site S2		Site S3		Site S4		Site S5		Site S6		Site S7		Site S8		Site S9	
	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number
INSECTA (continued)																		
Trichoptera (continued)																		
Hydroptilidae (micro-caddisflies), Agraylea sp.	--	--	--	--	.5	2	--	--	--	--	--	--	--	--	--	--	--	--
Brachycentridae, Micrasema sp.	--	--	--	--	--	--	--	--	--	--	--	--	.6	8	.6	23	--	--
Limnephilidae (northern caddisflies)	--	--	--	--	--	--	--	--	.5	4	.2	1	.1	1	3.0	108	.3	8
Ecclisomyia spp.	--	--	--	--	--	--	--	--	.5	4	--	--	--	--	.1	2	--	--
Neothremma sp.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	.3	7
Oligophlebodes sierra Ross 1944	--	--	--	--	--	--	--	--	--	--	.2	1	.1	1	2.9	106	--	--
Unident. limniphilid (nr. genus A)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	.0	1
Lepidostomatidae, Lepidostoma spp.	--	--	--	--	1.0	4	.1	10	5.6	44	.9	4	.4	6	1.5	55	.9	22
Leptoceridae (long-horned caddisflies), Mystacides sp.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sericostomatidae, Sericostoma sp.	--	--	--	--	--	--	--	--	--	--	--	--	.6	8	.1	2	.1	2
Coleoptera (beetles)	2.4	63	.4	1	3.0	12	.0	1	--	--	--	--	2.2	31	--	--	1.8	46
Dytiscidae (predaceous diving beetles)	--	--	.4	1	--	--	--	--	--	--	--	--	.1	1	--	--	--	--
Deronectes striatellus (Le Conte) 1852	--	--	.4	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Deronectes quadrimaculatus (Horn) 1883	--	--	--	--	--	--	--	--	--	--	--	--	.1	1	--	--	--	--
Elmidae (riffle beetles)	1.4	36	--	--	3.0	12	.0	1	--	--	--	--	2.0	28	--	--	1.8	46
Ampumixus dispar (Fall) 1925	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cleptelmis ornata (Schaeffer) 1911	1.4	36	--	--	--	--	--	--	--	--	--	--	1.9	27	--	--	--	--
Heterlimnius sp.	--	--	--	--	--	--	.0	1	--	--	--	--	--	--	--	--	--	--
Optioservus sp.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zaitzevia parvula Horn 1970	--	--	--	--	3.0	12	--	--	--	--	--	--	.1	1	--	--	1.8	46
Psephenidae (water penny beetles)																		
Eubrianax edwardsi (Le Conte) 1874	1.0	27	--	--	--	--	--	--	--	--	--	--	.1	2	--	--	--	--
Diptera (true flies)	66.7	1,785	59.7	151	43.7	174	98.0	13,726	57.0	447	59.8	254	41.9	585	70.6	2,550	69.2	1,773
Tipulidae (crane flies)	--	--	.4	1	--	--	--	--	.1	1	.5	2	.1	1	.0	1	.1	3
Antocha monticola Alexander 1917	--	--	.4	1	--	--	--	--	--	--	--	--	.1	1	--	--	--	--
Dicranota sp.	--	--	--	--	--	--	--	--	.1	1	.5	2	--	--	.0	1	--	--
Hexatoma sp.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	.1	2
Pedicia sp.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	.0	1
Prionocera sp.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Deuterophlebiidae (mountain midges)																		
Deuterophlebia shasta Wirth 1951	--	--	--	--	--	--	--	--	.5	4	.2	1	.4	5	--	--	.2	4
Ceratopogonidae (=Heleidae) (biting midges)																		
Bezzia (nr. setulosa Loew 1861) sp.	.0	1	--	--	--	--	--	--	.1	1	--	--	.6	8	.2	6	.4	11
Chironomidae (midges)	37.9	1,013	58.9	149	43.1	172	3.5	494	52.5	412	39.8	169	38.1	533	51.9	1,873	68.0	1,742
Podonominae	--	--	--	--	--	--	.0	1	--	--	--	--	--	--	--	--	.0	1
Parochlus (=Podonomus) sp.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	.0	1
Trichotanypus sp.	--	--	--	--	--	--	.0	1	--	--	--	--	--	--	--	--	--	--
Tanypodinae (=Pelopiinae)																		
Pentaneurini (nr. Conchapelopia, Arctopelopia)	5.1	136	12.6	32	.8	3	.7	104	1.5	12	.2	1	1.1	15	3.2	114	3.9	100
Diamesinae	--	--	--	--	1.5	6	.1	8	1.7	13	1.2	5	.4	6	.6	23	.7	18
Diamesa sp.	--	--	--	--	--	--	--	--	.3	2	--	--	.4	6	.5	19	.2	4
Pseudodiamesa sp.	--	--	--	--	.5	2	.1	8	1.3	10	--	--	--	--	.1	2	--	--
Unident. Diamesinae sp. 1	--	--	--	--	1.0	4	--	--	.1	1	1.2	5	--	--	.1	2	.6	14
Orthocladiinae (=Hydrobaeninae)	29.6	792	19.8	50	35.1	140	1.7	234	33.6	264	10.8	46	6.1	85	11.2	406	45.6	1,167
Brillia sp.	--	--	--	--	--	--	--	--	.5	4	--	--	.1	1	--	--	.6	16
Corynoneura sp.	.8	22	--	--	--	--	--	--	--	--	.2	1	--	--	.2	9	--	--
Cricotopus sp.	.0	1	.8	2	--	--	--	--	--	--	.9	4	.2	3	--	--	--	--
Diplocladius sp.	--	--	4.0	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Eukiefferiella sp. 1	--	--	--	--	.8	3	--	--	--	--	.2	1	.1	1	.6	21	--	--
Eukiefferiella sp. 2	19.1	511	--	--	.8	3	1.0	137	.5	4	2.4	10	.4	6	2.5	97	.5	13
Eukiefferiella sp. 3	--	--	--	--	12.5	50	.0	5	11.7	92	2.1	9	1.6	22	1.6	59	25.3	649
Metriocnemus sp.	--	--	--	--	--	--	--	--	12.9	101	.7	3	--	--	.2	9	5.2	132
Orthocladius sp. 1	.5	13	--	--	5.8	23	.2	31	2.4	19	3.1	13	1.6	22	1.2	42	2.5	63
Orthocladius sp. 3	8.7	232	7.1	18	--	--	.2	32	--	--	--	--	--	--	.1	5	--	--
Thienemanniella sp.	.5	13	6.3	16	15.3	61	.1	18	3.4	27	1.2	5	2.2	30	1.9	68	3.0	77
Trichocladius sp. 1	--	--	1.6	4	--	--	.1	11	2.2	17	--	--	--	--	1.7	62	8.3	212
Trichocladius sp. 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.1	41	.2	5
Chironominae	3.2	85	26.5	67	5.8	23	1.0	147	15.7	123	27.5	117	30.6	527	36.8	1,330	17.8	456
Chironomini	--	--	.8	2	4.5	18	.9	130	2.0	16	--	--	1.7	24	7.5	271	.2	6
Dicrotendipes sp.	--	--	--	--	--	--	--	--	--	--	--	--	.1	1	--	--	--	--
Paracladopelma sp.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	.1	2	--	--
Polypedilum sp.	--	--	.8	2	4.5	18	.9	130	2.0	16	--	--	1.6	23	7.4	269	.2	6
Tanytarsini	3.2	85	25.7	65	1.2	5	.1	17	13.6	107	27.5	117	28.8	403	29.3	1,059	17.6	450
Micropsectra (nr. Calopsectra polita Mall) sp.	1.4	37	25.7	65	1.2	5	.1	14	10.7	84	2.8	12	.4	5	28.3	1,023	8.5	217
Paratanytarsus sp.	--	--	--	--	--	--	.0	1	--	--	--	--	--	--	.7	26	.1	2
Rheotanytarsus spp.	1.7	45	--	--	--	--	--	--	2.9	23	24.2	103	28.5	398	.3	10	9.0	231
Zavrelia sp.	.1	3	--	--	--	--	.0	2	--	--	.5	2	--	--	--	--	--	--
Simuliidae (black flies)																		
Simuliids (Prosimulium spp., Simulium spp.)	28.8	771	.4	1	.5	2	94.5	13,232	2.6	20	19.3	82	2.6	37	18.6	670	.4	10
Empididae (dance flies), Unident. empidids (nr. Hemerodromia)	--	--	--	--	--	--	--	--	1.0	8	--	--	.1	1	--	--	.1	3
Muscidae (muscid flies), Unident. muscids (nr. Limnophora)	--	--	--	--	--	--	--	--	.1	1	--	--	--	--	--	--	--	--
ARACHNIDA, Aquatic Acari (water mites)	1.2	31	3.6	9	.8	3	.0	1	.8	6	.1	4	2.3	32	.1	4	2.5	64
MOLLUSCA (phylum)	21.4	572	--	--	--	--	.2	25	--	--	.2	1	7.6	106	9.9	359	--	--
PELECYPODA (bivalves), Pisidiidae (=Sphaeriidae), Pisidium sp.	21.2	568	--	--	--	--	.1	17	--	--	.2	1	6.6	92	9.8	355	--	--
GASTROPODA	.2	4	--	--	--	--	.1	8	--	--	--	--	1.0	14	.1	4	--	--
Ancylidae (fresh water limpets), Ferrissia sp.	.2	4	--	--	--	--	.1	8	--	--	--	--	--	--	.1	4	--	--
Viviparidae (unident. viriparid snail)	--	--	--	--	--	--	--	--	--	--	--	--	1.0	14	--	--	--	--

CLASS / Order / Family / Genus species	July 1975							
	Site S10		Site S11		Site S12		Site S13	
	Percent	Number	Percent	Number	Percent	Number	Percent	Number
INSECTA (continued)								
Trichoptera (continued)								
Hydroptilidae (micro-caddisflies), Agraylea sp.	--	--	--	--	--	--	.1	2
Brachycentridae, Micrasema sp.	--	--	--	--	.4	2	--	--
Limnephilidae (northern caddisflies)	.2	2	2.0	9	4.0	47	--	--
Ecclisomyia spp.	--	--	--	--	--	--	--	--
Neothremma sp.	--	--	--	--	--	--	--	--
Oligophlebodes sierra Ross 1944	.2	2	2.0	9	4.0	47	--	--
Unident. limniphilid (nr. genus A)	--	--	--	--	--	--	--	--
Lepidostomatidae, Lepidostoma spp.	.9	11	.2	1	6.3	74	.1	1
Leptoceridae (long-horned caddisflies), Mystacides sp.	--	--	--	--	.1	1	--	--
Sericostomatidae, Sericostoma sp.	.1	1	.9	4	--	--	--	--
Coleoptera (beetles)	.2	3	.9	4	.3	3	.1	1
Dytiscidae (predaceous diving beetles)	--	--	--	--	--	--	--	--
Deronectes striatellus (Le Conte) 1852	--	--	--	--	--	--	--	--
Deronectes quadrimaculatus (Horn) 1883	--	--	--	--	--	--	--	--
Elmidae (riffle beetles)	.2	3	.7	3	.2	2	--	--
Ampumixus dispar (Fall) 1925	--	--	--	--	.1	1	--	--
Cleptelmis ornata (Schaeffer) 1911	.2	2	.7	3	.1	1	--	--
Heterlimnius sp.	--	--	--	--	--	--	--	--
Optioservus sp.	.1	1	--	--	--	--	--	--
Zaitzevia parvula Horn 1970	--	--	--	--	--	--	--	--
Psephenidae (water penny beetles)								
Eubrianax edwardsi (Le Conte) 1874	--	--	.2	1	.1	1	.1	1
Diptera (true flies)	71.1	849	37.5	166	43.7	512	30.1	431
Tipulidae (crane flies)	.5	6	--	--	.5	6	.3	4
Antocha monticola Alexander 1917	--	--	--	--	.5	6	.3	4
Dicranota sp.	.3	4	--	--	--	--	--	--
Hexatoma sp.	.1	1	--	--	--	--	--	--
Pedicia sp.	--	--	--	--	--	--	--	--
Prionocera sp.	.1	1	--	--	--	--	--	--
Deuterophlebiidae (mountain midges)								
Deuterophlebia shasta Wirth 1951	.1	1	.2	1	--	--	--	--
Ceratopogonidae (=Heleidae) (biting midges)								
Bezzia (nr. setulosa Loew 1861) sp.	1.1	13	.9	4	--	--	--	--
Chironomidae (midges)	68.3	815	34.5	153	38.5	451	26.9	386
Podonominae	--	--	--	--	--	--	--	--
Parochlus (=Podonomus) sp.	--	--	--	--	--	--	--	--
Trichotanypus sp.	--	--	--	--	--	--	--	--
Tanypodinae (=Pelopiinae)								
Pentaneurini (nr. Conchapelopia, Arctopelopia)	8.2	98	4.7	21	3.2	37	.6	9
Diamesinae	.7	8	.7	3	.2	2	1.4	20
Diamesa sp.	--	--	--	--	.2	2	--	--
Pseudodiamesa sp.	--	--	.7	3	--	--	1.4	20
Unident. Diamesinae sp. 1	--	--	--	--	--	--	--	--
Orthocladiinae (=Hydrobaeninae)	44.6	532	15.6	69	20.6	252	12.1	173
Brillia sp.	--	--	--	--	.3	3	--	--
Corynoneura sp.	.6	7	2.0	9	.8	10	.9	13
Cricotopus sp.	.4	5	.7	3	2.4	28	3.2	46
Diplocladius sp.	--	--	--	--	--	--	--	--
Eukiefferiella sp. 1	--	--	.4	2	.1	1	--	--
Eukiefferiella sp. 2	1.2	14	1.4	6	.3	3	.4	6
Eukiefferiella sp. 3	13.2	157	3.8	17	.3	3	--	--
Metriocnemus sp.	--	--	--	--	--	--	--	--
Orthocladius sp. 1	2.3	27	4.5	20	6.8	80	4.8	69
Orthocladius sp. 3	.1	1	.2	1	.5	6	.2	3
Thienemanniella sp.	4.0	48	2.0	9	8.8	103	2.5	36
Trichocladius sp. 1	20.4	244	.0	2	.3	4	--	--
Trichocladius sp. 2	--	--	--	--	--	--	--	--
Chironominae	14.8	177	13.6	60	14.6	171	12.8	184
Chironomini	.2	3	5.4	24	6.7	79	--	--
Dicrotendipes sp.	--	--	--	--	--	--	--	--
Paracladopelma sp.	--	--	--	--	--	--	--	--
Polypedilum sp.	.2	3	5.4	24	6.7	79	--	--
Tanytarsini	14.6	174	8.1	36	7.8	92	12.8	184
Micropsectra (nr. Calopsectra polita Mall) sp.	14.5	173	7.0	31	1.6	19	2.0	28
Paratanytarsus sp.	--	--	--	--	--	--	--	--
Rheotanytarsus spp.	.1	1	1.1	5	6.2	73	10.9	156
Zavrelia sp.	--	--	--	--	--	--	--	--
Simuliidae (black flies)								
Simuliids (Prosimulium spp., Simulium spp.)	.7	8	1.6	7	4.6	54	.6	9
Empididae (dance flies), Unident. empidids (nr. Hemerodromia)	.5	6	.2	1	.1	1	2.2	32
Muscidae (muscid flies), Unident. muscids (nr. Limnophora)	--	--	--	--	--	--	--	--
ARACHNIDA, Aquatic Acari (water mites)	1.6	19	3.2	14	2.6	30	9.3	134
MOLLUSCA (phylum)	--	--	.2	1	--	--	--	--
PELECYPODA (bivalves), Pisidiidae (=Sphaeriidae), Pisidium sp.	--	--	.2	1	--	--	--	--
GASTROPODA	--	--	--	--	--	--	--	--
Ancylidae (fresh water limpets), Ferrissia sp.	--	--	--	--	--	--	--	--
Viviparidae (unident. viriparid snail)	--	--	--	--	--	--	--	--

Table 14.--*Benthic macroinvertebrates in streams*--Continued

CLASS Order Family Genus species	August 1975																			
	Site S1		Site S2		Site S3		Site S4		Site S5		Site S6		Site S7		Site S8		Site S9		Site S10	
	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number
COELENTERATA (phylum), Hydra sp.	55.6	6,077	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TURBELLARIA, Tricladida, Planariidae (flatworms)	--	--	--	--	0.3	2	--	--	0.2	5	0.0	1	0.3	14	0.6	45	3.5	28	1.0	16
Dugesia sp.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polycelis sierrensis (Kenk) 1973	--	--	--	--	.3	2	--	--	.2	5	.0	1	.3	14	.6	45	3.5	28	1.0	16
NEMATA (phylum), unident. nemas (unsegmented roundworms)	.3	32	1.4	32	--	--	0.1	3	--	--	--	--	.1	6	--	--	--	--	.9	14
OLIGOCHAETA (segmented worms)	2.3	248	3.5	78	--	--	.9	30	4.9	103	4.1	112	.1	3	.7	51	.2	2	1.5	23
Plesiopora	2.3	248	3.5	78	--	--	.9	30	4.9	103	3.8	105	.1	3	.6	44	--	--	1.5	23
Naididae	2.3	248	1.2	28	--	--	.0	1	.2	4	--	--	.0	2	.3	24	--	--	1.5	23
Chaetogaster spp.	2.1	26	--	--	--	--	--	--	--	--	--	--	--	--	.3	20	--	--	1.5	23
Nais spp.	.2	20	1.2	28	--	--	.0	1	.2	4	--	--	.0	2	.1	4	--	--	--	--
Tubificidae	--	--	2.2	50	--	--	.8	29	4.7	99	3.8	105	.0	1	.3	20	--	--	--	--
Ilyodrilus sp.	--	--	--	--	--	--	.6	22	2.2	46	3.7	102	--	--	.1	8	--	--	--	--
Limnodrilus sp.	--	--	2.2	50	--	--	.2	7	2.5	53	.1	3	.0	1	.2	12	--	--	--	--
Opisthopora, unident. true earthworms	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Prosopora	--	--	--	--	--	--	--	--	--	--	.3	7	--	--	.1	7	.2	2	--	--
Lumbriculidae	--	--	--	--	--	--	--	--	--	--	.3	7	--	--	.1	7	.2	2	--	--
Rhynchelmis sp.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	.1	5	.2	2	--	--
Unident. lumbriculid	--	--	--	--	--	--	--	--	--	--	.2	7	--	--	.0	2	--	--	--	--
CRUSTACEA, Ostracoda (subclass), unident. cyprid (seed shrimp)	--	--	2.0	44	--	--	--	--	--	--	--	--	.0	1	.3	20	--	--	2.1	33
INSECTA (insects)	24.0	2,612	87.4	1,958	99.0	685	92.6	3,177	94.6	1,996	94.7	2,583	90.9	3,821	93.6	6,804	94.1	755	93.0	1,451
Ephemeroptera (mayflies)	3.2	352	3.0	68	16.9	117	12.4	427	17.8	377	14.0	383	10.3	432	3.8	276	31.4	252	10.3	160
Siphlonuridae, Ameletus sp.	--	--	--	--	--	--	--	--	.1	2	--	--	.0	1	.2	16	.6	5	.1	2
Baetidae	.2	21	2.7	61	11.6	80	3.4	115	8.0	169	9.1	247	6.6	279	.8	58	14.3	115	4.2	66
Baetis spp.	.2	21	.2	4	11.6	80	3.4	115	8.0	169	9.1	247	6.6	279	.8	58	14.3	115	4.2	66
Centroptilum sp.	--	--	2.6	57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Heptageniidae	--	--	--	--	2.4	17	.3	10	5.7	120	2.8	75	1.8	77	.3	23	6.2	50	3.6	56
Cinygmula sp.	--	--	--	--	--	--	--	--	--	--	--	--	.0	1	.1	5	--	--	--	--
Epeorus (Ironodes) lepidus Traver 1935	--	--	--	--	--	--	--	--	.3	6	--	--	--	--	--	--	--	--	--	--
Epeorus (Iron) longimanus (Eaton) 1881	--	--	--	--	.1	1	--	--	.3	7	.2	6	1.2	51	--	--	--	--	1.0	15
Heptagenia elegantula (Eaton) 1885	--	--	--	--	2.3	16	.3	10	5.1	107	2.5	69	.6	25	.2	18	6.2	50	2.6	41
Leptophlebiidae, Paraleptophlebia pallipes (Hagen) 1875	1.8	195	.3	7	2.2	15	1.7	59	3.4	71	1.0	28	.4	16	2.5	179	10.2	82	2.2	35
Ephemerellidae	1.2	136	--	--	.7	5	7.1	243	.7	15	1.2	33	1.4	49	--	--	--	--	.1	1
Ephemerella doddsi Needham 1927	--	--	--	--	.1	1	--	--	.4	9	.5	13	.9	37	--	--	--	--	.1	1
Ephemerella flavilinea McDunnough 1926	--	--	--	--	--	--	--	--	.3	6	--	--	.0	2	--	--	--	--	--	--
Ephemerella infrequens McDunnough 1924	1.2	136	--	--	.6	4	7.1	243	--	--	.7	18	.4	19	--	--	--	--	--	--
Ephemerella spinifera Needham 1927	--	--	--	--	--	--	--	--	--	--	.1	2	--	--	--	--	--	--	--	--
Ephemerella tibialis McDunnough 1924	--	--	--	--	--	--	--	--	--	--	--	--	.0	1	--	--	--	--	--	--
Plecoptera (stoneflies)	.2	23	.2	4	.4	3	1.5	50	8.2	172	2.0	54	9.6	402	2.1	152	12.8	103	4.0	63
Peltoperlidae (roachlike stoneflies)																				
Peltoperla brevis Banks 1907	--	--	--	--	.1	1	--	--	--	--	.2	6	7.0	295	--	--	--	--	--	--
Nemouridae (spring stoneflies)	.2	18	.1	3	.1	1	1.4	49	5.0	105	1.0	28	1.7	71	.7	50	9.6	77	2.1	36
Malenka spp.	.2	18	.1	2	.1	1	1.4	49	4.5	97	.6	17	.8	32	.6	42	2.1	17	1.7	27
Visoka cataractae (Neave) 1933	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.1	41	--	--
Zapada spp.	--	--	.0	1	--	--	--	--	.4	8	.4	11	.9	39	.1	8	2.4	19	.6	9
Leuctridae (rolled-winged stoneflies)																				
Leuctra (Paraleuctra) sara Claassen 1937	--	--	--	--	--	--	--	--	--	--	--	--	--	--	.2	16	.2	2	.1	1
Perlodidae (perlodid stoneflies)	.0	5	.0	1	--	--	--	--	2.0	43	--	--	--	--	.6	46	--	--	--	--
Arcynopteryx (Swala) parallela (Frison) 1936	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isogenus (Kogotus) nonus (Needham and Claassen) 1925	.0	5	.0	1	--	--	--	--	2.0	43	--	--	--	--	.6	46	--	--	--	--
Chloroperlidae (green stoneflies)																				
Alloperla (exquisita, fidelis, and severa) spp.	--	--	--	--	.1	1	--	--	.9	19	.6	17	.3	12	.5	35	1.8	14	1.6	25
Perlidae (common stoneflies)																				
Acroneuria californica (Banks) 1905	--	--	--	--	--	--	.0	1	.2	5	.1	3	.6	24	.1	5	1.2	10	.1	1
Neuroptera	.0	1	2.4	54	--	--	.2	7	.0	1	--	--	--	--	.0	2	--	--	.4	6
Sialidae (alderflies), Sialis occidens Ross 1937	.0	1	2.4	54	--	--	.2	7	--	--	--	--	--	--	.0	2	--	--	--	--
Corydalidae (dobson and fishflies)																				
Dysmicohermes crepusculus Chandler 1954	--	--	--	--	--	--	--	--	.0	1	--	--	--	--	--	--	--	--	.4	6
Trichoptera (caddisflies)	.7	74	.1	2	5.8	40	6.8	232	4.6	97	4.1	112	18.2	765	1.4	98	5.7	46	8.1	126
Rhyacophilidae (primitive caddisflies)	.0	3	--	--	.4	3	.6	21	1.4	30	.4	10	.6	26	.2	14	.6	5	.3	5
Rhyacophila (nr. oreta Ross 1941b) sp.	.0	1	--	--	--	--	--	--	--	--	--	--	.0	1	--	--	--	--	--	--
Rhyacophila acropedes Banks 1914	.0	2	--	--	--	--	.0	1	.0	1	--	--	.2	9	.0	2	--	--	--	--
Rhyacophila angelita Banks 1911	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Rhyacophila vaccua Milne 1936	--	--	--	--	.3	2	--	--	1.3	27	.0	1	.0	2	.0	1	.4	3	.1	2
Rhyacophila vepulsa Milne 1936	--	--	--	--	.1	1	.6	20	.1	2	.3	9	.3	11	.2	11	.2	2	.2	3
Rhyacophila vocala Milne 1936	--	--	--	--	--	--	--	--	--	--	--	--	.1	3	--	--	--	--	--	--
Glossosomatidae	--	--	--	--	--	--	--	--	--	--	--	--	.9	39	--	--	--	--	.4	6
Agapetus (nr. malleatus Banks 1914 and taho Ross 1947) sp.	--	--	--	--	--	--	--	--	--	--	--	--	.9	39	--	--	--	--	--	--
Glossosoma oregonense Ling 1938	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	.4	6

CLASS Order Family Genus species	August 1975							
	Site S10		Site S11		Site S12		Site S13	
	Percent	Number	Percent	Number	Percent	Number	Percent	Number
COELENTERATA (phylum), Hydra sp.	--	--	--	--	--	--	0.1	6
TURBELLARIA, Tricladida, Planariidae (flatworms)	1.0	16	--	--	0.2	3	4.8	223
Dugesia sp.	--	--	--	--	.2	3	4.8	223
Polycelis sierrensis (Kenk) 1973	1.0	16	--	--	--	--	--	--
NEMATA (phylum), unident. nemas (unsegmented roundworms)	.9	14	--	--	.2	5	.3	15
OLIGOCHAETA (segmented worms)	1.5	23	.2	14	.2	4	10.0	465
Plesiopora	1.5	23	.2	13	.1	2	9.8	455
Naididae	1.5	23	.0	1	.0	1	9.8	455
Chaetogaster spp.	1.5	23	--	--	--	--	--	--
Nais spp.	--	--	.0	1	.0	1	9.8	455
Tubificidae	--	--	.2	12	.0	1	--	--
Ilyodrilus sp.	--	--	.2	12	--	--	--	--
Limnodrilus sp.	--	--	--	--	.0	1	--	--
Opisthopora, unident. true earthworms	--	--	--	--	--	--	.2	9
Prosopora	.0	1	.1	2	.0	1	--	--
Lumbriculidae	.0	1	.1	2	.0	1	--	--
Rhynchelmis sp.	.0	1	.1	2	.0	1	--	--
Unident. lumbriculid	--	--	--	--	--	--	--	--
CRUSTACEA, Ostracoda (subclass), unident. cyprid (seed shrimp)	2.1	33	.1	8	.2	5	.2	9
INSECTA (insects)	93.0	1,451	96.2	5,944	96.3	1,991	62.9	2,927
Ephemeroptera (mayflies)	10.3	160	5.6	346	12.0	249	4.5	209
Siphlonuridae, Ameletus sp.	.1	2	--	--	--	--	--	--
Baetidae	4.2	66	4.0	247	4.3	88	.9	41
Baetis spp.	4.2	66	4.0	247	4.3	88	.9	41
Centroptilum sp.	--	--	--	--	--	--	--	--
Heptageniidae	3.6	56	.5	28	5.6	115	2.9	134
Cinygmula sp.	--	--	--	--	--	--	--	--
Epeorus (Ironodes) lepidus Traver 1935	--	--	--	--	--	--	--	--
Epeorus (Iron) longimanus (Eaton) 1881	1.0	15	.4	22	5.6	115	.7	33
Heptagenia elegantula (Eaton) 1885	2.6	41	.1	6	--	--	2.2	101
Leptophlebiidae, Paraleptophlebia pallipes (Hagen) 1875	2.2	35	.7	46	1.7	36	--	--
Ephemerellidae	.1	1	.4	25	.5	10	.7	34
Ephemerella doddsi Needham 1927	.1	1	.2	13	.4	9	--	--
Ephemerella flavilinea McDunnough 1926	--	--	.1	7	.0	1	--	--
Ephemerella infrequens McDunnough 1924	--	--	.1	5	--	--	.7	34
Ephemerella spinifera Needham 1927	--	--	--	--	--	--	--	--
Ephemerella tibialis McDunnough 1924	--	--	--	--	--	--	--	--
Plecoptera (stoneflies)	4.0	63	2.1	128	.9	18	.7	32
Peltoperlidae (roachlike stoneflies)								
Peltoperla brevis Banks 1907	--	--	.1	7	--	--	--	--
Nemouridae (spring stoneflies)	2.1	36	1.1	66	.2	3	.3	12
Malenka spp.	1.7	27	.5	29	--	--	.3	12
Visoka cataractae (Neave) 1933	--	--	--	--	--	--	--	--
Zapada spp.	.6	9	.6	37	.2	3	--	--
Leuctridae (rolled-winged stoneflies)								
Leuctra (Paraleuctra) sara Claassen 1937	.1	1	.4	23	--	--	--	--
Perlodidae (perlodid stoneflies)	--	--	--	--	--	--	.1	6
Arcynopteryx (Swala) parallela (Frison) 1936	--	--	--	--	--	--	.1	6
Isogenus (Kogotus) nonus (Needham and Claassen) 1925	--	--	--	--	--	--	--	--
Chloroperlidae (green stoneflies)								
Alloperla (exquisita, fidelis, and severa) spp.	1.6	25	.3	20	.3	6	--	--
Perlidae (common stoneflies)								
Acroneuria californica (Banks) 1905	.1	1	.2	12	.4	9	.3	14
Neuroptera	.4	6	.0	1	.1	2	.1	3
Sialidae (alderflies), Sialis occidens Ross 1937	--	--	.0	1	--	--	.0	1
Corydalidae (dobson and fishflies)								
Dysmicohermes crepusculus Chandler 1954	.4	6	--	--	.1	2	.0	2
Trichoptera (caddisflies)	8.1	126	8.7	539	8.1	168	12.0	558
Rhyacophilidae (primitive caddisflies)	.3	5	1.2	76	.2	4	.2	10
Rhyacophila (nr. oreta Ross 1941b) sp.	--	--	--	--	--	--	--	--
Rhyacophila acropedes Banks 1914	--	--	.0	1	--	--	.2	8
Rhyacophila angelita Banks 1911	--	--	--	--	--	--	.0	1
Rhyacophila vaccua Milne 1936	.1	2	.1	5	.2	4	.0	1
Rhyacophila vepulsa Milne 1936	.2	3	1.1	70	--	--	--	--
Rhyacophila vocala Milne 1936	--	--	--	--	--	--	--	--
Glossosomatidae	.4	6	--	--	--	--	1.0	48
Agapetus (nr. malleatus Banks 1914 and taho Ross 1947) sp.	--	--	--	--	--	--	.9	41
Glossosoma oregonense Ling 1938	.4	6	--	--	--	--	.2	7

Table 14.--*Benthic macroinvertebrates in streams*--Continued

CLASS Order Family Genus species	August 1975																	
	Site S1		Site S2		Site S3		Site S4		Site S5		Site S6		Site S7		Site S8		Site S9	
	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number
INSECTA (continued)																		
Trichoptera (continued)																		
Philopotamidae (finger-net caddisflies or silken-tube spinners)																		
Wormaldia gabriella Banks 1930	--	--	--	--	--	--	1.6	55	.1	2	.1	2	2.6	108	--	--	--	--
Psychomyiidae (tube-making and trumpet-net caddisflies)																		
Polycentropus halidus Milne 1936	.6	67	--	--	--	--	4.0	139	.5	10	--	--	--	--	.1	9	3.0	24
Hydropsychidae (net-spinning caddisflies)	--	--	--	--	--	--	.2	5	.1	2	.2	7	12.6	529	.0	2	.5	4
Cheumatopsyche mickeli Denning 1942	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hydropsyche occidentalis Banks 1900	--	--	--	--	--	--	.2	5	.0	1	.2	5	12.6	529	.0	2	.5	4
Parapsyche sp.	--	--	--	--	--	--	--	--	.0	1	.1	2	--	--	.0	2	--	--
Hydroptilidae (micro-caddisflies), Agraylea sp.	--	--	--	--	5.4	37	--	--	.3	7	.1	2	--	--	.0	2	--	--
Brachycentridae, Micrasema sp.	--	--	--	--	--	--	--	--	1.5	32	3.0	83	.4	17	.3	23	.9	7
Limnephilidae (northern caddisflies)	.0	1	--	--	--	--	.2	7	--	--	--	--	--	--	--	--	.1	1
Dicosmoecus atripes (Hagen) 1875	--	--	--	--	--	--	--	--	--	--	.0	1	--	--	--	--	.5	4
Ecclisomyia spp.	--	--	--	--	--	--	--	--	1.5	32	3.0	82	.4	17	.3	23	.2	2
Oligophlebodes sierra Ross 1944	.0	1	--	--	--	--	.2	7	.7	14	.3	8	.7	29	.1	10	.5	4
Lepidostomatidae, Lepidostoma spp.	.0	3	.1	2	--	--	.2	5	--	--	--	--	.0	1	.5	38	.2	2
Sericostomatidae, Sericostoma sp.	--	--	--	--	--	--	--	--	--	--	--	--	.3	11	--	--	.4	3
Coleoptera (beetles)	.4	44	.8	17	.1	1	--	--	--	--	--	--	--	--	--	--	--	--
Dytiscidae (predaceous diving beetles), Oreodytes sp.	--	--	.7	17	--	--	--	--	--	--	--	--	.3	11	--	--	.4	3
Elmidae (riffle beetles)	.2	27	--	--	.1	1	--	--	--	--	--	--	.1	3	--	--	--	--
Ampumixus dispar (Fall) 1925	--	--	--	--	--	--	--	--	--	--	--	--	.1	6	--	--	--	--
Cleptelmis ornata (Schaeffer) 1911	--	--	--	--	.1	1	--	--	--	--	--	--	--	--	--	--	--	--
Optioservus sp.	--	--	--	--	--	--	--	--	--	--	--	--	.0	2	--	--	.4	3
Zaitzevia parvula Horn 1970	.2	27	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Psephenidae (water penny beetles)																		
Eubrianax edwardsi (Le Conte) 1874	.2	17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diptera (true flies)	19.4	2,118	81.0	1,813	75.7	524	71.7	2,461	63.9	1,349	74.6	2,034	52.6	2,211	86.3	6,276	43.8	351
Tipulidae (crane flies)	--	--	.1	3	--	--	--	--	.4	8	--	--	.0	1	--	--	--	--
Antocha monticola Alexander 1917	--	--	--	--	--	--	--	--	.1	2	--	--	.0	1	--	--	--	--
Dicranota sp.	--	--	.1	3	--	--	--	--	.3	6	--	--	--	--	--	--	--	--
Ceratopogonidae (=Heleidae) (biting midges)																		
Bezzia (nr. setulosa Loew 1861) sp.	--	--	.2	4	--	--	--	--	.3	6	.3	8	.1	6	--	--	.7	6
Chironomidae (midges)	11.4	1,240	79.6	1,781	75.7	524	34.0	1,168	61.9	1,307	73.6	2,007	52.0	2,186	85.1	6,190	42.9	344
Podonominae, Trichotanypus sp.	--	--	.0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tanypodinae (=Pelopiinae)																		
Pentaneurini (nr. Conchapelopia, Arctopelopia)	5.1	556	3.3	73	.6	4	9.4	323	2.8	60	.6	16	1.4	61	6.2	453	17.8	143
Diamesinae	.2	16	.7	16	.3	2	.2	7	.3	6	.1	2	--	--	--	--	.1	1
Diamesa sp.	.2	16	.4	8	--	--	.2	5	--	--	--	--	--	--	--	--	--	--
Pseudodiamesa sp.	--	--	.4	8	.3	2	.1	2	.3	6	.1	2	--	--	--	--	.1	1
Orthocladiinae (=Hydrobaeninae)	1.6	76	43.5	973	69.1	478	11.5	392	38.3	809	32.3	880	1.9	81	16.7	1,287	15.4	124
Brillia sp.	--	--	1.4	32	6.4	44	1.2	42	6.7	142	3.4	94	.1	3	.3	24	2.5	20
Corynoneura sp.	--	--	1.2	28	--	--	.3	9	--	--	.4	12	.0	1	1.2	88	--	--
Cricotopus sp.	.1	12	.2	4	6.8	47	.5	16	.3	6	.3	8	.1	6	.7	52	--	--
Eukiefferiella sp. 1	--	--	--	--	--	--	--	--	--	--	--	--	.0	1	--	--	--	--
Eukiefferiella sp. 2	.2	24	9.1	204	10.0	69	3.8	130	1.4	30	9.7	264	.7	30	5.7	416	.4	3
Eukiefferiella sp. 3	.6	64	--	--	3.0	21	.3	9	.2	4	.4	12	--	--	.1	8	--	--
Metriocnemus sp.	--	--	--	--	2.5	17	--	--	22.6	478	--	--	--	--	.2	12	1.1	9
Orthocladius sp. 1	.5	52	.2	4	9.4	65	2.6	88	1.0	20	.2	4	.2	7	1.7	121	.6	5
Orthocladius sp. 3	.0	4	--	--	.3	2	--	--	--	--	--	--	.1	3	--	--	--	--
Thienemanniella sp.	.2	16	11.3	252	8.0	55	2.2	74	2.5	52	3.8	104	.3	12	1.6	113	3.1	25
Trichocladius sp. 1	--	--	1.2	28	--	--	.3	10	--	--	.8	22	.1	5	--	--	--	--
Trichocladius sp. 2	.0	4	18.8	421	22.8	158	.4	14	3.6	77	13.2	360	.3	13	6.2	453	7.7	62
Chironominae	4.5	492	32.1	718	5.8	40	13.0	446	20.5	432	40.7	1,109	48.7	2,044	61.2	4,450	9.5	76
Chironomini	.2	16	.5	12	.6	4	10.3	354	2.1	45	.5	13	1.9	78	3.8	280	--	--
Cryptochironomus sp.	.2	16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polypedilum sp.	--	--	.5	12	.6	4	10.3	354	2.1	45	.5	13	1.9	78	3.8	280	--	--
Tanytarsini	4.4	476	31.5	706	5.2	36	2.7	92	18.3	387	40.2	1,096	46.8	1,966	57.4	4,170	9.5	76
Micropsectra (nr. Calopsectra polita Mall) sp.	4.2	464	30.5	682	5.1	35	2.5	87	18.3	387	39.6	1,080	7.3	305	54.9	3,993	9.2	74
Rheotanytarsus spp.	.1	12	1.1	24	.1	1	.2	5	--	--	.6	16	39.5	1,661	2.4	177	.2	2
Simuliidae (black flies)									1.3	27	.7	19	.4	18	1.2	86	--	--
Simuliids (Prosimulium spp., Simulium spp.)	8.0	878	1.1	25	--	--	37.7	1,293	.0	1	--	--	--	--	--	--	.1	1
Empididae (dance flies), Unident. empidids (nr. Hemerodromia)	--	--	--	--	--	--	--	--	.3	6	1.2	32	8.0	334	.9	61	2.0	16
ARACHNIDA, Aquatic Acari (water mites)	1.3	140	5.7	127	.6	4	.8	28	--	--	--	--	.5	22	4.0	288	.1	1
MOLLUSCA (phylum)	16.6	1,819	--	--	.1	1	5.7	195	--	--	--	--	.5	22	4.0	288	.1	1
PELECYPODA (bivalves), Pisidiidae (=Sphaeriidae), Pisidium sp.	16.6	1,819	--	--	.1	1	5.4	185	--	--	--	--	--	--	--	--	--	--
GASTROPODA	--	--	--	--	--	--	.3	10	--	--	--	--	--	--	--	--	--	--
Ancylidae (fresh water limpets), Ferrissia sp.	--	--	--	--	--	--	.3	10	--	--	--	--	--	--	--	--	--	--
Viviparidae (unident. viriparid snail)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

CLASS Order Family Genus species	August 1975									
	Site S10		Site S11		Site S12		Site S13			
	Percent	Number	Percent	Number	Percent	Number	Percent	Number		
INSECTA (continued)										
Trichoptera (continued)										
Philopotamidae (finger-net caddisflies or silken-tube spinners)										
Wormaldia gabriella Banks 1930	.1	2	.4	22	--	--	.0	1		
Psychomyiidae (tube-making and trumpet-net caddisflies)										
Polycentropus halidus Milne 1936	1.8	28	.1	5	.1	2	.4	19		
Hydropsychidae (net-spinning caddisflies)	.7	11	6.9	425	2.6	53	10.0	464		
Cheumatopsyche mickeli Denning 1942	.1	1	--	--	--	--	9.0	417		
Hydropsyche occidentalis Banks 1900	.6	10	6.9	425	2.6	53	1.0	47		
Parapsyche sp.	--	--	--	--	--	--	--	--		
Hydroptilidae (micro-caddisflies), Agraylea sp.	--	--	--	--	.6	12	.1	6		
Brachycentridae, Micrasema sp.	.3	4	.0	1	.2	4	.2	9		
Limnephilidae (northern caddisflies)	--	--	--	--	--	--	.2	9		
Dicosmoecus atripes (Hagen) 1875	--	--	--	--	--	--	--	--		
Ecclisomyia spp.	.3	4	.0	1	.2	4	--	--		
Oligophlebodes sierra Ross 1944	--	--	--	--	4.3	88	--	--		
Lepidostomatidae, Lepidostoma spp.	--	--	.1	7	.2	4	.0	1		
Sericostomatidae, Sericostoma sp.	.1	1	.1	4	.1	2	.0	1		
Coleoptera (beetles)	--	--	--	--	--	--	--	--		
Dytiscidae (predaceous diving beetles), Oreodytes sp.	.1	1	.1	4	.1	2	.0	1		
Elmidae (riffle beetles)	--	--	--	--	--	--	--	--		
Ampumixus dispar (Fall) 1925	--	--	--	--	--	--	--	--		
Cleptelmis ornata (Schaeffer) 1911	.1	1	.1	4	.0	1	--	--		
Optioservus sp.	--	--	--	--	.0	1	.0	1		
Zaitzevia parvula Horn 1970	--	--	--	--	--	--	--	--		
Psephenidae (water penny beetles)										
Eubrianax edwardsi (Le Conte) 1874	--	--	--	--	--	--	--	--		
Diptera (true flies)	70.2	1,095	79.7	4,926	75.1	1,552	45.6	2,124		
Tipulidae (crane flies)	.5	8	.1	6	.2	3	.4	21		
Antocha monticola Alexander 1917	.2	3	.1	6	.2	3	.4	21		
Dicranota sp.	.3	5	--	--	--	--	--	--		
Ceratopogonidae (=Heleidae) (biting midges)										
Bezzia (nr. setulosa Loew 1861) sp.	1.2	19	.1	5	--	--	--	--		
Chironomidae (midges)	68.4	1,067	57.5	3,555	73.6	1,522	41.5	1,933		
Podonominae, Trichotanypus sp.	--	--	--	--	--	--	--	--		
Tanypodinae (=Pelopiinae)										
Pentaneurini (nr. Conchapelopia, Arctopelopia)	8.2	128	.3	21	1.7	35	.9	43		
Diamesinae	.1	2	.1	8	1.6	3	1.2	58		
Diamesa sp.	--	--	--	--	1.4	30	1.2	55		
Pseudodiamesa sp.	.1	2	.1	8	.2	4	.1	3		
Orthocladiinae (=Hydrobaeninae)	14.6	227	9.9	621	39.8	820	29.4	1,367		
Brillia sp.	1.7	27	.0	1	.2	3	--	--		
Corynoneura sp.	.5	8	.3	17	.2	5	.0	2		
Cricotopus sp.	--	--	1.8	112	16.7	345	8.8	410		
Eukiefferiella sp. 1	--	--	.8	48	--	--	--	--		
Eukiefferiella sp. 2	1.5	24	.3	21	.5	10	6.1	285		
Eukiefferiella sp. 3	--	--	.1	5	--	--	.2	8		
Metriocnemus sp.	--	--	--	--	--	--	--	--		
Orthocladius sp. 1	.3	5	2.0	121	5.1	106	10.2	476		
Orthocladius sp. 3	--	--	--	--	.5	11	.4	17		
Thienemanniella sp.	2.5	39	3.2	199	15.9	328	3.6	169		
Trichocladius sp. 1	--	--	.5	31	.5	10	--	--		
Trichocladius sp. 2	7.8	122	.9	57	.2	4	--	--		
Chironominae	45.5	710	47.1	2,914	30.5	631	10.0	465		
Chironomini	--	--	5.0	309	9.9	205	.0	1		
Cryptochironomus sp.	--	--	.0	1	--	--	--	--		
Polypedilum sp.	45.5	710	5.0	308	9.9	205	.0	1		
Tanytarsini	44.7	697	42.1	2,605	30.6	426	10.0	464		
Micropsectra (nr. Calopsectra polita Mall) sp.	.8	13	2.1	130	16.7	345	9.9	459		
Rheotanytarsus spp.	--	--	--	--	--	--	--	--		
Simuliidae (black flies)	--	--	22.0	1,358	1.3	26	.1	6		
Simuliids (Prosimulium spp., Simulium spp.)	.1	1	.0	2	.0	1	3.5	164		
Empididae (dance flies), Unident. empidids (nr. Hemerodromia)	1.3	21	3.5	215	1.4	30	21.7	1,009		
ARACHNIDA, Aquatic Acari (water mites)	--	--	--	--	1.4	29	.0	1		
MOLLUSCA (phylum)	--	--	--	--	.3	7	.0	1		
PELECYPODA (bivalves), Pisidiidae (=Sphaeriidae), Pisidium sp.	--	--	--	--	1.1	22	--	--		
GASTROPODA	--	--	--	--	--	--	--	--		
Ancylidae (fresh water limpets), Ferrissia sp.	--	--	--	--	1.1	22	--	--		
Viviparidae (unident. viriparid snail)	--	--	--	--	--	--	--	--		

Table 14.--*Benthic macroinvertebrates in streams*--Continued

CLASS / Order / Family / Genus species	October 1975															
	Site S5		Site S6		Site S7		Site S8		Site S9		Site S10		Site S11		Site S12		Site S13	
	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number
TURBELLARIA, Tricladida, Planariidae (flatworms)	0.9	5	0.0	1	2.0	29	0.1	1	7.3	52	0.8	1	--	--	--	--	4.8	24
Dugesia sp.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.8	24
Polycelis sierrensis (Kenk) 1973	.9	5	.0	1	2.0	29	.1	1	7.3	52	.8	1	--	--	--	--	--	--
NEMATA (phylum), unident. nemas (unsegmented roundworms)	--	--	--	--	--	--	.7	6	--	--	--	--	--	--	0.4	1	--	--
OLIGOCHAETA (segmented worms)	--	--	.4	9	1.8	27	2.9	26	--	--	--	--	0.1	2	7.0	19	6.0	30
Plesiopora	--	--	.2	4	1.9	27	2.5	23	--	--	--	--	.1	2	7.0	19	5.7	29
Naididae	--	--	--	--	1.5	22	.3	3	--	--	--	--	--	--	7.0	19	5.7	29
Chaetogaster spp.	--	--	--	--	--	--	.2	2	--	--	--	--	--	--	--	--	--	--
Nais spp.	--	--	--	--	1.5	22	.1	1	--	--	--	--	--	--	7.0	19	5.7	29
Tubificidae, Limnodrilus sp.	--	--	.2	4	.4	5	2.2	20	--	--	--	--	.1	2	--	--	--	--
Opisthopora, unident. true earthworms	--	--	.0	1	--	--	--	--	--	--	--	--	--	--	--	--	.2	1
Prosopora	--	--	.2	4	--	--	.3	3	--	--	--	--	--	--	--	--	--	--
Lumbriculidae	--	--	.2	4	--	--	.3	3	--	--	--	--	--	--	--	--	--	--
Rhynchelmis sp.	--	--	--	--	--	--	.1	1	--	--	--	--	--	--	--	--	--	--
Unident. lumbriculid	--	--	.2	4	--	--	.2	2	--	--	--	--	--	--	--	--	--	--
CRUSTACEA, Ostracoda (subclass), unident. cyprid (seed shrimp)	--	--	--	--	--	--	--	--	--	--	4.3	5	.2	4	.7	2	--	--
INSECTA (insects)	98.2	541	99.5	2,006	90.9	1,297	83.9	758	91.5	649	94.0	110	97.0	1,685	88.3	240	89.2	451
Ephemeroptera (mayflies)	35.4	195	23.2	467	25.7	367	5.4	49	40.5	287	14.5	17	5.4	94	51.4	140	5.0	25
Siphlonuridae, Ameletus sp.	--	--	1.0	21	.1	1	.2	2	.3	2	5.1	6	.1	2	--	--	--	--
Baetidae, Baetis spp.	19.1	105	16.5	333	9.1	130	1.0	9	30.9	219	4.3	5	1.6	28	19.5	53	2.6	13
Heptageniidae	6.7	37	3.5	71	10.0	143	.3	3	5.1	36	1.7	2	2.6	46	29.4	80	--	--
Cinygmula sp.	5.3	29	.6	12	.4	5	--	--	4.0	28	--	--	--	--	--	--	--	--
Epeorus (Ironodes) lepidus Traver 1935	.7	4	--	--	.9	13	--	--	.4	3	--	--	--	--	--	--	--	--
Epeorus (Iron) longimanus (Eaton) 1881	--	--	--	--	2.7	38	--	--	--	--	.8	1	1.3	22	16.5	45	--	--
Heptagenia elegantula (Eaton) 1885	.7	4	2.9	59	6.1	87	.3	3	.7	5	.8	1	1.4	24	12.5	34	--	--
Rhithrogena morrisoni (Banks) 1924	--	--	--	--	--	--	--	--	--	--	--	--	--	--	.4	1	--	--
Leptophlebiidae, Paraleptophlebia pallipes (Hagen) 1875	4.0	22	.9	19	4.6	65	3.9	35	3.7	26	3.4	4	.6	10	2.2	6	--	--
Ephemerellidae	5.6	31	1.1	23	2.0	28	--	--	.6	4	--	--	.5	8	.4	1	2.4	12
Ephemerella doddsi Needham 1927	3.1	17	.2	3	.7	10	--	--	--	--	--	--	.2	3	--	--	--	--
Ephemerella infrequens McDunnough 1924	2.4	13	.9	19	1.3	18	--	--	.6	4	--	--	.1	2	.4	1	2.4	12
Ephemerella spinifera Needham 1927	.2	1	.0	1	--	--	--	--	--	--	--	--	.2	3	--	--	--	--
Plecoptera (stoneflies)	16.3	90	2.0	41	7.8	112	6.1	55	12.0	85	16.2	19	1.2	21	1.1	3	3.6	18
Peltoperlidae (roachlike stoneflies)																		
Peltoperla brevis Banks 1907	--	--	--	--	5.3	75	--	--	2.3	16	.8	1	.5	8	--	--	--	--
Nemouridae (spring stoneflies)	8.5	47	.4	9	1.2	17	2.3	21	5.6	40	.8	1	.1	1	--	--	2.2	11
Malenka spp.	--	--	--	--	.1	2	--	--	--	--	--	--	--	--	--	--	--	--
Visoka cataractae (Neave) 1933	--	--	--	--	--	--	--	--	4.5	32	--	--	--	--	--	--	--	--
Zapada spp.	8.5	47	.4	9	1.0	15	2.3	21	1.1	8	8	1	.1	1	--	--	2.2	11
Leuctridae (rolled-winged stoneflies)																		
Leuctra (Paraleuctra) sara Claassen 1937	.2	1	--	--	.1	1	.1	1	--	--	8	1	.2	4	--	--	--	--
Taeniopterygidae (winter stoneflies), Brachyptera sp.	--	--	.0	1	--	--	--	--	--	--	--	--	.1	1	--	--	--	--
Perlodidae (perlodid stoneflies)	.2	1	.1	2	.4	6	.1	1	.3	2	--	--	.1	1	--	--	--	--
Arcynopteryx (Oroperla) barbara (Needham) 1933	--	--	--	--	--	--	--	--	--	--	--	--	.1	1	--	--	--	--
Isogenus (Kogotus) nonus (Needham and Claassen) 1925	.2	1	.1	2	.4	6	.1	1	.3	2	--	--	--	--	--	--	--	--
Chloroperlidae (green stoneflies)																		
Alloperla (exquisita, fidelis, and severa) spp.	2.5	14	1.2	25	.4	5	2.9	26	.6	4	13.7	16	.2	3	--	--	.2	1
Perlidae (common stoneflies)																		
Acroneuria californica (Banks) 1905	4.9	27	.2	4	.6	8	.7	6	3.2	23	--	--	.2	3	1.1	3	1.2	6
Neuroptera	--	--	--	--	.1	1	--	--	2.8	20	.8	1	.2	3	--	--	--	--
Sialidae (alderflies), Sialis occidens Ross 1937	--	--	--	--	--	--	--	--	--	--	--	--	.2	3	--	--	--	--
Corydalidae (dobson and fishflies)																		
Dysmicohermes crepusculus Chandler 1954	--	--	--	--	.1	1	--	--	2.8	20	.8	1	--	--	--	--	--	--
Trichoptera (caddisflies)	6.0	33	6.0	121	14.1	202	12.1	109	10.2	72	6.8	8	4.0	69	16.9	46	49.1	248
Rhyacophilidae (primitive caddisflies)	.5	3	.2	3	.8	11	3.2	29	1.9	14	--	--	1.2	21	--	--	.2	1
Rhyacophila acropedes Banks 1914	--	--	--	--	.4	5	1.6	15	--	--	--	--	.4	7	--	--	.2	1
Rhyacophila rotunda Banks 1924	--	--	--	--	--	--	--	--	.1	1	--	--	--	--	--	--	--	--
Rhyacophila vaccua Milne 1936	.5	3	.0	1	.1	2	.7	6	1.1	8	--	--	.5	9	--	--	--	--
Rhyacophila vepulsa Milne 1936	--	--	.1	2	.2	3	.9	8	.7	5	--	--	.3	5	--	--	--	--
Rhyacophila vocala Milne 1936	--	--	--	--	.1	1	--	--	--	--	--	--	--	--	--	--	--	--
Glossosomatidae, Glossosoma oregonense Ling 1938	.2	1	.3	7	.2	3	--	--	1.1	8	--	--	--	--	--	--	--	--
Philopotamidae (finger-net caddisflies or silken-tube spinners)																		
Wormaldia gabriella Banks 1930	.2	1	--	--	.2	3	--	--	--	--	--	--	.1	1	--	--	--	--
Psychomyiidae (tube-making and trumpet-net caddisflies)																		
Polycentropus halidus Milne 1936	.2	1	--	--	.6	9	--	--	--	--	.8	1	.5	9	.4	1	--	--
Hydropsychidae (net-spinning caddisflies)	1.6	9	.1	2	8.0	114	2.6	23	1.8	13	.8	1	1.7	29	--	--	48.7	246
Cheumatopsyche mickeli Denning 1942	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	33.1	167
Hydropsyche occidentalis Banks 1900	1.1	6	.1	2	8.0	114	2.6	23	1.6	11	.8	1	1.7	29	--	--	15.6	79
Parapsyche sp.	.5	3	--	--	--	--	--	--	.3	2	--	--	--	--	--	--	--	--
Hydroptilidae (micro-caddisflies), Agraylea sp.	--	--	.4	8	--	--	--	--	4.1	29	--	--	--	--	--	--	.2	1
Brachycentridae, Micrasema sp.	--	--	--	--	.1	1	2.2	20	--	--	--	--	.4	7	--	--	--	--

Table 14.--*Benthic macroinvertebrates in streams*--Continued

CLASS Order Family Genus species	October 1975 Site S5 Percent	Number	Site S6 Percent	Number	Site S7 Percent	Number	Site S8 Percent	Number
INSECTA (continued)								
Trichoptera (continued)								
Limnephilidae (northern caddisflies)	1.4	8	.3	6	3.2	46	.9	8
Ecclisomyia spp.	--	--	.0	1	--	--	.9	8
Neothremma sp.	--	--	--	--	--	--	--	--
Oligophlebodes sierra Ross 1944	1.4	8	.2	5	3.2	46	--	--
Unident. limniphilid (nr. genus A)	--	--	--	--	--	--	--	--
Lepidostomatidae, Lepidostoma spp.	1.8	10	4.7	95	.9	13	3.2	29
Sericostomatidae, Sericostoma sp.	--	--	--	--	.1	2	--	--
Coleoptera (beetles)	.4	2	--	--	.5	7	.4	4
Limnebiidae (Hydraenidae) (minute moss beetles)								
Hydraena vandykei d'Orchymont 1923	.2	1	--	--	--	--	--	--
Elmidae (riffle beetles)	.2	1	--	--	.5	7	--	--
Ampumixus dispar (Fall) 1925	--	--	--	--	.4	6	--	--
Cleptelmis ornata (Schaeffer) 1911	.2	1	--	--	.1	1	--	--
Psephenidae (water penny beetles)								
Eubrianax edwardsi (Le Conte) 1874	--	--	--	--	--	--	.4	4
Diptera (true flies)	40.1	221	68.3	1,377	42.6	608	59.9	541
Tipulidae (crane flies)	.7	4	.1	2	.4	5	--	--
Antocha monticola Alexander 1917	--	--	.1	2	.4	5	--	--
Dicranota sp.	.7	4	--	--	--	--	--	--
Pedicia sp.	--	--	--	--	--	--	--	--
Ceratopogonidae (=Heleidae) (biting midges)								
Bezzia (nr. setulosa Loew 1861) sp.	.4	2	.2	4	.6	9	.1	1
Chironomidae (midges)	38.6	213	68.0	1,371	41.6	593	59.8	540
Tanypodinae (=Pelopiinae)								
Pentaneurini (nr. Conchapelopia, Arctopelopia)	1.3	7	.2	5	1.6	23	15.7	142
Diamesinae	1.1	6	--	--	--	--	.1	1
Diamesa sp.	--	--	--	--	--	--	--	--
Pseudodiamesa sp.	1.1	6	--	--	--	--	--	--
Unident. Diamesinae sp. 1	--	--	--	--	--	--	.1	1
Orthocladiinae (=Hydrobaeninae)	12.0	66	7.8	147	4.6	65	16.4	148
Brillia sp.	5.3	29	.8	17	.8	11	.3	3
Corynoneura sp.	--	--	--	--	.1	1	--	--
Cricotopus sp.	.4	2	--	--	.1	2	2.2	20
Diplocladius sp.	--	--	--	--	--	--	--	--
Eukiefferiella sp. 1	.4	2	.3	6	--	--	--	--
Eukiefferiella sp. 2	.2	1	--	--	--	--	2.6	23
Metriocnemus sp.	--	--	.4	8	--	--	.1	1
Orthocladius sp. 1	2.4	13	.6	12	1.5	22	4.2	38
Thienemanniella sp.	.4	2	.4	8	.6	9	.1	1
Trichocladius sp. 1	.4	2	--	--	--	--	--	--
Trichocladius sp. 2	2.7	15	5.3	106	1.4	20	6.9	62
Chironominae	24.3	134	60.0	1,209	35.4	505	27.6	249
Chironomini, Polypedilum sp.	5.1	28	1.2	25	10.4	148	6.5	59
Tanytarsini	19.2	106	58.7	1,184	25.0	347	21.0	190
Calopsectra (nr. bathophila kieff.) sp.	.5	3	.4	8	--	--	--	--
Micropsectra (nr. Calopsectra polita Mall) sp.	16.9	93	58.1	1,172	13.8	197	17.7	170
Paratanytarsus sp.	.9	5	--	--	--	--	.2	2
Rheotanytarsus spp.	.9	5	.2	4	11.2	160	3.1	28
Simuliidae (black flies)								
Simuliids (Prosimulium spp., Simulium spp.)	.4	2	--	--	.1	1	--	--
Empididae (dance flies), Unident. empidids (nr. Hemerodromia)	--	--	--	--	--	--	--	--
ARACHNIDA, Aquatic Acari (water mites)	.9	5	--	--	2.5	36	3.1	28
MOLLUSCA (phylum)	--	--	--	--	2.7	38	9.3	84
PELECYPODA (bivalves), Pisidiidae (=Sphaeriidae), Pisidium sp.	--	--	--	--	2.7	38	9.3	84
GASTROPODA	--	--	--	--	--	--	--	--
Viviparidae (unident. viriparid snail)	--	--	--	--	--	--	--	--

October 1975 Site S9 Percent	Number	Site S10 Percent	Number	Site S11 Percent	Number	Site S12 Percent	Number	Site S13 Percent	Number
.8	6	.8	1	.1	1	1.1	3	--	--
--	--	--	--	--	--	--	--	--	--
.4	3	--	--	--	--	--	--	--	--
.1	1	.8	1	.1	1	1.1	3	--	--
.3	2	--	--	--	--	--	--	--	--
.3	2	4.3	5	.1	1	15.4	42	--	--
--	--	--	--	--	--	--	--	--	--
--	--	.8	1	.1	1	.4	1	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	.1	1	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	.1	1	--	--	--	--
--	--	.8	1	--	--	.4	1	--	--
26.1	185	54.7	64	86.1	1,497	18.4	50	31.6	160
--	--	6.0	7	--	--	.4	1	1.4	7
--	--	--	--	--	--	.4	1	1.4	7
--	--	5.1	6	--	--	--	--	--	--
--	--	.8	1	--	--	--	--	--	--
--	--	--	--	.1	2	--	--	--	--
25.9	184	48.7	57	85.8	1,492	18.0	49	28.7	145
4.8	34	4.3	5	1.0	17	.7	2	1.0	5
4.8	34	4.3	5	1.0	14	.7	2	1.0	5
.6	4	--	--	.1	1	.4	1	.2	1
--	--	--	--	--	--	.4	1	.2	1
.4	3	--	--	.1	1	--	--	--	--
.1	1	--	--	--	--	--	--	--	--
13.5	96	12.0	14	5.6	98	4.8	13	25.2	127
2.0	14	.8	1	--	--	.4	1	1.4	7
--	--	--	--	--	--	--	--	--	--
--	--	.8	1	.4	6	1.8	5	13.7	69
--	--	--	--	--	--	--	--	.6	3
--	--	--	--	--	--	--	--	--	--
.7	5	--	--	.6	10	.7	2	.4	2
--	--	--	--	--	--	--	--	--	--
9.9	70	--	--	2.6	45	1.5	4	8.1	41
.4	3	2.6	3	.3	5	.4	1	1.0	5
--	--	.8	1	1.8	31	--	--	--	--
.6	4	6.8	8	--	--	--	--	--	--
7.1	50	32.5	38	79.2	1,377	12.1	33	2.4	12
.3	2	--	--	6.8	119	5.5	15	--	--
6.8	48	32.5	38	72.3	1,258	6.6	18	2.4	12
--	--	--	--	--	--	--	--	--	--
5.1	36	32.5	38	71.0	1,235	1.5	4	.4	2
--	--	--	--	--	--	--	--	--	--
1.7	12	--	--	1.3	23	5.2	14	2.0	10
--	--	--	--	.1	2	--	--	.6	3
.1	1	--	--	.1	1	--	--	1.0	5
1.1	8	.8	1	2.8	48	1.5	4	--	--
--	--	--	--	--	--	2.2	6	--	--
--	--	--	--	--	--	1.5	4	--	--
--	--	--	--	--	--	.7	2	--	--
--	--	--	--	--	--	.7	2	--	--

Table 14.--*Benthic macroinvertebrates in streams*--Continued

CLASS Order Family Genus species	June-July 1976																	
	Site S1		Site S2		Site S3		Site S4		Site S5		Site S6		Site S7		Site S8		Site S9	
	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number
COELENTERATA (phylum), Hydra sp.	71.0	14,892	--	--	--	--	0.2	3	--	--	--	--	--	--	--	--	--	--
TURBELLARIA, Tricladida, Planariidae (flatworms)	--	--	--	--	0.2	1	--	--	2.5	23	2.5	25	1.5	15	4.0	78	14.7	189
Dugesia sp.	--	--	--	--	.2	1	--	--	--	--	--	--	--	--	--	--	--	--
Polycelis sierrensis Kenk 1973	--	--	--	--	--	--	--	--	2.5	23	2.5	25	1.5	15	4.0	78	14.7	189
NEMATA (phylum), unident. nemas (unsegmented roundworms)	--	--	--	--	--	--	--	--	--	--	.1	1	.2	2	--	--	--	--
OLIGOCHAETA (segmented worms)	.1	17	3.0	20	.4	2	.2	3	--	--	.2	2	.1	1	.5	10	--	--
Plesiopora	.1	17	3.0	20	--	--	.1	3	--	--	.2	2	.1	1	--	--	--	--
Naididae, Nais spp.	.1	17	3.0	20	--	--	.1	2	--	--	--	--	--	--	--	--	--	--
Tubificidae, Ilyodrilus sp.	--	--	--	--	--	--	.0	1	--	--	--	--	--	--	--	--	--	--
Opisthopora, unident. true earthworms	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Prosopora	--	--	--	--	.4	2	--	--	--	--	--	--	--	--	.5	10	--	--
Lumbriculidae	--	--	--	--	.4	2	--	--	--	--	--	--	--	--	.5	10	--	--
Rhynchelmis sp.	--	--	--	--	.4	2	--	--	--	--	--	--	--	--	.1	2	--	--
Unident. lumbriculid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	.4	8	--	--
INSECTA (insects)	7.0	1,478	96.5	638	99.5	559	89.2	1,738	96.7	896	97.0	969	91.3	918	79.7	1,564	82.7	1,065
Ephemeroptera (mayflies)	1.9	396	28.7	190	55.9	314	8.2	159	41.6	386	19.8	198	29.4	296	4.1	80	23.4	301
Siphlonuridae, Ameletus sp.	--	--	27.5	182	--	--	--	--	.1	1	--	--	.4	4	.2	5	1.4	18
Baetidae, Baetis spp.	.0	1	--	--	38.6	217	.7	14	28.6	265	6.2	62	18.7	188	.9	17	17.2	222
Heptageniidae	--	--	.4	3	11.4	64	.1	2	7.8	72	7.3	73	6.4	64	1.5	29	3.1	40
Epeorus (Ironodes) lepidus Traver 1935	--	--	--	--	2.1	12	--	--	--	--	--	--	1.8	18	--	--	--	--
Epeorus (Iron) longimanus (Eaton) 1881	--	--	--	--	--	--	.1	2	3.4	32	3.5	35	3.7	37	--	--	--	--
Heptagenia elegantula (Eaton) 1885	--	--	.4	3	9.2	52	--	--	4.3	40	3.8	38	.9	9	1.5	29	3.1	40
Leptophlebiidae, Paraleptophlebia pallipes (Hagen) 1875	1.7	362	.8	5	5.9	33	4.5	88	4.4	41	5.4	54	3.5	35	1.5	29	1.3	21
Ephemerellidae	.2	33	--	--	--	--	2.8	55	.9	8	.9	9	.5	5	--	--	--	--
Ephemerella doddsi Needham 1927	--	--	--	--	--	--	--	--	.2	2	.5	5	.1	1	--	--	--	--
Ephemerella flavilinea McDunnough 1926	--	--	--	--	--	--	2.4	46	.6	6	.2	2	--	--	--	--	--	--
Ephemerella infrequens McDunnough 1924	.2	33	--	--	--	--	.5	9	--	--	.2	2	.4	4	--	--	--	--
Ephemerella proserpina Traver 1934	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ephemerella tibialis McDunnough 1924	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Odonata (dragonflies), Aeshnidae, Aeshna interrupta Walker 1908	.0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Plecoptera (stoneflies)	.0	3	14.8	98	3.4	19	.8	14	8.7	81	10.5	105	30.2	304	43.1	846	11.6	150
Peltoperlidae (roachlike stoneflies)																		
Peltoperla brevis Banks 1907	--	--	--	--	--	--	--	--	.2	2	--	--	26.0	262	--	--	1.6	21
Nemouridae (spring stoneflies)	.0	3	14.7	97	.5	3	.7	13	1.5	14	2.0	20	3.1	31	40.7	798	4.3	55
Malenka spp.	.0	3	14.7	97	.5	3	.6	11	1.5	14	1.4	14	1.9	19	40.6	796	4.1	53
Zapada spp.	--	--	--	--	--	--	.1	2	--	--	.6	6	1.2	12	.1	2	.2	2
Perlodidae (perlodid stoneflies)																		
Isogenus (Kogotus) nonus (Needham and Claassen) 1925	--	--	--	--	--	--	--	--	--	--	--	--	--	--	.1	2	--	--
Chloroperlidae (green stoneflies)																		
Alloperla (exquisita, fidelis, and severa) spp.	--	--	--	--	2.8	16	--	--	4.1	38	8.0	80	.4	4	.4	7	.7	9
Perlidae (common stoneflies)																		
Acroneuria californica (Banks) 1905	--	--	.2	1	--	--	.0	1	2.9	27	.5	5	.7	7	2.0	39	5.0	65
Neuroptera	.0	3	.3	2	--	--	.2	3	.4	4	--	--	.1	1	--	--	1.2	15
Sialidae (alderflies), Sialis occidens Ross 1937	.0	3	.3	2	--	--	.1	2	--	--	--	--	--	--	--	--	--	--
Corydalidae (dobson and fishflies)																		
Dysmicohermes crepusculus Chandler 1954	--	--	--	--	--	--	.0	1	.4	4	--	--	.1	1	--	--	1.1	15
Trichoptera (caddisflies)	.6	120	7.0	46	2.5	14	8.7	169	5.1	47	9.6	96	19.3	194	19.5	382	4.5	58
Rhyacophilidae (primitive caddisflies)	.0	1	.2	1	1.0	6	1.5	29	2.9	27	2.5	25	1.2	12	3.3	64	3.1	40
Rhyacophila (nr. oreta Ross 1941b) sp.	--	--	.2	1	--	--	.3	6	--	--	--	--	--	--	.0	1	--	--
Rhyacophila acropedes Banks 1914	.0	1	--	--	--	--	.7	14	--	--	--	--	.9	9	2.6	52	.1	1
Rhyacophila angelita Banks 1911	--	--	--	--	--	--	--	--	.1	1	--	--	--	--	--	--	--	--
Rhyacophila tucula Ross 1950	--	--	--	--	--	--	.4	8	--	--	--	--	--	--	--	--	--	--
Rhyacophila vaccua Milne 1936	--	--	--	--	1.1	6	.0	1	.1	1	.8	8	.1	1	.1	2	.3	4
Rhyacophila vepulsa Milne 1936	--	--	--	--	--	--	--	--	2.7	25	1.7	17	.1	1	.5	9	2.6	34
Rhyacophila vocala Milne 1936	--	--	--	--	--	--	--	--	--	--	--	--	.1	1	--	--	.1	1
Glossosomatidae	--	--	--	--	--	--	--	--	1.2	11	.4	4	.8	8	--	--	--	--
Agapetus (nr. malleatus Banks 1914 and taho Ross 1947) sp.	--	--	--	--	--	--	--	--	--	--	--	--	.8	8	--	--	--	--
Anagapetus chandleri Ross 1951	--	--	--	--	--	--	--	--	--	--	.4	4	--	--	--	--	--	--
Philopotamidae (finger-net caddisflies or silken-tube spinners)																		
Wormaldia gabriella Banks 1930	.0	2	.6	4	--	--	1.6	31	--	--	.1	1	6.5	65	--	--	.1	1
Psychomyiidae (tube-making and trumpet-net caddisflies)																		
Polycentropus halidus Milne 1936	.5	103	.2	1	.2	1	5.3	104	--	--	--	--	--	--	.1	3	.2	3
Hydropsychidae (net-spinning caddisflies)	--	--	--	--	--	--	--	--	.7	6	1.3	13	7.8	79	.4	8	.4	5
Cheumatopsyche mickeli Denning 1942	--	--	--	--	--	--	--	--	.4	4	.2	2	--	--	--	--	.2	2
Hydropsyche occidentalis Banks 1900	--	--	--	--	--	--	--	--	.1	1	.7	7	7.8	79	.4	8	.2	3
Parapsyche sp.	--	--	--	--	--	--	--	--	.1	1	.4	4	--	--	--	--	--	--
Hydroptilidae (micro-caddisflies), Agraylea sp.	--	--	--	--	.4	2	--	--	--	--	.1	1	.2	2	--	--	--	--
Brachycentridae, Micrasema sp.	--	--	--	--	--	--	--	--	--	--	--	--	2.1	21	11.1	218	--	--
Limnephilidae (northern caddisflies)	--	--	.2	1	--	--	--	--	.1	1	--	--	--	--	.1	2	.3	4
Ecclisomyia spp.	--	--	.2	1	--	--	--	--	--	--	--	--	--	--	.1	2	--	--
Neothremma sp.	--	--	--	--	--	--	--	--	.1	1	--	--	--	--	--	--	.3	4
Oligophlebodes sierra Ross 1944	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Unident. limniphilid (nr. genus A)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Calamoceratidae, Heteroplectron californicum McLachlan 1871	.0	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lepidostomatidae, Lepidostoma spp.	.0	9	5.9	39	.9	5	.3	5	.2	2	5.2	52	.6	6	4.4	87	.4	5
Sericostomatidae, Sericostoma sp.	--	--	--	--	--	--	--	--	--	--	--	--	.1	1	--	--	--	--

CLASS Order Family Genus species	June-July 1976																	
	Site S10		Site S11		Site S12		Site S13											
	Percent	Number	Percent	Number	Percent	Number	Percent	Number										
COELENTERATA (phylum), Hydra sp.	--	--	--	--	0.0	1	--	--										
TURBELLARIA, Tricladida, Planariidae (flatworms)	7.4	93	0.2	1	.4	8	1.9	115										
Dugesia sp.	--	--	.2	1	.4	8	1.9	115										
Polycelis sierrensis Kenk 1973	7.4	93	--	--	--	--	--	--										
NEMATA (phylum), unident. nemas (unsegmented roundworms)	.2	2	--	--	.0	1	--	--										
OLIGOCHAETA (segmented worms)	.3	4	.2	1	.2	4	1.1	64										
Plesiopora	--	--	.2	1	--	--	.6	37										
Naididae, Nais spp.	--	--	--	--	--	--	.6	37										
Tubificidae, Ilyodrilus sp.	--	--	.2	1	--	--	--	--										
Opisthopora, unident. true earthworms	--	--	--	--	--	--	.1	5										
Prosopora	.3	4	--	--	.2	4	.4	22										
Lumbriculidae	.3	4	--	--	.2	4	.4	22										
Rhynchelmis sp.	.3	4	--	--	.2	4	.1	7										
Unident. lumbriculid	--	--	--	--	--	--	.2	15										
INSECTA (insects)	90.5	1,132	94.1	413	98.2	2,089	96.7	5,752										
Ephemeroptera (mayflies)	27.4	342	37.1	163	12.9	274	2.4	144										
Siphlonuridae, Ameletus sp.	.3	4	8.9	39	1.3	28	--	--										
Baetidae, Baetis spp.	15.3	191	10.0	44	5.2	110	.5	31										
Heptageniidae	10.0	125	3.2	14	1.4	30	1.7	99										
Epeorus (Ironodes) lepidus Traver 1935	.8	10	--	--	--	--	--	--										
Epeorus (Iron) longimanus (Eaton) 1881	3.8	48	1.1	5	1.4	30	.0	1										
Heptagenia elegantula (Eaton) 1885	5.4	67	2.0	9	--	--	1.6	98										
Leptophlebiidae, Paraleptophlebia pallipes (Hagen) 1875	1.8	22	14.6	64	4.9	105	--	--										
Ephemerellidae	--	--	.5	2	.0	1	.2	14										
Ephemerella doddsi Needham 1927	--	--	--	--	--	--	--	--										
Ephemerella flavilinea McDunnough 1926	--	--	--	--	.0	1	--	--										
Ephemerella infrequens McDunnough 1924	--	--	.2	1	--	--	--	--										
Ephemerella proserpina Traver 1934	--	--	.2	1	--	--	--	--										
Ephemerella tibialis McDunnough 1924	--	--	--	--	--	--	.2	14										
Odonata (dragonflies), Aeshnidae, Aeshna interrupta Walker 1908	--	--	--	--	--	--	--	--										
Plecoptera (stoneflies)	9.9	124	16.4	72	2.6	55	3.7	221										
Peltoperlidae (roachlike stoneflies)																		
Peltoperla brevis Banks 1907	--	--	1.1	5	--	--	--	--										
Nemouridae (spring stoneflies)	6.2	77	7.5	33	1.6	34	2.9	174										
Malenka spp.	4.4	55	7.5	33	1.6	34	2.9	174										
Zapada spp.	1.8	22	--	--	--	--	--	--										
Perlodidae (perlodid stoneflies)																		
Isogenus (Kogotus) nonus (Needham and Claassen) 1925	--	--	--	--	--	--	.0	2										
Chloroperlidae (green stoneflies)																		
Alloperla (exquisita, fidelis, and severa) spp.	2.3	29	5.7	25	.6	13	--	--										
Perlidae (common stoneflies)																		
Acroneuria californica (Banks) 1905	1.4	18	2.0	9	.4	8	.8	45										
Neuroptera	.6	8	.9	4	--	--	--	--										
Sialidae (alderflies), Sialis occidens Ross 1937	--	--	.9	4	--	--	--	--										
Corydalidae (dobson and fishflies)																		
Dysmicohermes crepusculus Chandler 1954	.6	8	--	--	--	--	--	--										
Trichoptera (caddisflies)	6.4	80	7.3	32	11.9	253	3.1	182										
Rhyacophilidae (primitive caddisflies)	1.3	16	.7	3	.5	11	.1	7										
Rhyacophila (nr. oreta Ross 1941b) sp.	--	--	--	--	--	--	--	--										
Rhyacophila acropedes Banks 1914	.1	1	.2	1	.0	1	--	--										
Rhyacophila angelita Banks 1911	--	--	--	--	--	--	--	--										
Rhyacophila tucula Ross 1950	--	--	--	--	--	--	--	--										
Rhyacophila vaccua Milne 1936	.1	1	--	--	.3	7	.1	7										
Rhyacophila vepulsa Milne 1936	1.1	14	.5	2	.0	1	--	--										
Rhyacophila vocala Milne 1936	--	--	--	--	.1	2	--	--										
Glossosomatidae	.1	1	--	--	--	--	.2	10										
Agapetus (nr. malleatus Banks 1914 and taho Ross 1947) sp.	--	--	--	--	--	--	.2	10										
Anagapetus chandleri Ross 1951	.1	1	--	--	--	--	--	--										
Philopotamidae (finger-net caddisflies or silken-tube spinners)																		
Wormaldia gabriella Banks 1930	.9	4	.1	2	1.2	72												
Psychomyiidae (tube-making and trumpet-net caddisflies)																		
Polycentropus halidus Milne 1936	.6	7	4.1	18	.5	10	.1	7										
Hydropsychidae (net-spinning caddisflies)	.2	1	.2	5	1.2	70												
Cheumatopsyche mickeli Denning 1942	.1	1	--	--	--	--	.2	9										
Hydropsyche occidentalis Banks 1900	.5	6	.2	1	--	--	1.0	61										
Parapsyche sp.	--	--	--	--	--	--	--	--										
Hydroptilidae (micro-caddisflies), Agraylea sp.	--	--	--	--	.3	6	.2	13										
Brachycentridae, Micrasema sp.	--	--	.7	3	.2	5	--	--										
Limnephilidae (northern caddisflies)	.4	5	.2	1	.2	4	--	--										
Ecclisomyia spp.	--	--	--	--	--	--	--	--										
Neothremma sp.	.3	4	--	--	--	--	--	--										
Oligophlebodes sierra Ross 1944	.2	2	.2	1	.2	4	--	--										
Unident. limniphilid (nr. genus A)	.2	3	--	--	--	--	--	--										
Calamoceratidae, Heteroplectron californicum McLachlan 1871	--	--	--	--	--	--	--	--										
Lepidostomatidae, Lepidostoma spp.	3.5	44	.5	2	9.9	210	.0	3										
Sericostomatidae, Sericostoma sp.	--	--	--	--	--	--	--	--										

Table 14.--*Benthic macroinvertebrates in streams*--Continued

CLASS / Order / Family / Genus species	June-July 1976																	
	Site S1		Site S2		Site S3		Site S4		Site S5		Site S6		Site S7		Site S8		Site S9	
	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number
INSECTA (continued)																		
Coleoptera (beetles)	.4	76	--	--	.5	3	.0	1	.6	6	.1	1	1.0	10	.0	1	--	--
Dytiscidae (predaceous diving beetles)																		
Deronectes quadrimaculatus (Horn) 1883	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Limnebiidae (Hydraenidae)(minute moss beetles)																		
Hydraena vandykei d'Orchymont 1923	--	--	--	--	--	--	--	--	--	--	--	--	--	--	.0	1	--	--
Elmidae (riffle beetles)	.3	59	--	--	.5	3	.0	1	.6	6	.1	1	1.0	10	--	--	--	--
Cleptelmis ornata (Schaeffer) 1911	.3	59	--	--	.5	3	.0	1	.6	6	.1	1	1.0	10	--	--	--	--
Optioservus sp.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Psephenidae (water penny beetles)																		
Eubrianax edwardsi (Le Conte) 1874	.1	17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diptera (true flies)	4.2	879	45.7	302	37.2	209	71.4	1,392	40.0	372	57.0	569	11.2	113	13.0	255	42.0	541
Tipulidae (crane flies)	--	--	--	--	--	--	--	--	--	--	.2	2	.1	1	.2	3	--	--
Antocha monticola Alexander 1917	--	--	--	--	--	--	--	--	--	--	.2	2	.1	1	--	--	--	--
Dicranota sp.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	.2	3	--	--
Dixidae, Dixa sp.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ceratopogonidae (=Heleidae) (biting midges)																		
Bezzia (nr. setulosa Loew 1861) sp.	.0	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chironomidae (midges)	2.5	517	44.8	296	37.2	209	15.5	302	39.4	366	56.4	564	10.7	108	9.8	192	42.0	540
Tanypodinae (=Pelopiinae)																		
Pentaneurini (nr. Conchapelopia, Arctopelopia)	2.1	432	8.6	57	7.5	42	10.4	203	4.0	37	2.4	24	3.0	30	5.0	99	7.3	94
Diamesinae	--	--	3.9	26	1.4	8	.0	1	5.3	49	5.50	55	.1	1	.1	2	.7	9
Diamesa sp.	--	--	--	--	--	--	--	--	.1	1	.1	1	--	--	.1	2	--	--
Pseudodiamesa sp.	--	--	.2	1	.9	5	.0	1	.8	7	1.1	11	.1	1	--	--	.4	5
Syndiamesa ex. gr. nivosa	--	--	3.8	25	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Unident. Diamesinae sp. 1	--	--	--	--	.5	3	--	--	4.4	41	4.3	43	--	--	--	--	.3	4
Orthocladiinae (=Hydrobaeninae)	.2	35	16.6	110	24.4	137	3.5	69	20.2	188	28.1	281	2.6	26	2.4	48	23.3	300
Brillia sp.	--	--	.3	2	.2	1	--	--	.5	5	.3	3	.2	2	--	--	.5	6
Corynoneura sp.	--	--	11.8	78	.2	1	.1	2	2.6	24	1.2	12	.1	1	.0	1	1.0	13
Cricotopus sp.	.2	35	.3	2	10.5	59	2.9	57	1.6	15	5.2	52	.5	5	.8	15	2.1	27
Eukiefferiella sp. 1	--	--	.3	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Eukiefferiella sp. 2	--	--	.3	2	--	--	.1	2	3.1	29	.3	3	--	--	.6	12	.5	6
Metriocnemus sp. 1	--	--	.9	6	1.8	10	.2	3	6.5	60	16.2	126	--	--	.5	9	7.5	97
Orthocladius sp. 1	--	--	.8	5	--	--	--	--	--	--	.2	2	.1	1	--	--	5.4	69
Orthocladius sp. 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Orthocladius sp. 4	--	--	--	--	1.1	6	--	--	--	--	--	--	--	--	.3	7	1.4	18
Psectrocladius sp.	--	--	.8	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Thienemanniella sp.	--	--	--	--	2.8	16	--	--	1.1	10	.2	2	.8	8	.0	1	1.6	20
Trichocladius sp. 1	--	--	1.2	8	7.8	44	.3	5	4.8	44	4.5	45	.9	9	.2	3	3.4	44
Chironominae	.2	50	15.6	103	3.9	22	1.5	29	9.9	92	20.4	204	5.1	51	2.2	43	10.6	137
Chironomini	.0	1	11.0	73	3.9	22	1.1	21	4.0	37	14.7	147	1.3	13	1.0	19	1.7	22
Dicrotendipes sp.	.0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Microtendipes sp.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polypedilum sp.	--	--	11.0	73	3.9	22	1.0	19	4.0	37	14.7	147	1.3	13	1.0	19	1.7	22
Tribelos sp.	--	--	--	--	--	--	.1	2	--	--	--	--	--	--	--	--	--	--
Tanytarsini	.2	49	4.5	30	--	--	.4	8	5.9	55	5.7	57	3.8	38	1.2	24	8.9	115
Micropsectra (nr. Calopsectra polita Mall) sp.	.2	33	3.5	23	--	--	.3	5	5.1	47	5.6	56	.3	3	.5	10	6.1	78
Rheotanytarsus spp.	.1	16	1.1	7	--	--	.2	3	.9	8	.1	1	3.5	35	.7	14	2.6	33
Zavrelia sp.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	.3	4
Simuliidae (black flies)																		
Simuliids (Prosimulium spp., Simulium spp.)	1.7	359	.9	6	--	--	55.9	1,090	.4	4	.1	1	.4	4	3.0	59	--	--
Empididae (dance flies), Unident. empidids (nr. Hemerodromia)	--	--	--	--	--	--	--	--	.2	2	.1	1	--	--	--	--	--	--
Muscidae (muscid flies), Unident. muscids (nr. Limnophora)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ARACHNIDA, Aquatic Acari (water mites)	1.3	273	.4	3	--	--	.0	1	.9	8	.2	2	5.8	58	1.3	25	2.6	34
MOLLUSCA (phylum)	20.6	4,320	--	--	--	--	10.5	205	--	--	--	--	1.2	12	14.5	285	--	--
PELECYPODA (bivalves), Pisidiidae (=Sphaeriidae), Pisidium sp.	20.6	4,319	--	--	--	--	10.5	205	--	--	--	--	1.2	12	14.5	285	--	--
GASTROPODA																		
Ancylidae (fresh water limpets), Ferrissia sp.	.0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

CLASS / Order / Family / Genus species	June-July 1976																	
	Site S10		Site S11		Site S12		Site S13											
	Percent	Number	Percent	Number	Percent	Number	Percent	Number										
INSECTA (continued)																		
Coleoptera (beetles)	--	--	.2	1	.2	4	--	--										
Dytiscidae (predaceous diving beetles)																		
Deronectes quadrimaculatus (Horn) 1883	--	--	--	--	.0	1	--	--										
Limnebiidae (Hydraenidae)(minute moss beetles)																		
Hydraena vandykei d'Orchymont 1923	--	--	--	--	--	--	--	--										
Elmidae (riffle beetles)	--	--	.2	1	.1	2	--	--										
Cleptelmis ornata (Schaeffer) 1911	--	--	--	--	--	--	--	--										
Optioservus sp.	--	--	.2	1	.1	2	--	--										
Psephenidae (water penny beetles)																		
Eubrianax edwardsi (Le Conte) 1874	--	--	--	--	.1	1	--	--										
Diptera (true flies)	46.2	578	32.2	141	70.7	1,503	87.5	5,205										
Tipulidae (crane flies)	.2	3	--	--	.2	4	.0	1										
Antocha monticola Alexander 1917	--	--	--	--	.2	4	.0	1										
Dicranota sp.	--	--	--	--	--	--	--	--										
Dixidae, Dixa sp.	--	--	--	--	--	--	--	--										
Ceratopogonidae (=Heleidae) (biting midges)																		
Bezzia (nr. setulosa Loew 1861) sp.	--	--	.2	1	--	--	--	--										
Chironomidae (midges)	44.3	554	29.0	127	70.4	1,498	86.7	5,161										
Tanypodinae (=Pelopiinae)																		
Pentaneurini (nr. Conchapelopia, Arctopelopia)	20.3	254	6.6	29	7.3	156	.9	52										
Diamesinae	1.4	18	.7	3	3.3	71	4.5	270										
Diamesa sp.	--	--	.2	1	2.9	61	2.9	170										
Pseudodiamesa sp.	.1	1	.5	2	.5	10	1.7	100										
Syndiamesa ex. gr. nivosa	--	--	--	--	--	--	--	--										
Unident. Diamesinae sp. 1	1.4	17	--	--	--	--	--	--										
Orthocladiinae (=Hydrobaeninae)	11.8	148	12.8	56	21.7	461	79.0	4,701										
Brillia sp.	.4	5	--	--	.1	3	.0	1										
Corynoneura sp.	.6	8	.5	2	.4	9	.4	23										
Cricotopus sp.	--	--	5.5	24	7.0	150	22.8	1,358										
Eukiefferiella sp. 1	--	--	--	--	--	--	--	--										
Eukiefferiella sp. 2	1.0	12	.5	2	1.8	38	2.9	172										
Metriocnemus sp. 1	7.4	93	--	--	--	--	--	--										
Orthocladius sp. 1	--	--	--	--	.6	13	1.7	99										
Orthocladius sp. 2	--	--	.2	1	--	--	9.9	590										
Orthocladius sp. 4	--	--	--	--	3.4	72	11.3	671										
Psectrocladius sp.	--	--	--	--	--	--	--	--										
Thienemanniella sp.	.3	4	4.1	18	8.0	171	29.3	1,746										
Trichocladius sp. 1	2.1	26	2.0	9	.2	5	.7	41										
Chironominae	10.7	224	8.9	39	38.1	810	2.3	138										
Chironomini	.8	10	6.4	28	.7	14	.3	17										
Dicrotendipes sp.	--	--	--	--	--	--	.0	1										
Microtendipes sp.	--	--	--	--	--	--	.3	16										
Polypedilum sp.	.8	10	6.4	28	.7	14	--	--										
Tribelos sp.	--	--	--	--	--	--	--	--										
Tanytarsini	9.9	124	2.5	11	37.4	796	2.0	121										
Micropsectra (nr. Calopsectra polita Mall) sp.	8.4	105	2.0	9	2.1	44	.1	4										
Rheotanytarsus spp.	1.5	19	--	--	35.4	752	2.0	117										
Zavrelia sp.	--	--	.5	2	--	--	--	--										
Simuliidae (black flies)																		
Simuliids (Prosimulium spp., Simulium spp.)	.2	3	2.7	12	.0	1	--	--										
Empididae (dance flies), Unident. empidids (nr. Hemerodromia)	.7	9	--	--	--	--	.6	34										
Muscidae (muscid flies), Unident. muscids (nr. Limnophora)	--	--	--	--	--	--	.2	9										
ARACHNIDA, Aquatic Acari (water mites)	1.6	20	5.5	24	.8	18	.4	21										
MOLLUSCA (phylum)	--	--	--	--	.3	6	--	--										
PELECYPODA (bivalves), Pisidiidae (=Sphaeriidae), Pisidium sp.	--	--	--	--	.0	1	--	--										
GASTROPODA																		
Ancylidae (fresh water limpets), Ferrissia sp.	--	--	--	--	.2	5	--	--										

Table 14.--*Benthic macroinvertebrates in streams*--Continued

CLASS / Order / Family / Genus species	August 1976							
	Site S1		Site S2		Site S3		Site S4	
	Percent	Number	Percent	Number	Percent	Number	Percent	Number
COELENTERATA (phylum), Hydra sp.	1.0	109	--	--	--	--	1.1	34
TURBELLARIA, Tricladida, Planariidae (flatworms)	.0	3	--	--	1.0	5	--	--
Dugesia sp.	--	--	--	--	--	--	--	--
Polycelis sierrensis Kenk 1973	.0	3	--	--	1.0	5	--	--
NEMATA (phylum), unident. nemas (unsegmented roundworms)	--	--	--	--	--	--	--	--
OLIGOCHAETA (segmented worms)	.4	41	2.2	6	--	--	.2	6
Plesiopora	.4	41	2.2	6	--	--	.2	6
Naididae	.4	39	2.2	6	--	--	.2	6
Chaetogaster spp.	--	--	--	--	--	--	.2	6
Nais spp.	.4	39	2.2	6	--	--	--	--
Tubificidae	.0	2	--	--	--	--	--	--
Ilyodrilus sp.	.0	2	--	--	--	--	--	--
Limnodrilus sp.	--	--	--	--	--	--	--	--
Opisthopora, unident. true earthworms	--	--	--	--	--	--	--	--
Prosopora	--	--	--	--	--	--	--	--
Lumbriculidae	--	--	--	--	--	--	--	--
Rhynchelmis sp.	--	--	--	--	--	--	--	--
Unident. lumbriculid	--	--	--	--	--	--	--	--
CRUSTACEA, Ostracoda (subclass), unident. cyprid (seed shrimp)	--	--	--	--	--	--	--	--
INSECTA (insects)	21.4	2,419	97.8	271	97.1	509	72.8	2,312
Ephemeroptera (mayflies)	3.7	421	1.8	5	52.5	275	33.0	1,049
Siphlonuridae, Ameletus sp.	--	--	--	--	.2	1	--	--
Baetidae	.0	5	.7	2	41.2	216	4.0	126
Baetis spp.	.0	5	.7	2	41.2	216	4.0	126
Centroptilum sp.	--	--	--	--	--	--	--	--
Heptageniidae	.0	2	--	--	1.5	8	.1	2
Epeorus (Ironodes) lepidus Traver 1935	--	--	--	--	--	--	.0	1
Epeorus (Iron) longimanus (Eaton) 1881	--	--	--	--	--	--	--	--
Heptagenia elegantula (Eaton) 1885	.0	2	--	--	1.5	8	.0	1
Leptophlebiidae, Paraleptophlebia pallipes (Hagen) 1875	1.8	206	1.1	3	7.4	39	11.8	376
Ephemerellidae	1.8	208	--	--	2.1	11	17.2	545
Ephemerella doddsi Needham 1927	--	--	--	--	1.0	5	--	--
Ephemerella flavilinea McDunnough 1926	--	--	--	--	--	--	--	--
Ephemerella infrequens McDunnough 1924	1.8	208	--	--	1.2	6	17.2	545
Ephemerella tibialis McDunnough 1924	--	--	--	--	--	--	--	--
Odonata (dragonflies), Coenagrionidae	.0	1	--	--	--	--	--	--
Plecoptera (stoneflies)	.0	5	.4	1	2.7	14	1.6	52
Peltoperlidae (roachlike stoneflies)								
Peltoperla brevis Banks 1907	--	--	--	--	--	--	--	--
Nemouridae (spring stoneflies)	.0	3	--	--	.6	3	1.6	50
Malenka spp.	.0	3	--	--	--	--	1.6	50
Visoka cataractae (Neave) 1933	--	--	--	--	--	--	--	--
Zapada spp.	--	--	--	--	.6	3	--	--
Leuctridae (rolled-winged stoneflies)								
Leuctra (Paraleuctra) sara Claassen 1937	--	--	--	--	.2	1	--	--
Perlodidae (perlodid stoneflies)								
Isogenus (Kogotus) nonus (Needham and Claassen) 1925	.0	1	--	--	--	--	--	--
Chloroperlidae (green stoneflies)								
Alloperla (exquisita, fidelis, and severa) spp.	.0	1	.4	1	.8	4	--	--
Perlidae (common stoneflies)								
Acroneuria californica (Banks) 1905	--	--	--	--	1.2	6	.1	2
Neuroptera	.0	3	--	--	.4	2	.1	3
Sialidae (alderflies), Sialis occidens Ross 1937	.0	3	--	--	--	--	.1	3
Corydalidae (dobson and fishflies)								
Dysmicohermes crepusculus Chandler 1954	--	--	--	--	.4	2	--	--
Trichoptera (caddisflies)	1.0	116	.7	2	7.1	37	12.7	404
Rhyacophilidae (primitive caddisflies)	--	--	--	--	.6	3	.2	6
Rhyacophila acropedes Banks 1914	--	--	--	--	--	--	.1	4
Rhyacophila vaccua Milne 1936	--	--	--	--	.6	3	--	--
Rhyacophila vepulsa Milne 1936	--	--	--	--	--	--	.1	2
Rhyacophila vocala Milne 1936	--	--	--	--	--	--	--	--
Glossosomatidae	--	--	--	--	1.3	7	--	--
Agapetus (nr. malleatus Banks 1914 and taho Ross 1947) sp.	--	--	--	--	--	--	--	--
Glossosoma oregonense Ling 1938	--	--	--	--	1.3	7	--	--
Philopotamidae (finger-net caddisflies or silken-tube spinners), Wormaldia gabriella Banks 1930	.0	1	--	--	.4	2	.2	6
Psychomyiidae (tube-making and trumpet-net caddisflies)								
Polycentropus halidus Milne 1936	.8	94	--	--	.4	2	11.8	376
Hydropsychidae (net-spinning caddisflies)	--	--	--	--	--	--	--	--
Cheumatopsyche mickeli Denning 1942	--	--	--	--	--	--	--	--
Hydropsyche occidentalis Banks 1900	--	--	--	--	--	--	--	--
Parapsyche sp.	--	--	--	--	--	--	--	--
Hydroptilidae (micro-caddisflies), Agraylea sp.	--	--	.4	1	1.0	5	--	--
Brachycentridae, Micrasema sp.	--	--	--	--	--	--	--	--

macroinvertebrates in streams--Continued

August 1976																							
Site S5		Site S6		Site S7		Site S8		Site S9		Site S10		Site S11		Site S12		Site S13	
Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number
--	--	--	--	--	--	0.0	4	--	--	--	--	--	--	--	--	--	--
3.1	61	0.6	12	1.3	17	5.6	463	4.0	154	6.6	116	--	--	2.2	27	8.8	128
--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.2	27	8.8	128
3.1	61	.6	12	1.3	17	5.6	463	4.0	154	6.6	116	--	--	--	--	--	--
--	--	--	--	--	--	.4	29	.1	5	--	--	--	--	--	--	--	--
.0	1	.0	1	.2	3	1.1	91	1.0	40	.2	4	.6	15	12.8	159	20.0	290
.0	1	.0	1	.2	3	1.1	90	1.0	39	.2	4	.6	13	12.0	150	17.7	257
.0	1	.0	1	.2	3	.9	78	1.0	39	.1	1	.5	12	12.0	150	17.7	257
--	--	--	--	--	--	.1	6	--	--	.1	1	--	--	--	--	--	--
.0	1	.0	1	.2	3	.9	72	1.0	39	--	--	.5	12	12.0	150	17.7	257
--	--	--	--	--	--	.2	12	--	--	.2	3	.0	1	--	--	--	--
--	--	--	--	--	--	.0	4	--	--	.1	1	.0	1	--	--	--	--
--	--	--	--	--	--	.1	8	--	--	.1	2	--	--	--	--	--	--
--	--	--	--	--	--	.0	1	--	--	--	--	.0	1	.2	3	2.0	29
--	--	--	--	--	--	--	--	.0	1	--	--	.0	1	.5	6	.3	4
--	--	--	--	--	--	--	--	.0	1	--	--	.0	1	.5	6	.3	4
--	--	--	--	--	--	--	--	.0	1	--	--	.0	1	.4	5	.3	4
--	--	--	--	--	--	--	--	--	--	--	--	--	--	.1	1	--	--
--	--	--	--	--	--	.0	4	--	--	3.8	66	--	--	.1	1	--	--
95.2	1,846	98.0	2,054	92.4	1,237	79.9	6,648	92.8	3,531	83.6	1,458	98.8	2,293	82.9	1,033	70.6	1,024
32.2	624	31.1	651	28.4	380	3.9	328	17.1	652	17.0	296	11.4	264	3.4	42	1.4	21
--	--	--	--	.5	6	.2	16	8.3	315	7.6	133	--	--	--	--	--	--
19.4	376	20.0	418	11.8	158	1.8	151	.4	17	.5	8	4.6	107	.7	9	1.2	17
19.4	376	19.9	417	11.8	158	1.8	151	.4	17	.5	8	4.6	107	.7	9	.8	11
--	--	.0	1	--	--	--	--	--	--	--	--	--	--	--	--	.4	6
2.8	54	4.2	88	6.2	83	1.6	135	5.6	212	6.8	119	1.6	38	--	--	.3	4
2.1	41	.1	2	.6	8	--	--	--	--	--	--	--	--	--	--	--	--
.0	1	.1	3	4.3	58	--	--	--	--	.1	2	--	--	--	--	--	--
.6	12	4.0	83	1.3	17	--	--	5.6	212	6.7	117	1.6	38	--	--	.3	4
6.1	119	4.5	95	9.0	121	.3	26	2.8	108	2.0	34	5.0	116	2.6	32	--	--
3.9	75	2.0	42	.9	12	--	--	--	--	.1	2	.1	3	.1	1	--	--
.1	2	--	--	.6	8	--	--	--	--	--	--	--	--	.1	1	--	--
--	--	--	--	.1	1	--	--	--	--	.1	2	--	--	--	--	--	--
2.8	55	2.0	42	.2	3	--	--	--	--	--	--	.1	3	--	--	--	--
.9	18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10.6	206	6.3	132	12.4	166	10.6	884	7.2	274	7.8	137	7.5	175	1.2	15	2.6	37
.6	11	.1	2	7.3	98	--	--	.8	31	.6	11	.3	8	--	--	--	--
6.8	132	3.2	69	2.3	31	8.4	702	4.6	177	4.7	82	4.9	113	.1	1	.8	11
5.9	115	2.2	47	2.3	31	8.4	702	3.0	116	4.7	82	4.9	113	.1	1	.8	11
--	--	--	--	--	--	--	--	1.5	56	--	--	--	--	--	--	--	--
.9	17	1.0	22	--	--	--	--	.1	5	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	.3	6	--	--	--	--
--	--	--	--	.9	12	.3	22	.9	35	--	--	.7	16	--	--	--	--
.7	14	2.7	56	1.2	16	.7	58	.3	10	.8	14	1.1	26	.2	3	--	--
2.5	49	.2	5	.7	9	1.2	102	.6	21	1.7	30	.3	6	.9	11	--	--
.2	3	.0	1	.1	1	.1	6	1.2	45	.6	11	.6	15	.2	2	.1	1
--	--	.0	1	--	--	.1	6	.0	1	--	--	.6	14	--	--	--	--
.2	3	--	--	.1	1	--	--	1.2	44	.6	11	.0	1	.2	2	.1	1
16.6	322	25.8	541	25.8	343	9.0	745	12.6	478	15.9	278	8.9	206	12.9	161	25.7	373
1.3	26	.5	11	1.3	17	.5	43	.4	17	1.1	20	1.0	22	.1	1	--	--
.1	2	--	--	.8	10	.2	19	.0	1	.2	3	.7	16	--	--	--	--
1.2	24	.5	11	.4	6	.3	24	.4	16	1.0	17	.2	4	.1	1	--	--
--	--	--	--	--	--	--	--	--	--	--	--	.1	2	--	--	--	--
--	--	--	--	.1	1	--	--	--	--	--	--	--	--	--	--	--	--
7.9	153	23.3	488	.4	6	--	--	1.9	73	12.7	222	--	--	--	--	--	--
--	--	--	--	.3	4	--	--	1.9	73	--	--	--	--	--	--	--	--
7.9	153	23.3	488	.2	2	--	--	--	--	12.7	222	--	--	--	--	--	--
1.0	20	--	--	1.0	13	--	--	.3	11	--	--	.1	2	--	--	--	--
.6	11	.3	7	.4	5	.9	78	2.9	112	--	--	1.8	43	.2	2	--	--
4.6	90	.3	7	17.9	239	3.7	311	1.4	52	.3	6	4.6	107	.2	3	23.7	343
--	--	--	--	--	--	--	--	.0	1	--	--	.0	1	.1	1	21.0	304
2.0	38	.3	7	17.9	239	3.7	311	1.3	48	.3	6	4.6	106	.2	2	2.7	39
2.7	52	--	--	--	--	--	--	.1	3	--	--	--	--	--	--	--	--
.5	10	.1	3	.5	7	--	--	3.2	121	.2	3	1.1	25	--	--	1.7	25
.3	5	--	--	2.7	36	2.0	170	1.6	60	--	--	.3	6	--	--	--	--

Table 14.--*Benthic macroinvertebrates in streams*--Continued

CLASS / Order / Family / Genus species	August 1976 Site S1 Percent	Site S1 Number	Site S2 Percent	Site S2 Number	Site S3 Percent	Site S3 Number	Site S4 Percent	Site S4 Number
INSECTA (continued)								
Trichoptera (continued)								
Limnephilidae (northern caddisflies)	--	--	--	--	1.9	10	--	--
Dicosmoecus atripes (Hagen) 1875	--	--	--	--	--	--	--	--
Ecclisomyia spp.	--	--	--	--	--	--	--	--
Neothremma sp.	--	--	--	--	--	--	--	--
Oligophlebodes sierra Ross 1944	--	--	--	--	1.9	10	--	--
Unident. limniphilid (nr. genus A)	--	--	--	--	--	--	--	--
Calamoceratidae, Heteroplectron californicum McLachlan 1871	.0	5	--	--	--	--	--	--
Lepidostomatidae, Lepidostoma spp.	.1	16	.4	1	1.5	8	.5	16
Leptoceridae (long-horned caddisflies), Mystacides sp.	--	--	--	--	--	--	--	--
Sericostomatidae, Sericostoma sp.	--	--	--	--	--	--	--	--
Coleoptera (beetles)	.9	103	--	--	.6	3	.2	5
Dytiscidae (predaceous diving beetles), Agabinus sp.	--	--	--	--	--	--	--	--
Limnebiidae (Hydraenidae)(minute moss beetles)								
Hydraena vandykei d'Orchymont 1923	--	--	--	--	--	--	--	--
Elmidae (riffle beetles)	.4	42	--	--	.6	3	.2	5
Ampumixus dispar (Fall) 1925	--	--	--	--	.6	3	--	--
Cleptelmis ornata (Schaeffer) 1911	.4	42	--	--	--	--	.2	5
Zaitzevia parvula Horn 1870	--	--	--	--	--	--	--	--
Psephenidae (water penny beetles)								
Eubrianax edwardsi (Le Conte) 1874	.5	61	--	--	--	--	--	--
Diptera (true flies)	15.7	1,394	94.9	263	34.0	178	25.2	799
Tipulidae (crane flies)	--	--	.4	1	--	--	--	--
Antocha monticola Alexander 1917	--	--	--	--	--	--	--	--
Dicranota sp.	--	--	.4	1	--	--	--	--
Hexatoma sp.	--	--	--	--	--	--	--	--
Dixidae, Dixa sp.	--	--	.7	2	--	--	--	--
Ceratopogonidae (=Heleidae) (biting midges)								
Bezzia (nr. setulosa Loew 1861) sp.	--	--	--	--	--	--	--	--
Chironomidae (midges)	--	--	93.4	259	34.0	178	14.0	444
Tanypodinae (=Pelopiinae)								
Pentaneurini (nr. Conchapelopia, Arctopelopia)	4.9	557	14.4	40	2.5	13	8.5	270
Diamesinae	.2	28	1.4	4	1.0	5	3.4	11
Diamesa sp.	.2	28	1.4	4	--	--	.1	4
Pseudodiamesa sp.	--	--	--	--	1.0	5	.2	7
Syndiamesa ex. gr. nivosa	--	--	--	--	--	--	--	--
Unident. Diamesinae sp. 1	--	--	--	--	--	--	--	--
Orthocladiinae (=Hydrobaeninae)	3.1	352	62.8	174	23.1	121	2.9	91
Brillia sp.	--	--	.4	1	.4	2	--	--
Corynoneura sp.	.1	15	35.0	97	.6	3	.5	15
Cricotopus sp.	2.3	263	6.5	18	7.1	37	.2	5
Eukiefferiella sp. 1	--	--	--	--	--	--	--	--
Eukiefferiella sp. 2	.6	69	1.4	4	6.5	34	1.7	53
Metriocnemus sp. 1	--	--	.7	2	--	--	--	--
Metriocnemus sp. 2	--	--	--	--	--	--	.1	4
Orthocladius sp. 1	--	--	.4	1	5.8	30	.2	6
Orthocladius sp. 5	--	--	--	--	--	--	--	--
Psectrocladius sp.	--	--	1.1	3	--	--	--	--
Thienemanniella sp.	.0	2	8.3	23	.2	1	--	--
Trichocladius sp. 1	.0	2	6.9	19	.6	3	.0	1
Trichocladius sp. 2	.0	1	2.2	6	2.1	11	.2	7
Chironominae	4.1	457	14.8	41	7.4	39	2.3	72
Chironomini	.0	5	4.0	11	.4	2	1.2	39
Cryptochironomus sp.	.0	1	--	--	--	--	--	--
Dicrotendipes sp.	.0	1	--	--	--	--	--	--
Microtendipes sp.	--	--	--	--	--	--	--	--
Paracladopelma sp.	--	--	--	--	--	--	--	--
Paratendipes sp.	--	--	--	--	--	--	--	--
Polypedilum sp.	--	--	4.0	11	.4	2	1.1	34
Pseudochironomus sp.	--	--	--	--	--	--	--	--
Tribelos sp.	.0	3	--	--	--	--	.2	5
Tanytarsini	4.0	452	10.8	30	7.1	37	1.0	33
Calopsectra (nr. bathophila kieff.) sp.	1.6	182	--	--	--	--	--	--
Micropsectra (nr. Calopsectra polita Mall) sp.	2.2	242	9.4	26	7.1	37	1.0	31
Rheotanytarsus spp.	.2	28	1.5	4	--	--	.1	2
Simuliidae (black flies)								
Simuliids (Prosimulium spp., Simulium spp.)	3.3	376	--	--	--	--	11.2	354
Empididae (dance flies), Unident. empidids (nr. Hemerodromia)	--	--	--	--	--	--	.0	1
Muscidae (muscid flies), Unident. muscids (nr. Limnophora)	--	--	.4	1	--	--	--	--
ARACHNIDA, Aquatic Acari (water mites)	.8	88	--	--	1.2	6	1.1	34
MOLLUSCA (phylum)	76.4	8,616	--	--	.8	4	24.9	790
PELECYPODA (bivalves), Pisidiidae (=Sphaeriidae), Pisidium sp.	76.3	8,604	--	--	.8	4	24.8	787
GASTROPODA	.1	12	--	--	--	--	.1	3
Ancylidae (fresh water limpets), Ferrissia sp.	.0	3	--	--	--	--	.1	3
Viviparidae, Unident. viriparid snail	--	--	--	--	--	--	--	--
Physidae, Physa sp.	--	--	--	--	--	--	--	--
Planorbidae, Gyraulus sp.	.1	9	--	--	--	--	--	--

CLASS / Order / Family / Genus species	Site S5 Percent	S5 Number	Site S6 Percent	S6 Number	Site S7 Percent	S7 Number	Site S8 Percent	S8 Number	Site S9 Percent	S9 Number	Site S10 Percent	S10 Number	Site S11 Percent	S11 Number	Site S12 Percent	S12 Number	Site S13 Percent	S13 Number
INSECTA (continued)																		
Trichoptera (continued)																		
Limnephilidae (northern caddisflies)	.3	6	.1	3	.4	6	.1	5	.1	3	.1	2	--	--	.4	5	.1	1
Dicosmoecus atripes (Hagen) 1875	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	.1	1
Ecclisomyia spp.	.0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Neothremma sp.	.0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Oligophlebodes sierra Ross 1944	.2	4	.1	3	.4	6	.1	5	.0	2	.1	1	--	--	.4	5	--	--
Unident. limniphilid (nr. genus A)	--	--	--	--	--	--	--	--	.0	1	.1	1	--	--	--	--	--	--
Calamoceratidae, Heteroplectron californicum McLachlan 1871	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lepidostomatidae, Lepidostoma spp.	.0	1	1.0	22	1.0	13	1.7	138	.7	26	1.4	25	--	--	12.0	149	.1	1
Leptoceridae (long-horned caddisflies), Mystacides sp.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	.1	1
Sericostomatidae, Sericostoma sp.	--	--	--	--	.1	1	--	--	.1	3	--	--	.0	1	.1	1	--	--
Coleoptera (beetles)	.2	3	--	--	.8	11	--	--	.1	2	.1	2	.8	19	1.8	23	--	--
Dytiscidae (predaceous diving beetles), Agabinus sp.	--	--	--	--	--	--	--	--	--	--	.1	1	--	--	--	--	--	--
Limnebiidae (Hydraenidae)(minute moss beetles)																		
Hydraena vandykei d'Orchymont 1923	--	--	--	--	--	--	--	--	--	--	.1	1	--	--	--	--	--	--
Elmidae (riffle beetles)	.2	3	--	--	.8	10	--	--	.1	2	--	--	.8	19	1.5	19	--	--
Ampumixus dispar (Fall) 1925	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cleptelmis ornata (Schaeffer) 1911	.2	3	--	--	.8	10	--	--	.0	1	--	--	.5	11	--	--	--	--
Zaitzevia parvula Horn 1870	--	--	--	--	--	--	--	--	.0	1	--	--	.3	8	1.5	19	--	--
Psephenidae (water penny beetles)																		
Eubrianax edwardsi (Le Conte) 1874	--	--	--	--	.1	1	--	--	--	--	--	--	--	--	.3	4	--	--
Diptera (true flies)	35.4	688	34.8	729	25.1	336	56.3	4,685	54.6	2,080	42.1	734	69.6	1,614	63.4	790	40.9	592
Tipulidae (crane flies)	.2	3	.0	1	.1	1	.2	16	.1	3	.2	4	.0	1	--	--	.1	2
Antocha monticola Alexander 1917	--	--	--	--	.1	1	--	--	--	--	--	--	.0	1	--	--	.1	2
Dicranota sp.	--	--	--	--	--	--	.2	16	.1	3	.2	4	--	--	--	--	--	--
Hexatoma sp.	.2	3	.0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dixidae, Dixa sp.	.1	2	--	--	--	--	--	--	.2	7	.2	4	.0	1	--	--	--	--
Ceratopogonidae (=Heleidae) (biting midges)																		
Bezzia (nr. setulosa Loew 1861) sp.	.6	11	.7	14	.2	2	.7	57	.6	23	.7	12	.6	14	--	--	--	--
Chironomidae (midges)	34.1	662	34.0	713	24.4	327	55.2	4,593	53.7	2,044	40.7	710	63.4	1,470	63.3	788	40.0	579
Tanypodinae (=Pelopiinae)																		
Pentaneurini (nr. Conchapelopia, Arctopelopia)	.9	18	1.0	21	1.4	19	2.8	229	5.9	226	6.6	115	2.5	59	3.4	42	3.4	49
Diamesinae	1.3	25	.8	17	.1	1	.1	9	.6	23	.1	2	1.3	30	8.4	105	17.2	249
Diamesa sp.	--	--	--	--	.1	1	.0	4	--	--	--	--	.4	10	8.4	105	16.4	238
Pseudodiamesa sp.	1.3	25	.8	17	--	--	.0	4	.5	20	.1	2	.9	20	--	--	.7	10
Syndiamesa ex. gr. nivosa	--	--	--	--	--	--	.0	1	--	--	--	--	--	--	--	--	--	--
Unident. Diamesinae sp. 1	--	--	--	--	--	--	--	--	.1	3	--	--	--	--	--	--	.1	1
Orthocladiinae (=Hydrobaeninae)	19.2	372	11.9	249	6.4	86	28.6	2,378	36.8	1,401	22.4	390	17.3	402	46.9	584	16.1	233
Brillia sp.	.6	12	.5	11	--	--	--	--	.4	17	.4	7	1.4	32	.2	3	--	--
Corynoneura sp.	.8	16	.0	1	.3	4	.3	24	.4	17	1.4	25	.6	15	1.0	13	--	--
Cricotopus sp.	1.4	27	--	--	.3	4	--	--	--	--	--	--	5.0	115	28.0	349	8.1	118
Eukiefferiella sp. 1	.0	1	.1	2	--	--	--	--	--	--	.1	1	--	--	--	--	--	--
Eukiefferiella sp. 2	3.2	62	5.1	106	4.1	55	13.1	1,093	13.8	524	6.6	115	1.4	33	1.0	12	5.0	72
Metriocnemus sp. 1	1.9	37	.2	4	.1	1	--	--	.9	34	--	--	--	--	.2	3	--	--
Metriocnemus sp. 2	.1	2	--	--	.1	1	--	--	.0	2	.1	2	5.2	120	.2	3	--	--
Orthocladius sp. 1	--	--	1.2	24	.4	6	.7	56	13.2	504	3.7	64	.7	16	4.7	59	.6	100
Orthocladius sp. 5	--	--	--	--	--	--	--	--	--	--	--	--	.1	3	--	--	--	--
Psectrocladius sp.	--	--	--	--	.1	1	--	--	--	--	--	--	1.8	43	8.0	100	.1	1
Thienemanniella sp.	.8	15	2.2	47	.2	3	4.7	393	1.7	66	3.9	68	.3	6	3.0	37	2.0	29
Trichocladius sp. 1	9.3	180	1.4	29	.8	10	3.2	264	5.0	192	4.2	74	.3	6	.2	2	.3	4
Trichocladius sp. 2	1.0	20	1.2	25	.1	1	6.6	548	1.2	45	2.0	34	.6	13	.2	3	--	--
Chironominae	12.7	247	20.3	426	16.5	221	23.8	1,977	10.4	394	11.6	203	42.2	979	4.6	57	3.3	48
Chironomini	.9	18	.3	7	.4	6	.8	65	.7	26	.6	10	.7	16	1.0	12	.1	1
Cryptochironomus sp.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dicrotendipes sp.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Microtendipes sp.	--	--	.1	2	.1	1	--	--	--	--	--	--	--	--	--	--	--	--
Paracladopelma sp.	--	--	--	--	--	--	--	--	--	--	--	--	.0	1	--	--	--	--
Paratendipes sp.	--	--	--	--	--	--	--	--	--	--	--	--	.1	3	.2	2	.1	1
Polypedilum sp.	.9	18	.2	5	.4	5	.8	65	.7	26	.6	10	.5	11	.8	10	--	--
Pseudochironomus sp.	--	--	--	--	--	--	--	--	--	--	--	--	.0	1	--	--	--	--
Tribelos sp.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tanytarsini	11.8	229	20.0	419	16.1	215	23.0	1,912	9.7	368	11.1	193	41.5	963	3.6	45	3.2	47
Calopsectra (nr. bathophila kieff.) sp.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Micropsectra (nr. Calopsectra polita Mall) sp.	11.1	216	19.5	408	2.0	27	22.4	1,864	9.4	359	10.8	189	40.4	938	2.2	27	.8	11
Rheotanytarsus spp.	.7	13	.5	11	14.0	188	.6	48	.2	9	.2	4	1.1	25	1.4	18	2.5	36
Simuliidae (black flies)																		
Simuliids (Prosimulium spp., Simulium spp.)	.4	7	--	--	.3	4	.1	12	--	--	.2	3	5.0	115	--	--	--	--
Empididae (dance flies), Unident. empidids (nr. Hemerodromia)	.2	3	.0	1	.2	2	.1	7	.0	2	.1	1	.6	13	.2	2	.8	11
Muscidae (muscid flies), Unident. muscids (nr. Limnophora)	--	--	--	--	--	--	--	--	.0	1	--	--	--	--	--	--	--	--
ARACHNIDA, Aquatic Acari (water mites)	1.6	31	1.2	24	1.6	21	6.9	573	2.0	77	5.7	100	.3	6	.1	1	.3	4
MOLLUSCA (phylum)	.0	1	.2	5	4.5	60	6.1	508	--	--	--	--	.2	5	1.9	24	.2	3
PELECYPODA (bivalves), Pisidiidae (=Sphaeriidae), Pisidium sp.	.0	1	.2	5	4.5	60	6.1	508	--	--	--	--	.2	5	1.3	16	--	--
GASTROPODA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	.6	8	.2	3
Ancylidae (fresh water limpets), Ferrissia sp.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Viviparidae, Unident. viriparid snail	--	--	--	--	--	--	--	--	--	--	--	--	--	--	.6	8	--	--
Physidae, Physa sp.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	.2	3
Planorbidae, Gyraulus sp.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 14.--*Benthic macroinvertebrates in streams*--Continued

CLASS / Order / Family / Genus species	October 1976																	
	Site S1		Site S2		Site S3		Site S4		Site S5		Site S6		Site S7		Site S8		Site S9	
	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number
COELENTERATA (phylum), Hydra sp.	--	--	--	--	--	--	10.2	265	--	--	--	--	0.0	1	--	--	--	--
TURBELLARIA, Tricladida, Planariidae (flatworms)	--	--	--	--	--	--	--	--	2.0	20	0.2	2	.4	13	2.2	24	3.7	36
Dugesia sp.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polycelis sierrensis (Kenk) 1973	--	--	--	--	--	--	--	--	2.0	20	.2	2	.4	13	2.2	24	3.7	36
NEMATA (phylum), unident. nemas (unsegmented roundworms)	--	--	--	--	--	--	.0	1	--	--	--	--	.0	1	--	--	.1	1
OLIGOCHAETA (segmented worms)	0.1	2	--	--	--	--	.1	3	--	--	.1	1	.1	5	.8	9	.1	1
Plesiopora	.1	2	--	--	--	--	.1	3	--	--	--	--	.1	5	.8	9	.1	1
Naididae									--	--	--	--	.1	5	--	--	.1	1
Chaetogaster spp.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nais spp.	.1	2	--	--	--	--	.1	3	--	--	--	--	.1	5	--	--	.1	1
Tubificidae, Ilyodrilus sp.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	.8	9	--	--
Opisthopora, unident. true earthworms	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Prosopora									--	--	.1	1	--	--	--	--	--	--
Lumbriculidae	--	--	--	--	--	--	--	--	--	--	.1	1	--	--	--	--	--	--
Rhynchelmis sp.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Unident. lumbriculid	--	--	--	--	--	--	--	--	--	--	.1	1	--	--	--	--	--	--
Hirudinea (leeches)	--	--	--	--	--	--	--	--	--	--	--	--	.1	1	--	--	--	--
CRUSTACEA, Ostracoda (subclass), unident. cyprid (seed shrimp)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	.0	1
INSECTA (insects)	84.8	2,165	--	--	100.0	559	85.3	2,206	98.0	963	99.5	874	91.0	3,257	84.6	923	96.1	931
Ephemeroptera (mayflies)	44.4	1,133	--	--	63.3	354	22.4	579	53.4	525	16.2	142	33.1	1,186	14.2	155	17.6	170
Siphlonuridae, Ameletus sp.	--	--	--	--	.4	2	--	--	2.3	23	.1	1	.8	30	--	--	--	--
Baetidae	15.7	402	--	--	55.1	308	4.7	121	36.7	361	3.8	33	18.2	653	8.8	96	5.8	56
Baetis spp.	15.7	402	--	--	55.1	308	4.6	120	36.7	361	3.8	33	18.2	652	8.7	95	5.8	56
Centroptilum sp.	--	--	--	--	--	--	.0	1	--	--	--	--	.0	1	.1	1	--	--
Heptageniidae	.2	5	--	--	1.1	6	.1	3	8.2	81	6.3	55	6.7	239	3.5	38	8.6	83
Cinygmula sp.	--	--	--	--	--	--	--	--	--	--	--	--	.4	14	--	--	--	--
Epeorus (Ironodes) lepidus Traver 1935	--	--	--	--	--	--	.0	1	.1	1	.1	1	1.6	57	--	--	--	--
Epeorus (Iron) longimanus (Eaton) 1881	.2	5	--	--	--	--	.0	1	3.4	33	.3	3	3.6	130	.2	2	.9	9
Heptagenia elegantula (Eaton) 1885	--	--	--	--	1.1	6	.0	1	4.8	47	5.8	51	1.1	38	3.3	36	7.6	74
Leptophlebiidae, Paraleptophlebia pallipes (Hagen) 1875	7.6	194	--	--	4.3	24	6.5	168	2.3	23	4.6	40	6.2	221	1.9	21	3.2	31
Ephemerellidae	20.8	532	--	--	2.5	14	11.1	287	3.8	37	1.5	13	1.2	43	--	--	--	--
Ephemerella doddsi Needham 1927	--	--	--	--	1.1	6	--	--	.5	5	--	--	.3	11	--	--	--	--
Ephemerella infrequens McDunnough 1924	20.8	532	--	--	1.4	8	11.1	287	3.2	31	1.5	13	.9	32	--	--	--	--
Ephemerella spinifera Needham 1927	--	--	--	--	--	--	--	--	.1	1	--	--	--	--	--	--	--	--
Plecoptera (stoneflies)	.5	13	--	--	4	2	.4	10	3.8	37	8.4	74	4.9	175	11.2	122	18.5	179
Peltoperlidae (roachlike stoneflies)																		
Peltoperla brevis Banks 1907	--	--	--	--	--	--	.3	7	.1	1	.3	3	1.9	67	--	--	2.0	19
Nemouridae (spring stoneflies)	.2	5	--	--	--	--	.1	3	2.1	21	3.9	34	1.0	36	9.0	98	14.0	136
Malenka spp.	.2	5	--	--	--	--	.1	3	2.0	20	.9	8	1.0	34	8.7	95	13.4	130
Zapada spp.	--	--	--	--	--	--	--	--	.1	1	3.0	26	.1	2	.3	3	.6	6
Leuctridae (rolled-winged stoneflies)																		
Leuctra (Paraleuctra) sara Claassen 1937	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perlodidae (perlodid stoneflies)																		
Isogenus (Kogotus) nonus (Needham and Claassen) 1925	.3	8	--	--	--	--	--	--	--	--	--	--	--	--	.5	5	.1	1
Chloroperlidae (green stoneflies)																		
Alloperla (exquisita, fidelis, and severa) spp.	--	--	--	--	--	--	--	--	.3	3	4.0	35	1.4	49	1.7	18	.6	6
Perlidae (common stoneflies)																		
Acroneuria californica (Banks) 1905	--	--	--	--	.3	2	--	--	1.2	12	.2	2	.6	23	.1	1	1.8	17
Neuroptera	.0	1	--	--	--	--	--	--	.4	4	--	--	.2	6	--	--	1.0	10
Sialidae (alderflies), Sialis occidens Ross 1937	.0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Corydalidae (dobson and fishflies)																		
Dysmicohermes crepusculus Chandler 1954	--	--	--	--	--	--	--	--	.4	4	--	--	.2	6	--	--	1.0	10
Trichoptera (caddisflies)	3.0	76	--	--	5.7	32	7.3	189	17.6	173	21.5	189	9.0	323	12.4	135	11.8	114
Rhyacophilidae (primitive caddisflies)	.8	20	--	--	--	--	.5	14	.5	5	.9	8	.5	17	1.9	21	.5	5
Rhyacophila acropedes Banks 1914	.7	17	--	--	--	--	.5	13	.1	1	.1	1	.2	9	1.5	16	--	--
Rhyacophila vaccua Milne 1936	.1	3	--	--	--	--	--	--	.4	4	.7	6	.1	5	.5	5	.5	5
Rhyacophila vepulsa Milne 1936	--	--	--	--	--	--	.0	1	--	--	.1	1	.0	1	--	--	--	--
Rhyacophila vocala Milne 1936	--	--	--	--	--	--	--	--	--	--	--	--	.1	2	--	--	--	--
Glossosomatidae																		
Glossosoma oregonense Ling 1938	--	--	--	--	.4	2	--	--	12.7	125	17.0	149	.4	14	.1	1	5.1	49
Philopotamidae (finger-net caddisflies or silken-tube spinners), Wormaldia gabriella Banks 1930	--	--	--	--	--	--	--	--	--	--	--	--	.1	5	--	--	.1	1
Psychomyiidae (tube-making and trumpet-net caddisflies)																		
Polycentropus halidus Milne 1936	2.0	51	--	--	.2	1	6.7	174	.3	3	--	--	.3	10	3.4	37	.2	2
Hydropsychidae (net-spinning caddisflies)	--	--	--	--	.2	1	--	--	3.0	29	1.8	16	5.7	203	1.2	13	1.4	14
Cheumatopsyche mickeli Denning 1942	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hydropsyche occidentalis Banks 1900	--	--	--	--	.2	1	--	--	.6	6	1.7	15	5.7	203	1.2	13	1.4	14
Parapsyche sp.	--	--	--	--	--	--	--	--	2.3	23	.1	1	--	--	--	--	--	--
Hydroptilidae (micro-caddisflies), Agraylea sp.	.0	1	--	--	--	--	--	--	.5	5	--	--	.1	3	--	--	2.2	21
Brachycentridae, Micrasema sp.	--	--	--	--	--	--	--	--	.2	2	.1	1	.7	26	4.7	51	.7	7

CLASS / Order / Family / Genus species	October 1976																	
	Site S10		Site S11		Site S12		Site S13											
	Percent	Number	Percent	Number	Percent	Number	Percent	Number										
COELENTERATA (phylum), Hydra sp.	--	--	--	--	--	--	--	--										
TURBELLARIA, Tricladida, Planariidae (flatworms)	4.2	14	--	--	1.2	14	0.8	18										
Dugesia sp.	--	--	--	--	1.2	14	.8	18										
Polycelis sierrensis (Kenk) 1973	4.2	14	--	--	--	--	--	--										
NEMATA (phylum), unident. nemas (unsegmented roundworms)	--	--	--	--	--	--	.0	1										
OLIGOCHAETA (segmented worms)	.6	2	3.3	88	62.6	719	60.8	1,467										
Plesiopora	--	--	3.3	88	62.1	713	60.4	1,456										
Naididae	--	--	3.2	85	61.8	709	59.9	1,444										
Chaetogaster spp.	--	--	.0	1	--	--	--	--										
Nais spp.	--	--	3.1	84	61.8	709	59.9	1,444										
Tubificidae, Ilyodrilus sp.	--	--	--	--	.4	4	.5	12										
Opisthopora, unident. true earthworms	.6	2	--	--	--	--	.2	5										
Prosopora	--	--	.1	3	.5	6	.2	6										
Lumbriculidae	--	--	.1	3	.5	6	.2	6										
Rhynchelmis sp.	--	--	.1	3	.4	5	.0	1										
Unident. lumbriculid	--	--	--	--	.1	1	.2	5										
Hirudinea (leeches)	--	--	--	--	--	--	--	--										
CRUSTACEA, Ostracoda (subclass), unident. cyprid (seed shrimp)	--	--	.0	1	.1	1	--	--										
INSECTA (insects)	95.0	319	95.9	2,569	35.2	404	38.3	925										
Ephemeroptera (mayflies)	33.0	111	11.5	308	11.1	127	1.6	40										
Siphlonuridae, Ameletus sp.	1.5	5	.2	4	.4	4	--	--										
Baetidae	23.8	80	5.4	146	2.8	32	1.6	38										
Baetis spp.	23.8	80	5.4	146	2.8	32	1.6	38										
Centroptilum sp.	--	--	--	--	--	--	--	--										
Heptageniidae	3.6	12	2.4	64	.3	3	.0	1										
Cinygmula sp.	--	--	--	--	.2	2	--	--										
Epeorus (Ironodes) lepidus Traver 1935	--	--	--	--	--	--	--	--										
Epeorus (Iron) longimanus (Eaton) 1881	3.6	12	.2	4	.1	1	--	--										
Heptagenia elegantula (Eaton) 1885	--	--	2.2	60	--	--	.0	1										
Leptophlebiidae, Paraleptophlebia pallipes (Hagen) 1875	3.3	11	3.0	79	7.6	87	--	--										
Ephemerellidae	.9	3	.6	15	.1	1	.0	1										
Ephemerella doddsi Needham 1927	--	--	--	--	--	--	--	--										
Ephemerella infrequens McDunnough 1924	.9	3	.5	14	.1	1	.0	1										
Ephemerella spinifera Needham 1927	--	--	.0	1	--	--	--	--										
Plecoptera (stoneflies)	6.6	22	3.6	95	1.7	20	1.1	27										
Peltoperlidae (roachlike stoneflies)																		
Peltoperla brevis Banks 1907	--	--	.1	2	--	--	--	--										
Nemouridae (spring stoneflies)	4.5	15	1.6	44	.1	1	--	--										
Malenka spp.	3.9	13	1.6	43	.1	1	--	--										
Zapada spp.	.6	2	.0	1	--	--	--	--										
Leuctridae (rolled-winged stoneflies)																		
Leuctra (Paraleuctra) sara Claassen 1937	.3	1	.3	8	--	--	--	--										
Perlodidae (perlodid stoneflies)																		
Isogenus (Kogotus) nonus (Needham and Claassen) 1925	--	--	--	--	--	--	.1	3										
Chloroperlidae (green stoneflies)																		
Alloperla (exquisita, fidelis, and severa) spp.	1.8	6	1.4	38	1.4	16	--	--										
Perlidae (common stoneflies)																		
Acroneuria californica (Banks) 1905	--	--	.1	3	.3	3	1.0	24										
Neuroptera	--	--	.3	8	--	--	.0	1										
Sialidae (alderflies), Sialis occidens Ross 1937	--	--	.3	7	--	--	--	--										
Corydalidae (dobson and fishflies)																		
Dysmicohermes crepusculus Chandler 1954	--	--	.0	1	--	--	.0	1										
Trichoptera (caddisflies)	11.0	37	4.3	114	6.3	72	5.2	126										
Rhyacophilidae (primitive caddisflies)	.6	2	.5	13	.2	2	--	--										
Rhyacophila acropedes Banks 1914	--	--	.3	9	--	--	--	--										
Rhyacophila vaccua Milne 1936	.6	2	--	--	--	--	--	--										
Rhyacophila vepulsa Milne 1936	--	--	.2	4	.2	2	--	--										
Rhyacophila vocala Milne 1936	--	--	--	--	--	--	--	--										
Glossosomatidae																		
Glossosoma oregonense Ling 1938	8.6	29	--	--	--	--	--	--										
Philopotamidae (finger-net caddisflies or silken-tube spinners), Wormaldia gabriella Banks 1930	--	--	--	--	--	--	--	--										
Psychomyiidae (tube-making and trumpet-net caddisflies)																		
Polycentropus halidus Milne 1936	--	--	1.4	38	.9	10	.0	1										
Hydropsychidae (net-spinning caddisflies)	--	--	2.0	54	.2	2	5.1	123										
Cheumatopsyche mickeli Denning 1942	--	--	--	--	--	--	4.5	109										
Hydropsyche occidentalis Banks 1900	--	--	2.0	54	.2	2	.6	14										
Parapsyche sp.	--	--	--	--	--	--	--	--										
Hydroptilidae (micro-caddisflies), Agraylea sp.	--	--	--	--	--	--	.1	2										
Brachycentridae, Micrasema sp.	--	--	.1	3	.1	1	--	--										

Table 14.--*Benthic macroinvertebrates in streams*--Continued

CLASS / Order / Family / Genus species	October 1976																			
	Site S1		Site S2		Site S3		Site S4		Site S5		Site S6		Site S7		Site S8		Site S9		Site S10	
	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number
INSECTA (continued)																				
Trichoptera (continued)																				
Limnephilidae (northern caddisflies)	--	--	--	--	.7	4	--	--	.1	1	.6	5	.7	24	--	--	.8	8	.3	1
Ecclisomyia spp.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	.3	1
Neothremma sp.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	.8	8	--	--
Oligophlebodes sierra Ross 1944	--	--	--	--	--	--	--	--	--	--	.6	5	.6	23	--	--	--	--	--	--
Unident. limniphilid (nr. genus A)	--	--	--	--	.7	4	--	--	.1	1	--	--	--	--	--	--	--	--	--	--
Radema sp.	--	--	--	--	--	--	--	--	--	--	--	--	.0	1	--	--	--	--	--	--
Lepidostomatidae, Lepidostoma spp.	.2	4	--	--	4.3	24	.0	1	.3	3	1.1	10	.3	11	1.1	12	.2	2	1.2	4
Sericostomatidae, Sericostoma sp.	--	--	--	--	--	--	--	--	--	--	--	--	.3	10	--	--	.5	5	--	--
Coleoptera (beetles)	.9	22	--	--	--	--	4.8	123	--	--	--	--	.1	5	--	--	--	--	--	--
Elmidae (riffle beetles)																				
Cleptelmis ornata (Schaeffer) 1911	.7	17	--	--	--	--	4.8	123	--	--	--	--	.1	4	--	--	--	--	--	--
Psephenidae (water penny beetles)																				
Eubrianax edwardsi (Le Conte) 1874	.2	5	--	--	--	--	--	--	--	--	--	--	.0	1	--	--	--	--	--	--
Diptera (true flies)	36.0	920	--	--	30.6	171	50.4	1,305	22.8	224	53.4	469	43.6	1,562	46.8	511	47.3	458	44.4	149
Tipulidae (crane flies)	--	--	--	--	--	--	--	--	.2	2	.1	1	.2	8	.1	1	.4	4	1.2	4
Antocha monticola Alexander 1917	--	--	--	--	--	--	--	--	--	--	--	--	.2	8	--	--	--	--	--	--
Dicranota sp.	--	--	--	--	--	--	--	--	.2	2	.1	1	--	--	.1	1	.4	4	1.2	4
Ceratopogonidae (=Heleidae) (biting midges)																				
Bezzia (nr. setulosa Loew 1861) sp.	--	--	--	--	--	--	--	--	--	--	--	--	.2	6	--	--	.1	1	1.2	4
Chironomidae (midges)	17.3	441	--	--	30.4	170	15.5	402	22.6	222	53.2	467	43.2	1,546	42.5	464	46.8	453	41.1	138
Tanypodinae (=Pelopiinae)																				
Pentaneurini (nr. Conchapelopia, Arctopelopia)	10.3	263	--	--	.5	3	7.3	189	.8	8	.7	6	1.5	53	5.2	57	4.8	47	3.3	11
Diamesinae	1.2	30	--	--	.2	1	1.5	38	.1	1	1.4	12	--	--	.8	9	2.2	21	9.8	33
Diamesa sp.	.9	22	--	--	--	--	.5	13	--	--	.7	6	--	--	.8	9	1.0	10	2.1	7
Pseudodiamesa sp.	.3	8	--	--	.2	1	1.0	25	.1	1	.6	5	--	--	--	--	1.1	11	.3	1
Syndiamesa ex. gr. nivosa	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7.4	25
Unident. Diamesinae sp. 1	--	--	--	--	--	--	--	--	--	--	.1	1	--	--	--	--	--	--	--	--
Orthocladiinae (=Hydrobaeninae)	3.1	79	--	--	27.2	152	2.0	52	13.6	134	6.5	57	1.0	37	9.5	104	32.0	310	23.2	78
Brillia sp.	--	--	--	--	--	--	--	--	.2	2	.1	1	--	--	.4	4	1.2	12	.9	3
Corynoneura sp.	.0	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	.3	1
Cricotopus sp.	1.1	29	--	--	--	--	--	--	.4	4	--	--	--	--	1.1	12	.5	5	--	--
Diplocladius sp.	1.1	27	--	--	--	--	.0	1	--	--	--	--	--	--	--	--	.3	3	.9	3
Eukiefferiella sp. 1	--	--	--	--	--	--	--	--	.1	1	.1	1	--	--	--	--	--	--	--	--
Eukiefferiella sp. 2	.5	12	--	--	10.0	56	.2	5	1.0	10	--	--	.0	1	4.1	45	6.5	63	8.6	29
Metriocnemus sp. 1	--	--	--	--	--	--	--	--	2.3	23	1.1	10	.1	3	.1	1	.3	3	.9	3
Metriocnemus sp. 2	--	--	--	--	--	--	--	--	1.1	11	2.4	21	.4	13	--	--	--	--	--	--
Orthocladius sp. 1	--	--	--	--	.5	3	.5	12	.3	3	--	--	--	--	--	--	6.6	64	3.9	13
Orthocladius sp. 2	--	--	--	--	16.1	90	.7	19	--	--	--	--	.0	1	--	--	--	--	--	--
Orthocladius sp. 4	--	--	--	--	--	--	--	--	--	--	--	--	.5	17	--	--	--	--	--	--
Orthocladius sp. 5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Thienemanniella sp.	.0	1	--	--	.2	1	--	--	.6	6	--	--	.1	2	--	--	.5	5	.6	2
Trichocladius sp. 1	.4	9	--	--	--	--	.0	1	6.1	60	1.4	12	1.2	13	--	--	15.8	153	7.1	24
Trichocladius sp. 2	--	--	--	--	.4	2	.5	14	1.4	14	1.4	12	--	--	2.7	29	.2	2	--	--
Chironominae	2.7	69	--	--	2.5	14	4.8	123	8.0	79	44.6	392	40.7	1,456	26.9	294	7.7	75	4.8	15
Chironomini	.1	3	--	--	1.2	7	3.6	94	2.1	21	7.7	68	2.1	76	.8	9	.7	7	.3	1
Cryptochironomus sp.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	.1	1	--	--	--	--
Dicrotendipes sp.	.1	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Microtendipes sp.	--	--	--	--	--	--	--	--	.1	1	--	--	--	--	--	--	--	--	--	--
Polypedilum sp.	.0	1	--	--	1.2	7	3.6	94	2.0	20	7.7	68	2.1	76	.7	8	.7	7	.3	1
Tanytarsini	2.6	66	--	--	1.3	7	1.1	29	5.9	58	36.9	324	38.5	1,380	26.1	285	7.0	68	4.5	15
Micropsectra (nr. Calopsectra polita Mall) sp.	2.6	65	--	--	.7	4	1.0	25	4.5	44	36.3	319	7.1	254	25.4	277	6.1	59	4.2	14
Paratanytarsus sp.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	.7	8	--	--	--	--
Rheotanytarsus spp.	.0	1	--	--	.5	3	2.0	4	1.4	14	.6	5	31.4	1,126	--	--	.9	9	.3	1
Simuliidae (black flies)																				
Simuliids (Prosimulium spp., Simulium spp.)	18.8	479	--	--	.2	1	34.9	902	--	--	.1	1	.0	1	4.2	46	--	--	.6	2
Empididae (dance flies), Unident. empidids (nr. Hemerodromia)	--	--	--	--	--	--	.0	1	--	--	--	--	.0	1	--	--	--	--	.3	1
ARACHNIDA, Aquatic Acari (water mites)	.4	9	--	--	--	--	.2	6	--	--	.1	1	.6	22	.1	1	--	--	--	--
MOLLUSCA (phylum)	14.8	378	--	--	--	--	4.1	105	--	--	--	--	7.8	281	12.2	133	--	--	.3	1
PELECYPODA (bivalves), Pisidiidae (=Sphaeriidae), Pisidium sp.	14.2	362	--	--	--	--	4.1	105	--	--	--	--	7.8	281	12.2	133	--	--	.3	1
GASTROPODA	.6	16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ancylidae (fresh water limpets), Ferrissia sp.	.1	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Planorbidae, Gyraulus sp.	.5	13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

CLASS / Order / Family / Genus species	October 1976							
	Site S11		Site S12		Site S13			
	Percent	Number	Percent	Number	Percent	Number		
INSECTA (continued)								
Trichoptera (continued)								
Limnephilidae (northern caddisflies)	--	--	--	--	--	--		
Ecclisomyia spp.	--	--	--	--	--	--		
Neothremma sp.	--	--	--	--	--	--		
Oligophlebodes sierra Ross 1944	--	--	--	--	--	--		
Unident. limniphilid (nr. genus A)	--	--	--	--	--	--		
Radema sp.	--	--	--	--	--	--		
Lepidostomatidae, Lepidostoma spp.	.2	6	4.6	53	--	--		
Sericostomatidae, Sericostoma sp.	--	--	.4	4	--	--		
Coleoptera (beetles)	.3	8	.1	1	--	--		
Elmidae (riffle beetles)								
Cleptelmis ornata (Schaeffer) 1911	.3	8	.1	1	--	--		
Psephenidae (water penny beetles)								
Eubrianax edwardsi (Le Conte) 1874	--	--	--	--	--	--		
Diptera (true flies)	76.0	2,036	16.0	184	30.3	731		
Tipulidae (crane flies)	.0	1	--	--	.5	11		
Antocha monticola Alexander 1917	.0	1	--	--	.5	11		
Dicranota sp.	--	--	--	--	--	--		
Ceratopogonidae (=Heleidae) (biting midges)								
Bezzia (nr. setulosa Loew 1861) sp.	.1	2	--	--	--	--		
Chironomidae (midges)	74.4	1,994	15.9	183	29.0	699		
Tanypodinae (=Pelopiinae)								
Pentaneurini (nr. Conchapelopia, Arctopelopia)	3.4	91	4.6	53	10.1	244		
Diamesinae	.2	6	.2	2	.2	4		
Diamesa sp.	.1	2	.2	2	.2	4		
Pseudodiamesa sp.	.2	4	--	--	--	--		
Syndiamesa ex. gr. nivosa	--	--	--	--	--	--		
Unident. Diamesinae sp. 1	--	--	--	--	--	--		
Orthocladiinae (=Hydrobaeninae)	21.0	563	7.8	90	17.7	426		
Brillia sp.	--	--	--	--	--	--		
Corynoneura sp.	--	--	--	--	--	--		
Cricotopus sp.	--	--	4.3	49	3.3	80		
Diplocladius sp.	--	--	--	--	--	--		
Eukiefferiella sp. 1	--	--	--	--	.0	1		
Eukiefferiella sp. 2	.0	1	.1	1	.0	1		
Metriocnemus sp. 1	--	--	--	--	--	--		
Metriocnemus sp. 2	11.1	298	--	--	--	--		
Orthocladius sp. 1	--	--	2.9	35	7.8	187		
Orthocladius sp. 2	6.5	173	--	--	--	--		
Orthocladius sp. 4	2.7	72	--	--	6.2	150		
Orthocladius sp. 5	--	--	--	--	.2	4		
Thienemanniella sp.	.2	4	.1	1	.0	1		
Trichocladius sp. 1	.1	2	.5	6	.1	2		
Trichocladius sp. 2	.4	12	--	--	--	--		
Chironominae	49.8	1,334	3.3	38	1.0	25		
Chironomini	.5	14	.6	7	--	--		
Cryptochironomus sp.	--	--	--	--	--	--		
Dicrotendipes sp.	.1	2	--	--	--	--		
Microtendipes sp.	.2	2	--	--	--	--		
Polypedilum sp.	.4	12	.4	5	--	--		
Tanytarsini	49.3	1,320	2.7	31	1.0	25		
Micropsectra (nr. Calopsectra polita Mall) sp.	48.1	1,289	1.4	16	.0	1		
Paratanytarsus sp.	--	--	--	--	--	--		
Rheotanytarsus spp.	1.2	31	1.3	15	1.0	24		
Simuliidae (black flies)								
Simuliids (Prosimulium spp., Simulium spp.)	.7	18	.1	1	.0	1		
Empididae (dance flies), Unident. empidids (nr. Hemerodromia)	.8	21	--	--	.8	20		
ARACHNIDA, Aquatic Acari (water mites)	.8	21	.1	1	.0	1		
MOLLUSCA (phylum)	--	--	.8	9	--	--		
PELECYPODA (bivalves), Pisidiidae (=Sphaeriidae), Pisidium sp.	--	--	.7	8	--	--		
GASTROPODA	--	--	.1	1	--	--		
Ancylidae (fresh water limpets), Ferrissia sp.	--	--	.1	1	--	--		
Planorbidae, Gyraulus sp.	--	--	--	--	--	--		

Table 15.--*Stream depths and velocities at Surber sampling sites*

[Samples were collected along a transect and designated: A, near left bank; B, near middle; C, near right bank. No measurements: a, not measured because of snow; b, water level too low to detect water movement]

Sampling site number	Altitude (ft)	Sample number	1975 Depth (ft) July 8-11	Depth (ft) Aug. 25-29	Depth (ft) Oct. 21-23	Velocity (ft/s) July 8-11	Velocity (ft/s) Aug. 25-29	Velocity (ft/s) Oct. 21-23
S1	8,150	1-A	1.70	0.50	a	0.28	0.36	a
		1-B	1.60	1.00	a	.99	.06	a
		1-C	1.50	1.00	a	.22	.26	a
S2	8,100	2-A	1.10	.60	a	.73	.10	a
		2-B	1.15	.36	a	.36	.57	a
		2-C	1.35	.60	a	.21	.14	a
S3	7,800	3-A	1.20	.65	a	.20	1.26	a
		3-B	1.50	.65	a	.86	.86	a
		3-C	.70	.65	a	1.31	.26	a
S4	7,800	4-A	1.20	.50	a	1.26	.26	a
		4-B	.74	.30	a	1.43	.62	a
		4-C	.65	.46	a	1.59	.14	a
S5	7,400	5-A	.85	.40	.70	.43	.43	2.76
		5-B	.90	.40	.60	1.00	.32	2.42
		5-C	.30	.30	.50	1.63	.60	3.44
S6	7,250	6-A	1.30	.50	.60	1.03	.66	.90
		6-B	.90	.60	.60	1.25	.14	.51
		6-C	1.40	.30	.80	.81	.66	1.47
S7	6,950	7-A	.90	.85	1.10	1.40	.57	1.34
		7-B	1.60	.90	1.10	1.47	1.59	2.36
		7-C	1.00	.90	.80	.57	.21	1.08
S8	8,300	8-A	.65	.40	.30	.51	.28	.36
		8-B	.70	.40	.20	1.12	.46	.10
		8-C	.72	.40	.26	.71	.66	.76
S9	7,400	9-A	.90	.40	.16	1.63	.51	1.08
		9-B	.80	.40	.16	1.63	.96	1.12
		9-C	.50	.36	.26	.86	.21	.73
S10	6,950	10-A	.75	.40	.20	.23	.40	.10
		10-B	.85	.50	.10	.90	1.12	.81
		10-C	.75	.80	.36	1.66	.16	.40
S11	6,750	11-A	1.70	.70	1.60	1.23	1.70	2.86
		11-B	2.00	.70	1.50	1.26	1.01	2.16
		11-C	1.50	.80	1.50	1.34	.68	1.95
S12	6,450	12-A	1.40	.60	1.30	1.51	1.01	2.16
		12-B	1.00	.50	1.30	2.64	1.12	2.30
		12-C	1.00	.30	.80	1.63	1.14	1.59
S13	6,250	13-A	.70	.60	1.00	1.01	1.23	2.06
		13-B	1.15	.80	.90	1.95	.76	2.30
		13-C	1.10	.60	.90	2.00	.90	1.90

Table 15.--*Stream depths and velocities at Surber sampling sites*--Continued

Sampling site number	Altitude (ft)	Sample number	1976 Depth (ft) June 28-July 2	Depth (ft) Aug. 30-Sept. 3	Depth (ft) Oct. 12-15	Velocity (ft/sec) June 28-July 2	Velocity (ft/sec) Aug. 30-Sept. 3	Velocity (ft/sec) Oct. 12-15
S1	8,150	1-A	3.94	1.48	1.64	0.62	1.24	2.82
		1-B	2.62	2.56	.65	1.84	1.08	5.58
		1-C	1.96	2.04	1.30	1.59	.50	1.74
S2	8,100	2-A	1.30	.72	b	.46	.90	b
		2-B	1.15	.65	b	.57	.62	b
		2-C	1.00	1.00	b	1.12	.60	b
S3	7,800	3-A	1.64	1.24	1.00	.50	.50	1.51
		3-B	2.30	1.48	1.00	2.06	1.60	.60
		3-C	2.30	1.15	1.64	1.60	2.88	.66
S4	7,800	4-A	2.24	2.04	1.30	1.04	1.51	3.84
		4-B	1.64	1.80	.82	3.94	2.00	3.84
		4-C	1.48	1.80	.82	4.30	3.24	2.16
S5	7,400	5-A	1.30	.82	.65	2.16	5.12	1.23
		5-B	1.15	.82	1.00	1.95	3.08	5.70
		5-C	1.90	.65	.50	5.22	2.88	3.74
S6	7,250	6-A	1.15	1.48	1.00	4.04	1.66	.81
		6-B	1.24	1.00	.82	5.94	2.06	1.31
		6-C	1.48	1.24	.65	2.20	1.23	1.96
S7	6,950	7-A	2.78	2.30	1.00	4.82	1.08	3.68
		7-B	4.10	3.28	2.30	5.08	4.60	1.31
		7-C	2.62	2.30	2.30	3.14	3.32	2.06
S8	8,300	8-A	.82	.82	1.30	3.68	1.66	5.44
		8-B	.72	.50	1.00	3.74	1.96	5.58
		8-C	.65	.65	1.96	1.95	2.76	2.88
S9	7,400	9-A	.50	.50	1.00	5.44	1.12	5.68
		9-B	.82	.65	1.30	4.50	1.31	3.52
		9-C	.50	.32	.82	3.52	1.66	6.72
S10	6,950	10-A	.60	1.00	1.15	1.66	.78	2.24
		10-B	1.04	.65	1.30	1.04	3.32	1.18
		10-C	1.30	.65	1.00	.62	2.72	1.51
S11	6,750	11-A	2.30	1.64	2.30	1.34	.76	2.00
		11-B	2.14	2.62	2.62	1.51	5.94	3.38
		11-C	2.78	1.96	2.62	5.80	3.24	2.30
S12	6,450	12-A	1.96	2.46	1.64	1.31	2.24	.46
		12-B	2.30	2.30	1.15	3.02	1.34	.86
		12-C	2.30	1.96	1.64	1.95	3.24	1.40
S13	6,250	13-A	1.04	1.30	1.64	3.32	3.58	3.14
		13-B	1.24	1.96	1.80	2.88	2.78	3.08
		13-C	1.96	1.96	3.12	4.14	1.80	3.24

Table 16.--*Summary of community parameters for individual Surber samples*

[Samples were collected along a transect and designated: A, near left bank; B, near middle; and C, near right bank]

Sampling site number	Sample number	Total number of individuals	Total taxa	Diversity index (EH')	Maximum diversity (HMAX)	Minimum diversity (HMIN)	EVENES (EH'/HMAX)	Standard error of estimate (SEPH)
				July 1975				
S1	1-A	1,049	26	2.93	4.70	0.03	0.62	0.06
	1-B	1,111	28	2.65	4.81	.03	.55	.06
	1-C	516	26	3.06	4.70	.07	.65	.08
S2	2-A	75	12	2.75	3.58	.20	.77	.16
	2-B	78	13	3.06	3.70	.20	.83	.13
	2-C	100	13	3.00	3.70	.16	.81	.13
S3	3-A	188	27	3.68	4.75	.19	.77	.10
	3-B	88	18	3.21	7.17	.25	.77	.15
	3-C	123	20	3.30	4.32	.20	.76	.14
S4	4-A	1,295	29	1.76	4.86	.03	.36	.07
	4-B	7,267	26	.40	4.70	.00	.90	.02
	4-C	5,443	18	.23	4.17	.00	.06	.02
S5	5-A	352	35	4.15	5.13	.13	.81	.08
	5-B	121	29	4.36	4.86	.29	.90	.09
	5-C	311	34	4.03	5.09	.14	.79	.09
S6	6-A	70	28	3.95	4.81	.43	.82	.18
	6-B	197	22	2.71	4.46	.15	.61	.15
	6-C	86	21	3.40	4.39	.29	.77	.17
S7	7-A	679	44	3.43	5.46	.09	.63	.09
	7-B	578	44	4.20	5.46	.10	.77	.07
	7-C	140	31	4.28	4.95	.27	.86	.11
S8	8-A	1,106	41	3.53	5.36	.05	.66	.06
	8-B	896	44	3.50	5.46	.07	.64	.07
	8-C	1,610	44	3.83	5.46	.04	.70	.05
S9	9-A	549	38	4.15	5.25	.09	.79	.06
	9-B	1,021	44	4.09	5.46	.06	.75	.05
	9-C	991	44	3.80	5.46	.06	.70	.06
S10	10-A	762	37	3.47	5.21	.07	.67	.07
	10-B	217	34	4.36	5.09	.20	.86	.08
	10-C	215	35	4.09	5.13	.21	.80	.11
S11	11-A	124	35	4.42	5.13	.34	.86	.12
	11-B	154	36	4.23	5.17	.29	.82	.13
	11-C	165	31	4.06	4.95	.24	.82	.11
S12	12-A	494	33	3.93	5.04	.09	.78	.07
	12-B	300	31	3.91	4.95	.14	.79	.09
	12-C	378	35	3.68	5.13	.12	.72	.10
S13	13-A	416	41	4.33	5.36	.13	.81	.07
	13-B	351	35	4.25	5.13	.13	.83	.07
	13-C	667	39	4.29	5.29	.08	.81	.05

Table 16.--*Summary of community parameters for individual Surber samples*--Continued

Sampling site number	Sample number	Total number of individuals	Total taxa	Diversity index (EH')	Maximum diversity (HMAX)	Minimum diversity (HMIN)	EVENES (EH'/HMAX)	Standard error of estimate (SEPH)
				August 1975				
S1	1-A	5,125	22	2.20	4.46	0.01	0.49	0.03
	1-B	4,721	21	1.98	4.39	.01	.45	.03
	1-C	1,082	24	2.89	4.58	.03	.63	.05
S2	2-A	837	23	3.11	4.52	.04	.69	.06
	2-B	550	24	3.30	4.58	.06	.72	.07
	2-C	852	21	3.29	4.39	.03	.75	.05
S3	3-A	199	24	3.43	4.58	.16	.75	.12
	3-B	164	17	3.27	4.09	.13	.80	.10
	3-C	329	22	3.63	4.46	.09	.81	.06
S4	4-A	854	31	3.72	4.95	.05	.75	.05
	4-B	1,747	22	1.87	4.46	.02	.42	.06
	4-C	832	31	3.43	4.95	.05	.69	.06
S5	5-A	948	34	3.98	5.09	.05	.78	.05
	5-B	474	37	3.77	5.21	.11	.72	.08
	5-C	688	30	3.28	4.91	.06	.67	.07
S6	6-A	1,017	33	3.28	5.04	.04	.65	.06
	6-B	767	31	2.96	4.95	.06	.60	.07
	6-C	944	34	3.09	5.09	.05	.61	.07
S7	7-A	2,110	49	2.57	5.61	.03	.46	.06
	7-B	1,634	40	3.57	5.32	.03	.67	.04
	7-C	457	39	4.10	5.29	.11	.78	.08
S8	8-A	2,836	36	2.63	5.17	.02	.51	.05
	8-B	2,952	38	2.81	5.25	.02	.53	.04
	8-C	1,481	34	2.97	5.09	.03	.58	.06
S9	9-A	223	28	4.00	4.81	.16	.83	.08
	9-B	183	26	3.76	4.70	.18	.80	.11
	9-C	396	27	3.67	4.75	.09	.77	.07
S10	10-A	240	31	3.69	4.95	.17	.74	.12
	10-B	364	34	3.39	5.09	.12	.67	.12
	10-C	955	29	2.96	4.86	.04	.61	.07
S11	11-A	618	32	3.04	5.00	.07	.61	.08
	11-B	2,853	44	2.27	5.46	.02	.42	.05
	11-C	2,710	32	3.03	5.00	.02	.61	.04
S12	12-A	573	37	3.51	5.21	.09	.67	.08
	12-B	510	35	3.42	5.13	.09	.67	.08
	12-C	984	38	3.76	5.25	.05	.72	.05
S13	13-A	764	36	4.04	5.17	.06	.78	.06
	13-B	1,244	44	3.81	5.46	.05	.70	.05
	13-C	2,647	41	3.64	5.36	.02	.68	.03

Table 16.--*Summary of community parameters for individual Surber samples*--Continued

Sampling site number	Sample number	Total number of individuals	Total taxa	Diversity index (EH')	Maximum diversity (HMAX)	Minimum diversity (HMIN)	EVENES (EH'/HMAX)	Standard error of estimate (SEPH)
				October 1975				
S5	5-A	173	29	3.77	4.86	0.21	0.78	0.13
	5-B	214	31	3.90	4.95	.19	.79	.11
	5-C	164	28	3.98	4.81	.22	.83	.11
S6	6-A	648	32	2.31	5.00	.07	.46	.10
	6-B	1,199	22	2.21	4.46	.03	.50	.06
	6-C	169	11	2.34	3.46	.08	.68	.11
S7	7-A	173	23	3.08	4.52	.17	.68	.14
	7-B	476	40	3.85	5.32	.11	.72	.09
	7-C	778	36	3.99	5.17	.06	.77	.06
S8	8-A	230	27	4.05	4.75	.15	.85	.08
	8-B	295	34	4.05	5.09	.15	.80	.09
	8-C	378	30	3.74	4.91	.11	.76	.09
S9	9-A	275	33	4.17	5.04	.16	.83	.08
	9-B	93	26	3.94	4.70	.33	.84	.14
	9-C	341	32	3.16	5.00	.13	.63	.12
S10	10-A	28	11	2.87	3.46	.41	.83	.21
	10-B	61	20	3.02	4.32	.37	.70	.25
	10-C	28	13	3.15	3.70	.46	.85	.21
S11	11-A	369	25	2.43	4.64	.09	.52	.12
	11-B	206	22	1.55	4.46	.14	.35	.17
	11-C	1,164	33	1.85	5.04	.04	.37	.07
S12	12-A	93	20	3.27	4.32	.26	.76	.17
	12-B	102	15	3.00	3.91	.18	.77	.13
	12-C	77	19	3.34	4.25	.29	.79	.15
S13	13-A	269	21	3.25	4.39	.10	.74	.09
	13-B	117	16	2.84	4.00	.17	.71	.15
	13-C	119	16	2.83	4.00	.17	.71	.15

Table 16.--*Summary of community parameters for individual Surber samples*--Continued

Sampling site number	Sample number	Total number of individuals	Total taxa	Diversity index (EH')	Maximum diversity (HMAX)	Minimum diversity (HMIN)	EVENES (EH'/HMAX)	Standard error of estimate (SEPH)
				June-July 1976				
S1	1-A	5,599	20	1.40	4.32	0.00	0.32	0.02
	1-B	12,076	15	1.33	3.91	.00	.34	.01
	1-C	3,305	14	1.17	3.81	.01	.31	.03
S2	2-A	310	23	3.14	4.52	.10	.69	.10
	2-B	181	21	3.40	4.39	.15	.77	.10
	2-C	170	16	2.93	4.00	.12	.73	.11
S3	3-A	225	19	3.05	4.25	.11	.72	.11
	3-B	217	19	3.25	4.25	.11	.76	.11
	3-C	120	14	2.47	3.81	.15	.65	.17
S4	4-A	239	20	2.90	4.32	.11	.67	.11
	4-B	1,321	21	1.32	4.39	.02	.30	.06
	4-C	390	25	2.75	4.65	.09	.59	.10
S5	5-A	235	28	3.84	4.81	.16	.80	.11
	5-B	253	26	3.95	4.70	.14	.84	.09
	5-C	439	37	3.99	5.21	.11	.77	.09
S6	6-A	434	35	4.04	5.13	.11	.79	.08
	6-B	248	31	3.90	4.95	.16	.79	.09
	6-C	317	31	4.05	4.95	.13	.82	.07
S7	7-A	379	30	3.20	4.91	.11	.65	.10
	7-B	342	29	3.28	4.86	.11	.68	.11
	7-C	285	32	3.87	5.00	.15	.77	.09
S8	8-A	495	30	3.26	4.91	.08	.66	.08
	8-B	457	29	3.09	4.86	.09	.64	.10
	8-C	1,010	30	2.63	4.91	.04	.54	.07
S9	9-A	591	37	4.18	5.21	.09	.80	.06
	9-B	413	34	4.13	5.09	.11	.81	.07
	9-C	284	27	3.81	4.75	.13	.80	.09
S10	10-A	441	37	4.10	5.21	.11	.79	.07
	10-B	363	31	3.67	4.95	.11	.74	.09
	10-C	447	30	3.76	4.91	.09	.77	.07
S11	11-A	221	29	4.21	4.86	.17	.85	.08
	11-B	166	30	4.08	4.91	.23	.83	.11
	11-C	52	18	3.47	4.17	.38	.83	.18
S12	12-A	759	36	3.91	5.17	.06	.76	.06
	12-B	529	38	3.49	5.25	.10	.67	.09
	12-C	839	36	2.87	5.17	.06	.55	.07
S13	13-A	1,602	35	2.90	5.13	.03	.57	.05
	13-B	2,157	37	3.39	5.21	.02	.65	.04
	13-C	2,193	33	2.93	5.04	.02	.58	.04

Table 16.--*Summary of community parameters for individual Surber samples*--Continued

Sampling site number	Sample number	Total number of individuals	Total taxa	Diversity index (EH')	Maximum diversity (HMAX)	Minimum diversity (HMIN)	EVENES (EH'/HMAX)	Standard error of estimate (SEPH)
			August-September 1976					
S1	1-A	8,010	32	0.87	5.00	0.01	0.17	0.02
	1-B	1,849	28	3.01	4.81	.02	.63	.04
	1-C	1,417	30	2.85	4.91	.03	.58	.06
S2	2-A	75	17	3.16	4.09	.27	.77	.17
	2-B	161	18	2.92	4.17	.14	.77	.14
	2-C	41	11	2.66	3.46	.30	.77	.21
S3	3-A	95	19	3.41	4.25	.25	.80	.14
	3-B	137	23	2.92	4.52	.21	.64	.18
	3-C	292	27	3.13	4.75	.12	.66	.13
S4	4-A	753	22	3.07	4.46	.04	.69	.05
	4-B	951	28	3.11	4.81	.04	.65	.05
	4-C	1,472	28	3.24	4.81	.03	.67	.04
S5	5-A	652	43	3.95	5.43	.09	.73	.07
	5-B	610	40	3.02	3.69	.06	.82	.04
	5-C	678	43	4.33	5.43	.09	.80	.06
S6	6-A	754	37	3.72	5.21	.07	.71	.07
	6-B	830	34	3.07	5.09	.06	.60	.07
	6-C	512	34	3.31	5.09	.09	.65	.09
S7	7-A	256	36	4.04	5.17	.18	.78	.10
	7-B	245	32	3.76	5.00	.17	.75	.11
	7-C	837	44	3.86	5.46	.07	.71	.07
S8	8-A	2,413	38	2.89	5.25	.02	.55	.05
	8-B	2,542	36	4.10	5.17	.02	.79	.03
	8-C	3,365	37	4.13	5.21	.02	.79	.02
S9	9-A	1,353	40	4.19	5.32	.04	.79	.04
	9-B	1,483	41	4.28	5.36	.04	.80	.04
	9-C	971	46	4.29	5.52	.07	.78	.05
S-10	10-A	534	35	4.14	5.13	.09	.81	.06
	10-B	463	40	4.38	5.32	.12	.82	.06
	10-C	747	38	4.16	5.25	.07	.79	.05
S-11	11-A	991	39	2.66	5.29	.05	.50	.08
	11-B	1,031	48	3.70	5.58	.06	.66	.06
	11-C	297	39	4.48	5.29	.17	.85	.08
S-12	12-A	420	30	3.14	4.91	.10	.64	.09
	12-B	409	30	3.75	4.91	.10	.76	.08
	12-C	416	33	3.50	5.04	.11	.69	.09
S-13	13-A	487	23	2.68	4.52	.06	.59	.08
	13-B	331	26	3.33	4.70	.10	.71	.10
	13-C	631	28	3.59	4.81	.06	.75	.06

Table 16.--*Summary of community parameters for individual Surber samples*--Continued

Sampling site number	Sample number	Total number of individuals	Total taxa	Diversity index (EH')	Maximum diversity (HMAX)	Minimum diversity (HMIN)	EVENES (EH'/HMAX)	Standard error of estimate (SEPH)
			October 1976					
S1	1-A	877	23	2.96	4.52	0.04	0.66	0.06
	1-B	511	23	2.72	4.52	.06	.60	.08
	1-C	1,166	24					
S2	——— Not sampled due to 0 flow. ———							
S3	3-A	169	15	2.39	3.91	.11	.40	.15
	3-B	231	15	2.00	3.91	.08	.51	.12
	3-C	159	14	1.98	3.81	.11	.52	.14
S4	4-A	925	32	3.39	5.00	.05	.68	.05
	4-B	606	18	2.86	4.17	.04	.69	.06
	4-C	1,055	17	1.92	4.09	.02	.47	.06
S5	5-A	398	24	2.99	4.58	.08	.65	.11
	5-B	359	36	3.91	5.17	.13	.76	.09
	5-C	226	25	3.18	4.64	.14	.68	.13
S6	6-A	339	27	3.10	4.75	.11	.65	.11
	6-B	192	22	3.12	4.46	.15	.70	.12
	6-C	347	28	3.26	4.81	.11	.68	.10
S7	7-A	1,501	43	3.38	5.43	.04	.62	.05
	7-B	1,247	43	3.01	5.43	.05	.55	.06
	7-C	832	39	3.52	5.29	.06	.67	.06
S8	8-A	253	28	4.08	4.81	.15	.85	.08
	8-B	151	19	2.96	4.25	.16	.70	.13
	8-C	687	26	3.11	4.70	.05	.66	.07
S9	9-A	217	28	4.00	4.81	.17	.83	.09
	9-B	255	29	3.86	4.86	.15	.80	.09
	9-C	497	35	4.05	5.13	.10	.79	.07
S10	10-A	64	18	3.03	4.17	.33	.73	.23
	10-B	58	19	3.58	4.25	.37	.84	.16
	10-C	214	26	3.75	4.70	.16	.80	.10
S11	11-A	1,608	38	2.63	5.25	.03	.50	.06
	11-B	531	33	3.63	5.04	.08	.72	.08
	11-C	540	31	3.09	4.95	.08	.62	.09
S12	12-A	430	20	1.99	4.32	.06	.46	.11
	12-B	412	23	2.63	4.52	.07	.58	.11
	12-C	306	27	2.32	4.75	.12	.49	.14
S13	13-A	1,259	23	1.76	4.52	.02	.39	.06
	13-B	655	20	2.12	4.32	.04	.49	.08
	13-C	498	21	3.01	4.39	.06	.69	.08

TEMPLIN—WATER-QUALITY DATA FROM TAYLOR CREEK DRAINAGE BASIN, EL DORADO COUNTY, CALIFORNIA, JULY 1975 THROUGH OCTOBER 1976