WATER-QUALITY AND SEDIMENT-TRANSPORT CHARACTERISTICS IN KENNEY RESERVOIR, WHITE RIVER BASIN, NORTHWESTERN COLORADO

By Robert L. Tobin and Caroline P. Hollowed

U.S. GEOLOGICAL SURVEY

Water-Resources Investigations Report 90-4071

Prepared in Cooperation with the

COLORADO RIVER WATER CONSERVATION DISTRICT

Denver, Colorado
1990

U.S. DEPARTMENT OF THE INTERIOR

MANUEL LUJAN, JR., Secretary

U.S. GEOLOGICAL SURVEY

Dallas L. Peck, Director

For additional information write to:

District Chief
U.S. Geological Survey
Box 25046, Mail Stop 415
Federal Center
Denver, CO 80225-0046

Copies of this report can be purchased from:

U.S. Geological Survey
Books and Open-File Reports Section
Federal Center
Box 25425
Denver, CO 80225-0425

CONTENTS

	Page
Abstract	1
Introduction	2
Purpose and scope	4
Approach	7
River-basin characteristics	10
Hydrology	10
Acknowledgments	11
Water-quality characteristics	12
Temperature	14
Specific conductance	14
pH	16
Dissolved oxygen and biochemical oxygen demand	18
Light penetration and turbidity	20
General chemical characteristics	23
Major constituents	24
Nutrients	29
Trace constituents	39
Biological characteristics	39
Phytoplankton	39
Bacteria	46
Sediment-transport characteristics	48
Fluvial sediment	48
Sediment retention in the reservoir	54
Summary and conclusions	60
Selected references	64
Hydrologic data	67

FIGURES

		Page
Figure 1.	Map showing the White River basin and location of Kenney Reservoir	3
2.	Map showing sampling sites for Kenney Reservoir and the White River	5
3.	Diagram showing major zones in a lake	9
4.	Hydrographs showing mean daily discharge at site 3 for water years 1985-87 and at station 09306300 for water years 1973-81	11
5.	Diagram showing seasonal thermal profiles and circulation patterns in a temperate zone lake	13
6-26.	Graphs showing:	
	6. Water temperature, specific conductance, pH, and dissolved oxygen at selected depths at site 1 in Kenney Reservoir, water years 1985-87	15
	7. Relation of dissolved-solids concentration to specific conductance in Kenney Reservoir (sites 1 and 2) and the White River (site 3), water years 1985-87	17
	8. Water temperature, specific conductance, pH, and dissolved oxygen near the center of Kenney Reservoir, between sites 1 and 2, during a phytoplankton bloom, June 19, 1987	18

Page

Figures 6-26. Graphs showing--Continued:

9. Daily values and ranges of biochemical-oxygen demand (BOD) in Kenney Reservoir (site 1) and the White River (site 3), water years 1985-87---------------- 21
10. Secchi-disk measurements, sites 1 and 2 in Kenney Reservoir, water years 1985-87--------------------- 22
11. Relation of turbidity and suspended-solids concentrations to Secchi-disk measurements in Kenney Reservoir (sites 1 and 2), water years 1985-87---------- 23
12. Relation of suspended-solids concentrations to turbidity in Kenney Reservoir (sites 1 and 2), water years 1985-87-------------------------------- 24
13. Relations of dissolved-solids concentrations and percent composition of major ions, combined for sites in Kenney Reservoir (sites 1 and 2) and the White River (site 3), to water discharge measured at site 3, water years 1985-87--------------------- 28
14. Concentrations of ammonia as nitrogen in Kenney Reservoir (sites 1 and 2) and the White River (site 3), water years 1985-87---------------------- 34
15. Concentrations of nitrite plus nitrate as nitrogen in Kenney Reservoir (sites 1 and 2) and the White River (site 3), water years 1985-87---------------- 35
16. Concentrations of organic nitrogen in Kenney Reservoir (sites 1 and 2) and the White River (site 3), water years 1985-87---------------------- 36
17. Concentrations of phosphorus in Kenney Reservoir (sites 1 and 2) and the White River (site 3), water years 1985-87-------------------------------- 37
18. Cell counts and relative composition of the Bacillariophyta, Chlorophyta, and Cyanophyta in Kenney Reservoir (sites 1 and 2), water years 1985-87-- 42
19. Cell counts and relative composition of the Chrysophyta, Cryptophyta, Euglenophyta, and Pyrrhophyta in Kenney Reservoir (sites 1 and 2), water years 1985-87-------------------------------- 43
20. Maximum and minimum values of diversity index for all samples of phytoplankton collected in Kenney Reservoir, water years 1985-87--------------------- 45
21. Concentrations of fecal coliform and fecal streptococci bacteria collected at the 2-foot depths in Kenney Reservoir (sites 1 and 2), water years 1985-86------------------------------- 47
22. Relations of suspended-sediment loads to water discharge for three hydrologic seasons in the White River (site 3), water years 1983-87---------- 49
23. Relations of annual suspended-sediment loads to annual water discharge for the White River at site 3 (water years 1983-87) and at station 09306300 (water years 1973-81)------------- 53

Page

Figures 6-26. Graphs showing--Continued:
24. Percent retention of suspended solids in Kenney Reservoir computed from a comparison of data near the inlet (site 2) and at the dam (site 1) for a range of water discharge, water years 1985-87------ 55
25. Mean daily suspended-sediment loads and mean daily water discharge in the White River at site 3 and estimated mean daily suspended-solids loads discharged from Kenney Reservoir at site 1, water years 1985-87------------------------------ 56
26. Volume displacement and percent loss of original reservoir capacity from annual suspended-sediment loads to Kenney Reservoir as estimated from data collections during 1985-87 and methods of Brune (1953) and Churchill (1948)----------------------- 59

TABLES

Page

Table 1. Site information and general data-collection information, Kenney Reservoir and the White River----------------------- 6
2. Theoretical hydraulic residence time and capacity-inflow ratios for Kenney Reservoir-------------------------------- 7
3. Chemical criteria used to classify water types and hardness-- 25
4. Concentrations of major constituents in Kenney Reservoir, site 1, water years 1985-87-------------------------------- 26
5. Concentrations of major constituents in Kenney Reservoir, site 2, water years 1985-87-------------------------------- 26
6. Concentrations of nitrogen, phosphorus, and organic carbon in Kenney Reservoir, site 1, water years 1985-87----- 30
7. Concentrations of nitrogen, phosphorus, and organic carbon in Kenney Reservoir, site 2, water years 1985-87----- 32
8. Concentrations of trace constituents in Kenney Reservoir, site 1, water years 1985-87-------------------------------- 40
9. Size distributions of bedload and suspended sediment in the White River at site 3, water years 1984-87------------- 52
10. Examples of computations of volume displacement from sediment loads to Kenney Reservoir--------------------------------- 58
11. Water-quality data for selected depths in Kenney Reservoir, site 1, water years 1985-87--------------------- 68
12. Water-quality data for selected depths in Kenney Reservoir, site 2, water years 1985-87--------------------- 74
13. Selected water-quality data for near-surface and near-bottom depths in Kenney Reservoir, site 1, water years 1985-87----- 77
14. Selected water-quality data for near-surface and near-bottom depths in Kenney Reservoir, site 2, water years 1985-87----- 78
15. Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87--- 79

CONVERSION FACTORS

Multiply	*By*	*To obtain*
acre	0.4047	hectare
acre-foot (acre-ft)	1233.6	cubic meter
acre-foot per year (acre-ft/yr)	1233.6	cubic meter per year
cubic foot per second (ft^3/s)	0.02832	cubic meter per second
foot (ft)	0.3048	meter
inch (in)	25.4	millimeter (mm)
mile (mi)	1.609	kilometer
square mile (mi^2)	2.589	square kilometer
ton	0.9074	metric ton or megagram
ton per day	0.9074	metric ton or megagram per day

Temperature in degree Celsius (°C) may be converted to degree Fahrenheit (°F) by using the following equation:

$$°F=9/5(°C)+32.$$

The following terms and abbreviations also are used in this report:

biochemical oxygen demand (BOD) cells per milliliter (cells/mL)
colonies per 100 milliliters (col/100 mL)
microgram per liter (μg/L)
microsiemens per centimeter at 25 degrees Celsius (μS/cm)
milligram per liter (mg/L)
milligram per liter per day [(mg/L)/d]
millimeter (mm)
millimeter of mercury (mm of Hg)
nephelometric turbidity unit (NTU)

National Geodetic Vertical Datum of 1929 (NGVD of 1929): A Geodetic datum derived from a general adjustment of the first-order level nets of both the United States and Canada, formerly called "Sea Level Datum of 1929."

WATER-QUALITY AND SEDIMENT-TRANSPORT CHARACTERISTICS IN KENNEY RESERVOIR, WHITE RIVER BASIN, NORTHWESTERN COLORADO

By Robert L. Tobin and Caroline P. Hollowed

ABSTRACT

The construction of Taylor Draw Dam and filling of Kenney Reservoir during 1984 were done in response to increased water-management needs in northwestern Colorado. To evaluate possible processes and changes that may occur in the reservoir after filling and the effects of sediment transport to the reservoir, physical, chemical, and biological data needed to be collected to define seasonal variations in vertical and areal water-quality characteristics. Physical, chemical, and biological data collected during the first 3 years of reservoir operation (1985-87) are presented and summarized for two sites in Kenney Reservoir. Related water-quality data and sediment characteristics during 1983-87 are summarized for one site on the White River about 8 miles upstream from the reservoir. Data from the three sites were compared for changes in water-quality characteristics that were caused by impoundment. In addition, fluvial sediment loads were determined for the White River upstream from the reservoir for 1983-87, and sediment retention in the reservoir was estimated. During 1983-87, the mean annual discharge in the White River (site 3) was about 174 percent of the mean annual discharge for the period of record (1973-81) at a discontinued streamflow-gaging station near the present dam site.

Changes in water temperature, specific conductance, pH, and dissolved oxygen with depth were measured at the dam (site 1) and near the reservoir inlet (site 2). Some thermal stratification developed during summer when temperatures at site 1 generally decreased 3 to 5 °C from the surface to the bottom. Maximum surface temperatures in the reservoir were 23.8 °C at site 1 and 24.4 °C at site 2. Surface temperatures in the reservoir during summer were similar to temperatures measured in the White River at site 3 during summer.

Specific-conductance values in the reservoir were similar to values in the White River and ranged from 374 to 932 microsiemens per centimeter. Except during a phytoplankton bloom in June 1987, values of pH generally ranged from 7.4 to 8.8, and concentrations of dissolved oxygen generally ranged from 2.3 to 10.1 milligrams per liter. Values of pH that exceeded 9.0 and concentrations of dissolved oxygen that exceeded 200 percent saturation were measured in near-surface waters that contained concentrated growths of phytoplankton in June 1987. Values of pH and dissolved oxygen decreased with depth in summer. Light penetration and turbidity values indicated increasing water clarity from the inflow end of the reservoir to the dam as suspended solids settled in the reservoir.

Water in the reservoir and in the White River was a hard to very hard calcium bicarbonate type during high runoff and a very hard calcium magnesium sulfate bicarbonate type during low flow. A change in ionic composition to a mixed cation sulfate type is predicted during extremely low-flow conditions when specific-conductance values exceed 1,000 microsiemens per centimeter. Concentrations of nitrogen and phosphorus were greatest during spring runoff, least in periods of low flow, and were sufficient to support nuisance phytoplankton growths. Concentrations of ammonia as nitrogen were as much as 0.13 milligram per liter during summer in near-bottom depths at the dam. Concentrations of 22 trace constituents generally were less than maximum recommended concentrations established by the State of Colorado for cold-water biota.

A total of 210 phytoplankton species from 7 phyla were identified in Kenney Reservoir. Phytoplankton were mostly bacillariophyta (diatoms) and chlorophyta (green algae) in 1985-86 and cyanophyta (blue-green algae) in 1987. Cell counts increased from the inflow site to the dam site. Except for an algae bloom in June 1987, a maximum combined cell count (unrounded value) of greater than 15,000 cells per milliliter occurred in a composite sample at the dam in July 1986. In June 1987, a phytoplankton bloom that had cell counts of 71,000 cells per milliliter and that consisted mostly of the dinoflagellate, *Peridinium biceps*, developed in the reservoir. Similar blooms may occur in the future when concentrations of nutrients are large and when inflow to the reservoir during summer is low. Bacteria concentrations ranged from less than 2 to 1,100 colonies per 100 milliliters. Ratios of fecal coliforms to fecal streptococci generally were less than 1.0.

Suspended-sediment loads at the White River upstream from the reservoir during 1983-87 ranged from 391,000 to 1,570,000 tons per year. Bedload was less than 1.2 percent of the suspended-sediment load. Sediment retention in Kenney Reservoir was estimated to range from about 91 to about 98 percent. Calculations for estimated volume displacement resulting from sediment deposition during 1985-87 ranged from about 1.8 to about 5 percent of the original capacity of the reservoir per year.

INTRODUCTION

During 1984, Kenney Reservoir was constructed in the White River basin in northwestern Colorado (fig. 1). The reservoir, which has a small capacity (13,800 acre-ft), is located on the White River about 8 mi northeast of Rangely. The name of the reservoir originally was proposed to be Taylor Draw Reservoir but later was renamed Kenney Reservoir after the completion of Taylor Draw Dam. The dam is a reinforced earth type and has a spillway capacity of 65,300 ft^3/s at a crest elevation of 5,317.5 ft. A second outlet that has a capacity of 1,700 ft^3/s is provided through an intake orifice near the reservoir bottom at 5,270 ft. When the reservoir is full, the surface area is 615 acres and the maximum depth near the dam is about 50 ft.

The construction of Taylor Draw Dam and filling of Kenney Reservoir were done in response to increased water-management needs in northwestern Colorado. The main purposes of the reservoir were to provide local water supply, recreational use, and potential hydroelectric production. Secondary purposes included flood control and stream water-quality improvement.

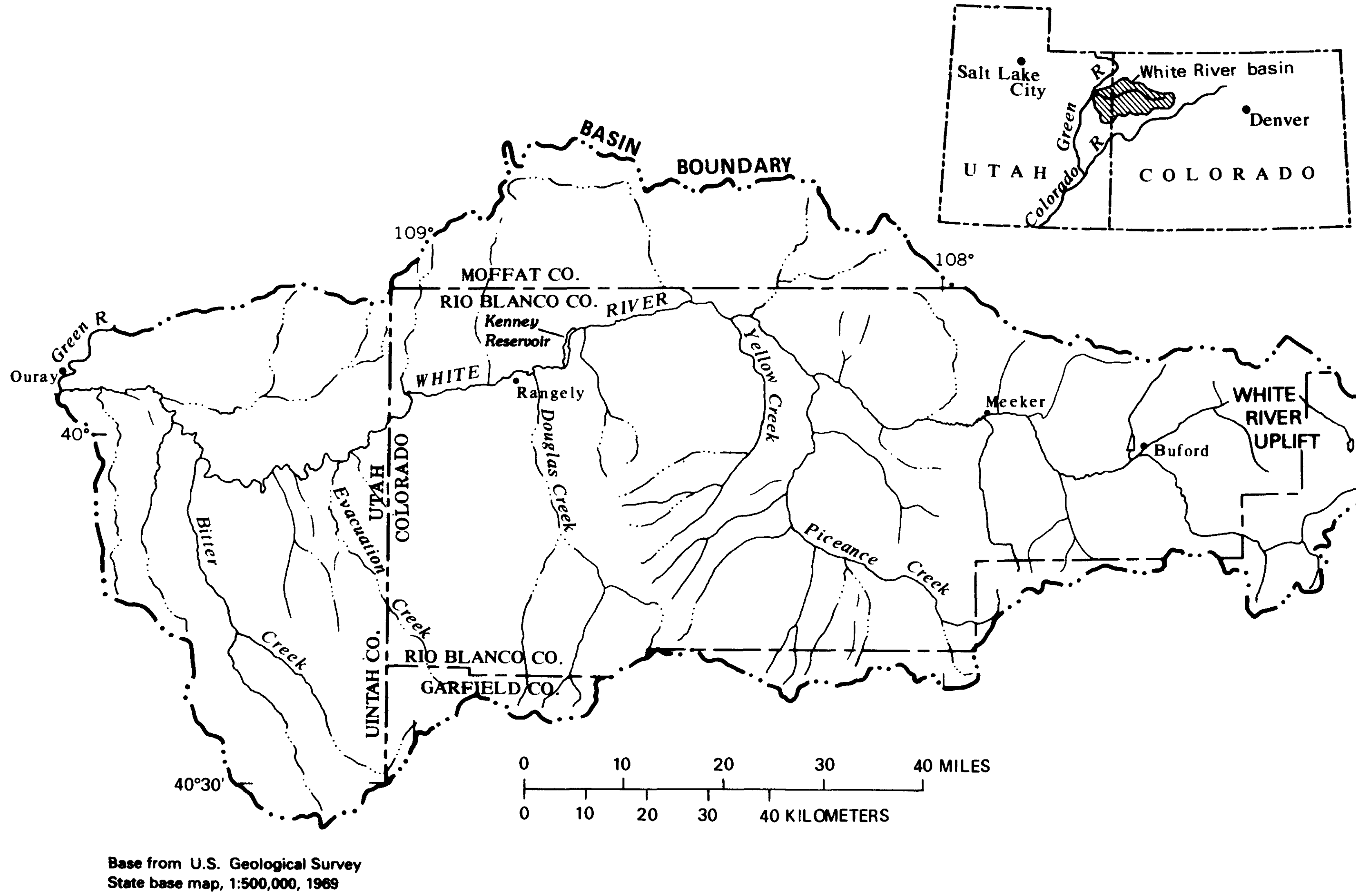


Figure 1.--The White River basin and location of Kenney Reservoir.

In late 1984, the U.S. Geological Survey, in cooperation with the Water Users Association No. 1 in the Colorado River Water Conservation District, began a reconnaissance of Kenney Reservoir. Because the study began when the reservoir was being filled, an opportunity existed to determine baseline water-quality conditions that can be used for future comparison. The reliability of estimating future water quality of the reservoir based on possible nonsteady-state conditions during the filling period was considered in the study. Although Kenney Reservoir is expected to have a fast flushing (flow-through) rate in late spring when streamflow in the White River is large, the hydraulic residence time will increase because of decreased inflow during late summer and fall and during low-flow years. During these periods of decreased inflow, the reservoir may develop thermal stratification and zones of decreased concentrations of dissolved oxygen. Related chemical and biological characteristics may change with depth and in bottom sediments, which may deleteriously affect reservoir uses. To evaluate these processes and changes and the effects of sediment transport to the reservoir, physical, chemical, and biological data were necessary to define seasonal variations in vertical and areal water-quality characteristics.

The objectives of the study were to: (1) Describe the physical, chemical, and biological characteristics within the reservoir during the first 2 years after filling; (2) compare these water-quality characteristics with characteristics in the White River at a site about 8 mi upstream from the reservoir to determine effects of impoundment; and (3) describe the quantity and characteristics of fluvial-sediment movement in the White River upstream from the reservoir during 1983-87 and estimate the sediment retention of the reservoir during 1985-87. In 1987, the study and data collection were extended 1 additional year to document the water-quality effects in the reservoir from an unexpected phytoplankton bloom that occurred during the early summer of 1987. This extension also provided an opportunity to enhance the sediment data base for the White River with data collected in 1987, a low-runoff year compared with 1983-86.

Purpose and Scope

This report describes the physical, chemical, and biological characteristics of the water impounded in Kenney Reservoir and compares these water-quality characteristics to the inflow water from the White River. The report also describes the quantity and characteristics of fluvial-sediment movement in the White River upstream from the reservoir at site 3 during 1983-87 and presents estimates of the sediment retention in the reservoir during 1985-87. Three years of hydrologic data collected during 1985-87 from two sites in Kenney Reservoir are presented, and hydrologic data from one site on the White River about 8 mi upstream from the reservoir during 1985-87 are summarized. Site locations and general data-collection information are shown in figure 2 and are listed in table 1.

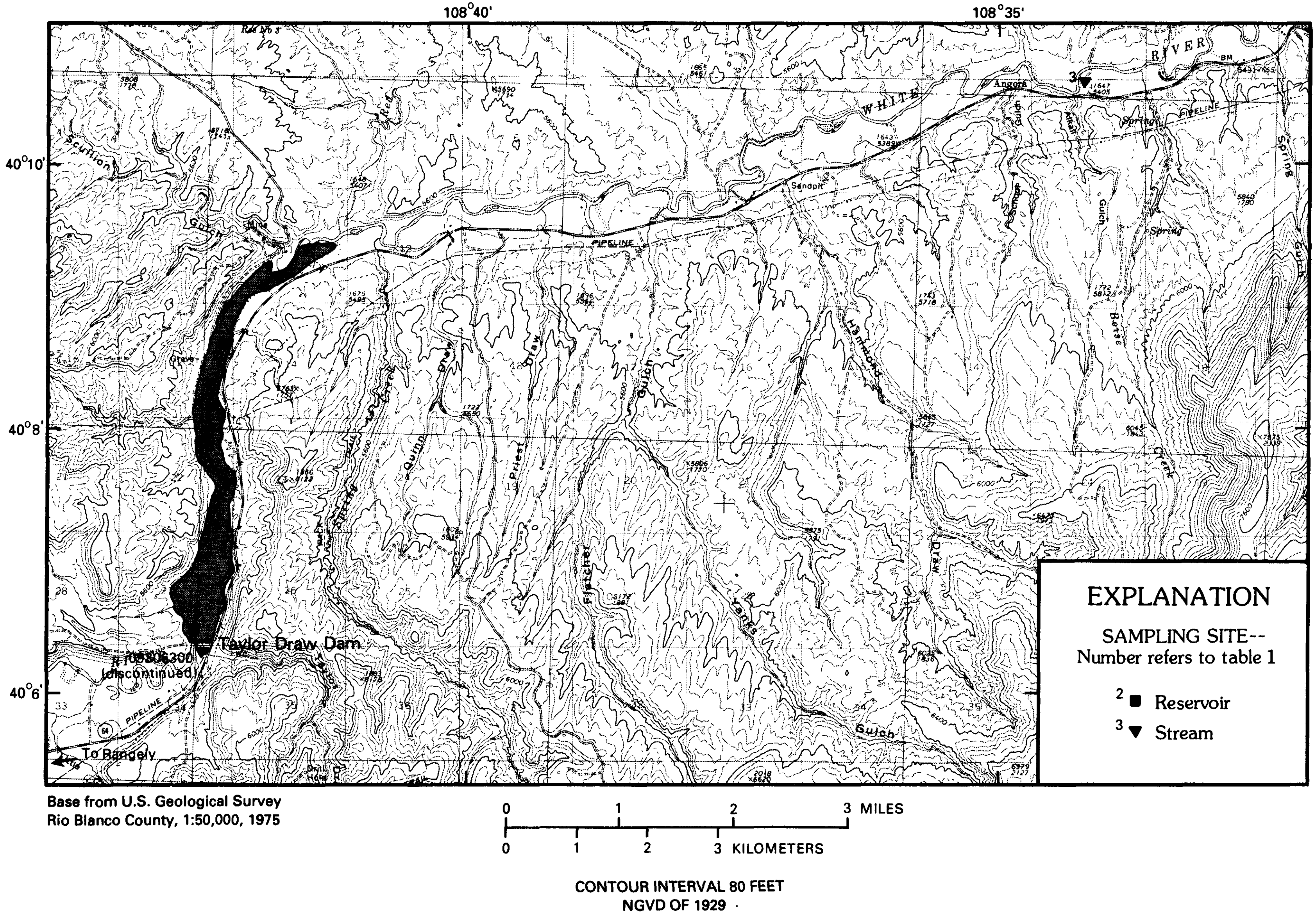


Figure 2.--Sampling sites for Kenney Reservoir and the White River.

Table 1.--*Site information and general data-collection information, Kenney Reservoir and the White River*

[M, monthly; --, data not collected; Q, quarterly; SA, semiannually]

General data-collection information			
Group nomenclature	Approximate sampling frequency		
Properties and constituents	Site 1[1]	Site 2[2]	Site 3[3]
Profile and onsite measurements			
Temperature	M	M	M
Specific conductance (SC)	M	M	M
pH	M	M	M
Dissolved oxygen (DO)	M	M	M
Secchi disk	M	M	--
Cations			
Calcium (Ca), magnesium (Mg)	Q	Q	M
Potassium (K), sodium (Na)	Q	Q	M
Anions			
Alkalinity ($CaCO_3$), chloride (Cl)	Q	Q	M
Fluoride (F), sulfate (SO_4)	Q	Q	M
Nutrients			
Nitrite plus nitrate (NO_2+NO_3)	M	M	M
Ammonia (NH_3)	M	M	M
Organic nitrogen (Org N)	M	M	M
Phosphorus (P)	M	M	M
Organic carbon (Org C)	M	M	Q
Trace constituents			
Aluminum (Al), antimony (Sb)	SA	SA	SA
Barium (Ba), beryllium (Be)	SA	SA	SA
Cadmium (Cd), chromium (Cr)	SA	SA	SA
Cobalt (Co), copper (Cu)	SA	SA	SA
Iron (Fe)	SA	SA	M
Lead (Pb), lithium (Li)	SA	SA	SA
Manganese (Mn), mercury (Hg)	SA	SA	SA
Molybdenum (Mo), nickel (Ni)	SA	SA	SA
Selenium (Se), silver (Ag)	SA	SA	SA
Strontium (Sr), zinc (Zn)	SA	SA	SA
Biological and physical			
Phytoplankton, bacteria	M	M	--
Biochemical oxygen demand (BOD)	M	M	M
Turbidity	M	M	M
Suspended solids	M	M	--
Suspended sediment	--	--	M
Sediment bedload	--	--	Q

[1]Kenney Reservoir at dam near Rangely (U.S. Geological Survey station number 400628108424601).

[2]Kenney Reservoir near inlet near Rangely (U.S. Geological Survey station number 400851108422701).

[3]White River below Boise Creek, near Rangely (U.S. Geological Survey station number 09306290).

Approach

Sampling in Kenney Reservoir was designed to measure the vertical and lateral differences in water-quality characteristics that occurred in the reservoir during spring, summer, and fall. Samples collected from site 1 near the dam (fig. 2) were from the deepest (40 to 50 ft) part of the reservoir. Water-quality characteristics at this site represented reservoir water that generally had a maximum residence time for given inflow rates (table 2).

Site 2 near the inlet was established in the north end of the reservoir where the White River enters Kenney Reservoir. Water depth at this site originally was measured at 14 ft in April 1985. Subsequent measurements of depths after the spring runoff in 1985 generally were 10 ft or less. In 1987, measurements of depth at site 2 ranged from 4 to 6 ft. Decreases in depth at this site were attributed to suspended-sediment deposition and redistribution of sediment from the White River. Water-quality characteristics at site 2 represented water that generally had a residence time in the reservoir of less than 24 hours.

Table 2.--*Theoretical hydraulic residence time and capacity-inflow ratios for Kenney Reservoir*

[ft^3/s, cubic feet per second; acre-ft, acre-feet]

Inflow-outflow discharge (ft^3/s)	Discharge, log base 10 (ft^3/s)	Annual discharge (acre-ft)	Approximate residence time (days)[1]	Capacity-inflow ratio[2]
100	2.0000	72,450	70	0.190
200	2.3010	144,900	35	.095
300	2.4771	217,350	23	.063
400	2.6021	289,800	17	.048
500	2.6990	362,250	14	.038
600	2.7782	434,700	12	.032
700	2.8451	507,150	9.9	.027
800	2.9031	579,600	8.7	.024
900	2.9542	652,050	7.7	.021
1,000	3.0000	724,500	7.0	.019
2,000	3.3010	1,449,000	3.5	.010
3,000	3.4771	2,173,500	2.3	.006
4,000	3.6021	2,898,000	1.7	.005
5,000	3.6990	3,622,500	1.4	.004
6,000	3.7782	4,347,000	1.2	.003
7,000	3.8451	5,071,500	.99	.003

[1]Approximate residence time, in days, is equal to the reservoir capacity (13,800 acre-ft) divided by the sum of 1.98 times the inflow-outflow discharge.
[2]Capacity-inflow ratio is equal to the reservoir capacity (13,800 acre-ft) divided by annual discharge.

In addition to the two reservoir sites, the U.S. Geological Survey streamflow-gaging station 09306290, White River below Boise Creek, near Rangely was established as site 3. Site 3 is about 8 mi upstream from Kenney Reservoir (fig. 2). All hydrologic data used in this report were obtained from the U.S. Geological Survey WATSTORE (Hutchison, 1975) computer data base.

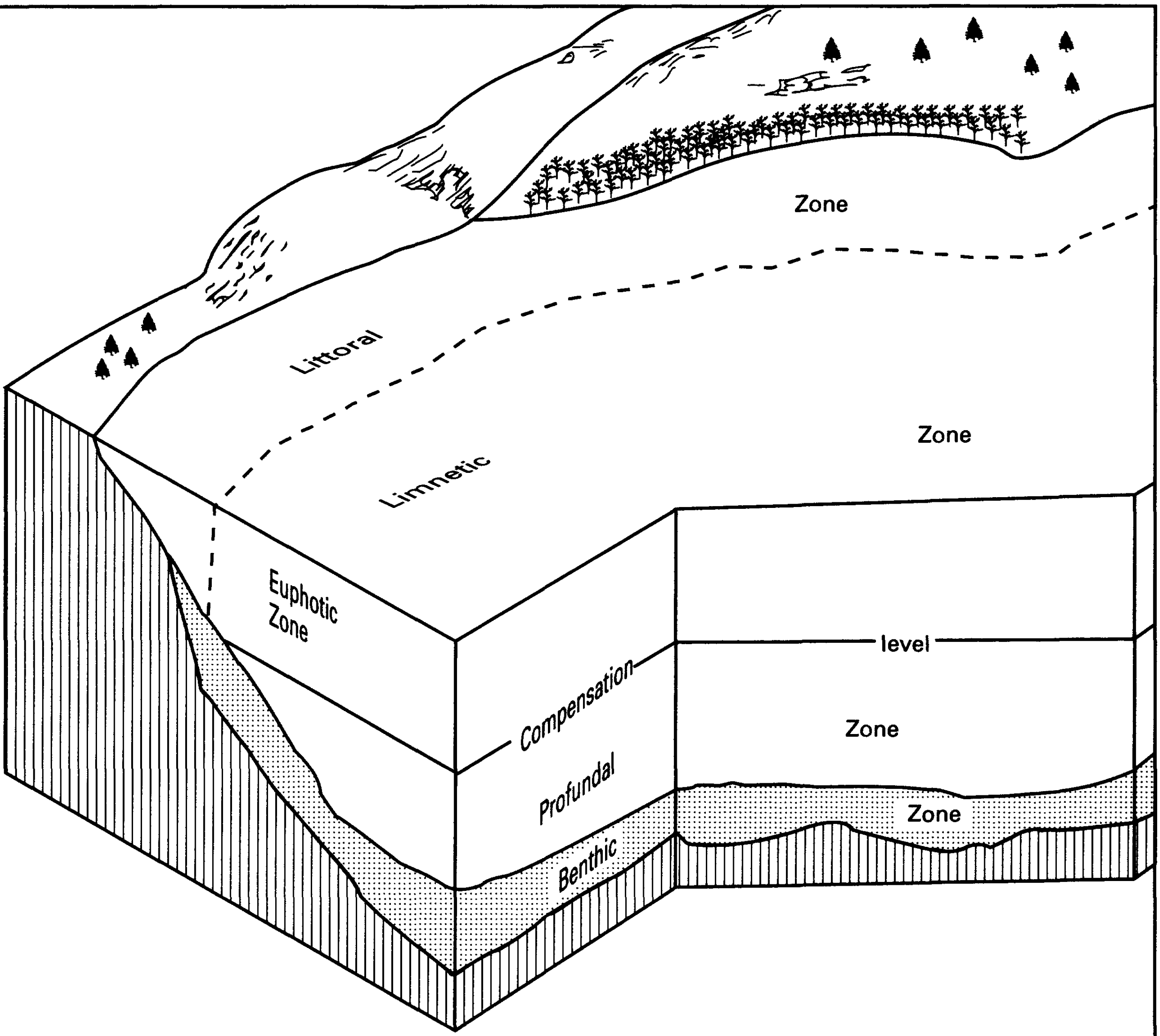
Profile measurements of water-quality properties and constituents and sample collections for chemical, biological, and physical analyses were made in the reservoir using a submersible pump that continuously delivered water from any depth to a multiprobe manifold at the water surface. The manifold housed probes that measured temperature, specific conductance, pH, and dissolved oxygen. Water samples could be withdrawn at any depth for laboratory analysis. Except at the manifold discharge point, water movement within the entire system remained isolated from atmospheric effects. Oxygen consumption because of indigenous processes that occur within the reservoir (sites 1 and 2) and in the White River (site 3) were estimated from 5- and 20-day natural biochemical-oxygen-demand (BOD) analyses. Incubations for the BOD analyses were processed from iced samples within 12 hours of sample collection.

Light penetration in the reservoir was measured using a standard Secchi disk. The average extinction depth of several observations was used. This value approximates the depth that receives 5 percent of the surface light intensity (Yoshimura, 1938). Major zones in a lake or reservoir based on a combination of light penetration, biology, and morphology are shown in figure 3.

Assessments of general water chemistry are based on laboratory data for periodic samples of major constituents, nutrients, and trace constituents. Samples were taken from near-surface and near-bottom depths at sites 1 and 2 in the reservoir and from depth composites at site 3 in the White River.

Point samples for phytoplankton (algae) identification, biomass, and chlorophyll analyses were collected from depths of maximum dissolved-oxygen saturation (usually 2 ft). Because oxygen is a by-product of photosynthesis, data from these depths generally should represent zones of maximum phytoplankton activity. A second sample that consisted of a composite of water from the euphotic zone (fig. 3) at site 1 and the general water column at site 2 also were analyzed. These analyses were done to describe the general phytoplankton population in the reservoir. The base of the euphotic zone generally is estimated by multiplying the Secchi-disk depth by a factor of 2.5 to 5.0 (Verduin, 1956). However, factors that ranged from 3.0 to 6.0 at site 1 were used where Secchi-disk depths were between 20 and 40 in., and factors that ranged from 2.0 to 4.0 were used where Secchi-disk depths were greater than 40 in. Samples, from water surface to a depth of 10 ft at site 1, were composited when Secchi-disk depths were less than 20 in. All phytoplankton and chlorophyll samples were analyzed by a private laboratory. Concentrations of chlorophylls *a*, *b*, and *c* were determined except where large concentrations of suspended material interfered with the analyses.

The presence of sanitary-indicator bacteria, total and fecal coliform, and fecal streptococci also were determined during 1985-86 from near-surface and near-bottom depths at both sites in Kenney Reservoir. Incubations for the bacteria analyses were processed from iced samples within 12 hours of sample collection. All samples for chemical and biological laboratory analyses were



EXPLANATION

Littoral zone	—	Shallow water area that has sufficient light to support attached vegetation
Limnetic zone	—	Open water area where base is defined by the 1-percent light-intensity level
Euphotic zone	—	The combined littoral and limnetic zones
Compensation level	—	Level at which oxygen production equals oxygen uptake
Profundal zone	—	Zone of deep water where the light intensity is less than 1 percent of the surface light. Little or no photosynthesis occurs in this zone
Benthic zone	—	Lake bottom

Figure 3.--Major zones in a lake (modified from Britton and others, 1975, p. 3).

collected, preserved, and analyzed in accordance with standard procedures of the U.S. Geological Survey (Brown and others, 1970; Goerlitz and Brown, 1972; Fishman and Friedman, 1985; Britton and Greeson, 1989).

Estimates of annual sediment load transported by the White River are based on streamflow and suspended-sediment and bedload-sediment data for water years 1983-87 collected at site 3 on the White River. Samples of suspended sediment were collected using depth-integrated techniques from equal stream-width increments. Bedload was collected at equal-width increments using a Helley-Smith sampler (Emmett, 1980). Sediment-collection techniques and laboratory analyses used in this study are summarized in Guy (1969) and Guy and Norman (1970).

River-basin Characteristics

The White River basin in northwestern Colorado (fig. 1) includes most of Rio Blanco County and parts of Moffat and Garfield Counties. The drainage area of the White River at Taylor Draw Dam (fig. 2) is 2,773 mi^2. Surface rocks in the basin consist mostly of sedimentary rocks that range in age from Paleozoic in the east to Mesozoic and Cenozoic in the central and western parts of the basin. The headwaters of the White River originate in the high mountains of the White River uplift in eastern Rio Blanco and Garfield Counties. The river flows from an alpine climate westward through transitional climates near Meeker and into a semiarid climate in western Rio Blanco County. Near Rangely, the White River enters Utah and joins the Green River. Ranching, agriculture, recreation, and energy development are the primary land uses in the basin. A general discussion of the White River basin is presented in Boyle and others (1984).

Hydrology

Precipitation in the basin ranges from 9 in. in western Rio Blanco County to 22 in. in eastern Rio Blanco County. Most precipitation occurs as winter snow and summer thunderstorms. Discharge in the White River occurs principally from snowmelt during spring and early summer (fig. 4). Occasional, intense thunderstorms may temporarily increase flow and sediment loads in the White River during summer.

Streamflow extremes for 1910-1987 (U.S. Geological Survey, 1988) indicate that maximum discharges measured at streamflow-gaging stations in the White River occurred during snowmelt runoff in 1983 and 1984 when Taylor Draw Dam was under construction. A maximum discharge for site 3 of 6,440 ft^3/s was recorded in June 1984. A minimum daily discharge in the lower White River basin of 62 ft^3/s was recorded immediately downstream from the reservoir at the discontinued U.S. Geological Survey streamflow-gaging station 09306300 in July 1977 (U.S. Geological Survey, 1982). Station 09306300, White River near Rangely, was at the present dam site and was discontinued in 1982 when construction of the dam began. The mean annual discharge at station 09306300 for the period of record, water years 1973-81, was 633 ft^3/s or about 460,000 acre-ft. The mean annual discharge at site 3 for the period of record, water years 1983-87, was 1,099 ft^3/s or about 796,000 acre-ft. Mean daily discharge at site 3 for the period of reservoir operation (1985-87) and mean daily

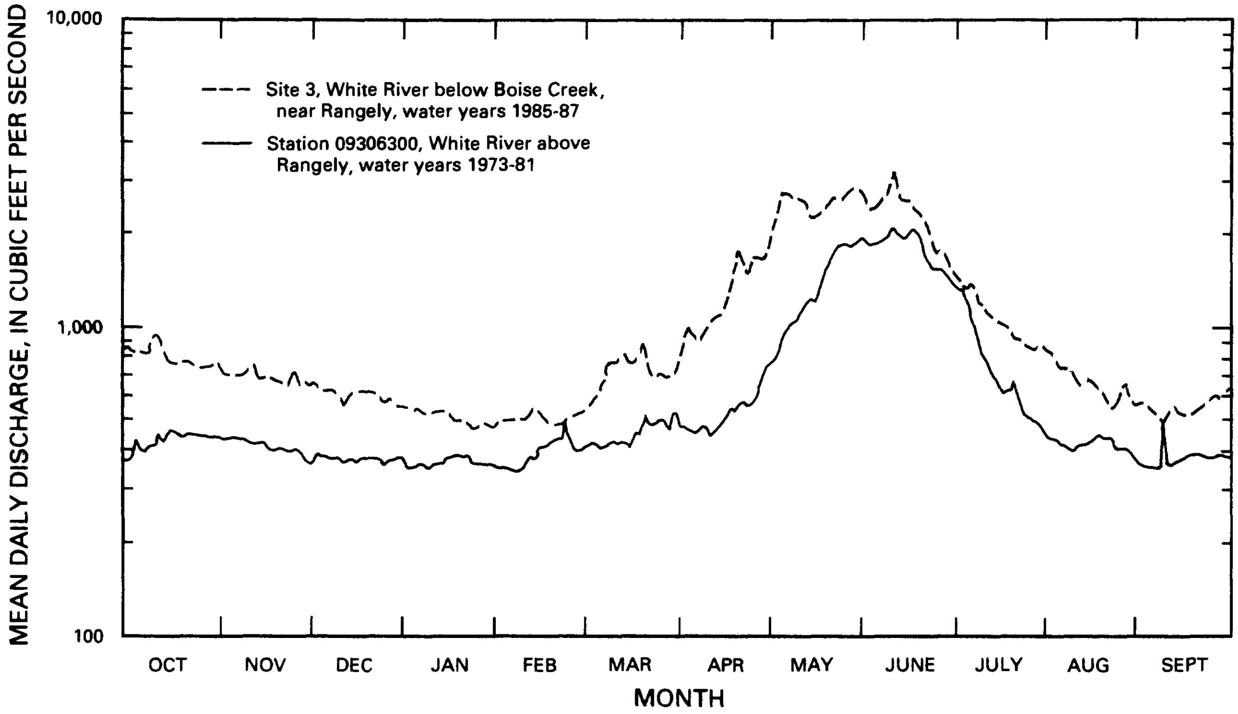


Figure 4.--Mean daily discharge at site 3 for water years 1985-87 and at station 09306300 for water years 1973-81.

discharge at station 09306300 (1973-81) are shown in figure 4. Using a capacity of 13,800 acre-ft for Kenney Reservoir, the theoretical hydraulic residence times and capacity-inflow ratios for the reservoir at various river discharges are listed in table 2. Residence-time calculations assume complete mixing and no thermal stratification within the reservoir. During periods of thermal stratification, however, temperatures of inflowing water will affect the allocation of the incoming river water within the reservoir. Thus, the residence times within different thermal zones may be considerably different from the values listed in table 2.

Acknowledgments

The authors thank Bill Murry and John (Hoot) Gibson of Water Users Association No. 1 in the Colorado River Water Conservation District for their assistance in collecting samples. The authors also thank Jim Geyler of Water Users Association No. 1 for supplying equipment throughout the study period.

WATER-QUALITY CHARACTERISTICS

Spatial and temporal changes in water quality often occur in lakes and reservoirs. Although this report is about a reservoir, the term "lake" more commonly is used in general literature and, therefore, sometimes is used in this report where discussing general properties and processes. Many of the explanations for water-quality characteristics presented in this report for Kenney Reservoir represent phenomena known to occur in lakes and reservoirs and are the likely reasons for the observed conditions. However, newly constructed reservoirs characteristically undergo dynamic change in water quality during, and immediately after, the reservoir is filled. A new equilibrium condition in regard to its hydrologic, sediment, nutrient, and other properties usually is not achieved immediately. The filling water inundates the reservoir basin, causing sediments and other materials to enter the water column and undergo chemical and biological reactions and interactions. An enhanced biological productivity often occurs, which can cause tastes and odors, clog intake screens in water-treatment plants, produce slime conditions, and be toxic to animals (Palmer, 1977). Eventually, however, the water body will reach an equilibrium state and exhibit relatively stable water quality. Given the postconstruction sampling period for Kenney Reservoir, therefore, the water-quality and trophic characteristics measured during this study will not necessarily describe the conditions likely to exist over the long term, even considering the relatively rapid flushing rate of the reservoir.

Although many physical and biological variables are involved, changes in water quality occur most noticeably when solar heating during summer causes nonuniform water-temperature distributions to develop within the impounded water. Temperature not only controls the rate of chemical and biological processes, but also, because the density of water is a function of temperature (water is densest at approximately 4 °C), nonuniform temperature (thermal) distribution in water is the primary cause of most stratification in lakes and reservoirs. A less common form of stratification can occur when large concentrations of dissolved solids that increase water density become nonuniformly distributed within a lake. Depending on wind conditions, reservoir morphology, hydraulic residence time, and release patterns at the dam, various forms of thermal stratification may develop. Summer thermal stratification commonly is characterized by (1) an upper zone of uniformly warm water (epilimnion), (2) an intermediate zone of transition where temperature decreases rapidly with depth (metalimnion), and (3) a lower zone of uniformly cold water (hypolimnion). The thermocline, as defined by Wetzel (1983), is the maximum rate of change of temperature with depth. The seasonal thermal profiles and circulation patterns of a temperate-zone lake are shown in figure 5. Hutchinson (1957) termed lakes that circulate twice a year in this manner as dimictic. Kenney Reservoir is an example of a dimictic lake.

When thermal stratification is stable, the various metabolic activities of aquatic animals, phytoplankton, plants, and bacteria can alter and recycle dissolved gases, nutrients, and other chemical constituents. As these activities progress, the thermocline acts as a barrier between the upper warm-water zone and the lower cold-water zone, decreasing the exchange of heat and dissolved substances and, also, acts as a biological barrier that affects the movement and dispersal of many aquatic organisms. As a result, water zones that have different chemical characteristics may develop. The environments of these physical, biological, and chemical zones are discussed in Hutchinson (1957) and Odum (1971).

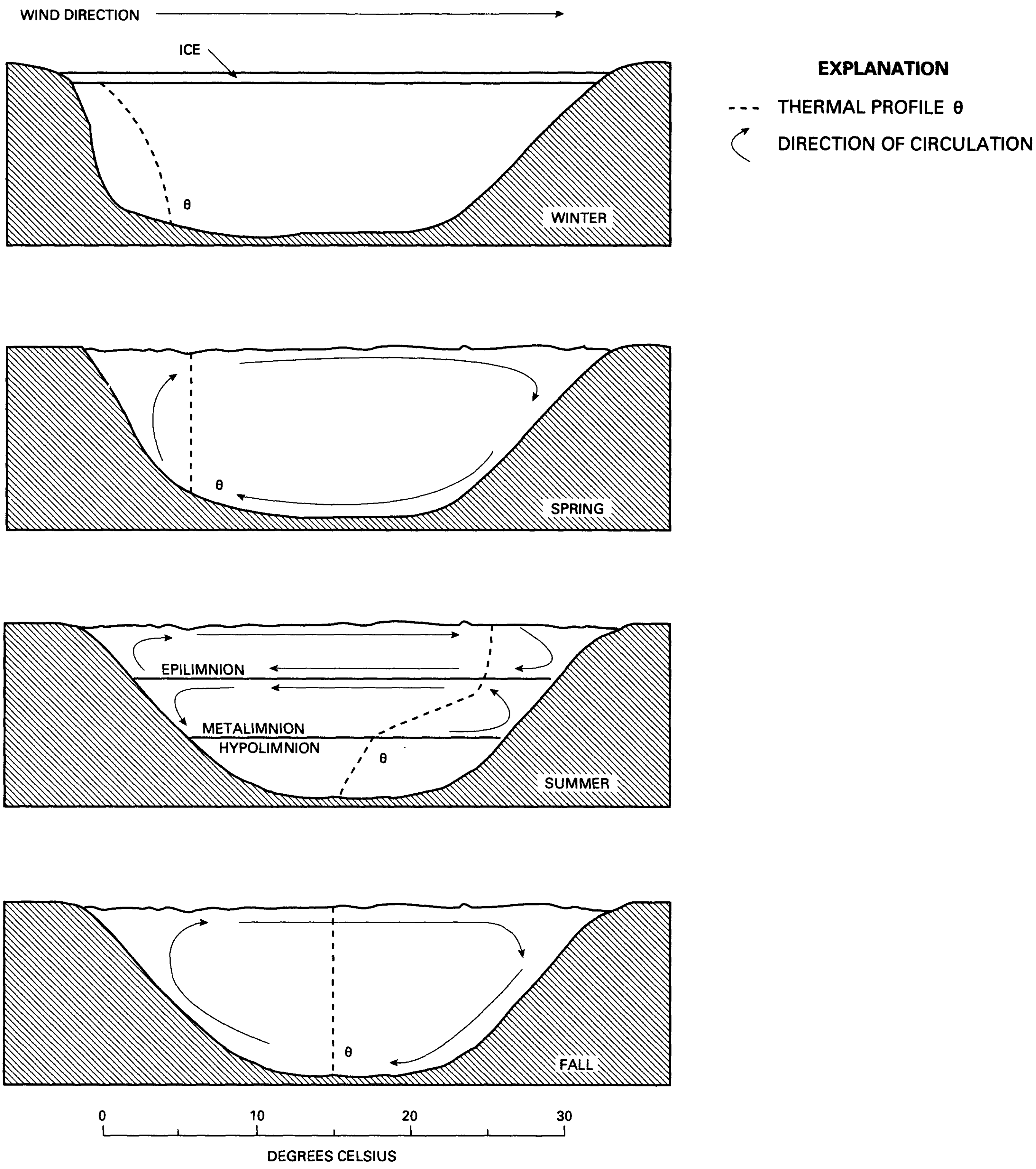


Figure 5.--Seasonal thermal profiles and circulation patterns in a temperate zone lake (modified from Britton and others, 1975, p. 4).

Data for onsite measurements of temperature, specific conductance, pH, and dissolved oxygen were collected continuously with depth at sites 1 and 2. Data for these profiles are presented for selected depths in tables 11 and 12 in the "Hydrologic Data" section at the back of the report. In addition, selected water-quality data for near-surface (2 ft) and near-bottom depths at sites 1 and 2 are listed in tables 13 and 14 in the "Hydrologic Data" section.

Temperature

Water temperature from profiles in Kenney Reservoir (tables 11 and 12 in the "Hydrologic Data" section) ranged from 0 °C during winter to 23.8 °C at site 1 during summer, and the maximum water temperature was 24.4 °C at site 2 during summer. Measurements of water temperature for selected depths at site 1 are shown in figure 6. During water years 1985-87, measured water temperatures in the White River at site 3 ranged from 0 to 24.0 °C. Although these data represent instantaneous measurements in time and cannot be compared directly, it seems that the range in temperature of the near-surface water in the reservoir and the White River at site 3 were similar.

During summer, water temperature at site 1 generally decreased 3 to 5 °C with depth (fig. 6). Because water density increases with decreasing water temperature for temperatures above 4 °C, some thermal stratification developed in the reservoir from May through September during the study period. The possible causes for the decreases in temperature with depth were:

1. The disproportionately large absorption of solar radiation by near-surface water when compared with the decreased penetration and absorption of solar radiation by water at depth; and

2. The routing of inflow water within the reservoir to depths or zones that had water temperature similar to the existing temperature of the inflows. Thus, inflow from the White River that enters the reservoir in the early morning, when stream temperatures are cool compared with afternoon temperatures, may remain and pass through the reservoir at depth.

The temperature differences that develop between near-surface and near-bottom water in the reservoir, the time that stratification stability exists during summer, and the warming of near-surface water may be expected to increase as inflow to the reservoir decreases and as the residence time of the inflowing water increases.

Specific Conductance

Specific conductance is a measure of the ability of water to conduct an electric current and is reported in microsiemens per centimeter at 25 degrees Celsius. Specific conductance can be used to estimate the dissolved-solids concentration of similar water types (Hem, 1985, p. 67). Chemical, hydrological, and biological activities continuously alter specific conductance through chemical solution or precipitation, dilution and evaporation, and metabolic uptake and release of chemicals.

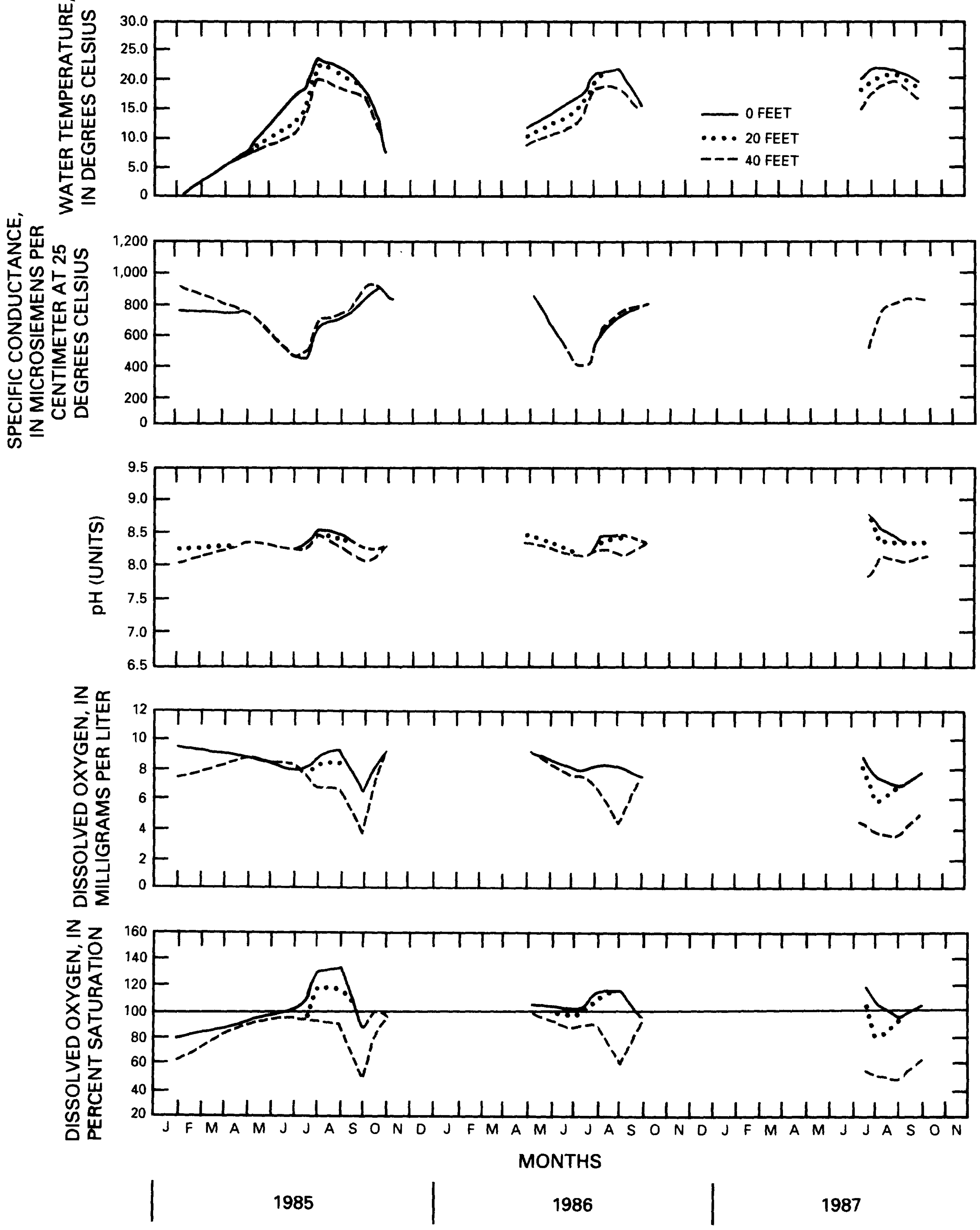


Figure 6.--Water temperature, specific conductance, pH, and dissolved oxygen at selected depths (0, 20, and 40 feet) at site 1 in Kenney Reservoir, water years 1985-87.

Except for the first measurements in January 1985, specific conductance from profiles in Kenney Reservoir (tables 11 and 12 in the "Hydrologic Data" section; fig. 6) ranged from 374 to 932 µS/cm. Periodic measurements of specific conductance in the White River at site 3 ranged from 375 to 963 µS/cm during water years 1985-87. The large specific-conductance values (972 and 1,550 µS/cm) measured in January 1985 (table 11 in the "Hydrologic Data" section) near the bottom of the reservoir at site 1 were measured soon after the reservoir filled. These large values were not repeated in subsequent measurements and were attributed to large values of specific conductance from residual ground-water seepage (Van Liew and Gesink, 1985, p. 20-28) and(or) to leaching of dissolved ions from material associated with the dam construction and reservoir-site preparation.

The data in figure 6 indicate little variation in specific conductance with depth. The slight lateral differences in specific conductance within the reservoir (tables 11 and 12 in the "Hydrologic Data" section) are related to changes in inflow discharge and time of travel within the reservoir. Specific conductance was least during snowmelt runoff in May and June and greatest during low flow in fall and winter.

Using the analysis of covariance test, the ratios of specific conductance to concentrations of dissolved solids for all samples in the reservoir were compared with the ratios of specific conductance to concentrations of dissolved solids for the White River at site 3. The test indicated no differences at the 0.05 level of significance for the range of data. The relation of dissolved-solids concentration to specific conductance in the reservoir and in the White River at site 3 is shown in figure 7. Dissolved-solids concentrations can be estimated from specific-conductance measurements in the reservoir and(or) the White River by using the regression shown in figure 7. However, since the reservoir may not be in a steady-state condition, additional measurements of specific conductance and dissolved-solids concentrations need to be done to ensure that this relation can be used as a predictive tool.

pH

Hydrogen ion activity (pH) is a measure of the acid-base characteristics of water. Water that is neutral has a pH of 7.0; however, pH of natural water that contains dissolved constituents commonly ranges from 5.0 to 9.0, and more frequently from 6.5 to 8.5 (Hem, 1985, p. 64). The constituents carbon dioxide (CO_2), bicarbonate (HCO_3), and carbonate (CO_3), which account for most alkalinity, greatly affect or buffer pH in natural water (Hem, 1985, p. 106).

Diel shifts in pH can develop in water that has considerable biological production and small ionic concentrations (Allen, 1972). Values of pH may increase to greater than 9.0 when phytoplankton use dissolved CO_2 and HCO_3 during photosynthesis. Conversely, diel and seasonal decreases in pH to values less than 7.0 can occur when CO_2 from decomposition and respiration accumulate in poorly mixed water. If exposure time is sufficient, these environmental changes may be harmful or lethal to some aquatic life (National Academy of Sciences, 1972).

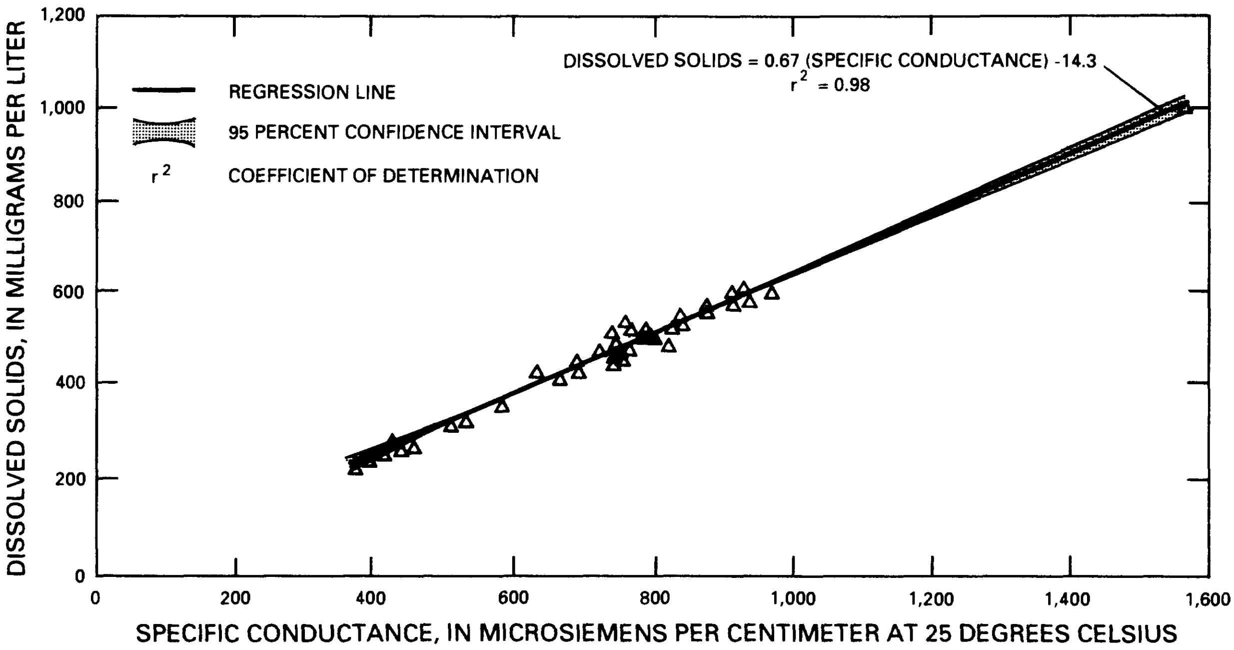


Figure 7.--Relation of dissolved-solids concentration to specific conductance in Kenney Reservoir (sites 1 and 2) and the White River (site 3), water years 1985-87.

Measured values of pH in Kenney Reservoir (tables 11 and 12 in the "Hydrologic Data" section) ranged from 7.4 to 8.8 at site 1 and from 8.2 to 8.6 at site 2. For all depths less than 41 ft at site 1, however, pH ranged from 7.9 to 8.8 (fig. 6). Reservoir data collected from below 40 ft at site 1 represented water from the near-bottom environment. Values of pH in this near-bottom water occasionally were less than 8.0 and decreased several tenths of a pH unit when compared with the overlying water column. These decreases in pH likely were due to the accumulation of CO_2 and other metabolic waste products that resulted from decomposing organic matter within the benthic zone during periods of thermal stratification and low inflow-outflow discharge. However, because the bottom of newly constructed reservoirs requires time to stabilize, the small pH value of 7.4 measured near the bottom of the reservoir at site 1 in January 1985 probably was not considered representative of reservoir conditions because of construction materials and recent soil disturbance. During water years 1985-87, measured values of pH at site 3 on the White River ranged from 8.0 to 8.8.

Values of pH at site 1 generally were greatest at or near the reservoir surface. Values of pH changed little with depth at site 2. The pH values at sites 1 and 2 exceeded 8.5 only in water that was supersaturated with respect to dissolved oxygen (tables 11 and 12). The larger pH values (greater than 8.5) were caused by the uptake of CO_2 and the conversion of HCO_3 ions to CO_2 by algae during photosynthesis and related oxygen production. During additional sampling at a selected site near the center of the reservoir on

June 19, 1987, a maximum pH of 9.2 was measured at depths of 1 ft or less (fig. 8). The large pH values (greater than 9.0) were associated with dense subsurface growths of phytoplankton that seemed to be confined to depths of less than 1 ft. Values of pH decreased to less than 9.0 below (fig. 8) and laterally (fig. 6, tables 11 and 12) from observed patches of phytoplankton. Except for the biologically active zones near the surface and near the bottom of Kenney Reservoir, ranges of pH values were similar to the range of pH values in the White River (site 3).

Dissolved Oxygen and Biochemical Oxygen Demand

Oxygen dissolves in water to a concentration controlled by the atmospheric partial pressure of the gas and the temperature and salinity of the water. Concentrations of dissolved oxygen at 100-percent saturation will increase as water temperature decreases and(or) atmospheric pressure increases.

Except for photosynthesis, almost all oxygen transfer to the water occurs at the air-water interface. Because oxygen diffuses very slowly in calm water (Hutchinson, 1957), winds, water turbulence, and currents are major factors in the aeration of a water body.

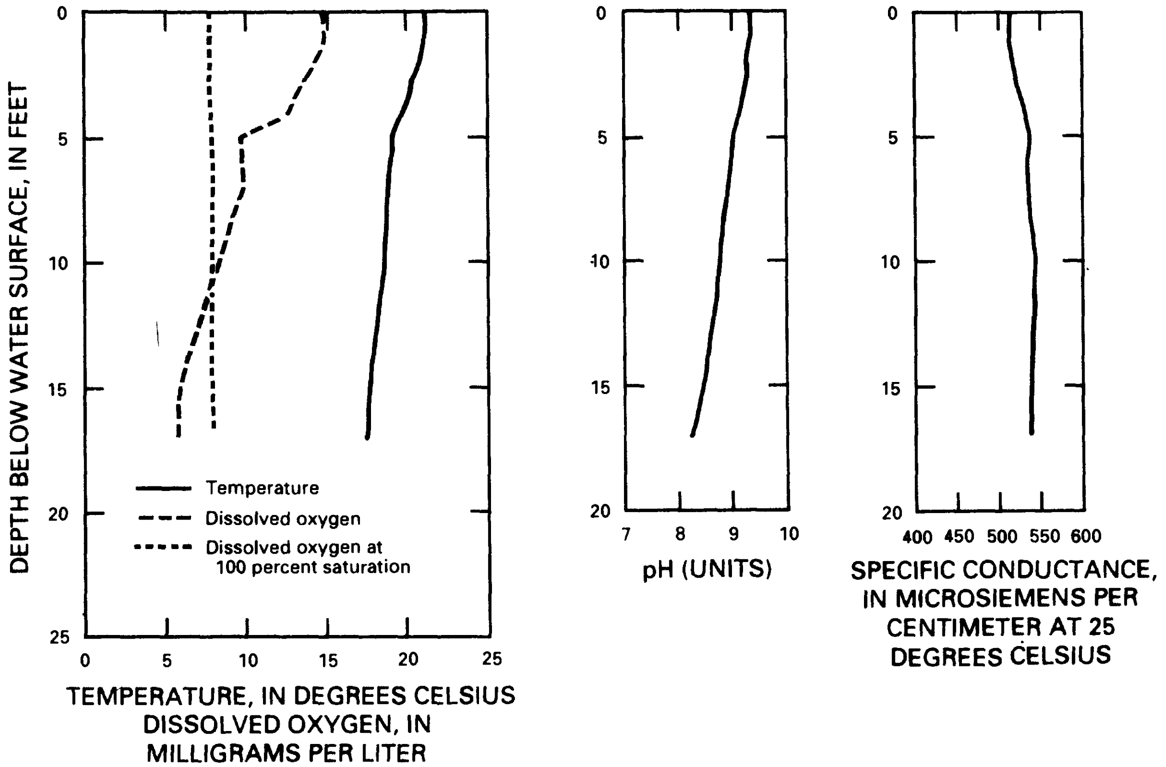


Figure 8.--Water temperature, specific conductance, pH, and dissolved oxygen near the center of Kenney Reservoir, between sites 1 and 2, during a phytoplankton bloom, June 19, 1987.

Seasonal and daily variations of dissolved-oxygen concentration in a water body are indirect measures of the biological productivity and oxygen demand of the system. If photosynthetic or respiratory activities are great during thermal stratification, separate biological zones can develop and cause vertical and horizontal variation in chemical characteristics. In lakes, the epilimnion typically is a zone of active biomass (phytoplankton) production, marked by nutrient uptake and daytime oxygen production. Where ample nutrients and light conditions exist, zones of oxygen supersaturation may develop. Conversely, overlying biomass or debris transported by inflowing streams may become deposited in the hypolimnion. As organisms die and settle downward, they are decomposed by bacteria and fungi. During decomposition, nutrients are returned to the water and oxygen is consumed. If large quantities of organic matter are present and there is little or no mixing with the oxygenated upper water, the dissolved-oxygen concentrations in the water at deeper levels may decrease to zero (anaerobic condition).

The quantity of oxygen consumed by indigenous processes in an isolated water sample confined in the dark at 20 °C for 5 days is termed the 5-day BOD. BOD is an estimated measurement of the biological- and chemical-oxygen demand required by the processes of respiration, decomposition, and chemical oxidation that occur in the sample.

Except for the zero value for dissolved oxygen near the bottom of the reservoir in January 1985, measured concentrations of dissolved oxygen at sites 1 and 2 in the reservoir (tables 11 and 12 in the "Hydrologic Data" section) ranged from 2.3 to 10.1 mg/L. Although concentrations of dissolved oxygen tended to decrease with depth at site 1, concentrations equal to or greater than 4.0 mg/L were maintained from the reservoir surface to a depth of 35 ft. The decrease in dissolved oxygen to concentrations less than 4.0 mg/L at depths greater than 35 ft may indicate that depletion of dissolved oxygen from respiration and decomposition processes occurred near the bottom of the reservoir. The concentration of 0.0 mg/L for dissolved oxygen in January 1985 may have resulted from residual ground water that collected near the bottom of the reservoir. Concentrations determined in the White River at site 3 during 1985-87 ranged from 7.8 to 12.5 mg/L.

In June 1987, maximum concentrations of dissolved oxygen within the reservoir were measured during a phytoplankton bloom that drifted at depths generally less than 1 ft. A concentration of 14.7 mg/L dissolved oxygen was measured during additional sampling at the 1-ft depth near the center of the reservoir on June 19, 1987 (fig. 8). Measurements of dissolved oxygen within other localized near-surface patches of phytoplankton on June 9 and June 19, 1987, ranged from 14.0 to 18.0 mg/L. These concentrations represented a range of supersaturation of dissolved oxygen from 190 to 240 percent. In addition to the phytoplankton bloom in June 1987, supersaturation of dissolved oxygen from photosynthetic activities occurred occasionally at both reservoir sites (fig. 6; tables 11 and 12 in the "Hydrologic Data" section). Smaller concentrations and ranges of dissolved oxygen, as compared to the concentrations and ranges of saturation of dissolved oxygen measured within the patches of phytoplankton, were measured at sites 1 and 2 (fig. 6; tables 11 and 12 in the "Hydrologic Data" section) and at depths greater than 5 ft directly below the phytoplankton bloom in June 1987 (fig. 8). These differences indicate that the greatly supersaturated conditions of dissolved oxygen (190-240 percent) were limited to water that contained the concentrated growths of phytoplankton.

Values of 5-day BOD in Kenney Reservoir ranged from 0.7 to 2.3 mg/L (tables 13 and 14 in the "Hydrologic Data" section). The daily values and ranges of BOD values determined from 20-day incubations for Kenney Reservoir for two depths at site 1 and for the White River at site 3 are compared in figure 9. Although BOD generally was slightly greater in the White River (site 3) than in Kenney Reservoir (fig. 9), one important exception occurred during the phytoplankton bloom in June 1987. Two selected samples collected near the center of the reservoir on June 9, 1987, from the 1-ft depth within localized growths or patches of phytoplankton had 1-day BOD values that were greater than 5.0 mg/L. These values extrapolated to 5-day BOD estimates that were greater than 25 mg/L. Although not representative of the general water column in the reservoir, these large BOD values indicated that rapid respiration (oxygen consumption) rates from phytoplankton growths can occur in the reservoir. If the biomass from phytoplankton blooms remain in the reservoir, substantial additional BOD may further decrease dissolved-oxygen concentrations at depth as microbial decomposition of the sinking biomass occurs.

Light Penetration and Turbidity

Nearly all biological activities in a lake depend directly or indirectly on sunlight. Photosynthesis by phytoplankton and other plants is related to the quantity of available sunlight. The depth to which light penetrates a lake is dependent on latitude and season, lake surface area and morphometry, turbidity, phytoplankton characteristics, and the transmitting and absorbing characteristics of the water and its dissolved material.

Turbidity is a qualitative measure of the light reducing or scattering capabilities of the suspended and colloidal matter in water. Where turbidity becomes large and light penetration is decreased, the following conditions may occur: (1) lowered water temperature at depth, (2) decreased photosynthesis and primary production, and (3) disruption of feeding patterns and physiological functions of benthic organisms and fish. Extreme turbidity levels can be directly lethal to some aquatic organisms (McKee and Wolf, 1963, p. 290-21).

Secchi-disk measurements in Kenney Reservoir (tables 13 and 14 in the "Hydrologic Data" section) ranged from 11 to 144 in. at site 1 and from 2 to 46 in. at site 2. A comparison of Secchi-disk measurements (fig. 10) indicates that substantial increases in light penetration (referred to as transparency in tables 13 and 14) occurred from the inlet (site 2) to the dam (site 1). Light penetration generally was least during periods of snowmelt and storm runoff when concentrations of suspended solids were large and greatest during late summer when streamflow and concentrations of suspended materials in the water column were small.

Turbidity, expressed in nephelometric turbidity units (NTU), measured from the 2-ft depths (tables 13 and 14 in the "Hydrologic Data" section) ranged from 1.2 to 45 NTU at site 1 and from 6.0 to 220 NTU at site 2. Turbidity measured in the White River at site 3 ranged from 5.0 to 210 NTU. The pattern of change in turbidity values within the reservoir was similar to the Secchi-disk pattern--turbidity decreased and light penetration increased from the inlet to the dam. These relations indicate that light attenuation by phytoplankton in Kenney Reservoir was minimal.

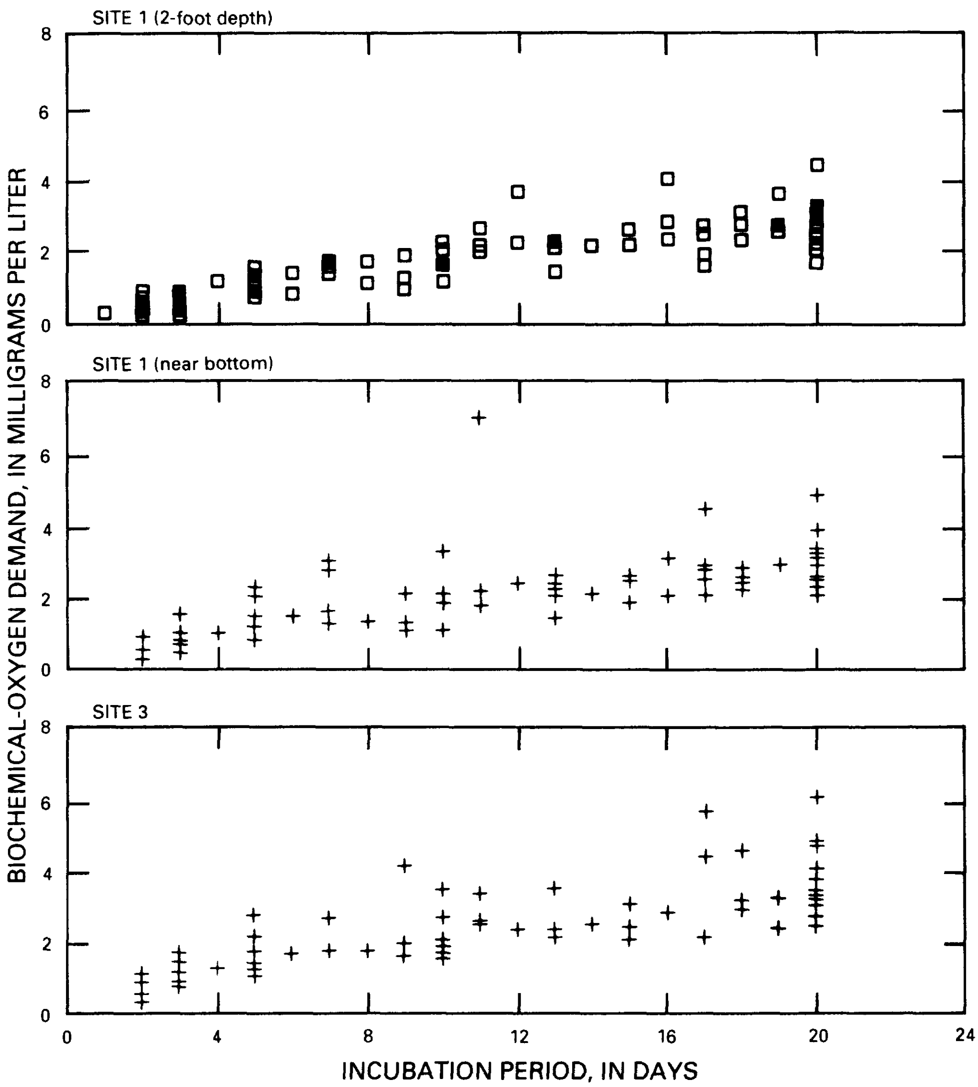


Figure 9.--Daily values and ranges of biochemical-oxygen demand (BOD) in Kenney Reservoir (site 1) and the White River (site 3), water years 1985-87.

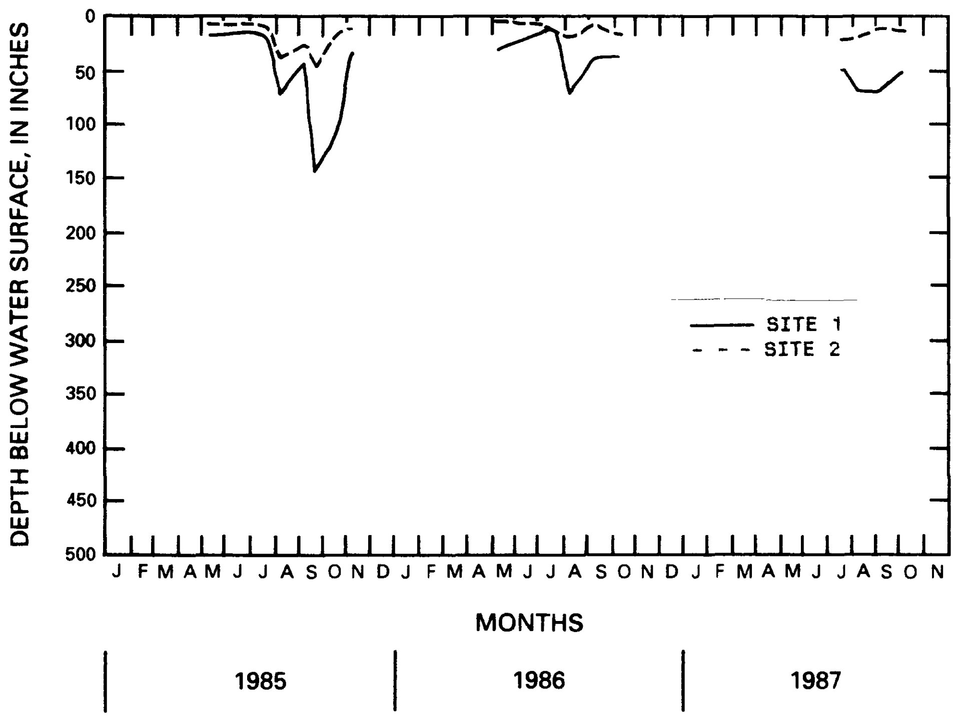


Figure 10.--Secchi-disk measurements, sites 1 and 2 in Kenney Reservoir, water years 1985-87.

The relation of turbidity and suspended-solids concentrations to Secchi-disk measurements and the relation of suspended-solids concentrations to turbidity (tables 13 and 14 in the "Hydrologic Data" section) were nonlinear. After log transformations of turbidity, suspended-solids concentrations, and Secchi-disk measurements, the relations of turbidity and suspended solids to Secchi-disk measurements were inverse and linear and are shown in figure 11. A positive and linear relation of suspended-solids concentrations to turbidity is shown in figure 12. The large values for the coefficients of determination (r^2) (figs. 11 and 12) were obtained because light penetration is closely associated with turbidity and because fine silts and clays that accounted for most of the suspended material in the reservoir were uniformly distributed.

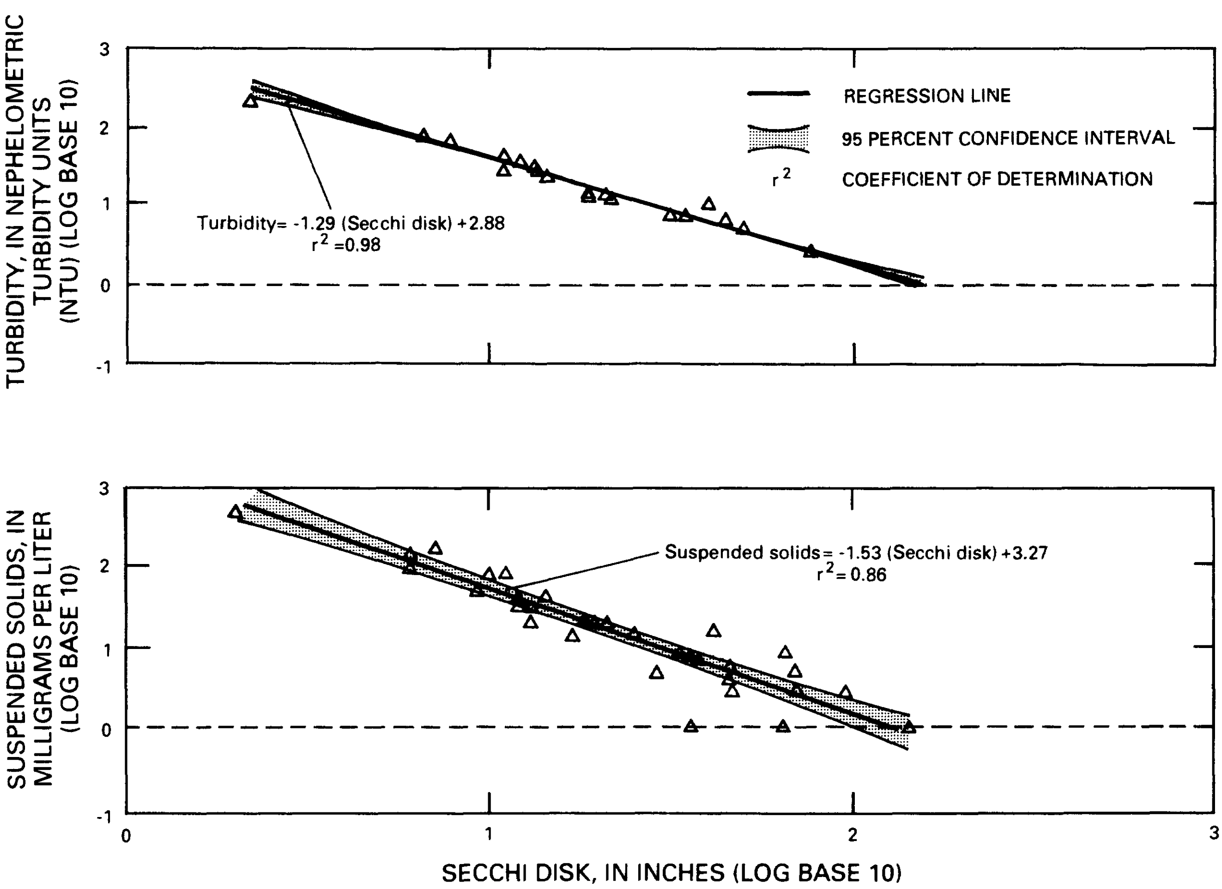


Figure 11.--Relation of turbidity and suspended-solids concentrations to Secchi-disk measurements in Kenney Reservoir (sites 1 and 2), water years 1985-87.

General Chemical Characteristics

The general chemical constituents in natural water are derived mainly from the action of water on soils and rocks (Hem, 1985). Carbon dioxide, derived from the atmosphere or from biological processes, readily dissolves in water, which decreases pH and increases acidity. Chemical constituents in soils and rocks are selectively dissolved into the water in various states of oxidation and ionization. The chemical constituents commonly are grouped as major constituents or ions, nutrients, and trace constituents.

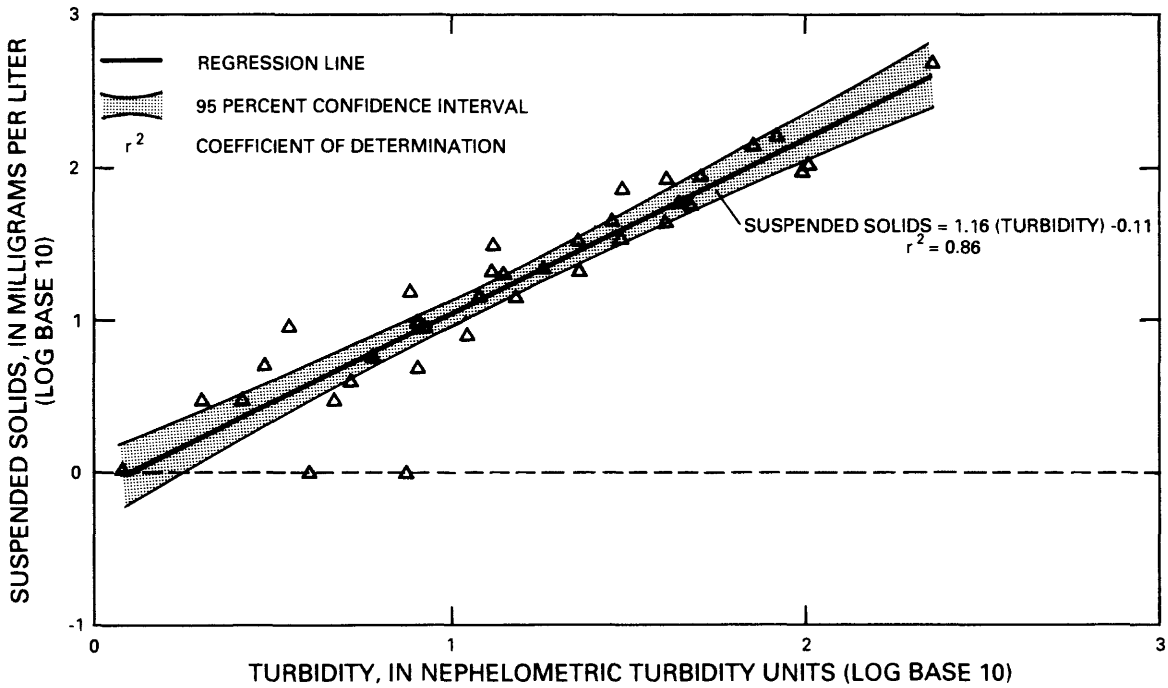


Figure 12.--Relation of suspended-solids concentrations to turbidity in Kenney Reservoir (sites 1 and 2), water years 1985-87.

Major Constituents

The most common major ions are listed below.

Cations (positive charge)	Anions (negative charge)
Calcium (Ca)	Alkalinity ($CaCO_3$)
Magnesium (Mg)	Bicarbonate (HCO_3)
Potassium (K)	Carbonate (CO_3)
Sodium (Na)	Chloride (Cl)
	Fluoride (F)
	Sulfate (SO_4)

Data for these ions provide a basis for the determination of hardness and the geochemical classifications used in this report (table 3).

Table 3.--*Chemical criteria used to classify water types and hardness*

[Water types, modified from Piper and others, 1953, p. 26; hardness, modified from Durfor and Becker, 1964, p. 27]

Water types (milliequivalents per liter)		Hardness	
Cations	Anions	Classification	Bivalent cations; calcium and magnesium (milligrams per liter as $CaCO_3$)
Single cation used when it amounts to 50 percent or more of the total cation equivalents; when the above does not exist, the largest percentages of two cations are used.	Single anion used when it amounts to 50 percent or more of the total anion equivalents; when the above does not exist, the largest percentages of two anions are used.	Soft------ Moderately hard---- Hard------ Very hard-	Less than 60. 61-120. 121-180. More than 180.

The general water quality in the White River at site 3 and in Kenney Reservoir (tables 4 and 5) was determined from milliequivalent conversions of concentrations of cations and anions. The water types changed from a hard to very hard calcium bicarbonate type during high-flow conditions (greater than 3,500 ft^3/s) to a very hard calcium magnesium sulfate bicarbonate type during low-flow or base-flow conditions (less than 400 ft^3/s). Although not shown, regressions were developed that related concentrations of the major constituents to specific conductance for the White River and Kenney Reservoir. Tests for similarity of data at the 0.05 level of significance indicated that the water chemistry for the major constituents was statistically similar at all sites. The relations of the dissolved-solids concentrations and percent composition of major ions to water discharge are shown in figure 13.

Table 4.--*Concentrations of major constituents*

[ft, feet; °C, degrees Celsius; µS/cm, microsiemens per

Date	Time	Sample depth (ft)	Temperature (°C)	Specific conductance (µS/cm)	pH (units)	Calcium, dissolved (mg/L Ca)	Magnesium, dissolved (mg/L Mg)	Potassium, dissolved (mg/L K)	Sodium dissolved (mg/L Na)	Alkalinity, laboratory (mg/L $CaCO_3$)
01/16/85	1430	2	0.0	741	8.3	72	29	1.6	48	187
01/16/85	1535	47	5.0	1,550	7.4	120	89	2.3	82	282
06/04/85	1250	2	15.8	453	8.3	46	18	1.3	21	129
06/04/85	1340	45	10.9	430	8.3	48	18	1.3	22	143
09/06/85	1105	2	19.1	835	8.3	68	35	2.3	62	198
09/06/85	1155	43	17.9	932	8.1	68	37	3.1	64	193
10/21/85	1235	2	8.5	820	8.4	70	33	2.0	57	195
10/21/85	1315	40	8.0	828	8.4	70	34	1.7	58	194
04/24/86	1225	2	12.0	865	8.5	73	37	1.9	56	212
04/24/86	1310	40	9.0	870	8.4	72	37	1.8	58	212
06/03/86	1145	2	14.7	374	8.2	42	15	1.2	16	123
06/03/86	1230	40	12.3	403	8.2	43	16	1.2	18	127
08/20/86	1225	2	22.0	739	8.5	62	30	1.8	50	183
08/20/86	1310	40	19.0	756	8.2	66	32	1.8	52	197
06/19/87	1325	2	19.6	511	8.8	51	20	1.4	28	150
06/19/87	1415	45	14.0	531	7.8	53	21	1.3	28	152
09/03/87	1215	2	19.5	824	8.4	67	35	1.9	63	192
09/03/87	1305	45	16.8	825	8.1	71	35	1.9	60	209

Table 5.--*Concentrations of major constituents*

[ft, feet; °C, degrees Celsius; µS/cm, microsiemens per

Date	Time	Sample depth (ft)	Temperature (°C)	Specific conductance (µS/cm)	pH (units)	Calcium, dissolved (mg/L Ca)	Magnesium, dissolved (mg/L Mg)	Potassium, dissolved (mg/L K)	Sodium dissolved (mg/L Na)	Alkalinity, laboratory (mg/L $CaCO_3$)
06/04/85	1435	2	14.4	456	8.3	47	18	1.4	22	134
09/06/85	1105	2	19.1	907	8.5	73	38	2.6	70	213
10/21/85	1405	2	8.5	794	8.5	68	32	1.7	52	192
10/21/85	1420	10	8.1	796	8.4	70	32	1.6	53	190
04/24/86	1335	2	11.8	718	8.4	64	32	1.7	45	186
06/03/86	1310	2	17.0	389	8.2	43	15	1.2	17	125
08/20/86	1405	2	22.2	736	8.4	63	29	1.7	49	193
06/19/87	1155	2	17.8	582	8.6	58	23	1.4	34	166
09/03/87	1105	2	19.0	814	8.4	66	36	1.7	60	195

in Kenney Reservoir, site 1, water years 1985-87

centimeter at 25 degrees Celsius; mg/L, milligrams per liter]

Chloride, dissolved (mg/L Cl)	Fluoride, dissolved (mg/L F)	Sulfate, dissolved (mg/L SO_4)	Silica, dissolved (mg/L SiO_2)	Solids, sum of constituents dissolved (mg/L)	Hardness (mg/L $CaCO_3$)	Hardness, noncarbonate (mg/L $CaCO_3$)	Sodium adsorption ratio (SAR)	Percent sodium
12.0	0.2	190	15	480	299	112	1.0	26
27.0	.3	510	20	1,020	666	384	1.0	21
5.2	.1	92	12	273	189	60	.7	19
5.6	.1	94	12	287	194	51	.7	20
15.0	.3	220	13	534	314	116	1.5	30
18.0	.3	270	11	587	322	129	1.6	30
15.0	.3	230	10	534	311	116	1.4	28
15.0	.3	230	13	538	315	121	1.4	28
13.0	.3	240	13	560	335	123	1.0	27
13.0	.3	250	13	570	332	120	1.0	27
4.2	.1	75	12	240	167	44	.5	17
4.7	.1	85	12	260	173	46	.6	18
12.0	.3	170	14	450	278	95	1.0	28
12.0	.3	180	15	480	297	100	1.0	28
10.0	.2	110	13	320	210	60	.8	23
10.0	.2	110	13	330	219	67	.8	22
16.0	.3	220	12	530	310	119	2.0	31
14.0	.3	220	14	540	320	112	1.0	29

in Kenney Reservoir, site 2, water years 1985-87

centimeter at 25 degrees Celsius; mg/L, milligrams per liter]

Chloride, dissolved (mg/L Cl)	Fluoride, dissolved (mg/L F)	Sulfate, dissolved (mg/L SO_4)	Silica, dissolved (mg/L SiO_2)	Solids, sum of constituents dissolved (mg/L)	Hardness (mg/L $CaCO_3$)	Hardness, noncarbonate (mg/L $CaCO_3$)	Sodium adsorption ratio (SAR)	Percent sodium
5.6	0.2	94	12	281	192	58	0.8	20
17.0	.3	240	14	583	339	126	1.8	31
14.0	.3	210	11	504	302	110	1.3	27
14.0	.3	210	12	507	307	117	1.4	27
9.9	.2	200	14	480	292	106	1.0	25
4.3	.1	81	12	250	169	44	.6	18
12.0	.2	170	14	460	277	84	1.0	28
11.0	.2	120	13	360	240	74	1.0	24
15.0	.3	220	11	530	310	118	1.0	30

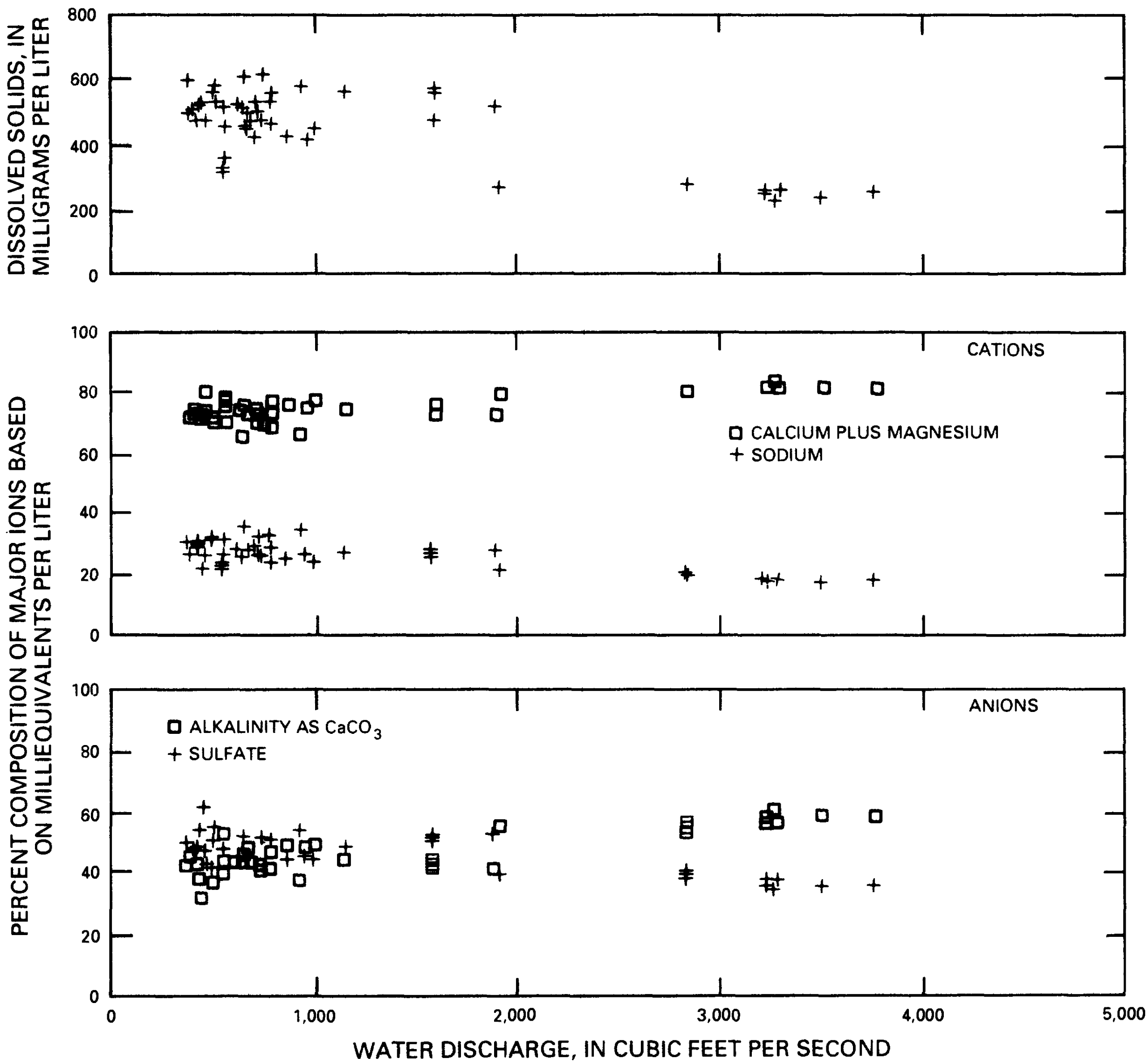


Figure 13.--Relations of dissolved-solids concentrations and percent composition of major ions, combined for sites in Kenney Reservoir (sites 1 and 2) and the White River (site 3), to water discharge measured at site 3, water years 1985-87.

Nutrients

The biological productivity in lakes is dependent on the availability of nutrients within the aquatic system. Those elements that are needed in large quantities for plant growth, such as nitrogen, phosphorus, and carbon, are termed major nutrients or macronutrients. Those elements needed in minute quantities, such as molybdenum and zinc, are termed as trace nutrients or micronutrients.

Although there are several ways for nutrients to enter a lake, most nutrients originate from surface-water inflow and cultural input such as septic-tank discharge. Once in the lake, nutrients are subjected to various removal and(or) recycling functions. Large quantities of nutrients can be removed from the water by chemical reactions, adsorption onto sediment and subsequent deposition, and biological utilization. These processes may be reversed, however, through biochemical action. The conversion of inorganic nutrients into biomass (nutrient removal) within a zone of substantial phytoplankton productivity may be reversed in the profundal zone where nutrients are recycled back into solution as byproducts from decomposition. These processes often produce uneven chemical and nutrient distributions when the lake is stratified.

Attempts to classify lakes into trophic categories commonly are based on the concentrations of macronutrients. Nitrogen and especially phosphorus currently are considered the major nutrients that affect the rate of eutrophication in lakes and reservoirs. Sawyer (1947) states that nuisance phytoplankton conditions can occur when inorganic nitrogen concentrations exceed 0.3 mg/L and phosphorus concentrations exceed 0.01 mg/L.

Vollenweider (1968) compared the input of nitrogen and phosphorus to lake mean depth and determined that shallower lakes are more sensitive to nuisance growth conditions than deeper lakes. A short hydraulic residence time (small capacity-inflow ratio), however, may control phytoplankton production by maintaining rapid flushing rates (Welch, 1969). Various attempts to control the rate and undesirable effects of eutrophication are summarized by Dunst and others (1974).

Nutrient data for Kenney Reservoir are listed in tables 6 and 7; nutrient data for the White River (site 3) for water years 1985-87 were compiled from the U.S. Geological Survey WATSTORE (Hutchison, 1975) computer data base. Concentrations of ammonia, nitrite plus nitrate as nitrogen, and organic nitrogen that were determined for sites 1, 2, and 3 during 1985-87 are shown in figures 14, 15, and 16. The concentrations of phosphorus are shown in figure 17. Concentrations of total organic carbon in the White River (site 3) and near the inlet (site 2) generally ranged from about 2 to 12 mg/L. Concentrations of total organic carbon at site 1 ranged from about 2 to 6 mg/L and generally were less than at sites 2 and 3. Concentrations of total organic carbon at site 3 were greatest during spring runoff; variations in concentrations of dissolved organic carbon generally were independent of flow.

Table 6.--*Concentrations of nitrogen, phosphorus, and*

[ft, feet; mg/L, milligrams per

Date	Time	Sample depth (ft)	Nitrogen nitrite, dissolved (mg/L N)	Nitrogen NO_2+NO_3, dissolved (mg/L N)	Nitrogen NO_2+NO_3, total (mg/L N)	Nitrogen ammonia, dissolved (mg/L N)	Nitrogen ammonia, total (mg/L N)	Nitrogen organic, dissolved (mg/L N)
01/16/85	1430	2	<0.01	0.52	0.5	0.04	0.05	0.16
01/16/85	1535	47	< .01	< .10	< .1	2.50	2.60	.00
04/24/85	1020	2	< .01	.86	.8	.06	.06	.44
04/24/85	1110	45	.01	.86	.9	.07	.07	.73
06/04/85	1250	2	< .01	.52	.5	.05	.05	.25
06/04/85	1340	45	< .01	.51	.5	.05	.03	.25
06/27/85	1315	2	< .01	.26	.2	.03	.05	.27
06/27/85	1405	43	< .01	.31	.3	.05	.06	.25
07/19/85	1235	2	< .01	< .10	< .1	.02	.03	.18
07/19/85	1325	45	< .01	.15	.1	.07	.09	.33
08/07/85	1235	2	< .01	.20	.2	.03	.04	.37
08/07/85	1325	45	< .01	.27	.3	.12	.11	.38
08/28/85	1215	2	< .01	.28	.3	.03	.04	.27
08/28/85	1305	42	.01	.29	.3	.11	.12	.29
09/06/85	1105	2	--	--	.3	--	.05	--
09/06/85	1155	43	--	--	.4	--	.13	--
09/17/85	1135	2	.01	.32	.3	.06	.04	.34
09/17/85	1225	42	.01	.35	.4	.07	.05	.33
10/21/85	1235	2	< .01	.38	.4	.06	.06	.24
10/21/85	1315	40	< .01	.39	.4	.06	.06	.24
04/24/86	1225	2	< .01	1.00	1.0	.04	.04	.26
04/24/86	1310	40	< .01	1.00	1.0	.06	.04	.24
06/03/86	1145	2	< .01	.28	.3	< .01	< .01	--
06/03/86	1230	40	< .01	.32	.3	.02	.02	.28
06/24/86	1120	2	< .01	.15	.2	< .01	.02	--
06/24/86	1205	40	< .01	.18	.2	.02	.02	.18
07/22/86	1055	2	< .01	.28	< .1	.03	.03	.17
07/22/86	1140	40	< .01	.21	.2	.07	.06	.23
08/20/86	1225	2	< .01	.19	.2	.05	.04	--
08/20/86	1310	40	.02	.25	.3	.09	.10	--
09/16/86	1140	2	< .01	.24	.2	.06	.05	--
09/16/86	1225	40	< .01	.21	2.0	.06	.05	--
06/09/87	1300	2	--	--	< .1	--	.11	--
06/19/87	1325	2	< .01	< .10	< .1	< .01	.02	.19
06/19/87	1415	45	< .01	< .10	< .1	.01	.04	.19
07/15/87	1500	2	< .01	< .10	< .1	.02	.02	--
07/15/87	1545	40	< .01	< .10	< .1	.06	.07	--
08/13/87	1435	2	< .01	.18	.2	.03	.03	.87
08/13/87	1520	40	.02	.16	.2	.09	.10	.71
09/03/87	1215	2	< .01	< .10	.1	.02	.01	< .18
09/03/87	1305	45	< .01	.12	.1	.09	.08	< .12

organic carbon in Kenney Reservoir, site 1, water years 1985-87

liter; <, less than; --, no data]

Nitrogen organic, total (mg/L N)	Nitrogen, dissolved (mg/L N)	Nitrogen, total (mg/L N)	Phosphorus ortho, dissolved (mg/L P)	Phosphorus ortho, total (mg/L P)	Phos-phorus, dissolved (mg/L P)	Phos-phorus, total (mg/L P)	Carbon organic, dissolved (mg/L C)	Carbon organic, total (mg/L C)
0.15	0.72	0.70	<0.01	<0.01	<0.01	0.01	1.8	2.1
.20	2.50	2.80	.01	.02	.15	.28	5.0	6.2
.64	1.36	1.50	.02	.02	.02	.04	5.8	4.8
.73	1.66	1.70	.02	.02	.02	.05	5.1	6.0
.25	.82	.82	.02	.02	.01	.02	3.2	4.3
.17	.81	.70	.02	.02	.02	.02	3.4	4.7
.05	.56	.30	.02	.02	.02	.05	2.8	3.5
.24	.61	.60	.02	.04	.02	.01	3.4	3.6
.37	.20	.40	< .01	< .01	< .01	.01	4.2	3.9
.31	.55	.50	< .01	< .01	< .01	.02	3.0	3.6
.16	.60	.40	.02	< .01	< .01	.03	3.2	3.3
.29	.77	.70	.01	< .01	< .01	.03	3.4	3.6
.26	.58	.60	.03	.01	< .01	< .01	3.1	3.1
.58	.69	1.00	.02	.01	< .01	< .01	3.2	3.4
.45	--	.80	--	.01	--	.01	--	3.0
.47	--	1.00	--	.02	--	.05	--	3.8
.46	.72	.80	< .01	.01	< .01	.01	4.5	3.6
.35	.75	.80	< .01	.01	< .01	.02	4.2	3.6
.34	.68	.80	.01	< .01	< .01	< .01	3.3	3.5
.34	.69	.80	--	< .01	< .01	< .01	3.2	6.7
.36	1.30	1.40	< .01	.02	.01	.02	4.3	4.6
.46	1.30	1.50	.01	.02	.02	.02	4.3	4.7
.39	--	.70	.01	.02	.02	.04	4.3	4.4
.38	.62	.70	.02	.02	.04	.04	4.9	5.1
.28	--	.50	< .01	.02	.02	.04	3.4	3.7
.28	.38	.50	< .01	.03	.03	.04	3.4	3.6
.27	.48	--	< .01	< .01	< .01	.02	3.4	3.3
.24	.51	.50	< .01	.02	.03	.03	3.3	3.6
.26	--	.50	< .01	< .01	< .01	.02	3.4	4.3
.30	--	.70	.01	.02	.01	.03	3.4	4.7
.35	--	.60	< .01	< .01	.01	.03	3.1	3.2
.55	--	2.60	< .01	< .01	< .01	.04	3.1	3.4
4.30	--	4.40	--	.05	--	.30	--	--
.18	.20	.20	< .01	--	.02	.05	4.7	3.6
2.60	.20	2.60	< .01	--	.02	.07	4.8	3.3
.58	--	.60	< .01	--	.02	.02	4.2	4.2
.63	--	.70	< .01	--	.02	.02	3.8	3.3
.67	1.08	.90	< .01	< .01	.02	.02	4.1	4.1
.50	.96	.80	< .01	< .01	.01	.03	4.3	4.2
.39	< .30	.50	.02	< .01	< .01	.02	3.3	4.0
.42	< .32	.60	.01	--	.01	.03	3.8	4.2

Table 7.--*Concentrations of nitrogen, phosphorus, and*

[ft, feet; mg/L, milligrams per

Date	Time	Sample depth (ft)	Nitrogen nitrite, dissolved (mg/L N)	Nitrogen NO_2+NO_3, dissolved (mg/L N)	Nitrogen NO_2+NO_3, total (mg/L N)	Nitrogen ammonia, dissolved (mg/L N)	Nitrogen ammonia, total (mg/L N)	Nitrogen organic, dissolved (mg/L N)
04/24/85	1200	2	<0.01	1.00	1.0	0.06	0.05	0.44
04/24/85	1225	14	< .01	1.00	1.0	.05	.05	.55
06/04/85	1435	2	< .01	.51	.5	.04	.03	.26
06/04/85	1450	8	< .01	.50	.5	.04	.05	.26
06/27/85	1445	2	< .01	.34	.3	.03	.05	.37
06/27/85	1505	13	< .01	.34	.3	.04	.06	.36
07/19/85	1400	2	< .01	.10	.1	.02	.04	.28
07/19/85	1415	9	< .01	.13	.1	.02	.05	.38
08/07/85	1355	2	< .01	.25	.3	.04	.04	.46
08/07/85	1405	7	< .01	.28	.3	.04	.04	.36
08/28/85	1435	2	< .01	.34	.3	.03	.02	.37
08/28/85	1450	9	< .01	.35	.4	.04	.05	.26
09/06/85	1220	2	--	--	.4	--	.05	--
09/17/85	1300	2	< .01	.21	.2	.05	.06	.35
09/17/85	1310	7	< .01	.24	.2	.05	.06	.35
10/21/85	1405	2	< .01	.32	.3	.05	.08	.35
10/21/85	1420	10	< .01	.31	.3	.05	.04	.25
04/24/86	1335	2	.01	.83	.9	.06	.05	.34
04/24/86	1345	7	.02	.88	.9	.07	.08	.33
06/03/86	1310	2	< .01	.33	.3	< .01	< .01	--
06/03/86	1320	7	< .01	.31	.3	< .01	.01	--
06/24/86	1245	2	< .01	.19	.2	.02	.03	.28
06/24/86	1300	10	< .01	.20	.2	.03	.01	.27
07/22/86	1220	2	< .01	.18	.2	.03	.02	--
07/22/86	1235	10	< .01	.31	.2	.04	.02	.16
08/20/86	1405	2	< .01	.27	.3	.07	.06	--
09/16/86	1305	2	< .01	.19	.2	.03	< .01	--
09/16/86	1315	7	< .01	.18	.2	.04	.03	--
06/09/87	1210	2	--	--	< .1	--	.02	--
06/19/87	1155	2	< .01	< .10	< .1	< .01	.02	.48
07/15/87	1330	2	< .01	.10	.1	.04	.04	.46
08/13/87	1320	2	< .01	.12	.1	.03	.02	.27
09/03/87	1105	2	< .01	.10	.1	.02	.03	< .18

organic carbon in Kenney Reservoir, site 2, water years 1985-87

liter; <, less than; --, no data]

Nitrogen organic, total (mg/L N)	Nitrogen, dissolved (mg/L N)	Nitrogen, total (mg/L N)	Phosphorus ortho, dissolved (mg/L P)	Phosphorus ortho, total (mg/L P)	Phos-phorus, dissolved (mg/L P)	Phos-phorus, total (mg/L P)	Carbon organic, dissolved (mg/L C)	Carbon organic, total (mg/L C)
0.72	1.50	1.77	0.02	0.02	0.01	0.06	4.8	6.6
1.55	1.60	2.60	.02	.02	.02	.04	4.5	12.0
.17	.81	.70	.01	.01	.02	.03	3.2	4.8
.25	.80	.80	< .01	.02	.03	.03	3.5	6.9
.25	.74	.60	.03	.04	.03	.12	3.6	6.3
.34	.74	.70	.03	.04	.05	.10	3.7	4.4
.36	.40	.50	< .01	< .01	< .01	.02	4.5	4.3
.25	.53	.40	< .01	< .01	< .01	.10	8.0	8.2
.26	.75	.60	.02	< .01	.01	.03	4.0	2.8
.36	.68	.70	.03	< .01	.01	.03	4.0	2.8
.48	.74	.80	< .01	< .01	< .01	< .01	3.5	3.9
.55	.65	1.00	.04	.02	< .01	< .01	3.5	3.5
.45	--	.90	--	.01	.03	--	--	3.7
.44	.61	.70	< .01	.01	< .01	.04	6.9	3.8
.44	.64	.70	.01	.01	.01	.04	4.8	4.5
.32	.72	.70	< .01	.01	< .01	.03	3.2	3.0
.36	.61	.70	.01	.01	< .01	.04	3.1	2.1
1.40	1.23	2.35	.01	.02	.02	.04	4.6	--
1.70	1.28	2.68	.01	.02	.02	.08	4.8	13.0
.49	--	.80	.02	.02	.03	.05	4.3	4.5
.49	--	.80	.02	.02	.03	.06	4.3	5.5
.37	.49	.60	.02	.02	.02	.10	4.5	4.4
.29	.50	.50	.02	.03	.04	.04	3.7	4.1
.28	--	.50	< .01	< .01	.01	.03	3.6	3.4
.38	.51	.60	< .01	.01	.01	.05	3.2	4.2
.34	--	.70	< .01	.01	.01	.04	3.8	5.8
.39	--	.60	< .01	< .01	< .01	.04	1.7	3.2
.37	--	.60	< .01	< .01	< .01	.04	3.5	3.2
.88	--	.90	--	.02	.10	--	--	--
1.30	.50	1.30	< .01	--	.02	.08	5.0	3.3
1.20	.50	1.20	.01	--	.02	.04	4.1	4.4
.28	.42	.32	< .01	< .01	.01	.02	4.0	4.1
.37	< .30	.50	.01	--	.01	.02	3.8	4.3

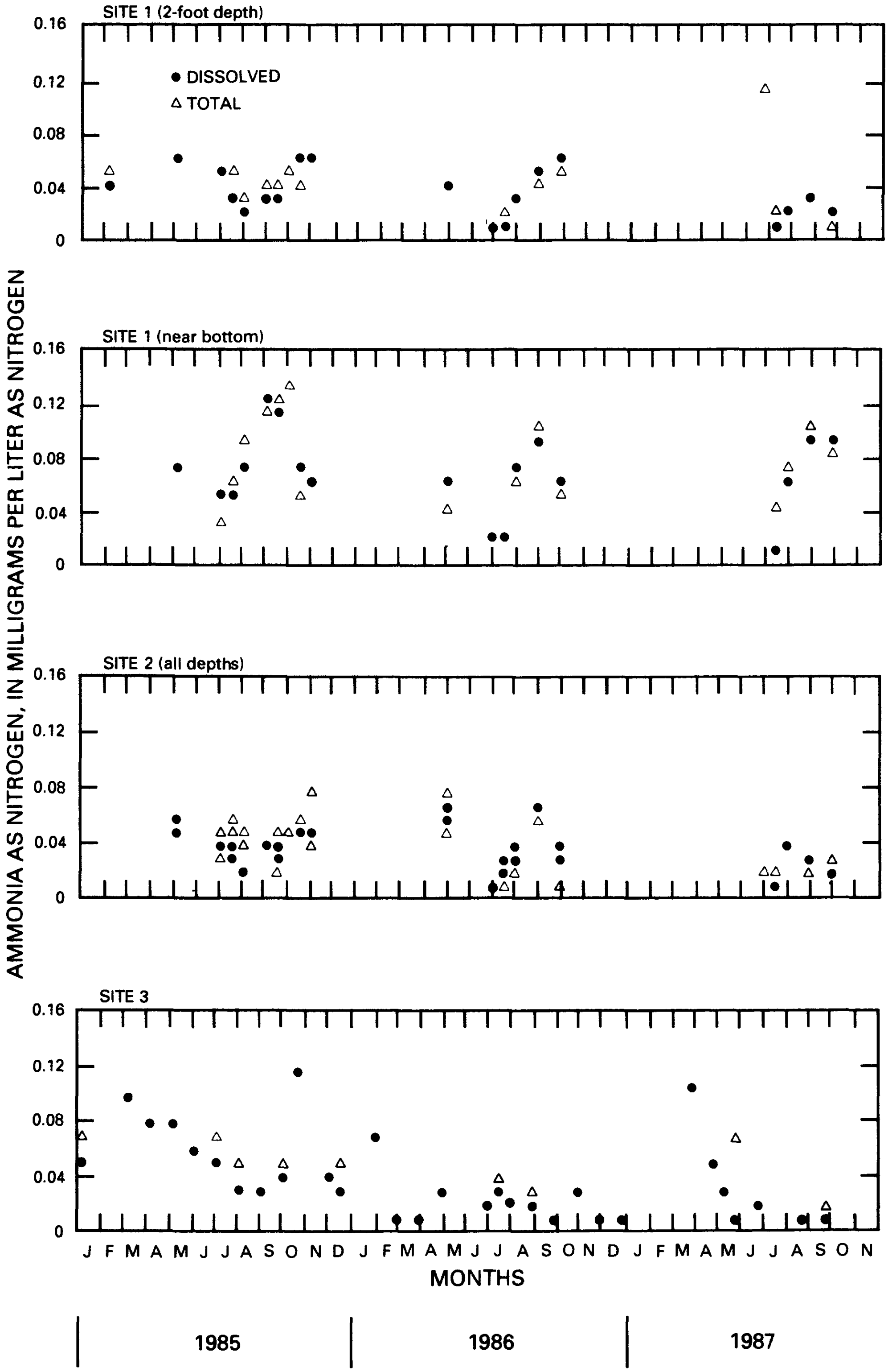


Figure 14.--Concentrations of ammonia as nitrogen in Kenney Reservoir (sites 1 and 2) and the White River (site 3), water years 1985-87.

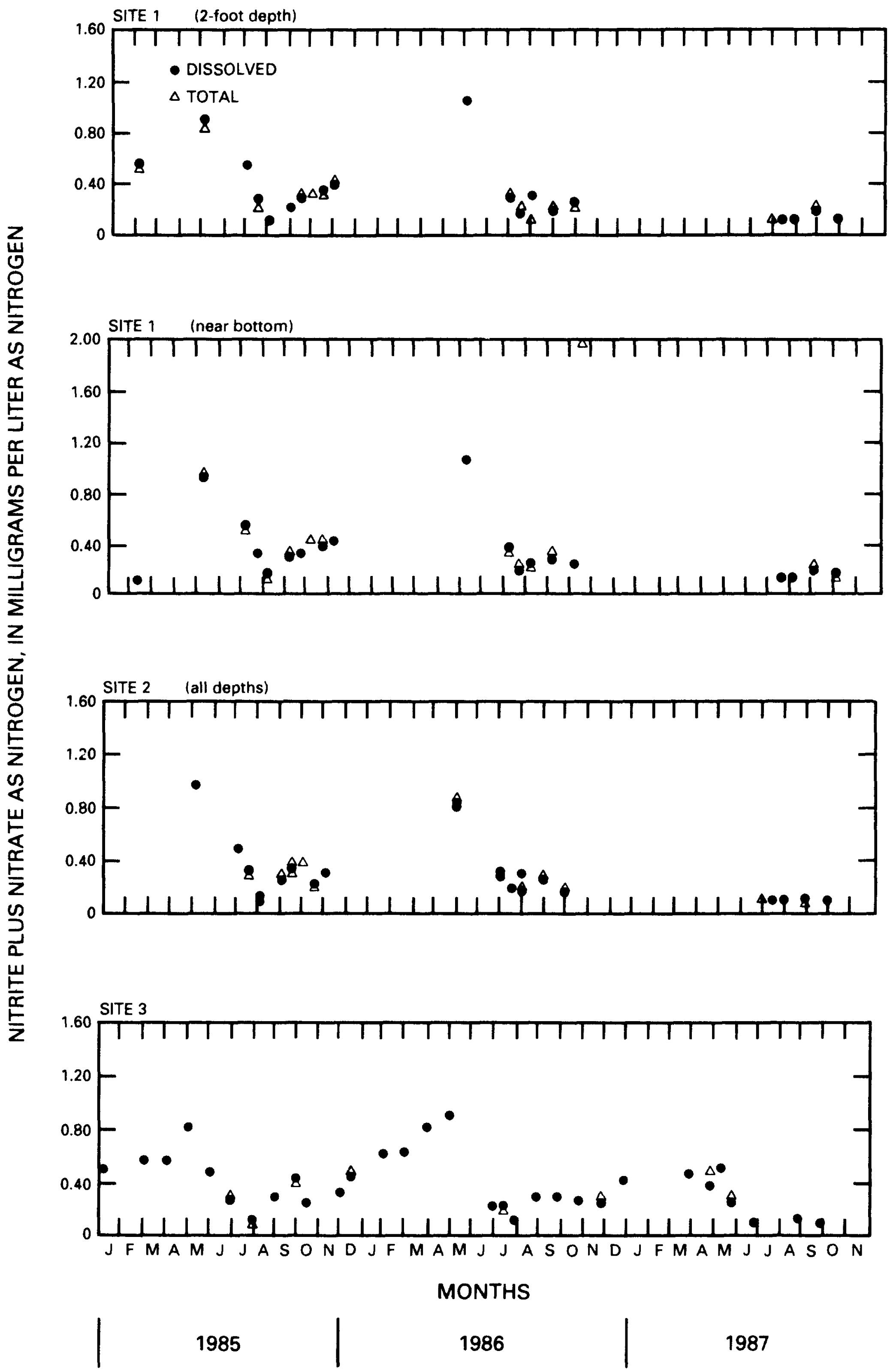


Figure 15.--Concentrations of nitrite plus nitrate as nitrogen in Kenney Reservoir (sites 1 and 2) and the White River (site 3), water years 1985-87.

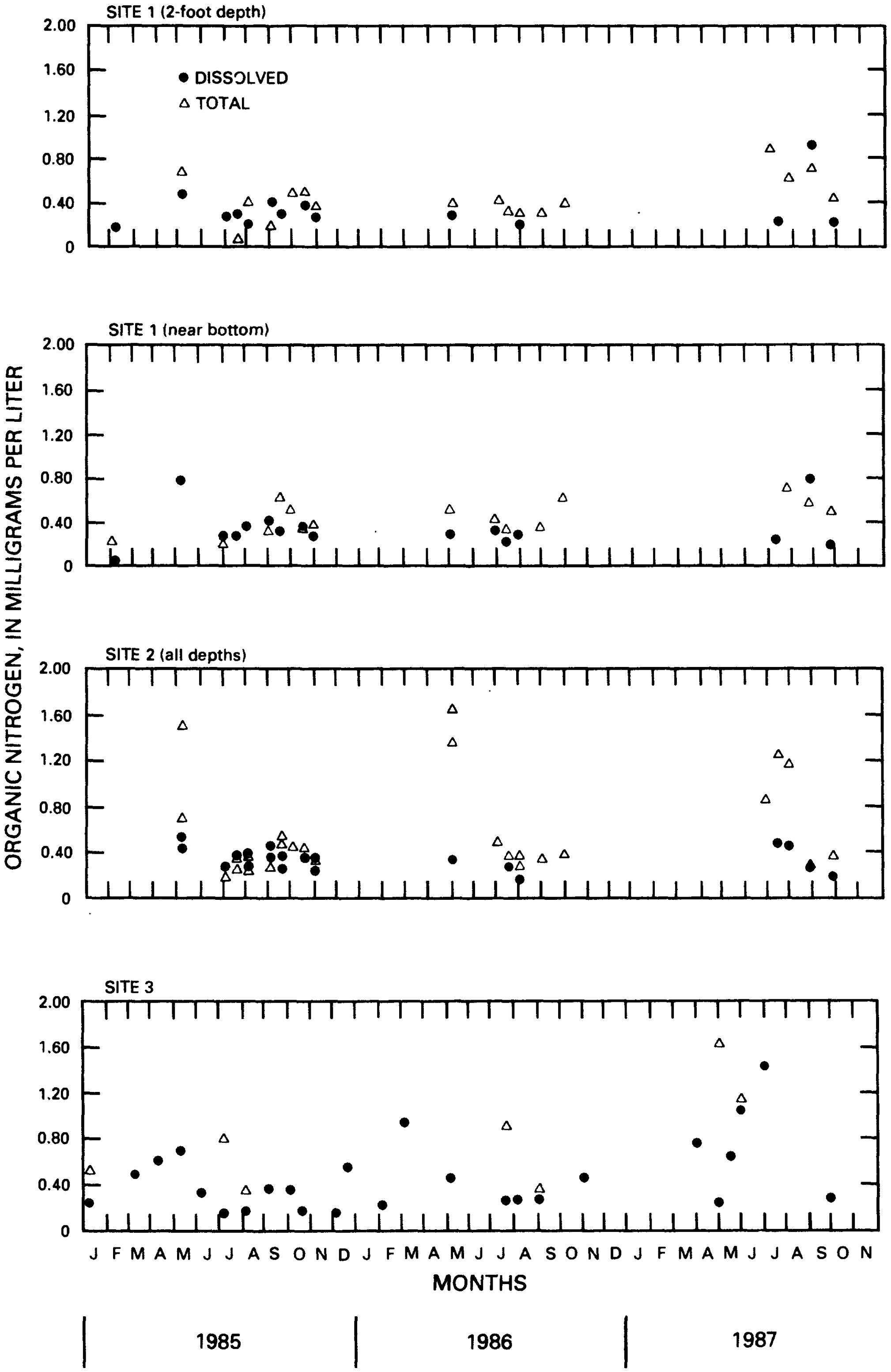


Figure 16.--Concentrations of organic nitrogen in Kenney Reservoir (sites 1 and 2) and the White River (site 3), water years 1985-87.

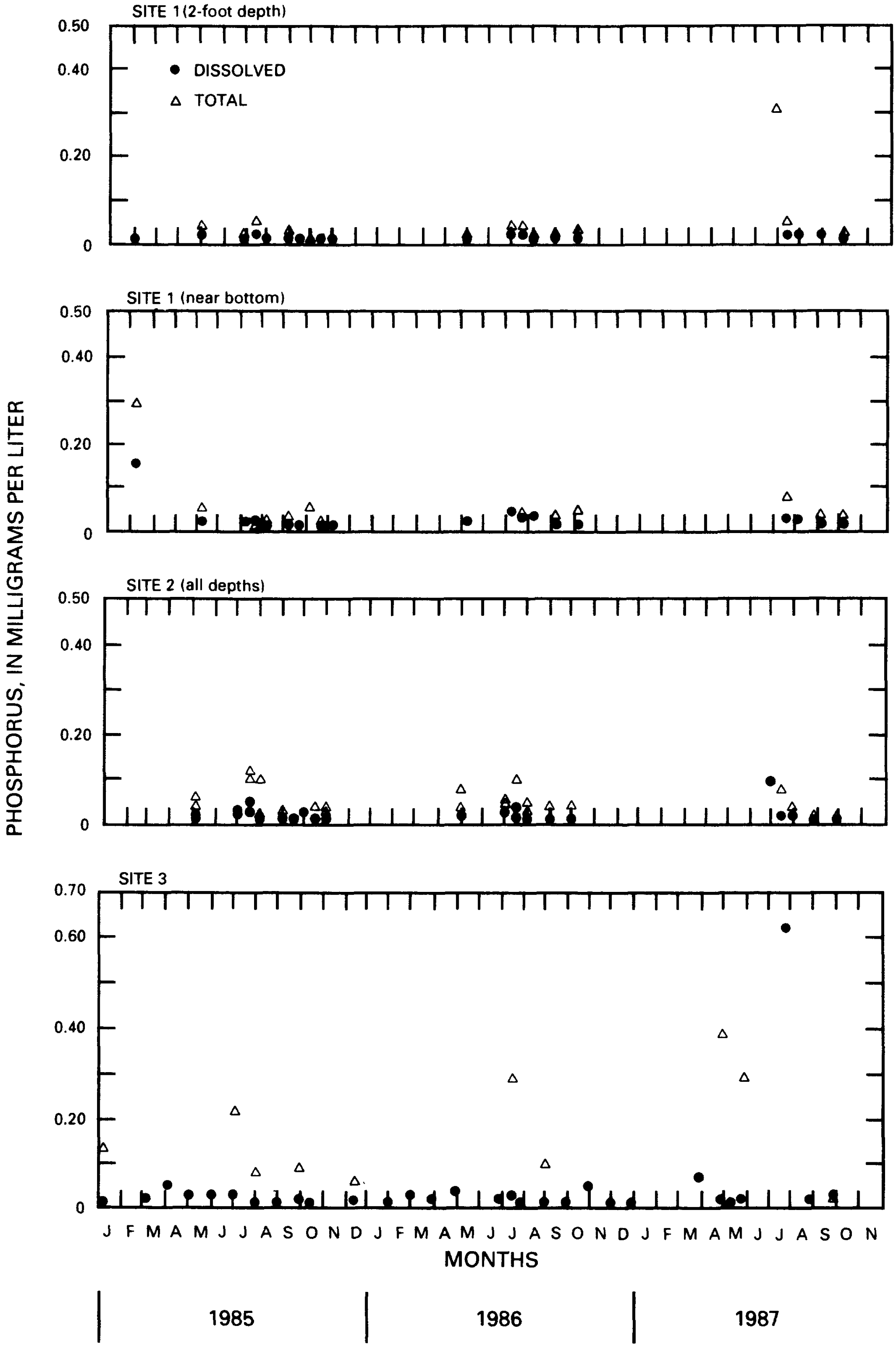


Figure 17.--Concentrations of phosphorus in Kenney Reservoir (sites 1 and 2) and the White River (site 3), water years 1985-87.

Except for ammonia, concentrations of nitrogen and phosphorus tended to be greatest during spring runoff and least during late summer and fall. At sites 1 and 2, inorganic forms of dissolved and total nitrogen (ammonia and nitrite plus nitrate) and total phosphorus often exceeded the concentration levels of 0.3 mg/L as nitrogen and 0.01 mg/L as phosphorus that are considered sufficient to produce nuisance phytoplankton growths. Dissolved phosphorus concentrations frequently were less than 0.1 mg/L in the White River (site 3) and less than 0.05 mg/L in Kenney Reservoir (sites 1 and 2). Large concentrations of dissolved or total phosphorus (0.2 to 0.62 mg/L) occasionally occurred in the White River during spring runoff.

Concentrations of total and(or) dissolved ammonia generally were greatest in the White River at site 3 (0.01 to 0.12 mg/L) and near the reservoir bottom at site 1 (concentrations commonly ranged from 0.01 to 0.13 mg/L). Except for one sample in June 1987, ammonia concentrations were least (<0.01 to 0.06 mg/L) in samples from the 2-ft depth at site 1. Concentrations of ammonia generally increased several hundredths of a milligram per liter during summer from the 2-ft depth to near-bottom water at site 1. These increases in ammonia concentrations probably were from accumulations of ammonia that were produced from biochemical processes. The concentration of total ammonia of 0.11 mg/L at the 2-ft depth at site 1 on June 9, 1987, probably was a result of increased organic decomposition. The very large concentrations of ammonia (2.5 and 2.6 mg/L) analyzed from samples collected at the 47-ft depth at the dam (site 1) in January 1985 may have resulted from the biological decay of residual organic material on the reservoir bottom shortly after filling and from organic decomposition and subsequent release from sediments during anaerobic conditions in January.

Except for an unexplained concentration of 2.0 mg/L in the bottom sample at site 1 in September 1986, concentrations of dissolved and(or) total nitrite plus nitrate as nitrogen ranged from less than 0.1 to 1.0 mg/L at all sites. Concentrations generally were greatest at all sites during spring runoff and least at sites 1 and 2 during summer and fall. Concentrations of dissolved and(or) total organic nitrogen in the White River (site 3) and reservoir inlet (site 2) ranged from 0.15 to 1.7 mg/L. Except for samples in June 1987, concentrations of dissolved and(or) total organic nitrogen in the reservoir at site 1 (0.00 to 0.87 mg/L) were substantially less than concentrations determined in the White River. The decreases of organic nitrogen from site 3 to site 1 may indicate that substantial quantities of total organic nitrogen transported by the White River were removed from the water column as a result of sedimentation processes near the inflow to the reservoir. The large concentrations of total organic nitrogen (4.3 mg/L), total ammonia (0.11 mg/L), and total phosphorus (0.3 mg/L) that were determined at site 1 on June 9, 1987, were from samples that contained large concentrations of phytoplankton.

During spring and early summer 1987, substantial quantities of nitrogen and possibly phosphorus may have entered Kenney reservoir, apparently from sources upstream from site 3 on the White River (figs. 16 and 17). Concentrations of total nitrogen (ammonia, nitrite, nitrate, and organic nitrogen) exceeded 1.5 mg/L, and concentrations of total and(or) dissolved phosphorus were 0.4, 0.3 mg/L, and 0.62 mg/L in samples collected at site 3. The large concentrations of these nutrients that entered the reservoir probably contributed to the phytoplankton bloom that occurred within the reservoir in June 1987.

Trace Constituents

A selected group of 22 trace constituents (table 8) were analyzed from samples collected from the 2-ft and near-bottom depths in Kenney Reservoir at the dam (site 1). The samples were collected during high- and low-flow conditions, and under ice, to determine if concentrations in excess of State-recommended criteria (Colorado Department of Health, 1978) of toxic or undesirable substances were present in the reservoir during 1985-87. Except for the one-time occurrence of concentrations of total recoverable iron and manganese in excess of 1,000 μg/L near the reservoir bottom in January 1985 and the concentrations of total recoverable mercury (as much as 0.2 μg/L), all concentrations of trace constituents were less than the recommended concentrations established by the State of Colorado for cold-water biota.

Concentrations of trace constituents analyzed during 1985-87 from five samples from the White River at site 3 generally were similar to those measured in the reservoir. Concentrations of total recoverable copper, mercury, and zinc tended to be slightly greater in the White River than concentrations determined in Kenney Reservoir.

Biological Characteristics

Biota in lakes and reservoirs are complex and include bacteria, plants (particularly phytoplankton), zooplankton, insects and other invertebrates, and vertebrates such as fish and waterfowl (Hutchinson, 1967; Odum, 1971). The organism distributions and densities vary greatly with season, physical conditions, and nutrient availability. Kenney Reservoir was sampled for phytoplankton and the sanitary-indicator bacteria--total and fecal coliform and fecal streptococci.

Phytoplankton

Biological studies of lakes frequently begin with an investigation of the phytoplankton biomass. As the primary producers in the ecosystem of the lake, these organisms are fundamental to biological productivity. The taxonomy or classification of phytoplankton, commonly known as algae, varies somewhat among taxonomists. In this report the following divisions or phyla, taken from Prescott (1970), with modifications of Chrysophyta based on Patrick and Reimer (1966), are used:

Bacillariophyta	- diatoms
Chlorophyta	- green algae
Cyanophyta	- blue-green algae
Chrysophyta	- golden-brown algae
Euglenophyta	- euglenoids
Cryptophyta	- cryptomonads
Pyrrhophyta	- dinoflagellates

Phytoplankton in this report are identified to the species level.

Table 8.--*Concentrations of trace constituents in Kenney Reservoir, site 1, water years 1985-87*

[ft, feet; °C, degrees Celsius; µS/cm, microsiemens per centimeter at 25 degrees Celsius; µg/L, micrograms per liter; <, less than; --, no data]

Date	Time	Sample depth (ft)	Temperature (°C)	Specific conductance (µS/cm)	pH (units)	Aluminum, total recoverable (µg/L Al)	Antimony, total (µg/L Sb)	Arsenic, total (µg/L As)	Barium, total recoverable (µg/L Ba)	Beryllium, total recoverable (µg/L Be)	Boron, dissolved (µg/L B)
01/16/85	1430	2	0.0	741	8.3	140	<1	<1	200	<10	50
01/16/85	1535	47	5.0	1,430	7.4	190	<1	9	<100	<10	80
09/06/85	1105	2	19.1	835	8.3	70	<1	2	<100	<10	80
09/06/85	1155	43	17.9	932	8.1	300	<1	2	<100	<10	90
04/24/86	1225	2	12.0	865	8.5	190	<1	2	100	<10	80
04/24/86	1310	40	9.0	870	8.4	190	<1	1	100	<10	70
08/20/86	1225	2	22.0	739	8.5	179	<1	2	<100	<10	60
08/20/86	1310	40	19.0	756	8.2	719	<1	2	<100	<10	70
06/19/87	1325	2	19.6	511	8.8	100	--	--	<100	<10	40
06/19/87	1415	45	14.0	531	7.8	530	--	--	<100	<10	40

Date	Time	Sample depth (ft)	Cadmium, total recoverable (µg/L Cd)	Chromium, total recoverable (µg/L Cr)	Cobalt, total recoverable (µg/L Co)	Copper, total recoverable (µg/L Cu)	Iron, total recoverable (µg/L Fe)	Lead, total recoverable (µg/L Pb)	Lithium, total recoverable (µg/L Li)	Manganese, total recoverable (µg/L Mn)
01/16/85	1430	2	<1	4	<1	2	140	6	10	10
01/16/85	1535	47	<1	3	4	3	2,800	<1	20	1,700
09/06/85	1105	2	2	3	52	2	30	2	20	20
09/06/85	1155	43	1	2	1	2	220	2	20	60
04/24/86	1225	2	<1	2	<1	7	250	4	20	20
04/24/86	1310	40	<1	5	<1	4	230	2	20	20
08/20/86	1225	2	<1	2	<1	3	179	5	10	20
08/20/86	1310	40	<1	5	1	5	789	<5	20	109
06/19/87	1325	2	<1	2	<1	2	170	<5	<10	10
06/19/87	1415	45	<1	5	<1	3	710	<5	<10	140

Date	Time	Sample depth (ft)	Mercury, total recoverable (µg/L Hg)	Molybdenum, total recoverable (µg/L Mo)	Nickel, total recoverable (µg/L Ni)	Selenium, total (µg/L Se)	Silver, total recoverable (µg/L Ag)	Strontium, dissolved (µg/L Sr)	Strontium, total recoverable (µg/L Sr)	Zinc, total recoverable (µg/L Zn)
01/16/85	1430	2	0.2	2	11	3	<1	860	1,100	20
01/16/85	1535	47	<.1	2	14	2	<1	1,300	1,200	20
09/06/85	1105	2	.2	3	32	3	<1	990	600	20
09/06/85	1155	43	.2	5	6	3	<1	890	600	20
04/24/86	1225	2	.1	<1	5	6	<1	950	850	<10
04/24/86	1310	40	.1	<1	2	6	<1	920	910	10
08/20/86	1225	2	<.1	5	3	2	<1	889	829	<10
08/20/86	1310	40	<.1	5	6	2	<1	920	860	10
06/19/87	1325	2	--	2	5	--	<1	540	520	<10
06/19/87	1415	45	--	<1	3	--	<1	540	520	<10

Phytoplankton densities will vary considerably from lake to lake and commonly show seasonal fluctuations or progressions within a given lake (Greeson, 1971). The ratios and dominance and(or) persistence of phytoplankton groups are sometimes used as an aid in lake classification (Hutchinson, 1967). Other investigators may use a diversity index such as that proposed by Wilhm and Dorris (1968). The diversity index (DI) is formulated as:

$$DI = - \sum_{1=1}^{s} \frac{n_i}{n} \log_2 \frac{n_i}{n} \quad (1)$$

and is based on the relation of individuals per taxon (n_i), the total number of individuals in the sample (n), and the total number of taxa or identifiable groups (s) in the sampled community.

Diversity index is a ratio of the number of species or other taxa to another important value, usually the total number of organisms in a sample of the community. The diversity index measures the evenness of distribution of individuals within the community (Greeson, 1982). The use of a diversity index as an indicator of water-quality conditions is based on the assumption that unpolluted water generally has a greater number of species, thus greater diversity index, than polluted water. The diversity index in unpolluted water is large because a benthic community can develop that has many species of relatively equal abundance. Persistent small values of diversity index are indicative of polluted or environmentally stressed water because this water will favor a relatively few species of tolerant organisms. Diversity index can range from zero (all organisms in the community belong to the same species) to any positive number. The upper limit, however, is about nine and most frequently is less than five.

Because phytoplankton distributions within a reservoir can vary, phytoplankton samples in Kenney Reservoir were collected at sites 1 and 2 from depths of maximum concentrations of dissolved oxygen (usually at the 2-ft depth) and as a composite of the euphotic zone. Phytoplankton identification, cell counts, percent composition, number of species, diversity index, biomass, and chlorophyll concentrations for sites 1 and 2 are listed in table 15 in the "Hydrologic Data" section.

A total of 210 phytoplankton species from 7 phyla were identified in Kenney Reservoir during 1985-87. Cell counts and phylum composition for diatoms, green algae, and blue-green algae from composite samples at sites 1 and 2, and from samples collected at the 2-ft depth at site 1, are shown in figure 18. Similar data for golden-brown algae, cryptomonads, euglenoids, and dinoflagellates are shown in figure 19.

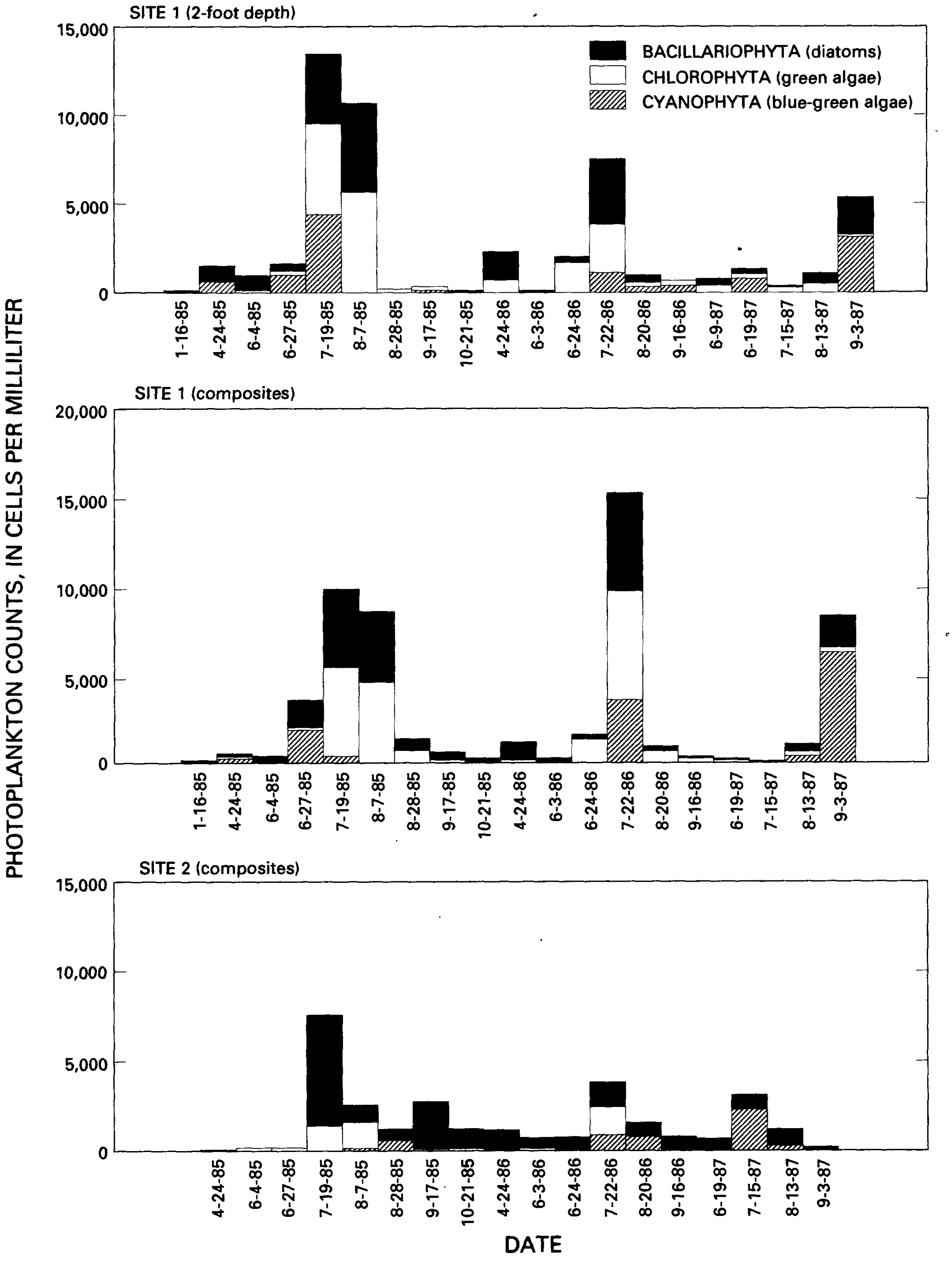


Figure 18.--Cell counts and relative composition of the Bacillariophyta, Chlorophyta, and Cyanophyta in Kenney Reservoir (sites 1 and 2), water years 1985-87.

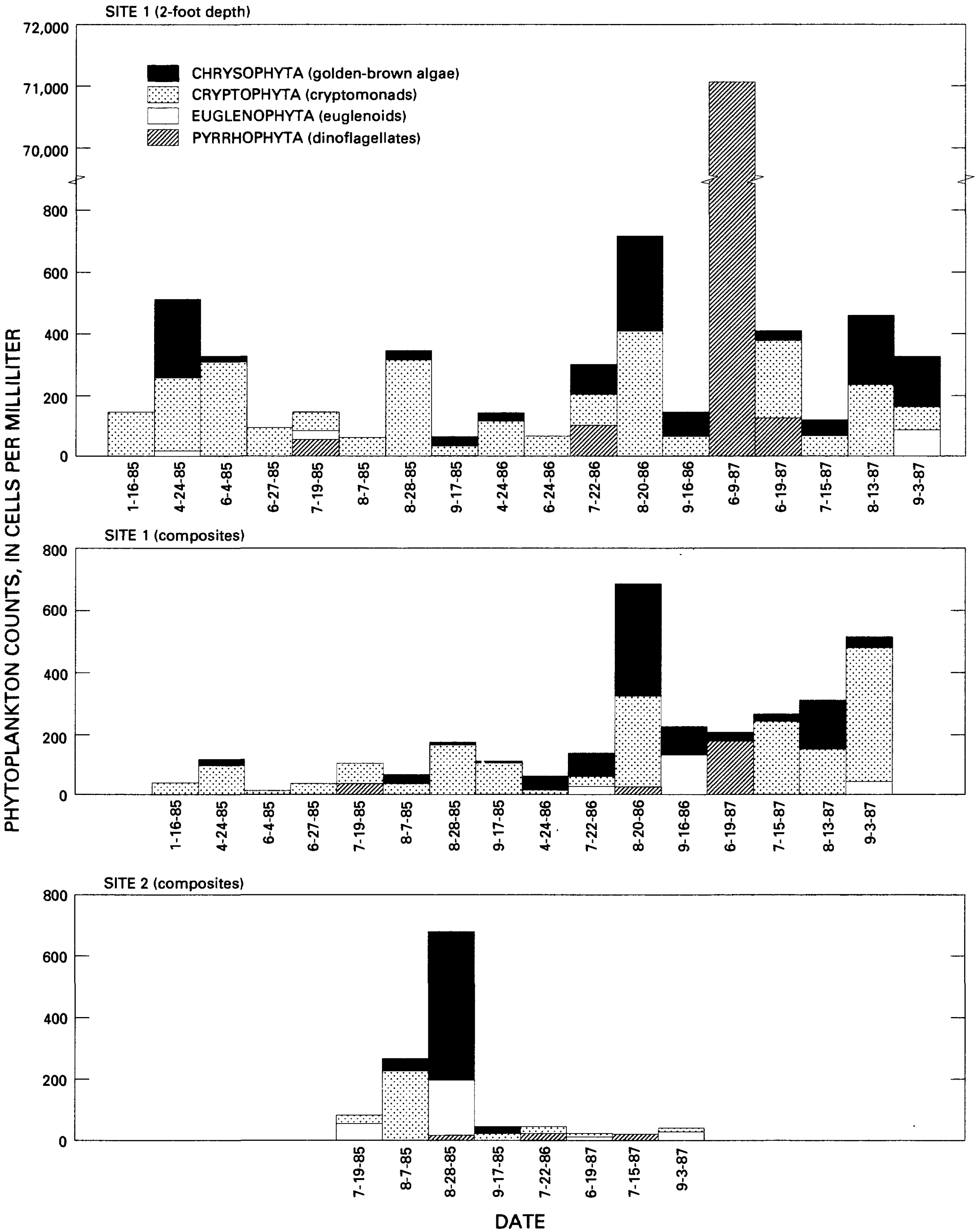


Figure 19.--Cell counts and relative composition of the Chrysophyta, Cryptophyta, Euglenophyta, and Pyrrhophyta in Kenney Reservoir (sites 1 and 2), water years 1985-87.

Except for a dinoflagellate bloom in June 1987, diatoms, green algae, and blue-green algae were the most common phytoplankton in Kenney Reservoir during 1985-86. In 1987, blue-green algae and occasionally diatoms were dominant. Cell counts tended to increase from the inlet (site 2) to the dam (site 1). Maximum combined cell count (unrounded values) in the reservoir for the three dominant phyla was slightly greater than 15,000 cells/mL (site 1) in 1986 (fig. 18). Cell counts for the remaining four phyla intermittently ranged from 0 cells/mL to several hundred cells/mL, except for the dinoflagellate bloom in June 1987. Data comparisons of the four nondominant phyla indicated that cryptomonads and golden-brown algae generally were present in the largest concentrations. Because large concentrations of suspended material interfere in the laboratory analyses for biomass and chlorophyll, attempts to relate concentrations of biomass and chlorophylls *a*, *b*, and *c* with other biological measurements from the turbid water at Kenney Reservoir were inconclusive.

A comparison of phytoplankton species collected among 29 sample pairs (2-ft depth and composite samples) for 1985-86 was determined. For all 29 comparisons, a combined total of 228 species was identified as common in both samples. In addition to the common species in both samples, the composite samples contained 237 species not identified in the 2-ft depth samples. Conversely, 154 species were identified from the 2-ft depth samples that did not occur in composite samples. These comparisons indicate that although the composite method for phytoplankton collection alone would have yielded about 22 percent more species than collections obtained solely at the 2-ft depth, the presence or recurrence of 154 species during 1985 and 1986 would have gone undetected if the single-depth samples (2-ft) were omitted from the program.

In 1987, a phytoplankton bloom that was observed during most of June and consisted almost entirely of the dinoflagellate, *Peridinium biceps*, developed within the near-surface (depths generally less than 1 ft) water of the reservoir. Dark brown patches and stringers of concentrated phytoplankton growths were easily visible and seemed to resemble subsurface oil slicks. A maximum count of 71,000 cells/mL (fig. 19) was determined from a sample collected near site 1 on June 9, 1987. Large concentrations of dissolved oxygen (14.0-18.0 mg/L) from photosynthesis, large pH values (9.0-9.2), and large BOD from respiration (greater than 5 [(mg/L)/day] dissolved oxygen or 5-day BOD greater than 25 mg/L) were measured in water samples obtained from the concentrated growths of phytoplankton. By July, almost all indications of the phytoplankton bloom were gone.

The phytoplankton bloom in 1987 was the first bloom detected since the reservoir filled in late 1984. Conditions that may have contributed to the bloom and that were unique in 1987 when compared with previous years are listed below:

1. Mean annual inflows to the reservoir (site 3) in 1985 and 1986 were about 1,160 ft^3/s; in 1987, the mean annual inflow was about 750 ft^3/s. More notably, mean monthly discharge for June 1985 was about 2,900 ft^3/s and for June 1986 was about 3,100 ft^3/s, but decreased to about 1,000 ft^3/s for June 1987. As a result, hydraulic residence time, water clarity, and water temperature, which may be the major causative factors for the bloom in Kenney Reservoir, were greater in June 1987 than during the same month in 1985-86.

2. On several occasions during April-June 1987, concentrations of organic nitrogen that ranged from 1.0 to 1.7 mg/L and total and(or) dissolved phosphorus concentrations that ranged from 0.3 to 0.62 mg/L were determined in the White River at site 3. During the same period in 1985-86, concentrations of organic nitrogen at site 3 were 1.0 mg/L or less, and phosphorus concentrations were 0.3 mg/L or less. The large nutrient concentrations in the White River in the spring of 1987 resulted in large nutrient concentrations in Kenney Reservoir prior to the phytoplankton bloom in June. However, because nitrogen and phosphorus do not seem to decrease to concentrations that would limit algal growth, other factors, such as residence time and water clarity, probably affect algal growth in the reservoir.

Values for diversity index for all samples of phytoplankton ranged from 0.11 to 3.99 at the dam (site 1) and from 0.18 to 4.02 near the inlet (site 2). The maximum and minimum diversity-index values for each sampling period for all phytoplankton samples collected in Kenney Reservoir during 1985-87 are shown in figure 20. For most of the sampling period, the diversity-index values were greater near the inlet (site 2) than near the dam (site 1). The slightly lesser diversity index and the general increases in cell counts of blue-green algae near the dam, when compared with data near the inlet, may indicate the effects of the hydrologic change from a river environment to a lake environment.

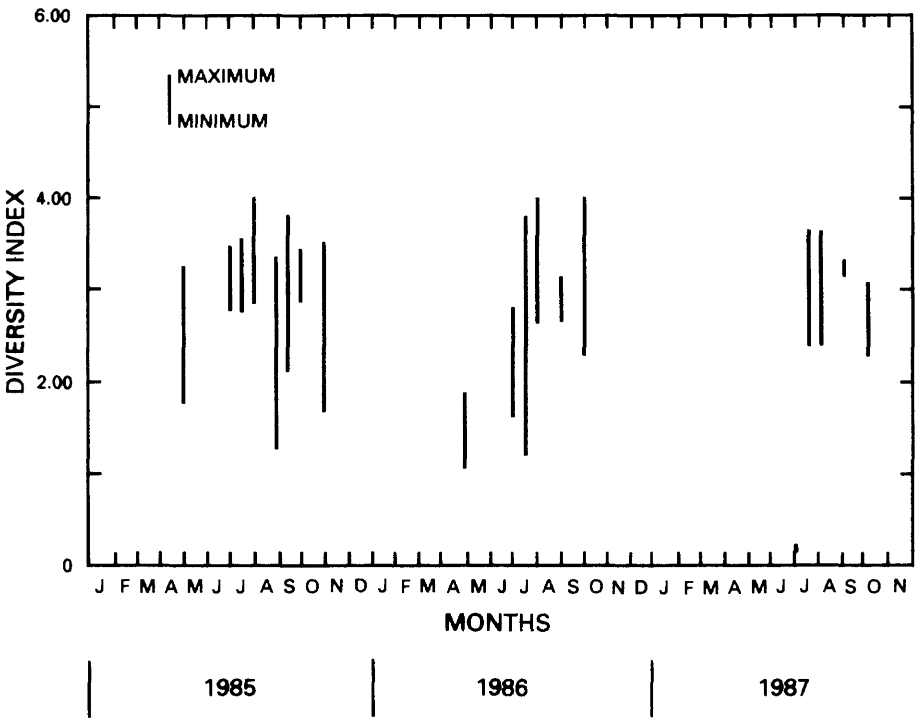


Figure 20.--Maximum and minimum values of diversity index for all samples of phytoplankton collected in Kenney Reservoir, water years 1985-87.

Bacteria

Total and fecal coliform and fecal streptococci bacteria are natural inhabitants of the intestinal tract of man and other animals. As such, they are excreted in large numbers. A healthy person would not normally excrete pathogenic organisms; however, should illness develop, these organisms could occur in the feces. The presence of large numbers of fecal coliform and fecal streptococci bacteria in water provides warning of the potential presence of waterborne pathogenic organisms (Federal Water Quality Administration, 1971).

Knowing whether the fecal coliform bacteria originated from human or other animals would be helpful in interpreting or locating the source of contamination. To assist in this determination, the ratio of fecal coliform to fecal streptococci (FC/FS) sometimes is used. A ratio greater than 4.0 indicates a human-waste source; a ratio less than 1.0 indicates a predominantly livestock and(or) poultry source (Federal Water Quality Administration, 1971). The State of Colorado (Colorado Department of Health, 1978) has set forth the following criteria for recreational water:

Class	Fecal coliform bacteria (colonies per 100 milliliters) Geometric mean
Class I - Primary contact	200
Class II - Secondary contact	1,000

Because Kenney Reservoir is used for recreation, concentrations of total and fecal coliform and fecal streptococci bacteria were determined from the 2-ft and near-bottom depths at sites 1 and 2 for all sample collections during 1985-86 (tables 13 and 14 in the "Hydrologic Data" section). The range of colony counts per 100 milliliters that were determined after controlled incubations are as follows: total coliform bacteria less than 2 to 1,100; fecal coliform bacteria less than 2 to 380; and fecal streptococci bacteria less than 3 to 960. Maximum values for all three bacteria groups occurred at site 2.

Patterns of concentrations of fecal coliform and fecal streptococci bacteria collected from the 2-ft depths at sites 1 and 2 were representative of the bacteria groups in general and are compared in figure 21. Colony counts for both bacteria groups were greatest during the spring and early summer when overland runoff was high and were least during base-flow conditions. Because suspended solids can absorb organic material, bacteria densities mostly decreased from the inlet (site 2) to the dam (site 1) as suspended material settled to the bottom of the reservoir. The FC/FS ratios were less than 2.0 and generally were less than 1.0. Because the FC/FS ratios were substantially less than 4, the sources of the bacteria in Kenney Reservoir most likely were indigenous to the basin and not from nearby human origins.

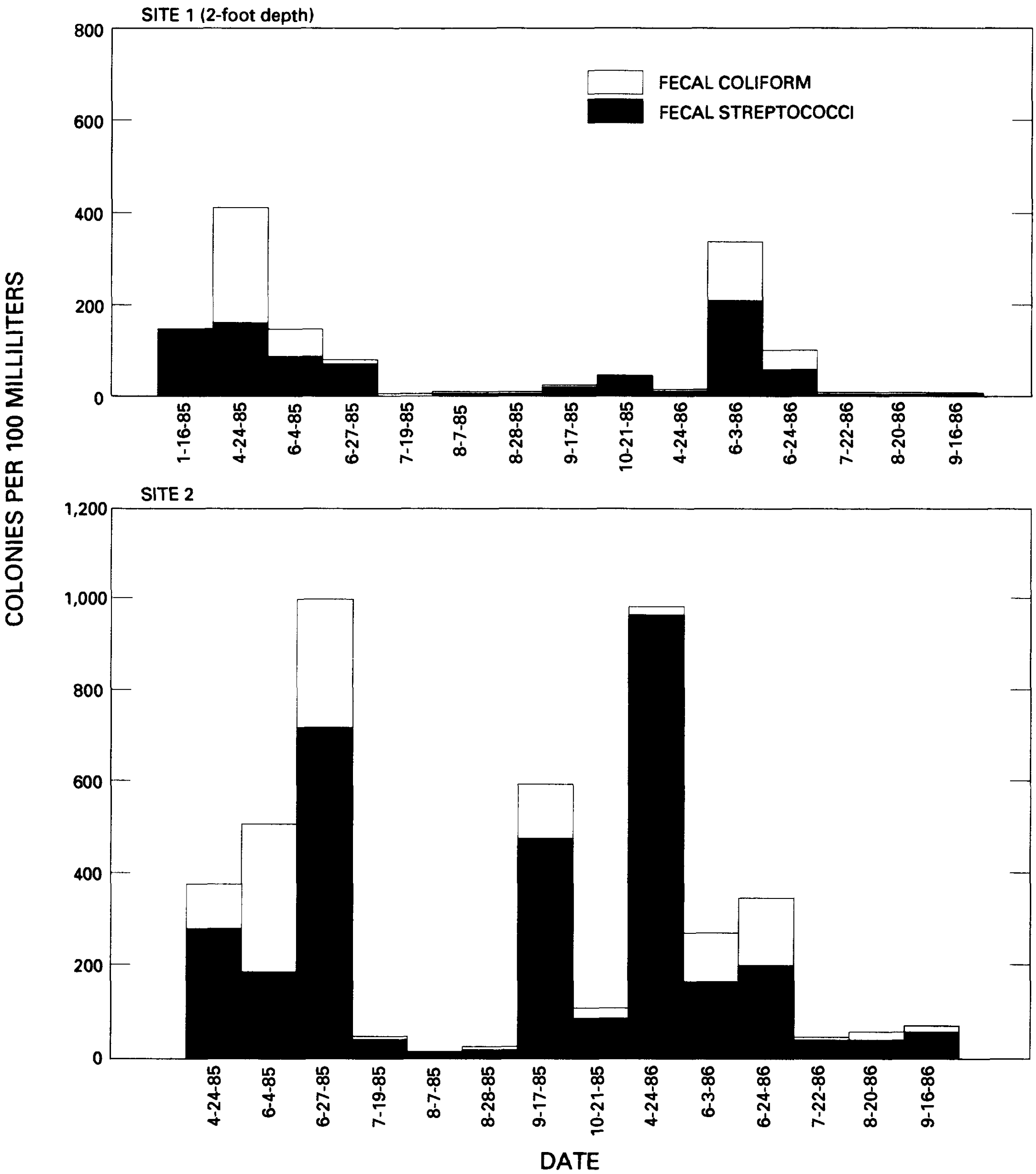


Figure 21.--Concentrations of fecal coliform and fecal streptococci bacteria collected at the 2-foot depths in Kenney Reservoir (sites 1 and 2), water years 1985-86.

SEDIMENT-TRANSPORT CHARACTERISTICS

Fluvial sediment, as defined by Colby (1963), is sediment transported by or suspended in water or that has been deposited in beds by water. The source of sediment in streams is derived principally from sheet erosion and channel erosion. Sheet erosion removes sediment rather uniformly from an area, and channel erosion erodes the beds and banks of streams when the flowing water has the capability of transporting additional sediment. Channel erosion usually is evident downstream from reservoirs, where the relatively sediment-free streamflow will degrade the stream channel as the channel begins to achieve equilibrium with sediment-transport capacity.

Sediment is transported in suspension (suspended-sediment load) and as particles along the streambed (bedload). The suspended-sediment load commonly consists of clay, silt, and sand that usually travel at the velocity of the stream and that are held in suspension by the upward components of turbulent currents or by colloidal forces. Bedload consists of coarser sized sediment that comes from the bed and banks of the stream. Particles moving as bedload remain close to the streambed, usually within a few grain diameters for uniform sediment (Colby, 1963). The suspended-sediment load plus the bedload compose the total-sediment load.

Sediment deposition in water is dependent upon particle-fall velocity and the transporting capability of the water. Fall velocity of a particle is dependent upon the difference in density between the particle and the water, the viscosity of the water, and the size, shape, and flocculation of the particles. Flocculation is dependent upon the size, shape, and composition of the particles and on the turbulence and chemical properties of the water (Colby, 1963). Fluvial sediment generally is deposited in lakes or reservoirs, stream channels, or flood plains. Concepts of fluvial sediment are discussed in Colby (1963) and Guy (1970a).

Fluvial Sediment

Instantaneous suspended-sediment load (L_s), in tons per day, is a function of water discharge (Q) in cubic feet per second, sediment concentration (C) in milligrams per liter, and the conversion constant 0.0027. Suspended-sediment load is calculated as follows:

$$L_s = 0.0027\ QC. \tag{2}$$

Annual loads of suspended sediment transported by the White River at site 3 for water years 1983-87 were estimated from least-square regressions that related instantaneous suspended-sediment load to instantaneous water discharge. Three regressions were developed from periodic samples using log-transformed data for concentrations of suspended sediment and instantaneous water discharge for water years 1983-87. The data were selectively grouped to define the suspended-sediment load and water-discharge characteristics for hydrologic seasons as follows: (1) The rising and peak flows during spring and early summer from snowmelt runoff; (2) the receding streamflows of summer that follow the peak snowmelt conditions; and (3) the base flows of fall and winter. The regressions used to relate suspended-sediment loads to water discharge for the three hydrologic seasons at site 3 are shown in figure 22.

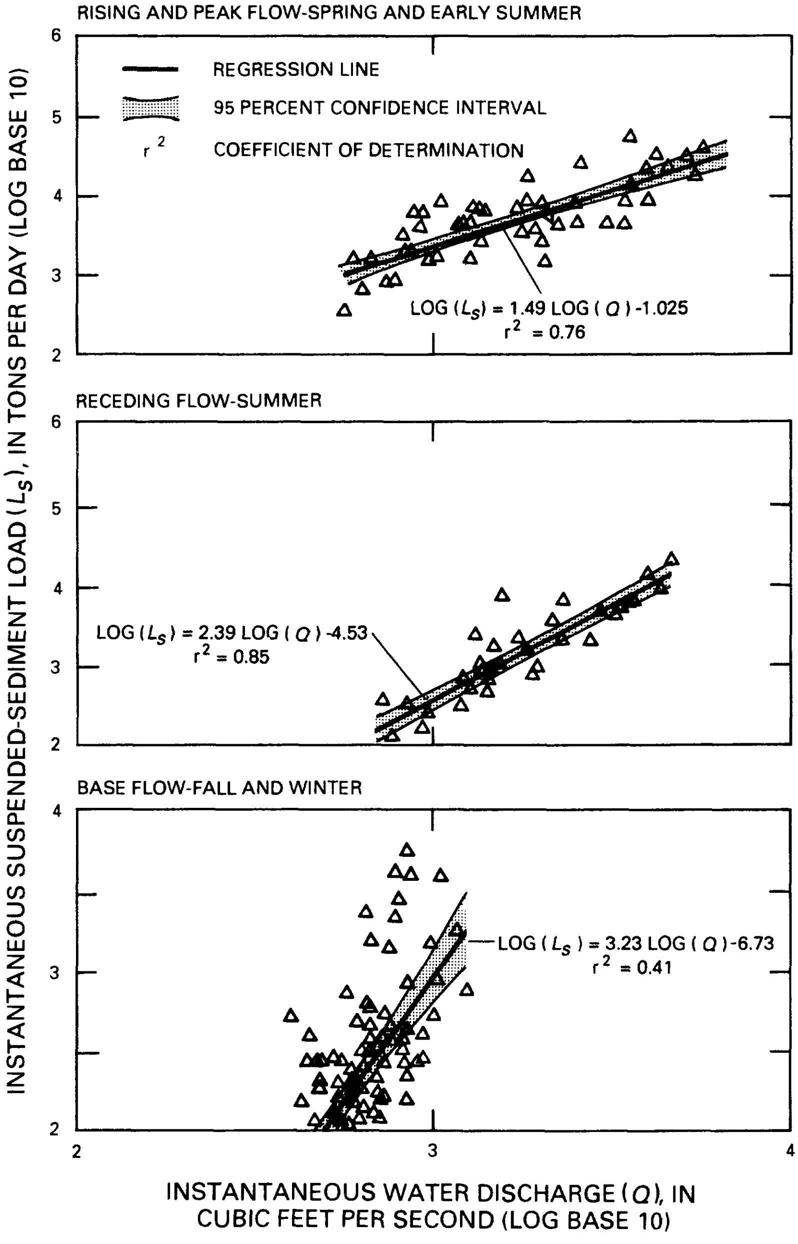


Figure 22.--Relations of suspended-sediment loads to water discharge for three hydrologic seasons in the White River (site 3), water years 1983-87.

Instantaneous bedload was measured at site 3 during 1984-86 from 18 samples of bedload. The samples were collected with a Helley-Smith bedload sampler using the techniques described by Emmett (1980). Each sample was collected in conjunction with samples for suspended sediment at identical locations in the stream. Instantaneous bedload (L_b), in tons per day, is a function of sampled bedload weight (W_b), in grams, width of the stream (D_w), in feet, the conversion constant 0.0952, horizontal width of the sampler intake (S_w), in feet, number of verticals (N), and the time of sampling per vertical (T), in seconds. Instantaneous bedload is calculated as follows:

$$L_b = \frac{W_b \, D_w \, 0.0952}{S_w \, N \, T} \tag{3}$$

Instantaneous bedloads were compared with instantaneous suspended-sediment loads that were collected simultaneously with bedload data (table 9). For a water-discharge range of 599-6,090 ft^3/s, bedload was less than 1.2 percent of the suspended-sediment load. Because bedload was small at site 3, it was not considered a substantial part of the estimated annual sediment loads to Kenney Reservoir.

The regression estimates of instantaneous suspended-sediment load (L_s) were assumed applicable for computing daily suspended-sediment load (L_{sd}) from daily mean water discharges (Q_d) for the three hydrologic seasons. Because bias may be introduced when using log-transformed data for regression analysis, a bias correction factor (C_b), as presented by Ferguson (1986) and discussed by Elliott and Defeyter (1986), was applied to each regression. The bias correction factor for conversion from common logarithms to the general antilogarithm form is a function of the regression variance (s^2) and is expressed as follows:

$$C_b = e^{(2.65s^2)}, \tag{4}$$

where e equals 2.71828 and is the base for natural logarithms. The general antilogarithm form of the regressions shown in figure 21 combined with the bias correction factor is as follows:

$$L_s = 10^a \, Q^b \, C_b, \tag{5}$$

where *a* is the regression constant and *b* is the regression coefficient. Using the assumption that

$$L_s \cong L_{sd}, \tag{6}$$

the regressions used to compute mean daily suspended-sediment loads (L_{sd}) from daily water discharge (Q_d) for the hydrologic seasons are:

Rising and peak flow	$L_{sd} = 10^{-1.025}\ Q_d^{1.491}\ 1.207$	(7)
Receding flow	$L_{sd} = 10^{-4.53}\ Q_d^{2.386}\ 1.165$	(8)
Base flow	$L_{sd} = 10^{-6.725}\ Q_d^{3.23}\ 1.642$	(9)

The computed daily suspended-sediment loads were summed to determine annual suspended-sediment loads in the lower White River.

Annual suspended-sediment loads for the 5 water years, 1983-87, in the White River at site 3, and annual suspended-sediment loads for the 9 water years, 1973-81, for the discontinued streamflow-gaging station 09306300, are plotted in figure 23. The sediment data from station 09306300 were computed using the procedures discussed previously and are included in figure 23 to improve the definition of suspended-sediment transport for years of low flow in the lower White River. Although analysis of covariance at the 0.05 level of significance indicated that the annual suspended-sediment loads and water discharges from both sites might be combined into one regression, two regressions were used because of the distance between the sites (12 mi) and because concurrent data were not collected at the sites. Comparisons are further limited because annual suspended-sediment loads could not be determined for similar ranges of annual water discharge at either site.

Analysis of data (figs. 22 and 23) indicated that during water years 1983-87 annual suspended-sediment loads in the lower White River at site 3 ranged from about 391,000 tons in 1987 to about 1,570,000 tons in 1984. Mean annual suspended-sediment load at site 3 for 1983-87 was approximately 1,040,000 tons. For the 3 water years (1985-87) of reservoir existence, however, annual suspended-sediment loads at site 3 ranged from 391,000 to 1,070,000 tons. During 1973-81, when annual water discharge at station 09306300 ranged from 312 ft^3/s (about 226,000 acre-ft) to 766 ft^3/s (about 555,000 acre-ft), annual suspended-sediment loads near the present dam site (fig. 2) ranged from about 104,000 tons in 1977 to about 747,000 tons in 1978. The mean annual suspended-sediment load at station 09306300 for 1973-81 was approximately 482,000 tons. Improved regressions for estimating annual suspended-sediment loads for medium- and low-flow runoff years in the White River at site 3 should be possible when additional data are collected.

Additional short-term, but large, discharges of sediment to the main stem of the White River may occur from tributary basins during intense thunderstorms. As an example, an estimated 290,000 tons of sediment transport from the Piceance basin was reported from a single storm near the mouth of Yellow Creek (fig. 1) in 1978 (U.S. Geological Survey, 1979). Although evidence of this event is inferred in figure 23, such events may go undetected when samples are collected periodically.

Table 9.--*Size distributions of bedload and suspended sediment in the White River at site 3, water years 1984-87*

[ft^3/s, cubic feet per second; mm, millimeters; --, no data]

Date	Time	Water discharge, instantaneous (ft^3/s)	Bedload, instantaneous (tons/day)	Suspended-sediment load, instantaneous (tons/day)	Sediment, percentage finer than 0.002 mm		Sediment, percentage finer than 0.004 mm		Sediment, percentage finer than 0.016 mm	
					(bedload)	(suspended)	(bedload)	(suspended)	(bedload)	(suspended)
05/01/84	1030	957	17.2	2,840	--	28.0	--	41.0	--	64.0
05/17/84	1130	4,760	14.2	37,800	--	24.0	--	32.0	--	53.0
06/01/84	1145	5,210	24.0	27,100	--	22.0	--	23.0	--	46.0
06/06/84	1530	5,140	24.0	22,500	--	24.0	--	30.0	--	46.0
06/08/84	1100	6,090	50.0	42,900	--	29.0	--	38.0	--	57.0
06/14/84	1345	3,960	32.0	15,200	--	20.0	--	24.0	--	44.0
06/29/84	1230	3,300	27.0	6,050	--	14.0	--	16.0	--	32.0
07/13/84	1120	1,760	17.0	1,950	--	7.0	--	18.0	--	40.0
11/30/84	1130	599	2.8	246	--	21.0	--	23.0	--	53.0
04/23/85	1400	1,890	29.0	10,100	--	26.0	--	32.0	--	51.0
05/29/85	1500	3,760	50.5	11,100	--	13.0	--	16.0	--	28.0
06/13/85	1500	3,500	22.6	8,140	--	15.0	--	20.0	--	31.0
04/23/86	1300	1,246	13.7	3,940	--	15.0	--	22.0	--	36.0
05/08/86	1330	2,404	28.2	5,170	--	18.0	--	24.0	--	40.0
06/02/86	1300	3,260	61.8	5,270	--	16.0	--	21.0	--	34.0
06/05/86	1100	3,280	60.0	6,240	--	17.0	--	22.0	--	36.0
06/11/86	1015	3,275	14.6	7,380	--	24.0	--	29.0	--	46.0
06/19/86	1300	2,290	16.8	2,250	--	17.0	--	23.0	--	37.0
05/01/87	1500	2,000	--	7,880	--	16.0	--	20.0	--	32.0
05/16/87	1510	2,140	--	4,920	--	14.0	--	19.0	--	32.0

Date	Sediment, percentage finer than 0.062 mm		Sediment, percentage finer than 0.125 mm		Sediment, percentage finer than 0.250 mm		Sediment, percentage finer than 0.500 mm		Sediment, percentage finer than 1.00 mm	
	(bedload)	(suspended)	(bedload)	(suspended)	(bedload)	(suspended)	(bedload)	(suspended)	(bedload)	(suspended)
05/01/84	1.0	86.0	3.6	92.0	36.1	98.0	93.9	100.0	97.4	100.0
05/17/84	.7	78.0	2.2	91.0	5.6	99.0	40.3	100.0	52.5	100.0
06/01/84	.9	76.0	2.4	89.0	9.5	98.0	53.4	100.0	67.2	100.0
06/06/84	1.3	75.0	2.6	88.0	7.5	97.0	60.6	99.0	76.7	100.0
06/08/84	1.0	82.0	2.3	92.0	6.8	99.0	33.7	100.0	44.4	100.0
06/14/84	1.5	75.0	2.7	89.0	5.7	97.0	48.4	100.0	66.4	100.0
06/29/84	.5	67.0	1.2	85.0	3.6	97.0	55.4	100.0	77.6	100.0
07/13/84	.3	77.0	0.5	90.0	1.6	98.0	55.1	100.0	88.9	100.0
11/30/84	1.4	86.0	1.6	93.0	17.4	99.0	64.9	100.0	92.3	100.0
04/23/85	1.2	75.0	3.5	87.0	18.6	96.0	81.7	100.0	91.2	100.0
05/29/85	1.6	57.0	5.4	79.0	33.8	94.0	77.8	100.0	90.8	100.0
06/13/85	1.9	59.0	3.1	82.0	24.4	96.0	71.3	100.0	87.5	100.0
04/23/86	1.1	64.0	3.8	83.0	34.3	96.0	83.5	100.0	96.2	100.0
05/08/86	.7	64.0	3.3	77.0	35.4	94.0	88.0	99.0	97.0	100.0
06/02/86	.3	62.0	1.5	75.0	10.4	92.0	54.1	100.0	77.2	100.0
06/05/86	.6	65.0	2.5	77.0	13.4	91.0	59.6	99.0	85.2	100.0
06/11/86	.6	76.0	2.5	88.0	29.4	97.0	80.6	100.0	93.3	100.0
06/19/86	.2	66.0	0.7	76.0	9.2	91.0	55.0	99.0	78.2	100.0
05/01/87	--	62.0	--	81.0	--	96.0	--	100.0	--	100.0
05/16/87	--	59.0	--	78.0	--	93.0	--	99.0	--	100.0

Table 9.--*Size distributions of bedload and suspended sediment in the White River at site 3, water years 1984-87*--Continued

Date	Sediment, percentage finer than 2.00 mm		Sediment, percentage finer than 4.00 mm		Sediment, percentage finer than 8.00 mm		Sediment, percentage finer than 16.00 mm		Sediment, percentage finer than 32.00 mm		Sediment, percentage finer than 64.00 mm	
	(bed-load)	(sus-pended)	(bed-load)	(sus-pended)	(bed-load)	(sus-pended)	(bed-load)	(sus-pended)	(bed-load)	(sus-pended)	(bed-load)	(sus-pended)
05/01/84	99.2	--	99.8	--	99.9	--	100.0	--	--	--	--	--
05/17/84	61.3	--	71.8	--	84.0	--	94.1	--	100.0	--	--	--
06/01/84	74.1	--	79.9	--	87.0	--	94.1	--	100.0	--	--	--
06/06/84	83.9	--	88.5	--	91.5	--	94.5	--	97.2	--	100.0	--
06/08/84	52.2	--	61.2	--	73.4	--	88.4	--	99.1	--	100.0	--
06/14/84	74.4	--	80.3	--	85.9	--	93.3	--	97.8	--	100.0	--
06/29/84	87.1	--	92.7	--	95.5	--	97.0	--	97.0	--	100.0	--
07/13/84	97.5	--	99.5	--	100.0	--	100.0	--	--	--	--	--
11/30/84	98.2	--	99.6	--	100.0	--	--	--	--	--	--	--
04/23/85	94.0	--	97.9	--	98.7	--	100.0	--	--	--	--	--
05/29/85	95.5	--	97.7	--	99.2	--	99.8	--	100.0	--	--	--
06/13/85	93.9	--	97.3	--	98.8	--	100.0	--	--	--	--	--
04/23-86	99.1	--	99.5	--	100.0	--	--	--	--	--	--	--
05/08/86	99.0	--	99.6	--	99.7	--	100.0	--	--	--	--	--
06/02/86	84.8	--	88.2	--	91.8	--	96.6	--	100.0	--	--	--
06/05/86	92.6	--	95.8	--	98.3	--	99.8	--	100.0	--	--	--
06/11/86	96.8	--	98.5	--	99.7	--	100.0	--	--	--	--	--
06/19/86	88.6	--	93.6	--	97.0	--	100.0	--	--	--	--	--
05/01/87	--	--	--	--	--	--	--	--	--	--	--	--
05/16/87	--	--	--	--	--	--	--	--	--	--	--	--

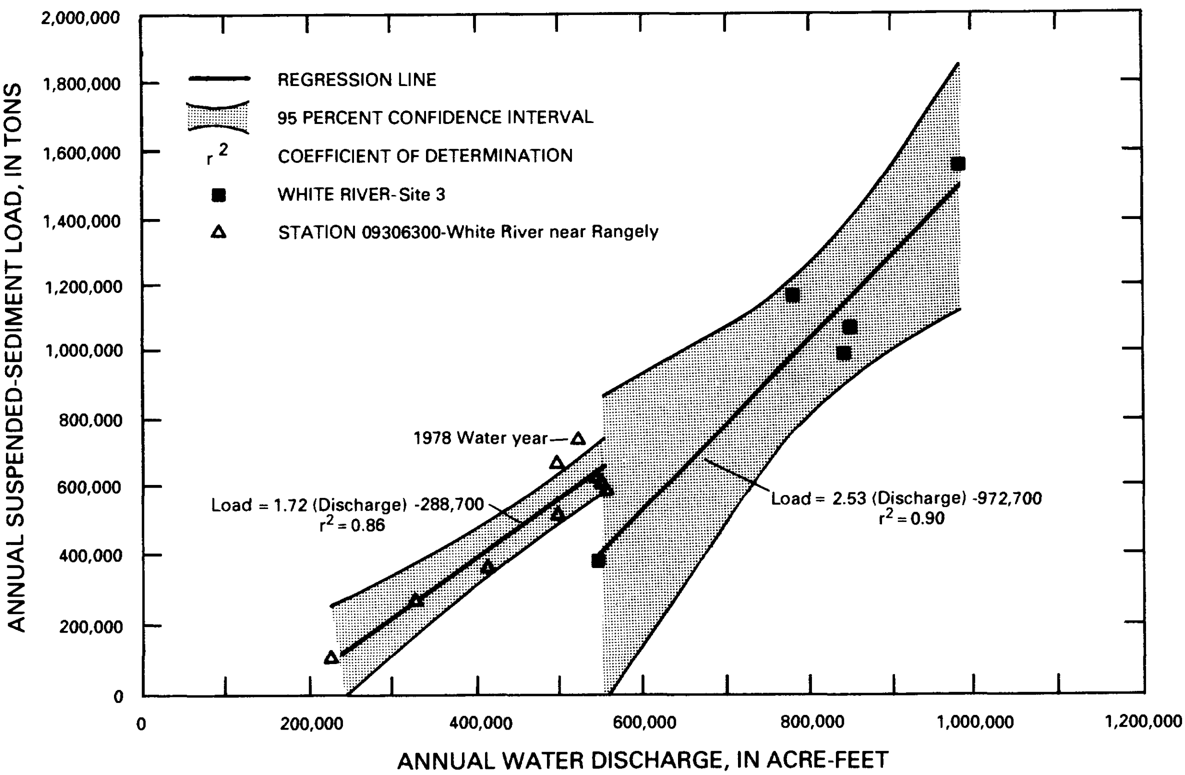


Figure 23.--Relations of annual suspended-sediment loads to annual water discharge for the White River at site 3 (water years 1983-87) and at station 09306300 (water years 1973-81).

Twenty samples of suspended sediment were collected from a range of water discharge during 1984-87 and analyzed for particle-size distribution (table 9). Variations in size composition of suspended sediment seemed to be independent of changes in sediment concentration, water discharge, and sediment loads. Average values, standard deviations, and ranges of size composition for the 20 samples are listed below:

Size category [mm = millimeter]	Average composition (rounded to nearest percent)	Standard deviation (percent)	Minimum value (percent)	Maximum value (percent)
Clay (finer than 0.004 mm)	25	7	16	41
Silt (0.004 to finer than 0.062 mm)	46	6	39	63
Sand (0.062 to finer than 2.00 mm)	29	9	14	43

Bedload was mostly sand (about 86 percent sand and about 13 percent gravel). Variations in size composition of bedload were independent of water discharge and sediment load.

Sediment Retention in the Reservoir

Because water-discharge and sediment data were not collected immediately downstream from the dam, direct measurements of sediment retention and reservoir trap efficiency of Kenney Reservoir were not possible. However, indirect estimates of sediment retention and trap efficiency in the reservoir were determined from data comparisons of samples for suspended solids (tables 13 and 14 in the "Hydrologic Data" section) collected from the 2-ft and near bottom depths within the reservoir at sites 1 and 2. In addition, data for suspended solids in the reservoir were compared with suspended-sediment data in the White River at site 3.

Concentrations of suspended solids generally decreased from the inlet (site 2) to the dam (site 1). The percent retention of suspended solids for a range of water discharge is shown in figure 24. The percent retention in concentrations of suspended solids from site 2 to site 1 ranged from about 65 to 98 percent when inflow was less than 1,000 ft^3/s; the percentage decreased to about 30 to 80 percent when inflow was greater than 2,500 ft^3/s (fig. 24). These values should approximate the percent retention or reservoir trap efficiency of clay and perhaps, very fine silts that entered the reservoir. Sediment particles that had general fall velocities in excess of 1 mm per second, such as coarse silts and sands, most likely were deposited along the reservoir bottom before the samples for suspended solids were collected. Assuming a generally small value of approximately 65 percent retention of clay and total retention of silt and sand in the reservoir, the estimated total sediment retention of the reservoir during high runoff years was calculated as 0.65 (25 percent clay) plus 1.00 (46 percent silt) plus 1.00 (29 percent sand) or equal to about 91 percent of the suspended sediment that entered Kenney Reservoir.

Concentrations of suspended solids at sites 1 and 2 in Kenney Reservoir were compared with concentrations of suspended sediment measured in the White River (site 3). Although direct comparison of suspended solids with suspended sediment may include some analytical and sampling error, both methods provide an acceptable measure of suspended matter in water. Data were evaluated for approximate time of travel between site 3 and the reservoir (approximately 2 to 5 hours) and for residence time within the reservoir (table 2). Eight sets of data that had collection times between sites that approximated the downstream time of travel were selected. Comparison of data within each set indicated that when daily suspended-sediment loads exceeded 100 tons in the White River, suspended-sediment concentrations decreased about 74 percent from the White River (site 3) to the inlet (site 2) and decreased about 94 percent from the White River (site 3) to the dam (site 1).

Daily concentrations of suspended solids at site 1 were estimated from regressions that related instantaneous concentrations of suspended solids for the 2-ft and near-bottom depths and an average of both depths at site 1 with reservoir inflow measured at site 3. The coefficients of determination (r^2) of the 3 regressions ranged from 0.43 to 0.71. Because the reservoir capacity is small, it was assumed that daily mean water discharge to the reservoir approximated daily mean water discharge from the reservoir. Mean daily and mean annual suspended-solids loads that theoretically were discharged from the 2-ft or near-bottom depths at site 1 were determined using the regression estimates for daily concentrations of suspended solids and inflow discharge.

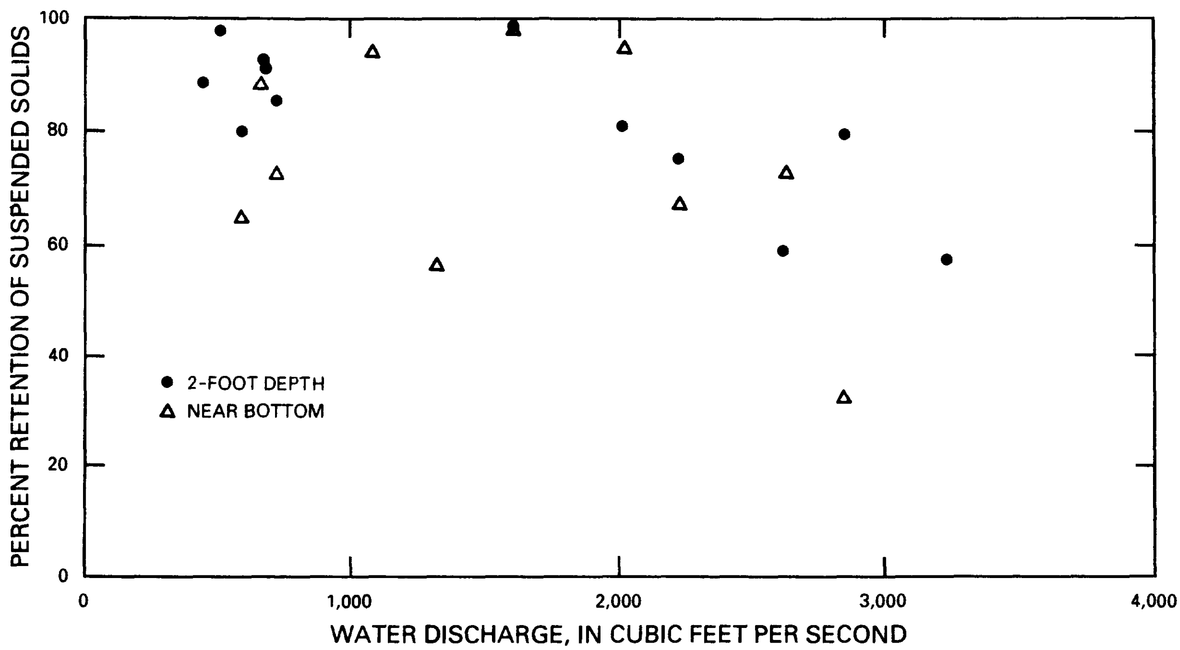


Figure 24.--Percent retention of suspended solids in Kenney Reservoir computed from a comparison of data near the inlet (site 2) and at the dam (site 1) for a range of water discharge, water years 1985-87.

Mean daily suspended-sediment loads for site 3 and mean daily suspended-solids loads computed as the average of the 2-ft and near-bottom depths at site 1 for 1985-87 are compared in figure 25. Annual suspended-sediment loads for site 3 and estimated suspended-solids loads at site 1 at the 2-ft and near-bottom depths are listed below:

	Site 3		Site 1 (2-foot depth)		Site 1 (near-bottom depth)	
Water year	Suspended-sediment Load (tons per year)	Suspended-sediment Yield (tons per square mile)	Estimated suspended-solids load (tons per year)	Percent of suspended load at site 3	Estimated suspended-solids load (tons per year)	Percent of suspended load at site 3
1985	1,070,000	424	27,100	2.5	34,400	3.2
1986	1,000,000	396	23,900	2.4	31,900	3.2
1987	391,000	154	6,800	1.7	14,100	3.6

A comparison of the data for suspended-sediment loads in the White River at site 3 with the estimated suspended-solids loads discharged from the dam at site 1 indicates that the sediment retention in Kenney Reservoir may be as great as 96 to 98 percent.

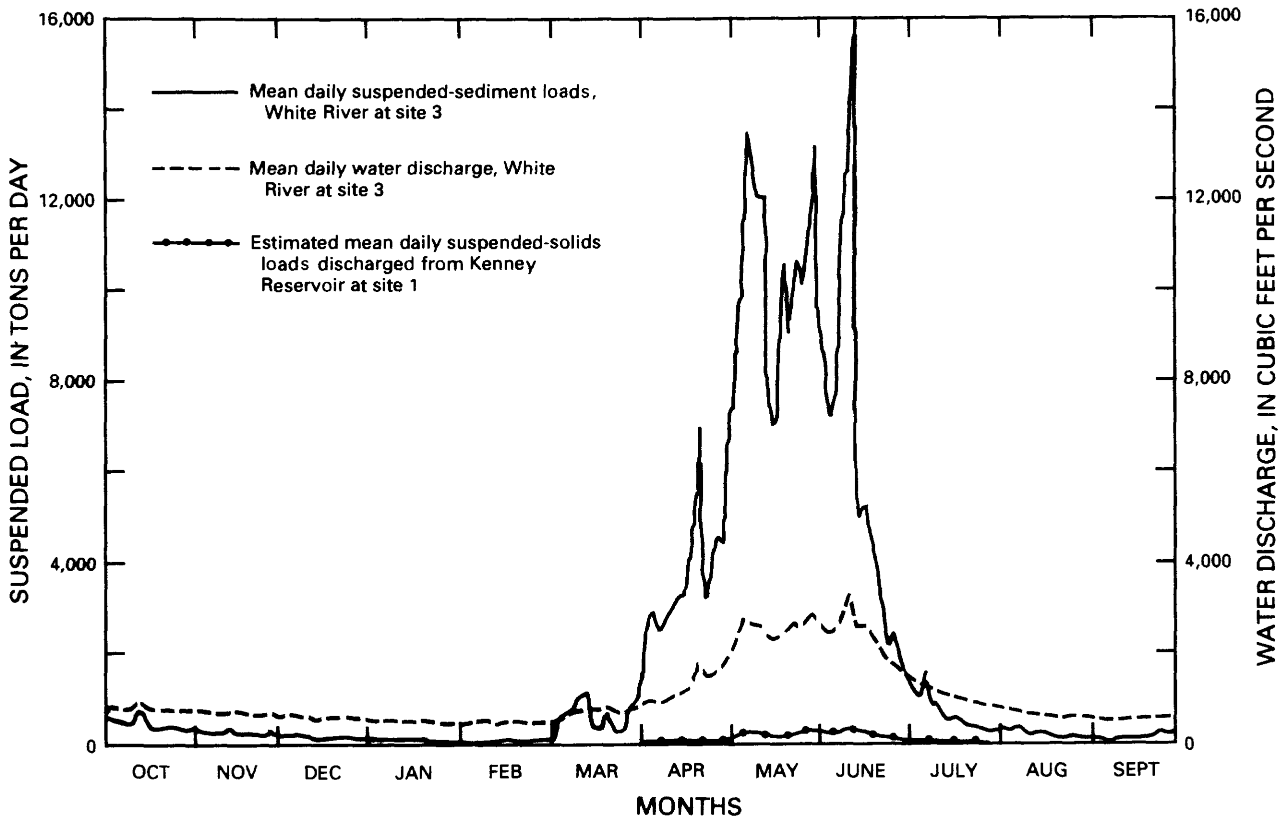


Figure 25.--Mean daily suspended-sediment loads and mean daily water discharge in the White River at site 3 and estimated mean daily suspended-solids loads discharged from Kenney Reservoir at site 1, water years 1985-87.

The estimated values of sediment retention, by using the three previously described methods, ranged from 91 to 98 percent. These results are large when compared with estimates for sediment retention developed from methods of Brune (1953) and Churchill (1948). Brune developed a set of curves for estimating sediment retention based on capacity-inflow ratios. The application of Brune's curves to Kenney Reservoir indicates that sediment retention would range from about 50 to 75 percent. Churchill's method, which uses capacity-inflow data and mean velocity of flow through the reservoir, indicated that sediment retention in Kenney Reservoir would be about 85 percent. The methods of Brune and Churchill, however, do not completely address size distribution of sediment. The coarse size composition (about 75 percent sand and silt) and related rapid deposition within the reservoir of the suspended sediment from the White River probably account for most of the differences between the estimates of sediment retention presented in this report and the estimates by using the methods of Brune and Churchill. Data for reservoir percent retention of suspended solids (fig. 24), however, are within the range of estimates of sediment retention by using the methods of Brune and Churchill.

A method for deriving original volume and compacted sediment volume displacement and percent loss of original reservoir capacity from methods of reservoir operation and average size composition of input sediment loads is presented in Strand and Pemberton (1982). The method of Strand and Pemberton, as applied to Kenney Reservoir, is exemplified in table 10. Based on a 91-percent sediment retention for the reservoir and the annual suspended-sediment load data at station 09306300 and site 3, annual volume displacement during 1973-87 would have ranged from about 0.5 percent in 1977 to about 7 percent in 1984 of the original reservoir capacity. After completion of the reservoir in late 1984, the estimated capacity loss ranged from about 1.8 percent in 1987, when the annual suspended-sediment load equaled about 391,000 tons, to about 5 percent in 1985, when the annual suspended-sediment load was approximately 1,070,000 tons.

By using the mean annual suspended-sediment load of 1,040,000 tons (site 3) for 1983-87, about 4.5 to about 5.0 percent of the original reservoir capacity would have been displaced by sediment in a year of average streamflow. If, however, the mean annual suspended-sediment load of 482,000 tons determined for discontinued gaging station 09306300 for 1973-81 is used, then the projected loss of original reservoir capacity would have been about 2.2 percent during a year of average water discharge.

Volume displacement and percent loss of original reservoir capacity for estimates of sediment retention are shown in figure 26. Not shown in figure 26 are possible additional increases in volume displacement that might result from occasional major runoff events from the semi-arid tributary basins upstream from the reservoir. Capacity loss may be less if near-bottom currents within the reservoir discharged scoured sediments through the bottom release outlet.

Table 10.--*Examples of computations of volume displacement from sediment loads to Kenney Reservoir*

I. PROGRAM TO COMPUTE INITIAL AND FINAL WEIGHT PER VOLUME OF SEDIMENT IN RESERVOIRS (from Strand and Pemberton, 1982)

a. Reservoir operation coefficient (Or)
(Or) Description
1. Sediment always submerged or nearly submerged
2. Normally moderate to considerable reservoir drawdown
3. Reservoir normally empty
4. Riverbed sediments

b. Coefficients for sediment size per reservoir operation (Or)

Or	Initial weight (mass) in lbs/cubic foot (Kg/cubic meter)						Time compaction (K) for inch lb (metric units)					
	Clay (Wc)		Silt (Wm)		Sand (Ws)		Clay (Wc)		Silt (Wm)		Sand (Ws)	
	English	Metric	English	Metric	English	Metric	English	Metric	English	Metric	English	Metric
1	26	416	70	1,120	97	1,550	16	256	5.7	91	0	0
2	35	561	71	1,140	97	1,550	8.4	135	1.8	29	0	0
3	40	641	72	1,150	97	1,550	0	0	0	0	0	0
4	60	961	73	1,170	97	1,550						

c. Data input

Enter reservoir coefficient----------> 1
Enter clay percent-------------------> 25 %
Enter silt percent-------------------> 46 %
Enter sand percent-------------------> 29 %

Enter compaction time (T) in years---> 20 years
Enter reservoir capacity (C)---------> 13,800 acre-feet
Enter annual sediment load-----------> 1,040,000 tons (average 1983-87)

d. Calculations

Initial weight(IW) = (Wc)(%c) + (Wm)(%m) + (Ws)(%s)
IW = 66.830

Final weight(FW) = IW + 0.04343(K)[(T/T-1)(log e T)-1]
K = 6.622
FW = 73.023

II. VOLUME DISPLACEMENT IN ACRE-FEET (data for original reservoir capacity)

Annual sediment load (tons)	At 91% retention: Initial volume displacement (acre-feet)	Initial capacity loss (percent)	Volume after (T=20) years (acre-feet)	Capacity loss after (T=20) years (percent)	At 98% retention: Initial volume displacement (acre-feet)	Initial capacity loss (percent)	Volume after (T=20) years (acre-feet)	Capacity loss after (T=20) years (percent)
100,000	63	0.45	57	0.41	67	0.49	62	0.45
200,000	125	0.91	114	0.83	135	0.98	123	0.89
300,000	188	1.36	172	1.24	202	1.46	185	1.34
400,000	250	1.81	229	1.66	269	1.95	246	1.79
500,000	313	2.27	286	2.07	337	2.44	308	2.23
600,000	375	2.72	343	2.49	404	2.93	370	2.68
700,000	438	3.17	401	2.90	471	3.42	431	3.13
800,000	500	3.62	458	3.32	539	3.90	493	3.57
900,000	563	4.08	515	3.73	606	4.39	555	4.02
1,000,000	625	4.53	572	4.15	673	4.88	616	4.47
1,100,000	688	4.98	629	4.56	741	5.37	678	4.91
1,200,000	750	5.44	687	4.98	808	5.85	739	5.36
1,300,000	813	5.89	744	5.39	875	6.34	801	5.80
1,400,000	875	6.34	801	5.80	943	6.83	863	6.25
1,500,000	938	6.80	858	6.22	1,010	7.32	924	6.70
1,600,000	1,000	7.25	915	6.63	1,077	7.81	986	7.14

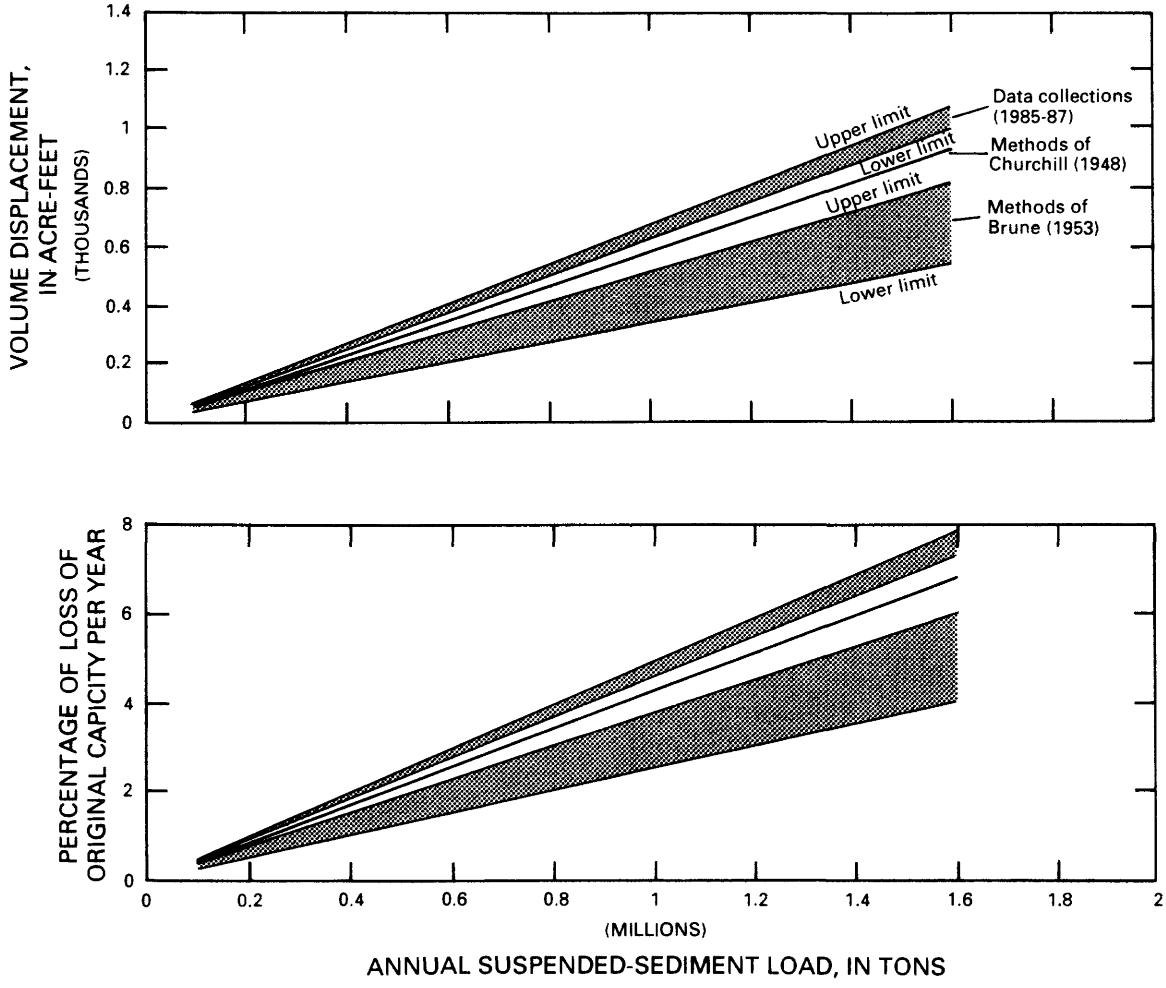


Figure 26.--Volume displacement and percent loss of original reservoir capacity from annual suspended-sediment loads to Kenney Reservoir as estimated from data collections during water years 1985-87 and methods of Brune (1953) and Churchill (1948).

SUMMARY AND CONCLUSIONS

The construction of Taylor Draw Dam and filling of Kenney Reservoir during 1984 were done in response to increased water-management needs in northwestern Colorado. To evaluate possible processes and changes that may occur in the reservoir after filling and the effects of sediment transport to the reservoir, physical, chemical, and biological data needed to be collected to define seasonal variations in vertical and areal water-quality characteristics. Physical, chemical, and biological data collected during the first 3 years of reservoir operation (1985-87) are presented and summarized for two sites in Kenney Reservoir. Related water-quality data and sediment characteristics during 1983-87 are summarized for one site on the White River about 8 mi upstream from the reservoir. Data from the three sites were compared to determine and evaluate changes in water-quality characteristics caused by impoundment. In addition, fluvial sediment loads were determined for the White River upstream from the reservoir for 1983-87, and sediment retention in the reservoir was estimated. During 1983-87, the mean annual discharge in the White River (site 3) was about 174 percent of the mean annual discharge for the period of record (1973-81) at a discontinued streamflow-gaging station near the present dam site.

Water temperature, specific conductance, pH, and dissolved oxygen at various depths were measured at the dam (site 1) and near the reservoir inlet (site 2). Some stratification developed during summer when temperatures at site 1 generally decreased 3 to 5 °C from the surface to the bottom. Maximum surface temperatures in the reservoir were 23.8 °C at site 1 and 24.4 °C at site 2. Surface temperatures in the reservoir during summer were similar to temperatures measured in the White River at site 3 during summer.

After initial flushing, specific conductance in the reservoir ranged from 374 to 932 µS/cm, and values for the White River at site 3 ranged from 375 to 963 µS/cm. Specific conductance was least during snowmelt runoff in May and June and greatest during low flow in fall and winter. Specific conductance varied little with depth. Lateral differences between sites were attributed to variations in discharge and time of travel. Predicted values of dissolved-solids concentrations from regression relations between values of specific conductance and concentrations of dissolved solids were similar at all three sites.

Measured values of pH in Kenney Reservoir generally ranged from 7.4 to 8.8; exceptions to this range of pH (9.0 to 9.2) occurred in localized water that contained a phytoplankton bloom in June 1987. Values of pH exceeded 8.5 only in near-surface water that was supersaturated with dissolved oxygen. Values of pH decreased with depth and were least (about 7.4 to 8.0) near the bottom of the reservoir. The small values of pH were attributed to the accumulation of CO_2 by respiration and other byproducts of organic decomposition. Values from periodic measurements of pH in the White River (site 3) during 1985-87 ranged from 8.0 to 8.8.

Concentrations of dissolved oxygen in the reservoir at sites 1 and 2 generally ranged from 2.3 to 10.1 mg/L; measured values in the White River (site 3) during 1985-87 ranged from 7.8 to 12.5 mg/L. A concentration of 0.0 mg/L was measured near the bottom at site 1 shortly after the reservoir filled. Maximum concentrations of dissolved oxygen (14.0 to 18.0 mg/L) in the reservoir occurred in locally concentrated areas of a phytoplankton bloom in June 1987. Dissolved oxygen at the dam (site 1) decreased with depth during summer but concentrations remained equal to or greater than 4.0 mg/L in depths less than 35 ft. Supersaturation of dissolved oxygen from photosynthesis occurred in shallow depths at both reservoir sites. Biological activies such as respiration and decomposition decreased the dissolved-oxygen concentration at near-bottom depths. Except for two samples collected from localized growths of phytoplankton in June 1987, 5-day BOD in Kenney Reservoir ranged from 0.7 to 2.3 mg/L. The 5-day BOD in samples collected from the phytoplankton bloom in June 1987 exceeded 25 mg/L. Generally, BOD was slightly less in Kenney Reservoir when compared with BOD in the White River.

Secchi-disk measurements in the reservoir ranged from 11 to 144 in. Turbidity in NTU measured at 2-ft depths was least (1.2 NTU) at site 1 and greatest (220 NTU) at site 2. Data comparisons indicated that light penetration and general water clarity improved substantially from the inlet (site 2) to the dam (site 1), especially during low-flow periods.

Major ion types in the White River and Kenney Reservoir were similar and ranged from a hard to very hard calcium bicarbonate type when discharge in the White River exceeded 3,500 ft^3/s. When flows were less than 400 ft^3/s, water-quality type was a very hard calcium magnesium sulfate bicarbonate.

Concentrations of nitrogen, phosphorus, and total organic carbon in Kenney Reservoir and in the White River varied with season and runoff conditions. Concentrations of ammonia as nitrogen, nitrite plus nitrate as nitrogen, and organic nitrogen generally were greatest in the White River (site 3) during spring runoff and least in near-surface waters at the dam (site 1) during fall. Ammonia concentrations as great as 0.13 mg/L were generated from biological decomposition near the reservoir bottom during summer; however, concentrations of ammonia may increase if anaerobic conditions develop.

Concentrations of dissolved phosphorus most frequently were less than 0.1 mg/L in the White River (site 3) and less than 0.05 mg/L in Kenney Reservoir. Large concentrations of nitrogen (greater than 1.5 mg/L) and phosphorus (0.3 to 0.62 mg/L) were measured in the White River during spring runoff in 1987. These large nutrient concentrations preceded a phytoplankton bloom that occurred in Kenney Reservoir during June 1987.

Twenty-two trace constituents were sampled from near-surface and near-bottom depths during high- and low-flow periods at site 1. Concentrations of iron and manganese were greater than 1,000 µg/L only in the first sample collected near the reservoir bottom at site 1 in January 1985. Except for the one-time measurements of total recoverable iron and manganese in January 1985 and the concentrations of total recoverable mercury (as much as 0.2 µg/L), all concentrations of trace constituents were less than the recommended concentrations established by the State of Colorado for cold-water biota. Concentrations of total recoverable copper, mercury, and zinc tended to be slightly greater in the White River than concentrations measured in Kenney Reservoir.

A total of 210 species from 7 phyla of phytoplankton were identified from single depth and composite samples collected in Kenney Reservoir. Bacillariophyta (diatoms) and chlorophyta (green algae) were the most common phytoplankton collected during 1985-86; cyanophyta (blue-green algae) were dominant in 1987. Cell counts increased during summer and were greater at site 1 than at site 2. Except for an algae bloom in June 1987, the maximum combined cell count (unrounded value) for the three major phyla (diatoms, green algae, and blue-green algae) was slightly greater than 15,000 cells/mL.

Species compositions of phytoplankton samples collected from the 2-ft depth in 1985 and 1986 were compared with concurrent collections of composite samples of the euphotic zone. Although the composite method for phytoplankton collection alone would have yielded about 22 percent more species than collections obtained solely at the 2-ft depth, the presence or reoccurrence of 154 species during 1985 and 1986 would have gone undetected if the single depth samples (2-ft) were omitted from the program.

In June 1987, a phytoplankton bloom that consisted almost entirely of the dinoflagellate, *Peridinium biceps*, developed in the reservoir. Subsurface growths that appeared as dark brown patches and stringers contained counts of 71,000 cells/mL. Large concentrations of dissolved oxygen (14.0-18.0 mg/L), pH (9.0-9.2 units), and 5-day BOD (greater than 25 mg/L) were measured in water that contained the phytoplankton growths. Increases in the hydraulic residence time, water clarity, water temperature, and possibly nutrient concentrations in Kenney Reservoir in 1987, when compared with 1985 and 1986, probably contributed to the bloom.

The diversity index (DI) for phytoplankton species identified from all samples ranged from 0.11 to 3.99 at the dam (site 1) and from 0.18 to 4.02 near the inlet (site 2). The DI generally was greater at site 2 than at site 1.

Concentrations, in colonies per 100 milliliters, of total coliform bacteria ranged from less than 2 to 1,100; concentrations of fecal coliform bacteria ranged from less than 2 to 380; and concentrations of fecal streptococci bacteria ranged from less than 3 to 960. Bacteria concentrations were greatest at site 2 during high runoff, and concentrations generally decreased from site 2 to site 1. The FC/FS ratios were less than 2.0 and generally were less than 1.0. Sources of bacteria in the reservoir most likely were indigenous to the basin and not from nearby human origins.

Annual suspended-sediment loads at site 3, during water years 1983-87, ranged from 391,000 to 1,570,000 tons. Bedload was less than 1.2 percent of suspended-sediment load in 18 measurements throughout a range (599-6,090 ft^3/s) of water discharge. Because bedload was small, it was not considered a substantial part of the annual sediment load.

Size composition of 20 samples of suspended sediment averaged 25 percent clay, 46 percent silt, and 29 percent sand. Changes in percent composition of suspended sediment seemed to be independent of changes in sediment concentration, water discharge, and sediment load. Bedload was mostly sand (average bedload was about 86 percent sand and about 13 percent gravel), and the percent composition also seemed to be independent of water discharge and sediment load.

Sediment retention in Kenney Reservoir was estimated by using three methods. Data indicated that about 91 to about 98 percent of the total sediment load to the reservoir was retained since filling of the reservoir was completed in late 1984. Calculations of volume displacement in Kenney Reservoir, based on sediment load and size composition, and sediment retention comparisons with independent methods were summarized. Data collected during 1985-87 indicated that about 1.8 to 5 percent of the original capacity of the reservoir was displaced each year by sediment deposition. Data collected during 1973-87, however, indicated that the annual displacement could range from 0.5 to 7 percent each year. Variables such as sediment discharges from local tributary basins and sediment scour and discharge from the bottom of the reservoir were not measured.

Comparisons of water-quality data for the White River (site 3) with water impounded in Kenney Reservoir (sites 1 and 2) indicated:

1. Water releases at depth from the reservoir during summer generally would be several degrees cooler when compared with daytime maximum temperatures in the White River (site 3).

2. Differences between sites in values of specific conductance and concentrations of dissolved solids, major ions, and trace constituents were minor or insignificant. Changes in values for these chemical characteristics principally were related to changes in streamflow.

3. Values of pH and dissolved oxygen were substantially less at depth during summer when compared with values measured near the reservoir surface and in the White River. Large values of pH and dissolved oxygen that were generated from photosynthesis in near-surface water in Kenney Reservoir were greater than values measured in the White River at site 3. Recurrences of these values in the reservoir during summer are probable.

4. Residence time was sufficient for most suspended matter to settle; therefore, substantial increases in water clarity of the White River between sites 3 and site 1 occurred during impoundment.

5. Decreases in concentrations of nitrate plus nitrite as nitrogen and phosphorus, probably as a result of biological uptake, occurred, and there were apparent gradual increases in concentrations of ammonia as nitrogen at depth during summer from respiration.

6. Suspended solids tend to adsorb organics as they settle; therefore, concentrations of bacteria and other related organics, such as organic nitrogen, were decreased in the water column as water flowed through the reservoir.

7. Phytoplankton blooms and the effects of the blooms on water quality within the reservoir were substantial. Major phytoplankton blooms probably will occur when there are associated increases in residence time, water clarity, and water temperature and possibly when large concentrations of nutrients exist during periods of decreased inflow.

8. Sediment transport by the White River upstream from the reservoir was decreased approximately 91 percent or greater after filling of Kenney Reservoir. The long-term effects of sediment removal and storage on the White River downstream from Kenney Reservoir were not assessed.

SELECTED REFERENCES

Allen, H.L., 1972, Phytoplankton photosynthesis, micronutrient interactions, and inorganic carbon availability in a soft-water Vermont lake--Proceedings of the symposium on nutrients and eutrophication: American Society of Limnology and Oceanography, v. 1, p. 63-83.

Boyle, J.M., Covay, K.J., and Bauer, D.P., 1984, Quantity and quality of streamflow in the White River basin, Colorado and Utah: U.S. Geological Survey Water-Resources Investigations Report 84-4022, 84 p.

Britton, L.J., Averett, R.C., and Ferreira, R.F., 1975, An introduction to the processes, problems, and management of urban lakes: U.S. Geological Survey Circular 601-K, 22 p. (Reprinted 1977).

Britton, L.J., and Greeson, P.E., eds., 1989, Methods for collection and analysis of aquatic biological and microbiological samples: U.S. Geological Survey Techniques of Water-Resources Investigations, bk. 5, chap. A4, 363 p.

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 of Water-Resources Investigations, bk. 5, chap. A1, 160 p. [Out of print; available only in U.S. Depository Libraries; this is the only version that contains field methods]

Brune, G.M., 1953, Trap efficiency of reservoirs: American Geophysical Union Transactions, v. 34, no. 3, p. 407-418.

Butler, D.L., 1986, Sediment transport in the Colorado River near DeBeque, Colorado: U.S. Geological Survey Water-Resources Investigations Report 85-4266, 30 p.

Churchill, M.A., 1948, Analysis and use of reservoir sedimentation data with discussion by L.C. Gottschalk: Federal Inter-Agency Sedimentation Conference, Denver, Colo., 1947, Proceedings, p. 139-140.

Colby, B.R., 1956, Relationship of sediment discharge to streamflow: U.S. Geological Survey open-file report, 170 p.

_____1963, Fluvial sediments--a summary of source, transportation, deposition, and measurement of sediment discharge: U.S. Geological Survey Bulletin 1181-A, 47 p.

Colorado Department of Health, 1978, Water quality standards for Colorado: Denver, Water Quality Control Division, 47 p.

Dunst, R.C., Born, S.M., Uttormark, P.D., Smith, S.A., and others, 1974, Survey of lake rehabilitation techniques and experiences: Wisconsin Department of Natural Resources Technical Bulletin no. 75, 179 p.

Durfor, C.N., and Becker, Edith, 1964, Public water supplies of the 100 largest cities in the United States, 1962: U.S. Geological Survey Water-Supply Paper 1812, 364 p.

Elliott, J.G., and DeFeyter, K.L., 1986, Sediment-data sources and estimated annual suspended-sediment loads of rivers and streams in Colorado: U.S. Geological Survey Water-Resources Investigations Report 86-4344, 148 p.

Emmett, W.W., 1980, A field calibration of the sediment-trapping characteristics of the Helley-Smith bedload sampler: U.S. Geological Survey Professional Paper 1139, 44 p.

Federal Water Quality Administration, 1971, Current practice in water microbiology: Washington, D.C., U.S. Department of Interior Training Manual, var. pag.

Ferguson, R.I., 1986, River loads underestimated by rating curves: Water Resources Research, v. 22, no. 1, p. 74-76.

Fishman, M.J., and Friedman, L.C., eds., 1985, Methods for determination of inorganic substances in water and fluvial sediments: U.S. Geological Survey Open-File Report 85-495, 709 p. [Pending publication as U.S. Geological Survey Techniques of Water-Resources Investigations, bk. 5, chap. A1].

Goerlitz, D.F. and Brown, Eugene, 1972, Methods for analysis of organic substances in water: U.S. Geological Survey Techniques of Water-Resources Investigations, bk. 5, chap. A3, 40 p.

Greeson, P.E., 1971, Limnology of Oneida Lake with emphasis on factors contributing to algae blooms: U.S. Geological Survey open-file report, 185 p.

_____ed., 1982, Biota and biological principles of the aquatic environment: U.S. Geological Survey Circular 858-A, 49 p.

Guy, H.P., 1969, Laboratory theory and methods for sediment analysis: U.S. Geological Survey Techniques of Water-Resources Investigations, bk. 5, chap. C1, 58 p.

_____1970a, Fluvial sediment concepts: U.S. Geological Survey Techniques of Water-Resources Investigations, bk. 3, chap. C1, 55 p.

_____1970b, Sediment problems in urban areas: U.S. Geological Survey Circular 601-E, 8 p.

Guy, H.P., and Norman, V.W., 1970, Field methods for measurement of fluvial sediment: U.S. Geological Survey Techniques of Water-Resources Investigations, bk. 3, chap. C2, 59 p.

Hem, J.D., 1985, Study and interpretation of the chemical characteristics of natural water (3d ed.): U.S. Geological Survey Water-Supply Paper 2254, 263 p.

Hutchinson, G.E., 1957, A treatise on limnology--Volume I, Geography, physics and chemistry: New York, John Wiley, 1,015 p.

_____1967, A treatise on limnology--Volume II, Introduction to the lake biology and the limnoplankton: New York, John Wiley, 1,115 p.

Hutchison, N.E., Compiler, 1975 WATSTORE users guide, volume 1: U.S. Geological Survey Open-File Report 75-426, 708 p.

McKee, J.E., and Wolf, H.W., 1963, Water quality criteria (2d ed): California Water Resources Control Board Publication no. 3-A, 548 p. (Reprinted in 1971).

National Academy of Sciences, 1972, Water quality criteria, 1972: Washington, D.C., U.S. Government Printing Office, Ecological Research Series, EPA-R3-73-033-March 1973, 594 p.

Odum, E.P., 1971, Fundamentals of ecology (3d ed): Philadelphia, W.B. Saunders Co., 574 p.

Palmer, C.M., 1977, Algae and water pollution: Cincinnati, Ohio, U.S. Environmental Protection Agency EPA-60019-77-036, 123 p.

Patrick, Ruth, and Reimer, C.W., 1966, Diatoms of the United States: Philadelphia, Academy of Natural Sciences, v. 1, no. 13, 688 p.

Piper, A.M., Garrett, A.A., and others, 1953, Native and contaminated ground waters in the Long Beach-Santa Ana area, California: U.S. Geological Survey Water-Supply Paper 1136, 320 p.

Prescott, G.W., 1939, Some relationships of phytoplankton to limnology and aquatic biology, *in* Problems of lake biology: American Association for the Advancement of Science Publication no. 10, p. 65-78.

_____1970, How to know the freshwater algae: Dubuque, Wm. C. Brown Co., 348 p.

Rudolfs, Willem and Heukelekian, H., 1967, Effect of sunlight and green organisms on re-aeration of streams, *in* Biology of Water Pollution: U.S. Department of Interior, Federal Water Pollution Control Administration, 290 p.

Sawyer, C.N., 1947, Fertilization of lakes by agricultural and urban drainage: Journal of the New England Water Works Association, v. 61, no. 2, p. 109-127.

Strand, R.I. and Pemberton, E.L., 1982, Reservoir sedimentation--Technical guideline for the U.S. Bureau of Reclamation: Denver, Sedimentation and River Hydraulics Section, Hydrology Branch, Division of Planning Technical Services, Engineering and Research Center, 48 p.

U.S. Geological Survey, 1978-86, Dolores River basin, Green River basin, and San Juan River basin *in* Water resources data--Colorado, Water years 1977-85: U.S. Geological Survey Water-Data Reports CO-78-3 through CO-86-3, v. 3, 9 v.

_____1987-88, Colorado River basin *in* Water resources data--Colorado, Water years 1986-87: U.S. Geological Survey Water-Data Reports CO-87-2 through CO-88-2, v. 2, 2 v.

Van Liew, W.P. and Gesink, M.L., 1985, Preliminary assessment of the ground-water resources of the alluvial aquifer, White River Valley, Rio Blanco County, Colorado: U.S. Geological Survey Water-Resources Investigations Report 84-4307, 82 p.

Verduin, Jacob, 1956, Primary production in lakes: Limnology and Oceanography, v. 1, no. 2, p. 85-91.

Vollenweider, R.A., 1968, Scientific fundamentals of the eutrophication of lakes and flowing water with particular reference to nitrogen and phosphorus as factors in eutrophication: Paris, France, Organization for Economic Cooperation and Development, 252 p.

Warren, C.E., Doudoroff, Peter, and Shumway, D.L., 1973, Development of dissolved oxygen criteria for freshwater fish: Washington, D.C., U.S. Environmental Protection Agency, 121 p.

Welch, E.B., 1969, Factors initiating phytoplankton blooms and resulting effects on dissolved oxygen in Duwamish River estuary, Seattle, Wash.: U.S. Geological Survey Water-Supply Paper 1873-A, 62 p.

Wetzel, R.G., 1983, Limnology (2d ed.); Philadelphia, W.B. Saunders Co., 767 p.

Wilhm, J.L., and Dorris, T.C., 1968, Biological parameters for water quality criteria: Biological Science, v. 18, no. 6, p. 477-480.

Yoshimura, S., 1938, Dissolved oxygen of the lake waters of Japan: *in section C of* Science Reports [series]: Tokyo Bunrika Daigaku, [now Tokyo Kyoiku Daigaku], v. 2, no. 8, p. 63-277.

HYDROLOGIC DATA

Table 11.--*Water-quality data for selected depths in Kenney Reservoir, site 1, water years 1985-87*

[ft, feet; °C, degrees Celsius; μS/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter]

Date	Time (hours)	Sample depth (ft)	Temperature (°C)	Specific conductance (μS/cm)	pH (units)	Oxygen, dissolved (mg/L)	Oxygen, dissolved saturation (percent)
01/16/85	1420	0	0.0	741	8.3	9.6	79
01/16/85	1430	2	0.0	741	8.3	9.6	79
01/16/85	1440	4	0.0	741	8.3	9.5	79
01/16/85	1445	6	0.0	745	8.3	9.5	79
01/16/85	1447	7	0.0	745	8.3	9.4	78
01/16/85	1450	8	0.0	745	8.3	9.4	78
01/16/85	1455	10	0.0	749	8.3	9.4	78
01/16/85	1500	15	0.0	756	8.3	9.5	79
01/16/85	1505	20	0.0	760	8.3	9.5	79
01/16/85	1510	25	0.0	779	8.3	9.3	77
01/16/85	1515	30	0.0	790	8.3	9.1	75
01/16/85	1520	35	0.0	832	8.3	8.9	74
01/16/85	1525	40	0.0	905	8.1	7.5	62
01/16/85	1530	45	1.7	972	8.0	5.3	46
01/16/85	1535	47	5.1	1,550	7.4	0.0	0
04/24/85	1015	0	8.0	739	8.4	9.0	93
04/24/85	1020	2	8.0	739	8.4	9.0	93
04/24/85	1025	4	8.0	733	8.4	9.0	93
04/24/85	1030	7	8.0	733	8.4	8.9	92
04/24/85	1035	10	8.0	733	8.4	8.9	92
04/24/85	1040	15	7.8	735	8.4	8.9	91
04/24/85	1045	20	7.8	735	8.4	8.9	91
04/24/85	1050	25	7.8	735	8.4	8.9	91
04/24/85	1055	30	7.7	740	8.4	8.9	91
04/24/85	1100	35	7.6	736	8.4	8.9	91
04/24/85	1105	40	7.5	736	8.4	8.8	90
04/24/85	1110	45	7.0	770	8.4	8.8	89
06/04/85	1245	0	17.5	448	8.3	8.0	101
06/04/85	1250	2	15.8	453	8.3	8.1	100
06/04/85	1255	4	14.0	457	8.3	8.3	98
06/04/85	1300	7	13.8	452	8.3	8.3	98
06/04/85	1305	10	13.5	456	8.3	8.3	97
06/04/85	1310	15	13.5	453	8.3	8.3	97
06/04/85	1315	20	13.1	452	8.3	8.3	96
06/04/85	1320	25	13.0	450	8.3	8.3	96
06/04/85	1325	30	12.5	444	8.3	8.4	95
06/04/85	1330	35	11.1	433	8.3	8.5	94
06/04/85	1335	40	11.0	427	8.3	8.5	94
06/04/85	1340	45	10.9	430	8.3	8.4	93
06/04/85	1345	49	10.8	447	8.3	7.9	87

Table 11.--*Water-quality data for selected depths in Kenney Reservoir, site 1, water years 1985-87*--Continued

Date	Time (hours)	Sample depth (ft)	Temper-ature (°C)	Specific conduct-ance (µS/cm)	pH (units)	Oxygen, dissolved (mg/L)	Oxygen, dissolved saturation (percent)
06/27/85	1310	0	18.8	431	8.4	8.2	107
06/27/85	1315	2	16.8	434	8.4	7.8	98
06/27/85	1320	4	16.8	434	8.4	7.8	98
06/27/85	1325	7	16.5	436	8.4	7.8	97
06/27/85	1330	10	16.4	436	8.3	7.6	95
06/27/85	1335	15	15.5	471	8.3	7.6	93
06/27/85	1340	20	15.0	484	8.3	7.6	92
06/27/85	1345	25	14.5	496	8.3	7.7	92
06/27/85	1350	30	14.2	498	8.3	7.7	92
06/27/85	1355	35	14.1	500	8.3	7.8	93
06/27/85	1400	40	14.0	500	8.3	7.8	92
06/27/85	1405	43	13.8	505	8.3	7.8	92
07/19/85	1230	0	23.8	660	8.6	9.0	130
07/19/85	1235	2	23.8	660	8.6	8.9	129
07/19/85	1240	4	23.4	655	8.6	8.9	128
07/19/85	1245	7	23.1	655	8.6	8.9	127
07/19/85	1250	10	23.0	649	8.6	8.9	127
07/19/85	1255	15	22.9	648	8.6	8.5	121
07/19/85	1300	20	22.7	648	8.6	8.4	119
07/19/85	1305	25	21.5	689	8.5	7.6	105
07/19/85	1310	30	21.1	698	8.5	6.9	95
07/19/85	1315	35	20.8	694	8.5	6.8	93
07/19/85	1320	40	20.5	698	8.5	6.8	92
07/19/85	1325	45	19.3	693	8.4	6.8	90
08/07/85	1230	0	22.5	699	8.5	9.4	133
08/07/85	1235	2	22.0	704	8.5	9.5	133
08/07/85	1240	4	21.8	705	8.5	9.5	132
08/07/85	1245	7	21.6	706	8.5	9.5	132
08/07/85	1250	10	21.5	704	8.5	9.3	129
08/07/85	1255	15	21.4	704	8.5	9.1	126
08/07/85	1300	20	20.9	706	8.4	8.5	116
08/07/85	1305	25	20.0	713	8.4	7.6	102
08/07/85	1310	30	20.0	708	8.4	7.2	97
08/07/85	1315	35	19.6	712	8.4	7.0	93
08/07/85	1320	40	19.2	713	8.3	6.8	90
08/07/85	1325	45	18.5	718	8.2	5.4	70
08/28/85	1210	0	21.0	760	8.4	8.0	110
08/28/85	1215	2	20.8	760	8.4	7.9	108
08/28/85	1220	4	20.3	766	8.4	7.9	107
08/28/85	1225	7	20.1	768	8.4	8.0	108
08/28/85	1230	10	20.0	766	8.4	8.0	107
08/28/85	1235	15	20.0	761	8.4	7.9	106

Table 11.--*Water-quality data for selected depths in Kenney Reservoir, site 1, water years 1985-87*--Continued

Date	Time (hours)	Sample depth (ft)	Temperature (°C)	Specific conductance (µS/cm)	pH (units)	Oxygen, dissolved (mg/L)	Oxygen, dissolved saturation (percent)
08/28/85	1240	20	20.0	755	8.4	7.8	105
08/28/85	1245	25	19.0	768	8.3	5.3	70
08/28/85	1250	30	18.8	772	8.2	4.8	63
08/28/85	1255	35	18.3	797	8.2	5.1	66
08/28/85	1300	40	18.1	803	8.2	5.2	67
08/28/85	1305	42	18.0	803	8.2	4.8	62
09/06/85	1100	0	19.1	835	8.3	6.6	87
09/06/85	1105	2	19.1	835	8.3	6.6	87
09/06/85	1110	4	19.1	837	8.3	6.5	86
09/06/85	1115	7	19.0	837	8.3	6.6	87
09/06/85	1120	10	19.0	837	8.3	6.6	87
09/06/85	1125	15	19.0	841	8.3	6.6	87
09/06/85	1130	20	19.0	841	8.3	6.6	87
09/06/85	1135	25	19.0	841	8.3	6.6	87
09/06/85	1140	30	18.9	841	8.2	6.3	83
09/06/85	1145	35	18.1	902	8.1	4.0	52
09/06/85	1150	40	18.0	918	8.1	3.6	46
09/06/85	1155	43	17.9	932	8.1	3.6	46
09/06/85	1200	45	17.9	932	7.8	2.3	30
09/17/85	1130	0	16.1	899	8.3	8.1	100
09/17/85	1135	2	16.1	899	8.3	8.1	100
09/17/85	1140	4	16.1	899	8.3	8.1	100
09/17/85	1145	7	16.1	899	8.3	8.0	99
09/17/85	1150	10	16.0	895	8.3	8.0	99
09/17/85	1155	15	16.0	895	8.3	8.0	99
09/17/85	1200	20	16.0	895	8.3	8.0	99
09/17/85	1205	25	14.8	906	8.3	7.1	86
09/17/85	1210	30	14.5	915	8.3	7.1	85
09/17/85	1215	35	14.2	913	8.3	7.1	84
09/17/85	1220	40	13.8	917	8.2	7.0	82
09/17/85	1225	42	13.6	920	8.2	6.9	81
09/17/85	1230	45	13.6	920	7.7	3.7	43
10/21/85	1230	0	8.6	816	8.4	9.4	98
10/21/85	1235	2	8.5	820	8.4	9.4	98
10/21/85	1240	4	8.5	823	8.4	9.5	99
10/21/85	1245	7	8.5	823	8.4	9.5	99
10/21/85	1250	10	8.4	821	8.4	9.5	99
10/21/85	1255	15	8.2	825	8.4	9.4	98
10/21/85	1300	20	8.0	828	8.4	9.4	97
10/21/85	1305	25	8.0	828	8.4	9.3	96
10/21/85	1309	30	8.0	828	8.4	9.3	96
10/21/85	1312	35	8.0	828	8.4	9.3	96
10/21/85	1315	40	8.0	828	8.4	9.3	96
10/21/85	1320	43	8.0	820	7.9	6.0	62

Table 11.--*Water-quality data for selected depths in Kenney Reservoir, site 1, water years 1985-87*--Continued

Date	Time (hours)	Sample depth (ft)	Temper-ature (°C)	Specific conduct-ance (µS/cm)	pH (units)	Oxygen, dissolved (mg/L)	Oxygen, dissolved saturation (percent)
04/24/86	1220	0	12.0	865	8.5	9.4	106
04/24/86	1225	2	12.0	865	8.5	9.4	106
04/24/86	1230	4	12.0	865	8.5	9.4	106
04/24/86	1235	7	11.8	865	8.5	9.4	106
04/24/86	1240	10	11.5	867	8.5	9.4	105
04/24/86	1245	15	11.0	871	8.5	9.4	104
04/24/86	1250	20	10.6	876	8.5	9.4	103
04/24/86	1255	25	10.0	874	8.5	9.4	102
04/24/86	1300	30	9.5	881	8.5	9.5	102
04/24/86	1305	35	9.0	876	8.5	9.4	100
04/24/86	1310	40	9.0	870	8.4	9.4	100
04/24/86	1315	43	8.5	876	8.4	9.3	97
06/03/86	1140	0	16.5	378	8.2	8.2	102
06/03/86	1145	2	14.7	374	8.2	8.2	99
06/03/86	1150	4	14.5	378	8.2	8.2	98
06/03/86	1155	7	14.4	379	8.2	8.2	98
06/03/86	1200	10	14.3	380	8.2	8.2	98
06/03/86	1205	15	14.1	382	8.2	8.2	97
06/03/86	1210	20	14.0	382	8.2	8.1	96
06/03/86	1215	25	13.3	384	8.2	8.0	93
06/03/86	1220	30	13.0	384	8.2	8.0	93
06/03/86	1225	35	12.7	385	8.2	7.9	91
06/03/86	1230	40	12.3	403	8.2	7.6	87
06/03/86	1235	45	12.0	410	8.2	7.4	84
06/24/86	1115	0	17.8	390	8.2	8.0	103
06/24/86	1120	2	17.3	391	8.2	8.0	102
06/24/86	1125	4	17.1	392	8.2	8.0	101
06/24/86	1130	7	16.9	389	8.2	8.0	101
06/24/86	1135	10	16.6	387	8.2	8.0	100
06/24/86	1140	15	16.5	388	8.2	8.0	100
06/24/86	1145	20	16.4	389	8.2	8.0	100
06/24/86	1150	25	16.2	389	8.2	7.9	98
06/24/86	1155	30	15.0	384	8.2	7.9	96
06/24/86	1200	35	14.5	388	8.2	7.8	93
06/24/86	1205	40	14.0	391	8.2	7.6	90
06/24/86	1210	45	13.9	398	8.1	7.4	87
07/22/86	1050	0	21.0	596	8.5	8.4	115
07/22/86	1055	2	21.0	596	8.5	8.4	115
07/22/86	1100	4	21.0	596	8.5	8.4	115
07/22/86	1105	7	20.6	595	8.5	8.5	115
07/22/86	1110	10	20.5	593	8.5	8.3	112
07/22/86	1115	15	20.4	593	8.5	8.3	112

Table 11.--*Water-quality data for selected depths in Kenney Reservoir, site 1, water years 1985-87*--Continued

Date	Time (hours)	Sample depth (ft)	Temperature (°C)	Specific conductance (µS/cm)	pH (units)	Oxygen, dissolved (mg/L)	Oxygen, dissolved saturation (percent)
07/22/86	1120	20	20.0	626	8.4	8.3	111
07/22/86	1125	25	19.5	632	8.3	7.0	93
07/22/86	1130	30	19.0	635	8.3	6.9	91
07/22/86	1135	35	19.0	635	8.3	6.9	91
07/22/86	1140	40	18.8	636	8.3	6.9	90
07/22/86	1145	45	18.5	636	8.3	6.7	87
08/20/86	1220	0	22.0	740	8.5	8.3	116
08/20/86	1225	2	22.0	740	8.5	8.4	117
08/20/86	1230	4	22.0	740	8.5	8.3	116
08/20/86	1235	7	22.0	740	8.5	8.3	116
08/20/86	1240	10	22.0	740	8.5	8.3	116
08/20/86	1245	15	22.0	736	8.5	8.3	116
08/20/86	1250	20	22.0	736	8.5	8.3	116
08/20/86	1255	25	21.0	734	8.4	7.1	97
08/20/86	1300	30	20.0	744	8.4	6.1	82
08/20/86	1305	35	19.2	756	8.3	5.1	67
08/20/86	1310	40	19.0	757	8.2	4.4	58
08/20/86	1315	42	18.9	757	8.2	4.0	53
09/16/86	1135	0	16.3	790	8.4	7.6	94
09/16/86	1140	2	16.3	790	8.4	7.6	94
09/16/86	1145	4	16.1	799	8.4	7.6	94
09/16/86	1150	7	16.1	799	8.4	7.5	93
09/16/86	1155	10	16.0	793	8.4	7.5	93
09/16/86	1200	15	16.0	793	8.4	7.4	91
09/16/86	1205	20	16.0	793	8.4	7.5	93
09/16/86	1210	25	16.0	793	8.4	7.8	96
09/16/86	1215	30	15.9	793	8.4	7.5	92
09/16/86	1220	35	15.8	782	8.4	7.5	92
09/16/86	1225	40	15.1	791	8.4	7.6	92
09/16/86	1230	43	15.1	791	8.4	7.6	92
06/19/87	1320	0	20.0	511	8.8	8.9	119
06/19/87	1325	2	19.6	511	8.8	9.1	120
06/19/87	1330	4	18.7	509	8.8	9.3	121
06/19/87	1335	7	18.6	505	8.8	9.1	118
06/19/87	1340	10	18.5	506	8.8	8.6	112
06/19/87	1345	15	18.5	506	8.8	8.5	110
06/19/87	1350	20	18.3	503	8.8	8.2	106
06/19/87	1355	25	16.5	497	8.2	5.0	62
06/19/87	1400	30	15.8	495	8.0	4.6	56
06/19/87	1405	35	15.5	493	7.9	4.5	55
06/19/87	1410	40	15.0	496	7.9	4.5	54
06/19/87	1415	45	14.0	531	7.8	3.6	42

Table 11.--*Water-quality data for selected depths in Kenney Reservoir, site 1, water years 1985-87*--Continued

Date	Time (hours)	Sample depth (ft)	Temper-ature (°C)	Specific conduct-ance (μS/cm)	pH (units)	Oxygen, dissolved (mg/L)	Oxygen, dissolved saturation (percent)
07/15/87	1455	0	22.1	759	8.6	7.6	106
07/15/87	1500	2	21.5	753	8.5	7.6	104
07/15/87	1505	4	21.0	758	8.5	7.8	107
07/15/87	1510	7	20.8	753	8.5	7.7	104
07/15/87	1515	10	20.4	754	8.5	7.3	99
07/15/87	1520	15	20.1	759	8.5	7.1	95
07/15/87	1525	20	19.8	747	8.4	5.8	77
07/15/87	1530	25	19.1	757	8.3	4.9	64
07/15/87	1535	30	19.0	757	8.3	4.4	58
07/15/87	1540	35	18.6	752	8.3	4.0	52
07/15/87	1545	40	18.2	758	8.2	3.9	50
07/15/87	1550	45	17.9	770	8.2	3.4	44
08/13/87	1430	0	21.6	826	8.4	6.9	96
08/13/87	1435	2	21.7	826	8.4	6.9	96
08/13/87	1440	4	21.5	830	8.4	6.8	94
08/13/87	1445	7	21.5	830	8.4	6.8	94
08/13/87	1450	10	21.2	828	8.4	6.9	95
08/13/87	1455	15	21.1	828	8.4	6.9	95
08/13/87	1500	20	21.1	828	8.4	6.9	95
08/13/87	1505	25	21.1	828	8.4	6.9	95
08/13/87	1510	30	21.0	832	8.4	6.8	93
08/13/87	1515	35	20.3	825	8.2	4.3	58
08/13/87	1520	40	20.0	826	8.1	3.5	47
08/13/87	1525	45	19.6	829	8.0	2.5	33
09/03/87	1210	0	19.8	814	8.4	7.9	105
09/03/87	1215	2	19.5	824	8.4	7.9	104
09/03/87	1220	4	19.2	814	8.4	8.0	105
09/03/87	1225	7	19.0	809	8.5	8.2	106
09/03/87	1230	10	18.8	810	8.4	8.2	106
09/03/87	1235	15	18.7	806	8.5	8.2	106
09/03/87	1240	20	18.6	809	8.4	8.1	104
09/03/87	1245	25	18.5	809	8.4	8.0	102
09/03/87	1250	30	17.8	813	8.3	6.0	77
09/03/87	1255	35	17.0	826	8.2	5.5	70
09/03/87	1300	40	17.0	817	8.2	5.0	63
09/03/87	1305	45	16.8	825	8.1	4.0	50

Table 12.--*Water-quality data for selected depths in Kenney Reservoir, site 2, water years 1985-87*

[ft, feet; °C, degrees Celsius; µS/cm, microsiemens per centimeter; mg/L, milligrams per liter]

Date	Time (hours)	Sample depth (ft)	Temper- ature (°C)	Specific conduct- ance (µS/cm)	pH (units)	Oxygen, dissolved (mg/L)	Oxygen, dissolved saturation (percent)
04/24/85	1155	0	8.4	847	8.4	9.8	102
04/24/85	1200	2	8.2	849	8.4	9.7	101
04/24/85	1205	4	8.0	849	8.4	9.7	100
04/24/85	1210	7	7.9	843	8.4	9.7	100
04/24/85	1215	10	7.9	840	8.4	9.7	100
04/24/85	1225	14	7.9	843	8.5	9.6	99
06/04/85	1430	0	14.8	452	8.3	8.1	98
06/04/85	1435	2	14.4	456	8.3	8.1	96
06/04/85	1440	4	14.1	460	8.3	8.2	96
06/04/85	1445	6	14.1	460	8.3	8.2	96
06/04/85	1450	8	14.1	457	8.3	8.2	96
06/27/85	1440	0	15.0	533	8.4	8.4	102
06/27/85	1445	2	14.8	535	8.4	8.5	102
06/27/85	1450	4	14.5	534	8.4	8.5	102
06/27/85	1455	7	14.2	531	8.4	8.5	101
06/27/85	1500	10	13.8	528	8.4	8.6	101
06/27/85	1505	13	12.8	529	8.4	8.4	97
07/19/85	1355	0	24.4	685	8.6	9.3	136
07/19/85	1400	2	23.0	709	8.6	9.2	131
07/19/85	1405	4	21.7	722	8.6	9.3	129
07/19/85	1410	7	20.5	730	8.6	9.3	126
07/19/85	1415	9	20.5	730	8.6	9.0	122
08/07/85	1350	0	22.5	697	8.5	8.6	121
08/07/85	1355	2	22.3	700	8.5	8.6	121
08/07/85	1400	4	21.8	699	8.4	8.5	118
08/07/85	1405	7	20.1	706	8.4	8.5	114
08/07/85	1410	8	20.0	708	8.3	8.2	110
08/28/85	1430	0	21.8	848	8.5	8.2	114
08/28/85	1435	2	21.8	848	8.4	8.2	114
08/28/85	1440	4	21.8	848	8.4	8.1	113
08/28/85	1445	7	20.0	877	8.4	8.5	114
08/28/85	1450	9	20.0	877	8.5	8.5	114
09/06/85	1215	0	19.2	907	8.5	8.1	107
09/06/85	1220	2	19.1	907	8.5	8.1	107
09/06/85	1225	4	19.0	907	8.5	8.1	107
09/06/85	1230	7	18.9	895	8.5	7.9	104
09/06/85	1235	9	15.2	923	8.4	7.7	94

Table 12.--*Water-quality data for selected depths in Kenney Reservoir, site 2, water years 1985-87*--Continued

Date	Time (hours)	Sample depth (ft)	Temperature (°C)	Specific conductance (µS/cm)	pH (units)	Oxygen, dissolved (mg/L)	Oxygen, dissolved saturation (percent)
09/17/85	1255	0	15.0	868	8.3	8.0	97
09/17/85	1300	2	15.0	868	8.3	7.9	96
09/17/85	1305	4	15.0	868	8.3	7.9	96
09/17/85	1310	7	15.0	868	8.3	8.0	97
10/21/85	1400	0	8.5	794	8.5	10.0	104
10/21/85	1405	2	8.5	794	8.5	10.0	104
10/21/85	1410	4	8.5	788	8.5	10.1	106
10/21/85	1415	7	8.5	788	8.5	10.1	106
10/21/85	1420	10	8.1	796	8.4	9.8	101
10/21/85	1425	13	8.1	796	8.4	9.4	97
04/24/86	1330	0	11.8	721	8.4	9.0	101
04/24/86	1335	2	11.8	718	8.4	8.9	100
04/24/86	1340	4	11.8	718	8.4	8.9	100
04/24/86	1345	7	11.8	718	8.4	8.9	100
06/03/86	1305	0	17.6	390	8.2	7.8	100
06/03/86	1310	2	17.0	389	8.2	7.8	98
06/03/86	1315	4	15.0	392	8.2	7.9	96
06/03/86	1320	7	15.0	387	8.2	7.9	96
06/03/86	1325	8	14.9	385	8.2	7.8	94
06/24/86	1240	0	16.1	404	8.3	8.1	100
06/24/86	1245	2	16.0	402	8.3	8.1	100
06/24/86	1250	4	16.0	402	8.3	8.0	99
06/24/86	1255	7	16.0	402	8.3	8.0	99
06/24/86	1300	10	16.0	402	8.3	8.0	99
07/22/86	1215	0	20.6	641	8.5	7.9	107
07/22/86	1220	2	20.6	641	8.5	7.9	107
07/22/86	1225	4	20.3	642	8.5	7.9	107
07/22/86	1230	7	20.0	644	8.5	7.9	106
07/22/86	1235	10	19.0	637	8.5	7.8	103
08/20/86	1400	0	22.2	736	8.4	7.2	101
08/20/86	1405	2	22.2	736	8.4	7.3	102
08/20/86	1410	4	22.2	736	8.4	7.3	102
09/16/86	1300	0	15.0	794	8.5	8.7	105
09/16/86	1305	2	15.0	794	8.5	8.7	105
09/16/86	1310	4	15.0	794	8.5	8.8	106
09/16/86	1315	7	15.0	794	8.5	8.8	106

Table 12.--*Water-quality data for selected depths in Kenney Reservoir, site 2, water years 1985-87*--Continued

Date	Time (hours)	Sample depth (ft)	Temperature (°C)	Specific conductance (μS/cm)	pH (units)	Oxygen, dissolved (mg/L)	Oxygen, dissolved saturation (percent)
06/19/87	1145	0	18.0	575	8.6	8.0	103
06/19/87	1155	2	17.8	582	8.6	8.0	103
06/19/87	1205	4	17.8	582	8.6	8.0	103
07/15/87	1325	0	23.0	788	8.4	6.9	97
07/15/87	1330	2	22.8	792	8.4	7.1	100
07/15/87	1335	4	22.0	806	8.4	7.3	101
08/13/87	1315	0	18.5	809	8.4	7.0	91
08/13/87	1320	2	18.0	805	8.4	6.5	83
08/13/87	1325	4	18.0	805	8.4	6.4	82
09/03/87	1100	0	20.2	814	8.5	7.4	100
09/03/87	1105	2	19.0	814	8.4	7.1	92
09/03/87	1110	4	17.3	807	8.4	6.6	84

Table 13.--*Selected water-quality data for near-surface and near-bottom depths in Kenney Reservoir, site 1, water years 1985-87*

[ft, feet; BOD, biochemical oxygen demand; mg/L, milligrams per liter; mm of HG, millimeters of mercury; in., inches; NTU, nephelometric turbidity units; °C, degrees Celsius; col/100 mL, colonies per 100 milliliters; <, less than; >, greater than; --, no data]

Date (day)	Time	Sample depth (ft)	BOD, 5-day (mg/L)	BOD, 20-day (mg/L)	Barometric pressure (mm of HG)	Transparency, Secchi disk (in.)	Turbidity (NTU)	Solids, residue at 105 °C, suspended (mg/L)	Coliform bacteria, total (col/ 100 mL)	Coliform bacteria, fecal (col/ 100 mL)	Streptococci bacteria, fecal (col/ 100 mL)
01/16/85	1430	2	1.0	4.6	630	--	3.5	--	<2	<2	147
01/16/85	1535	47	2.0	--	--	--	22.0	--	<3	<3	<3
04/24/85	1020	2	1.4	3.2	627	17	13.0	31	>250	250	170
04/24/85	1110	45	2.3	4.9	--	--	14.0	39	480	320	360
06/04/85	1250	2	1.5	3.0	625	13	23.0	21	>70	60	90
06/04/85	1340	45	1.1	2.5	--	--	23.0	186	160	100	84
06/27/85	1315	2	1.2	2.8	635	20	13.0	21	250	6	64
06/27/85	1405	43	1.1	3.0	--	--	25.0	37	750	260	680
07/19/85	1235	2	1.2	3.0	625	70	2.6	3	5	<4	<4
07/19/85	1325	45	1.1	3.1	--	--	9.2	8	36	23	260
08/07/85	1235	2	1.7	3.5	628	41	7.6	16	<4	<4	8
08/07/85	1325	45	1.4	2.6	--	--	13.0	23	<4	<4	4
08/28/85	1215	2	.9	2.2	629	144	1.2	1	200	<4	8
08/28/85	1305	42	1.3	4.0	--	--	12.0	13	550	<4	32
09/06/85	1105	2	--	--	626	126	2.0	--	--	--	--
09/06/85	1155	43	--	--	--	--	7.6	--	--	--	--
09/17/85	1135	2	1.1	2.6	621	96	2.0	3	42	<4	10
09/17/85	1225	42	1.2	3.0	--	--	5.6	6	120	<4	40
10/21/85	1235	2	1.4	3.4	623	32	8.0	10	15	3	37
10/21/85	1315	40	1.5	3.3	--	--	8.0	11	15	3	40
04/24/86	1225	2	.9	2.4	623	29	8.0	5	10	<5	5
04/24/86	1310	40	.9	2.3	--	--	7.5	8	10	<5	50
06/03/86	1145	2	1.2	3.3	625	11	45.0	61	160	140	190
06/03/86	1230	40	.7	2.9	--	--	40.0	39	160	60	180
06/24/86	1120	2	1.0	2.8	628	13	23.0	35	100	45	55
06/24/86	1205	40	.8	2.5	--	--	25.0	35	50	45	120
07/22/86	1055	2	1.3	3.2	629	70	3.0	5	5	<4	<4
07/22/86	1140	40	1.1	2.4	--	--	18.0	50	80	23	84
08/20/86	1225	2	1.3	3.0	630	37	11.0	8	<4	<4	<4
08/20/86	1310	40	1.2	3.0	--	--	21.0	25	5	<4	5
09/16/86	1140	2	.9	2.2	625	35	8.2	9	3	<4	10
09/16/86	1225	40	.8	2.0	--	--	22.0	23	25	3	24
06/19/87	1325	2	.8	1.9	625	47	4.7	3	--	--	--
06/19/87	1415	45	1.2	3.0	--	--	20.0	17	--	--	--
07/15/87	1500	2	1.3	2.9	625	66	3.5	9	--	--	--
07/15/87	1550	45	1.0	2.9	--	--	7.3	13	--	--	--
08/13/87	1435	2	1.4	3.2	623	66	4.0	1	--	--	--
08/13/87	1525	45	1.2	3.2	--	--	9.5	2	--	--	--
09/03/87	1215	2	1.7	3.1	626	46	5.2	4	--	--	--
09/03/87	1305	45	1.3	3.0	--	--	18.0	18	--	--	--

Table 14.--*Selected water-quality data for near-surface and near-bottom depths in Kenney Reservoir, site 2, water years 1985-87*

[ft, feet; BOD, biochemical oxygen demand; mg/L, milligrams per liter; mm of HG, millimeters of mercury; in., inches; NTU, nephelometric turbidity units; °C, degrees Celsius; col/100 mL, colonies per 100 milliliters; <, less than; >, greater than; --, no data]

Date (day)	Time	Sample depth (ft)	BOD, 5-day (mg/L)	BOD, 20-day (mg/L)	Barometric pressure (mm of HG)	Transparency, Secchi disk (in.)	Turbidity (NTU)	Solids, residue at 105 °C, suspended (mg/L)	Coliform bacteria, total (col/100 mL)	Coliform bacteria, fecal (col/100 mL)	Streptococci bacteria, fecal (col/100 mL)
04/24/85	1200	2	0.9	2.7	627	7	80.0	165	400	100	280
04/24/85	1225	14	1.2	3.3	--	--	250	778	>200	140	440
06/04/85	1435	2	1.1	3.2	625	6	100	103	>320	320	190
06/04/85	1450	8	1.6	3.6	--	--	120	276	>240	>60	230
06/27/85	1445	2	1.4	3.4	625	10	50	86	400	290	720
06/27/85	1505	13	1.6	4.2	--	--	55	114	1,100	380	>920
07/19/85	1400	2	1.4	3.3	625	37	7.4	1	55	7	40
07/19/85	1415	9	1.4	3.4	--	--	22	154	130	80	210
08/07/85	1355	2	1.3	2.3	628	25	12	15	40	<4	8
08/07/85	1405	7	1.3	2.4	--	--	15	27	47	23	80
08/28/85	1435	2	1.3	2.9	629	46	6.0	6	200	4	23
08/28/85	1450	9	1.1	2.6	--	--	12.0	9	150	3	230
09/06/85	1220	2	--	--	626	25	12	--	--	--	--
09/06/85	1235	9	--	--	--	--	60	--	--	--	--
09/17/85	1300	2	1.2	3.0	621	12	40	46	440	130	460
09/17/85	1310	7	1.5	3.1	--	--	36	53	360	120	420
10/21/85	1405	2	1.2	3.0	623	10	30	73	50	33	70
10/21/85	1420	10	1.2	2.8	--	--	23	40	50	3	87
04/24/86	1335	2	1.8	4.2	623	2	220	494	800	20	960
04/24/86	1345	7	2.3	5.3	--	--	200	624	--	--	--
06/03/86	1310	2	.8	2.3	625	6	70	144	150	100	170
06/03/86	1320	7	.8	2.7	--	--	80	--	400	220	220
06/24/86	1245	2	.8	1.8	628	11	40	86	200	150	200
06/24/86	1300	10	.8	2.0	--	--	50	130	120	100	190
07/22/86	1220	2	1.1	2.6	629	17	18	22	15	6	44
07/22/86	1235	10	1.3	2.9	--	--	55	115	250	52	260
08/20/86	1405	2	1.3	3.3	630	6	95	96	27	21	33
09/16/86	1305	2	1.0	2.5	625	14	28	46	14	12	52
09/16/86	1315	7	1.0	2.8	--	--	21	66	20	16	52
06/19/87	1155	2	.8	1.9	625	19	14	21	--	--	--
07/15/87	1330	2	1.3	3.2	625	17	15	15	--	--	--
08/13/87	1320	2	1.4	3.7	623	9	48	58	--	--	--
09/03/87	1105	2	1.3	3.0	626	12	30	36	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*

[Cells, cell numbers per milliliter; ft, feet; % Comp, percent composition; mg/L, milligrams per liter; µg/L, micrograms per liter; --, no data. All cell numbers, subtotals, and totals are rounded to two significant figures (Britton and Greeson, 1989), therefore, percentage totals do not always equal 100]

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
				January 16, 1985				
BACILLARIOPHYTA (DIATOMS)	31	11.9	28	14.7	--	--	--	--
CENTRALES	0	0.0	0	0.0	--	--	--	--
Cyclotella bodanica	--	--	--	--	--	--	--	--
Cyclotella kutzingiana	--	--	--	--	--	--	--	--
Cyclotella meneghiniana	--	--	--	--	--	--	--	--
Cyclotella pseudostelligera	--	--	--	--	--	--	--	--
Cyclotella stelligera	--	--	--	--	--	--	--	--
Melosira granulata var. *angustissima*	--	--	--	--	--	--	--	--
Melosira italica	--	--	--	--	--	--	--	--
Melosira lirata	--	--	--	--	--	--	--	--
Melosira sp.	--	--	--	--	--	--	--	--
Rhizosolenia eriensis	--	--	--	--	--	--	--	--
Stephanodiscus alpinus	--	--	--	--	--	--	--	--
Stephanodiscus astrea	--	--	--	--	--	--	--	--
Stephanodiscus niagarae	--	--	--	--	--	--	--	--
Stephanodiscus tenuis	--	--	--	--	--	--	--	--
Stephanodiscus sp.	--	--	--	--	--	--	--	--
PENNALES	31	11.9	28	14.7	--	--	--	--
Achnanthes affinis	--	--	--	--	--	--	--	--
Achnanthes lanceolata	--	--	--	--	--	--	--	--
Achnanthes minutissima	--	--	--	--	--	--	--	--
Amphora perpusilla	--	--	--	--	--	--	--	--
Amphora veneta	--	--	--	--	--	--	--	--
Amphora sp.	--	--	--	--	--	--	--	--
Asterionella formosa	14	5.4	--	--	--	--	--	--
Cocconeis placentula	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1) 2-ft depth Cells	Kenney Reservoir (site 1) 2-ft depth % Comp	Kenney Reservoir (site 1) Composite (0-10 ft) Cells	Kenney Reservoir (site 1) Composite (0-10 ft) % Comp	Kenney Reservoir (site 2) 2-ft depth Cells	Kenney Reservoir (site 2) 2-ft depth % Comp	Kenney Reservoir (site 2) Composite (0-10 ft) Cells	Kenney Reservoir (site 2) Composite (0-10 ft) % Comp
			January 16, 1985--Continued					
BACILLARIOPHYTA (DIATOMS)--Continued								
PENNALES--Continued								
Cylindrotheca gracilis	--	--	--	--	--	--	--	--
Cylindrotheca sp.	--	--	--	--	--	--	--	--
Cymatopleura solea	--	--	--	--	--	--	--	--
Cymbella affinis	--	--	--	--	--	--	--	--
Cymbella minuta	--	--	3	1.6	--	--	--	--
Cymbella minuta f. *latens*	--	--	--	--	--	--	--	--
Cymbella minuta var. *silesica*	--	--	--	--	--	--	--	--
Cymbella sinuata	--	--	--	--	--	--	--	--
Diatoma anceps	--	--	--	--	--	--	--	--
Diatoma hiemale var. *mesodon*	--	--	--	--	--	--	--	--
Diatoma tenue var. *elongatum*	--	--	--	--	--	--	--	--
Diatoma vulgare	--	--	7	3.7	--	--	--	--
Diploneis sp.	--	--	--	--	--	--	--	--
Epithemia sorex	--	--	--	--	--	--	--	--
Eunotia sp.	--	--	--	--	--	--	--	--
Fragilaria capucina	--	--	--	--	--	--	--	--
Fragilaria crotonensis	--	--	--	--	--	--	--	--
Fragilaria pinnata	--	--	--	--	--	--	--	--
Fragilaria vaucheriae	--	--	--	--	--	--	--	--
Gomphonema angustatum	--	--	--	--	--	--	--	--
Gyrosigma spencerii	--	--	--	--	--	--	--	--
Hannaea arcus	--	--	--	--	--	--	--	--
Hannaea arcus var. *amphioxys*	--	--	--	--	--	--	--	--
Hannaea arcus var. *arcus*	--	--	--	--	--	--	--	--
Hantzschia amphioxys	--	--	--	--	--	--	--	--
Meridion circulare	--	--	--	--	--	--	--	--
Navicula arvensis	--	--	--	--	--	--	--	--
Navicula capitata	--	--	--	--	--	--	--	--
Navicula cryptocephala	--	--	--	--	--	--	--	--

Navicula cryptocephala var. *veneta*	--	--	--	--	--	--	--	--
Navicula gastrum	--	--	--	--	--	--	--	--
Navicula heufleri	--	--	--	--	--	--	--	--
Navicula lanceolata	--	--	--	--	--	--	--	--
Navicula luzonensis	--	--	--	--	--	--	--	--
Navicula menisculus var. *upsaliensis*	--	--	--	--	--	--	--	--
Navicula minima	--	--	--	--	--	--	--	--
Navicula minuscula	--	--	--	--	--	--	--	--
Navicula mutica	--	--	--	--	--	--	--	--
Navicula notha	--	--	--	--	--	--	--	--
Navicula pellicosa	--	--	--	--	--	--	--	--
Navicula pupula	--	--	--	--	--	--	--	--
Navicula radiosa	--	--	--	--	--	--	--	--
Navicula radiosa var. *tenella*	--	--	--	--	--	--	--	--
Navicula rhyncocephala	--	--	--	--	--	--	--	--
Navicula sabinians var. *intermedia*	--	--	--	--	--	--	--	--
Navicula tantula	--	--	--	--	--	--	--	--
Navicula tripunctata	--	--	--	--	--	--	--	--
Navicula viridula	--	--	--	--	--	--	--	--
Navicula viridula var. *aveame*	--	--	--	--	--	--	--	--
Navicula viridula var. *avenacea*	--	--	--	--	--	--	--	--
Navicula sp.	--	--	--	--	--	--	--	--
Nitzschia acicularis	--	--	--	--	--	--	--	--
Nitzschia communis	--	--	--	--	--	--	--	--
Nitzschia dissipata	3	1.2	1	0.5	-	--	--	--
Nitzschia filiformis	--	--	--	--	--	--	--	--
Nitzschia frustulum	7	2.7	7	3.7	--	--	--	--
Nitzschia hantzschiana	--	--	--	--	--	--	--	--
Nitzschia hungarica	--	--	--	--	--	--	--	--
Nitzschia ignorata	--	--	--	--	--	--	--	--
Nitzschia intermedia	--	--	--	--	--	--	--	--
Nitzschia latens	--	--	--	--	--	--	--	--
Nitzschia linearis	--	--	--	--	--	--	--	--
Nitzschia longissima var. *reversa*	--	--	--	--	--	--	--	--
Nitzschia microcephala	--	--	--	--	--	--	--	--
Nitzschia palea	--	--	--	--	--	--	--	--
Nitzschia paleacea	--	--	--	--	--	--	--	--
Nitzschia pusilla	--	--	--	--	--	--	--	--
Nitzschia romana	7	2.7	3	1.6	--	--	--	--
Nitzschia thermalis	--	--	--	--	--	--	--	--
Nitzschia tryblionella var. *debilis*	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1) 2-ft depth		Kenney Reservoir (site 1) Composite (0-10 ft)		Kenney Reservoir (site 2) 2-ft depth		Kenney Reservoir (site 2) Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
			January 16, 1985--Continued					
BACILLARIOPHYTA (DIATOMS)--Continued								
PENNALES--Continued								
Nitzschia sp.	--	--	--	--	--	--	--	--
Pleurosigma delicatalum	--	--	--	--	--	--	--	--
Rhoicosphenia curvata	--	--	--	--	--	--	--	--
Rhopalodia musculus	--	--	--	--	--	--	--	--
Surirella angustata	--	--	--	--	--	--	--	--
Surirella ovalis	--	--	--	--	--	--	--	--
Surirella ovata	--	--	--	--	--	--	--	--
Synedra acus	--	--	--	--	--	--	--	--
Synedra delicatissima	--	--	--	--	--	--	--	--
Synedra fasciculate	--	--	--	--	--	--	--	--
Synedra minuscula	--	--	--	--	--	--	--	--
Snyedra radiens	--	--	--	--	--	--	--	--
Synedra rumpens	--	--	--	--	--	--	--	--
Synedra rumpens var. *familiaris*	--	--	--	--	--	--	--	--
Synedra ulna	--	--	--	--	--	--	--	--
Synedra ulna var. *contracta*	--	--	--	--	--	--	--	--
Synedra ulna var. *danica*	--	--	--	--	--	--	--	--
Synedra ulna var. *oxyrhynchus*	--	--	--	--	--	--	--	--
Synedra sp.	--	--	7	3.7	--	--	--	--
Thalassiosira fluviatilis	--	--	--	--	--	--	--	--
CHLOROPHYTA (GREEN ALGAE)	7	2.7	0	0.0	--	--	--	--
Actinastrum hantzschii	--	--	--	--	--	--	--	--
Actinastrum sp.	--	--	--	--	--	--	--	--
Ankistrodesmus convolutus	--	--	--	--	--	--	--	--
Ankistrodesmus convolutus v. *acicularis*	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus var. *acicularis*	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus var. *mirabilis*	--	--	--	--	--	--	--	--

Carteria sp.	--	--	--	--	--	--	--	--
Chlamydomonas sp.	7	2.7	--	--	--	--	--	--
Chlorella sp.	--	--	--	--	--	--	--	--
Chlorococcum humicola	--	--	--	--	--	--	--	--
Chlorococcum sp.	--	--	--	--	--	--	--	--
Chlorogonium spirale	--	--	--	--	--	--	--	--
Chlorogonium sp.	--	--	--	--	--	--	--	--
Chodatella quadriseta	--	--	--	--	--	--	--	--
Closterium sp.	--	--	--	--	--	--	--	--
Coccomyxa minor	--	--	--	--	--	--	--	--
Crucigenia quadrata	--	--	--	--	--	--	--	--
Dictyosphaerium ehrenbergianum	--	--	--	--	--	--	--	--
Dictyosphaerium pulchellum	--	--	--	--	--	--	--	--
Dictyosphaerium sp.	--	--	--	--	--	--	--	--
Gloeocystis sp.	--	--	--	--	--	--	--	--
Golenkinia radiata	--	--	--	--	--	--	--	--
Golenkiniopsis solitaria	--	--	--	--	--	--	--	--
Gonium sp.	--	--	--	--	--	--	--	--
Kirchneriella contorta	--	--	--	--	--	--	--	--
Mesotaenium sp.	--	--	--	--	--	--	--	--
Micratinium pusillum	--	--	--	--	--	--	--	--
Micratinium sp.	--	--	--	--	--	--	--	--
Mougeotia sp.	--	--	--	--	--	--	--	--
Oocytis sp.	--	--	--	--	--	--	--	--
Pandorina morum	--	--	--	--	--	--	--	--
Phacotus lenticularis	--	--	--	--	--	--	--	--
Phacotus sp.	--	--	--	--	--	--	--	--
Platymonas sp.	--	--	--	--	--	--	--	--
Pteromonas sp.	--	--	--	--	--	--	--	--
Scenedesmus armatus	--	--	--	--	--	--	--	--
Scenedesmus bijuga	--	--	--	--	--	--	--	--
Scenedesmus dimorphus	--	--	--	--	--	--	--	--
Scenedesmus quadricauda	--	--	--	--	--	--	--	--
Scenedesmus serratus	--	--	--	--	--	--	--	--
Scenedesmus sp.	--	--	--	--	--	--	--	--
Schroederia judayi	--	--	--	--	--	--	--	--
Schroederia setigera	--	--	--	--	--	--	--	--
Selenastrum minutum	--	--	--	--	--	--	--	--
Sphaerocystis schroeteri	--	--	--	--	--	--	--	--
Staurastrum sp.	--	--	--	--	--	--	--	--
Treubaria sp.	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
				January 16, 1985--Continued				
CHRYSOPHYTA (GOLDEN-BROWN ALGAE)	0	0.0	0	0.0	--	--	--	--
Dinobryon divergens	--	--	--	--	--	--	--	--
Kephyrion spirale	--	--	--	--	--	--	--	--
Kephyrion sp.	--	--	--	--	--	--	--	--
Mallomonas acaroides	--	--	--	--	--	--	--	--
Mallomonas akrokonos	--	--	--	--	--	--	--	--
Mallomonas globosa	--	--	--	--	--	--	--	--
Mallomonas sp.	--	--	--	--	--	--	--	--
Pleurosigma delicatulum	--	--	--	--	--	--	--	--
Pleurosigma sp.	--	--	--	--	--	--	--	--
Ochromonas sp.	--	--	--	--	--	--	--	--
CYANOPHYTA (BLUE-GREEN ALGAE)	85	32.7	120	63.2	--	--	--	--
Anabaena sp.	--	--	--	--	--	--	--	--
Aphanocapsa delicatissima	--	--	--	--	--	--	--	--
Aphanocapsa sp.	--	--	--	--	--	--	--	--
Aphanothece sp.	--	--	--	--	--	--	--	--
Chroococcus dispersus	--	--	--	--	--	--	--	--
Chroococcus limneticus	--	--	--	--	--	--	--	--
Chroococcus sp.	--	--	14	7.4	--	--	--	--
Dactylococcopsis fascicularis	--	--	--	--	--	--	--	--
Dactylococcopsis sp.	--	--	--	--	--	--	--	--
Lyngbya limnetica	--	--	--	--	--	--	--	--
Lyngbya nana	--	--	--	--	--	--	--	--
Marssoniella elegans	--	--	--	--	--	--	--	--
Oscillatoria angusta	--	--	--	--	--	--	--	--
Oscillatoria angustissima	85	32.7	--	--	--	--	--	--
Oscillatoria limnetica	--	--	--	--	--	--	--	--
Oscillatoria tenuis	--	--	--	--	--	--	--	--
Oscillatoria sp.	--	--	--	--	--	--	--	--

Phormidium sp.	--	--	110	57.9	--	--	--	--
Synechococcus lineare	--	--	--	--	--	--	--	--
Synechococcus sigmoidea	--	--	--	--	--	--	--	--
Synechococcus sigmoidea f. *minor*	--	--	--	--	--	--	--	--
Synechococcus sp.	--	--	--	--	--	--	--	--
CRYPTOPHYTA (CRYPTOMONADS)	140	53.8	45	23.7	--	--	--	--
Chroomonas sp.	85	32.7	10	5.3	--	--	--	--
Cryptomonas erosa	--	--	--	--	--	--	--	--
Cryptomonas marsonii	--	--	--	--	--	--	--	--
Cryptomonas ovata	14	5.4	7	3.7	--	--	--	--
Cryptomonas rostrata	--	--	--	--	--	--	--	--
Cryptomonas rostratiformis	--	--	--	--	--	--	--	--
Cryptomonas sp.	43	16.5	28	14.7	--	--	--	--
Rhodomonas minuta	--	--	--	--	--	--	--	--
EUGLENOPHYTA (EUGLENOIDS)	0	0.0	0	0.0	--	--	--	--
Euglena acus	--	--	--	--	--	--	--	--
Euglena viridis	--	--	--	--	--	--	--	--
Euglena sp.	--	--	--	--	--	--	--	--
Trachelomonas sp.	--	--	--	--	--	--	--	--
PYRRHOPHYTA (DINOFLAGELLATES)	0	0.0	0	0.0	--	--	--	--
Ceratium hirundinella	--	--	--	--	--	--	--	--
Gymnodinium sp.	--	--	--	--	--	--	--	--
Peridinium biceps	--	--	--	--	--	--	--	--
Peridinium inconspicua	--	--	--	--	--	--	--	--
Peridinium sp.	--	--	--	--	--	--	--	--
Total cells and percent composition	260	101	190	102	--	--	--	--
Number of species	9	--	11	--	--	--	--	--
Diversity index (DI) at species level	2.41	--	2.24	--	--	--	--	--
Biomass (mg/L dry weight)	<0.1	--	<0.1	--	--	--	--	--
Chlorophyll *a* (μg/L)	--	--	--	--	--	--	--	--
Chlorophyll *b* (μg/L)	--	--	--	--	--	--	--	--
Chlorophyll *c* (μg/L)	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1) 2-ft depth		Kenney Reservoir (site 1) Composite (0-10 ft)		Kenney Reservoir (site 2) 2-ft depth		Kenney Reservoir (site 2) Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
				April 24, 1985				
BACILLARIOPHYTA (DIATOMS)	850	43.1	290	35.4	84	16.5	56	66.7
CENTRALES	740	37.6	200	24.4	0	0.0	0	0.0
Cyclotella bodanica	400	20.3	200	24.4	--	--	--	--
Cyclotella kutzingiana	--	--	--	--	--	--	--	--
Cyclotella meneghiniana	--	--	--	--	--	--	--	--
Cyclotella pseudostelligera	--	--	--	--	--	--	--	--
Cyclotella stelligera	--	--	--	--	--	--	--	--
Melosira granulata var. *angustissima*	--	--	--	--	--	--	--	--
Melosira italica	160	8.1	--	--	--	--	--	--
Melosira lirata	180	9.1	--	--	--	--	--	--
Melosira sp.	--	--	--	--	--	--	--	--
Rhizosolenia eriensis	--	--	--	--	--	--	--	--
Stephanodiscus alpinus	--	--	--	--	--	--	--	--
Stephanodiscus astrea	--	--	--	--	--	--	--	--
Stephanodiscus niagarae	--	--	--	--	--	--	--	--
Stephanodiscus tenuis	--	--	--	--	--	--	--	--
Stephanodiscus sp.	--	--	--	--	--	--	--	--
PENNALES	110	5.6	93	11.3	84	16.5	56	66.7
Achnanthes affinis	--	--	--	--	--	--	--	--
Achnanthes lanceolata	--	--	--	--	--	--	--	--
Achnanthes minutissima	--	--	--	--	--	--	--	--
Amphora perpusilla	--	--	--	--	--	--	--	--
Amphora veneta	--	--	--	--	--	--	--	--
Amphora sp.	--	--	--	--	--	--	--	--
Asterionella formosa	--	--	11	1.3	--	--	--	--
Cocconeis placentula	--	--	--	--	--	--	--	--
Cylindrotheca gracilis	--	--	--	--	--	--	--	--
Cylindrotheca sp.	--	--	--	--	--	--	--	--
Cymatopleura solea	--	--	--	--	--	--	--	--

Cymbella affinis	--	--	--	--	28	5.5	28	33.3
Cymbella minuta	--	--	--	--	--	--	--	--
Cymbella minuta f. *latens*	--	--	--	--	--	--	--	--
Cymbella minuta var. *silesica*	--	--	--	--	--	--	--	--
Cymbella sinuata	--	--	--	--	--	--	--	--
Diatoma anceps	--	--	--	--	--	--	--	--
Diatoma hiemale var. *mesodon*	--	--	--	--	--	--	--	--
Diatoma tenue var. *elongatum*	--	--	5	0.6	--	--	--	--
Diatoma vulgare	--	--	--	--	28	5.5	--	--
Diploneis sp.	--	--	--	--	--	--	--	--
Epithemia sorex	--	--	--	--	--	--	--	--
Eunotia sp.	--	--	--	--	--	--	--	--
Fragilaria capucina	--	--	--	--	--	--	--	--
Fragilaria crotonensis	--	--	--	--	--	--	--	--
Fragilaria pinnata	--	--	--	--	--	--	--	--
Fragilaria vaucheriae	--	--	--	--	--	--	--	--
Gomphonema angustatum	--	--	--	--	--	--	--	--
Gyrosigma spencerii	--	--	--	--	--	--	--	--
Hannaea arcus	--	--	--	--	--	--	--	--
Hannaea arcus var. *amphioxys*	--	--	--	--	--	--	--	--
Hannaea arcus var. *arcus*	--	--	--	--	--	--	--	--
Hantzschia amphioxys	--	--	--	--	--	--	--	--
Meridion circulare	--	--	--	--	--	--	14	16.7
Navicula arvensis	--	--	--	--	--	--	--	--
Navicula capitata	--	--	--	--	--	--	--	--
Navicula cryptocephala	--	--	--	--	--	--	--	--
Navicula cryptocephala var. *veneta*	--	--	--	--	--	--	--	--
Navicula gastrum	--	--	--	--	--	--	--	--
Navicula heufleri	--	--	--	--	--	--	--	--
Navicula lanceolata	--	--	--	--	--	--	--	--
Navicula luzonensis	--	--	--	--	--	--	--	--
Navicula menisculus var. *upsaliensis*	--	--	--	--	--	--	--	--
Navicula minima	--	--	--	--	--	--	--	--
Navicula minuscula	--	--	--	--	--	--	--	--
Navicula mutica	--	--	--	--	--	--	7	8.3
Navicula notha	--	--	--	--	--	--	--	--
Navicula pellicosa	--	--	--	--	--	--	--	--
Navicula pupula	--	--	--	--	--	--	--	--
Navicula radiosa	--	--	--	--	--	--	--	--
Navicula radiosa var. *tenella*	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
	April 24, 1985--Continued							
BACILLARIOPHYTA (DIATOMS)--Continued								
PENNALES--Continued								
Navicula rhyncocephala	--	--	--	--	--	--	--	--
Navicula sabinians var. *intermedia*	--	--	--	--	--	--	--	--
Navicula tantula	--	--	--	--	--	--	--	--
Navicula tripunctata	--	--	--	--	--	--	--	--
Navicula viridula	--	--	--	--	--	--	--	--
Navicula viridula var. *aveame*	--	--	--	--	--	--	--	--
Navicula viridula var. *avenacea*	--	--	11	1.3	--	--	--	--
Navicula sp.	--	--	--	--	--	--	--	--
Nitzschia acicularis	28	1.4	--	--	--	--	--	--
Nitzschia communis	14	0.7	--	--	--	--	--	--
Nitzschia dissipata	--	--	11	1.3	-	--	--	--
Nitzschia filiformis	--	--	11	1.3	--	--	--	--
Nitzschia frustulum	--	--	--	--	--	--	--	--
Nitzschia hantzschiana	--	--	--	--	--	--	--	--
Nitzschia hungarica	--	--	--	--	--	--	--	--
Nitzschia ignorata	14	0.7	11	1.3	--	--	--	--
Nitzschia intermedia	--	--	--	--	--	--	--	--
Nitzschia latens	--	--	--	--	--	--	--	--
Nitzschia linearis	--	--	11	1.3	--	--	--	--
Nitzschia longissima var. *reversa*	--	--	--	--	--	--	--	--
Nitzschia microcephala	28	1.4	--	--	--	--	--	--
Nitzschia palea	--	--	11	1.3	--	--	--	--
Nitzschia paleacea	28	1.4	11	1.3	28	5.5	7	8.3
Nitzschia pusilla	--	--	--	--	--	--	--	--
Nitzschia romana	--	--	--	--	--	--	--	--
Nitzschia thermalis	--	--	--	--	--	--	--	--
Nitzschia tryblionella var. *debilis*	--	--	--	--	--	--	--	--
Nitzschia sp.	--	--	--	--	--	--	--	--

Pleurosigma delicatalum	--	--	--	--	--	--	--	--
Rhoicosphenia curvata	--	--	--	--	--	--	--	--
Rhopalodia musculus	--	--	--	--	--	--	--	--
Surirella angustata	--	--	--	--	--	--	--	--
Surirella ovalis	--	--	--	--	--	--	--	--
Surirella ovata	--	--	--	--	--	--	--	--
Synedra acus	--	--	--	--	--	--	--	--
Synedra delicatissima	--	--	--	--	--	--	--	--
Synedra fasciculate	--	--	--	--	--	--	--	--
Synedra minuscula	--	--	--	--	--	--	--	--
Snyedra radiens	--	--	--	--	--	--	--	--
Synedra rumpens	--	--	--	--	--	--	--	--
Synedra rumpens var. *familiaris*	--	--	--	--	--	--	--	--
Synedra ulna	--	--	--	--	--	--	--	--
Synedra ulna var. *contracta*	--	--	--	--	--	--	--	--
Synedra ulna var. *danica*	--	--	--	--	--	--	--	--
Synedra ulna var. *oxyrhynchus*	--	--	--	--	--	--	--	--
Synedra sp.	--	--	--	--	--	--	--	--
Thalassiosira fluviatilis	--	--	--	--	--	--	--	--
CHLOROPHYTA (GREEN ALGAE)	14	0.7	110	13.4	0	0.0	0	0.0
Actinastrum hantzschii	--	--	--	--	--	--	--	--
Actinastrum sp.	--	--	--	--	--	--	--	--
Ankistrodesmus convolutus	--	--	--	--	--	--	--	--
Ankistrodesmus convolutus v. *acicularis*	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus var. *acicularis*	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus var. *mirabilis*	--	--	--	--	--	--	--	--
Carteria sp.	--	--	--	--	--	--	--	--
Chlamydomonas sp.	--	--	--	--	--	--	--	--
Chlorella sp.	--	--	--	--	--	--	--	--
Chlorococcum humicola	--	--	--	--	--	--	--	--
Chlorococcum sp.	--	--	--	--	--	--	--	--
Chlorogonium spirale	--	--	--	--	--	--	--	--
Chlorogonium sp.	--	--	--	--	--	--	--	--
Chodatella quadriseta	--	--	--	--	--	--	--	--
Closterium sp.	--	--	--	--	--	--	--	--
Coccomyxa minor	--	--	--	--	--	--	--	--
Crucigenia quadrata	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
				April 24, 1985--Continued				
CHLOROPHYTA (GREEN ALGAE)--Continued								
Dictyosphaerium ehrenbergianum	--	--	--	--	--	--	--	--
Dictyosphaerium pulchellum	--	--	--	--	--	--	--	--
Dictyosphaerium sp.	--	--	--	--	--	--	--	--
Gloeocystis sp.	14	0.7	110	13.4	--	--	--	--
Golenkinia radiata	--	--	--	--	--	--	--	--
Golenkiniopsis solitaria	--	--	--	--	--	--	--	--
Gonium sp.	--	--	--	--	--	--	--	--
Kirchneriella contorta	--	--	--	--	--	--	--	--
Mesotaenium sp.	--	--	--	--	--	--	--	--
Micratinium pusillum	--	--	--	--	--	--	--	--
Micratinium sp.	--	--	--	--	--	--	--	--
Mougeotia sp.	--	--	--	--	--	--	--	--
Oocytis sp.	--	--	--	--	--	--	--	--
Pandorina morum	--	--	--	--	--	--	--	--
Phacotus lenticularis	--	--	--	--	--	--	--	--
Phacotus sp.	--	--	--	--	--	--	--	--
Platymonas sp.	--	--	--	--	--	--	--	--
Pteromonas sp.	--	--	--	--	--	--	--	--
Scenedesmus armatus	--	--	--	--	--	--	--	--
Scenedesmus bijuga	--	--	--	--	--	--	--	--
Scenedesmus dimorphus	--	--	--	--	--	--	--	--
Scenedesmus quadricauda	--	--	--	--	--	--	--	--
Scenedesmus serratus	--	--	--	--	--	--	--	--
Scenedesmus sp.	--	--	--	--	--	--	--	--
Schroederia judayi	--	--	--	--	--	--	--	--
Schroederia setigera	--	--	--	--	--	--	--	--
Selenastrum minutum	--	--	--	--	--	--	--	--
Sphaerocystis schroeteri	--	--	--	--	--	--	--	--
Staurastrum sp.	--	--	--	--	--	--	--	--
Treubaria sp.	--	--	--	--	--	--	--	--

CHRYSOPHYTA (GOLDEN-BROWN ALGAE)	240	12.2	11	1.3	0	0.0	0	0.0
Dinobryon divergens	--	--	--	--	--	--	--	--
Kephyrion spirale	--	--	--	--	--	--	--	--
Kephyrion sp.	230	11.7	11	1.3	--	--	--	--
Mallomonas acaroides	--	--	--	--	--	--	--	--
Mallomonas akrokonos	--	--	--	--	--	--	--	--
Mallomonas globosa	--	--	--	--	--	--	--	--
Mallomonas sp.	14	0.7	--	--	--	--	--	--
Pleurosigma delicatulum	--	--	--	--	--	--	--	--
Pleurosigma sp.	--	--	--	--	--	--	--	--
Ochromonas sp.	--	--	--	--	--	--	--	--
CYANOPHYTA (BLUE-GREEN ALGAE)	610	31.0	300	36.6	430	84.3	28	33.3
Anabaena sp.	--	--	--	--	--	--	--	--
Aphanocapsa delicatissima	--	--	--	--	--	--	--	--
Aphanocapsa sp.	--	--	--	--	--	--	--	--
Aphanothece sp.	--	--	--	--	--	--	--	--
Chroococcus dispersus	--	--	--	--	--	--	--	--
Chroococcus limneticus	--	--	--	--	--	--	--	--
Chroococcus sp.	--	--	--	--	--	--	--	--
Dactylococcopsis fascicularis	43	2.2	--	--	--	--	--	--
Dactylococcopsis sp.	--	--	--	--	--	--	--	--
Lyngbya limnetica	--	--	--	--	--	--	--	--
Lyngbya nana	170	8.6	--	--	200	39.2	28	33.3
Marssoniella elegans	--	--	--	--	--	--	--	--
Oscillatoria angusta	--	--	--	--	--	--	--	--
Oscillatoria angustissima	--	--	--	--	230	45.1	--	--
Oscillatoria limnetica	--	--	--	--	--	--	--	--
Oscillatoria tenuis	--	--	--	--	--	--	--	--
Oscillatoria sp.	400	20.3	300	36.6	--	--	--	--
Phormidium sp.	--	--	--	--	--	--	--	--
Synechococcus lineare	--	--	--	--	--	--	--	--
Synechococcus sigmoidea	--	--	--	--	--	--	--	--
Synechococcus sigmoidea f. *minor*	--	--	--	--	--	--	--	--
Synechococcus sp.	--	--	--	--	--	--	--	--
CRYPTOPHYTA (CRYPTOMONADS)	240	12.2	110	13.4	0	0.0	0	0.0
Chroomonas sp.	14	0.7	--	--	--	--	--	--
Cryptomonas erosa	--	--	--	--	--	--	--	--
Cryptomonas marsonii	--	--	--	--	--	--	--	--
Cryptomonas ovata	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
				April 24, 1985--Continued				
CRYPTOPHYTA (CRYPTOMONADS)--Continued								
Cryptomonas rostrata	--	--	--	--	--	--	--	--
Cryptomonas rostratiformis	--	--	--	--	--	--	--	--
Cryptomonas sp.	230	11.7	110	13.4	--	--	--	--
Rhodomonas minuta	--	--	--	--	--	--	--	--
EUGLENOPHYTA (EUGLENOIDS)	14	0.7	0	0.0	0	0.0	0	0.0
Euglena acus	--	--	--	--	--	--	--	--
Euglena viridis	--	--	--	--	--	--	--	--
Euglena sp.	14	0.7	--	--	--	--	--	--
Trachelomonas sp.	--	--	--	--	--	--	--	--
PYRRHOPHYTA (DINOFLAGELLATES)	0	0.0	0	0.0	0	0.0	0	0.0
Ceratium hirundinella	--	--	--	--	--	--	--	--
Gymnodinium sp.	--	--	--	--	--	--	--	--
Peridinium biceps	--	--	--	--	--	--	--	--
Peridinium inconspicua	--	--	--	--	--	--	--	--
Peridinium sp.	--	--	--	--	--	--	--	--
Total cells and percent composition	1,970	100	820	100	510	101	84	100
Number of species	17	--	14	--	5	--	5	--
Diversity index (DI) at species level	3.25	--	2.60	--	1.74	--	2.08	--
Biomass (mg/L dry weight)	<0.1	--	<0.1	--	<0.1	--	<0.1	--
Chlorophyll *a* (μg/L)	--	--	--	--	--	--	--	--
Chlorophyll *b* (μg/L)	--	--	--	--	--	--	--	--
Chlorophyll *c* (μg/L)	--	--	--	--	--	--	--	--

June 4, 1985

BACILLARIOPHYTA (DIATOMS)	730	57.5	480	94.1	270	90.0	370	100.0
CENTRALES	590	46.5	210	41.2	57	19.0	57	15.4
Cyclotella bodanica	--	--	--	--	--	--	--	--
Cyclotella kutzingiana	--	--	--	--	--	--	--	--
Cyclotella meneghiniana	14	1.1	14	2.7	--	--	--	--
Cyclotella pseudostelligera	--	--	--	--	--	--	--	--
Cyclotella stelligera	330	26.0	200	39.2	57	19.0	57	15.4
Melosira granulata var. *angustissima*	--	--	--	--	--	--	--	--
Melosira italica	230	18.1	--	--	--	--	--	--
Melosira lirata	--	--	--	--	--	--	--	--
Melosira sp.	--	--	--	--	--	--	--	--
Rhizosolenia eriensis	--	--	--	--	--	--	--	--
Stephanodiscus alpinus	14	1.1	--	--	--	--	--	--
Stephanodiscus astrea	--	--	--	--	--	--	--	--
Stephanodiscus niagarae	--	--	--	--	--	--	--	--
Stephanodiscus tenuis	--	--	--	--	--	--	--	--
Stephanodiscus sp.	--	--	--	--	--	--	--	--
PENNALES	140	11.0	267	52.4	210	70.0	310	83.8
Achnanthes affinis	--	--	--	--	--	--	--	--
Achnanthes lanceolata	--	--	--	--	--	--	--	--
Achnanthes minutissima	--	--	28	5.5	28	9.3	28	7.6
Amphora perpusilla	--	--	--	--	--	--	--	--
Amphora veneta	--	--	--	--	--	--	--	--
Amphora sp.	--	--	--	--	--	--	--	--
Asterionella formosa	--	--	14	2.7	--	--	--	--
Cocconeis placentula	--	--	--	--	--	--	--	--
Cylindrotheca gracilis	--	--	--	--	--	--	--	--
Cylindrotheca sp.	--	--	--	--	--	--	--	--
Cymatopleura solea	--	--	--	--	--	--	--	--
Cymbella affinis	--	--	--	--	85	28.3	--	--
Cymbella minuta	--	--	--	--	--	--	--	--
Cymbella minuta f. *latens*	--	--	--	--	--	--	--	--
Cymbella minuta var. *silesica*	--	--	--	--	--	--	--	--
Cymbella sinuata	--	--	--	--	--	--	--	--
Diatoma anceps	--	--	--	--	--	--	--	--
Diatoma hiemale var. *mesodon*	--	--	--	--	--	--	--	--
Diatoma tenue var. *elongatum*	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
	June 4, 1985--Continued							
BACILLARIOPHYTA (DIATOMS)--Continued								
PENNALES--Continued								
Diatoma vulgare	--	--	--	--	--	--	--	--
Diploneis sp.	--	--	--	--	--	--	--	--
Epithemia sorex	--	--	--	--	--	--	--	--
Eunotia sp.	--	--	--	--	--	--	--	--
Fragilaria capucina	--	--	--	--	--	--	--	--
Fragilaria crotonensis	--	--	--	--	--	--	--	--
Fragilaria pinnata	--	--	--	--	--	--	--	--
Fragilaria vaucheriae	--	--	--	--	--	--	--	--
Gomphonema angustatum	--	--	--	--	--	--	--	--
Gyrosigma spencerii	--	--	--	--	--	--	--	--
Hannaea arcus	--	--	--	--	--	--	--	--
Hannaea arcus var. *amphioxys*	--	--	--	--	--	--	--	--
Hannaea arcus var. *arcus*	--	--	--	--	--	--	--	--
Hantzschia amphioxys	--	--	--	--	--	--	--	--
Meridion circulare	--	--	--	--	--	--	--	--
Navicula arvensis	--	--	--	--	--	--	--	--
Navicula capitata	--	--	--	--	--	--	--	--
Navicula cryptocephala	--	--	--	--	--	--	--	--
Navicula cryptocephala var. *veneta*	--	--	--	--	--	--	--	--
Navicula gastrum	--	--	--	--	--	--	--	--
Navicula heufleri	--	--	--	--	--	--	28	7.6
Navicula lanceolata	--	--	--	--	--	--	--	--
Navicula luzonensis	--	--	--	--	--	--	--	--
Navicula menisculus var. *upsaliensis*	--	--	--	--	--	--	--	--
Navicula minima	--	--	--	--	--	--	--	--
Navicula minuscula	14	1.1	28	5.5	--	--	--	--
Navicula mutica	--	--	--	--	--	--	--	--
Navicula notha	--	--	--	--	--	--	--	--

Navicula pellicosa	--	--	--	--	--	--	--	--
Navicula pupula	--	--	--	--	--	--	--	--
Navicula radiosa	--	--	--	--	--	--	--	--
Navicula radiosa var. *tenella*	--	--	--	--	--	--	--	--
Navicula rhyncocephala	--	--	--	--	--	--	--	--
Navicula sabinians var. *intermedia*	--	--	--	--	--	--	--	--
Navicula tantula	--	--	--	--	--	--	--	--
Navicula tripunctata	--	--	--	--	--	--	--	--
Navicula viridula	--	--	--	--	--	--	--	--
Navicula viridula var. *aveame*	--	--	14	2.7	--	--	--	--
Navicula viridula var. *avenacea*	--	--	--	--	--	--	--	--
Navicula sp.	--	--	--	--	--	--	--	--
Nitzschia acicularis	--	--	--	--	--	--	--	--
Nitzschia communis	--	--	14	2.7	--	--	28	7.6
Nitzschia dissipata	28	2.2	--	--	28	9.3	28	7.6
Nitzschia filiformis	--	--	--	--	--	--	--	--
Nitzschia frustulum	--	--	28	5.5	32	10.7	14	3.8
Nitzschia hantzschiana	--	--	--	--	--	--	--	--
Nitzschia hungarica	--	--	--	--	--	--	--	--
Nitzschia ignorata	--	--	14	2.7	--	--	--	--
Nitzschia intermedia	28	2.2	14	2.7	--	--	28	7.6
Nitzschia latens	14	1.1	14	2.7	--	--	--	--
Nitzschia linearis	--	--	--	--	--	--	--	--
Nitzschia longissima var. *reversa*	--	--	--	--	--	--	--	--
Nitzschia microcephala	--	--	--	--	--	--	--	--
Nitzschia palea	--	--	57	11.2	28	9.3	28	7.6
Nitzschia paleacea	--	--	--	--	--	--	--	--
Nitzschia pusilla	--	--	--	--	--	--	--	--
Nitzschia romana	28	2.2	28	5.5	7	2.3	14	3.8
Nitzschia thermalis	--	--	--	--	--	--	--	--
Nitzschia tryblionella var. *debilis*	--	--	--	--	--	--	--	--
Nitzschia sp.	--	--	--	--	--	--	28	7.6
Pleurosigma delicatalum	--	--	--	--	--	--	--	--
Rhoicosphenia curvata	--	--	--	--	--	--	--	--
Rhopalodia musculus	--	--	--	--	--	--	28	7.6
Surirella angustata	14	1.1	--	--	--	--	--	--
Surirella ovalis	--	--	--	--	--	--	--	--
Surirella ovata	14	1.1	--	--	--	--	--	--
Synedra acus	--	--	--	--	--	--	--	--
Synedra delicatissima	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1) 2-ft depth Cells	% Comp	Kenney Reservoir (site 1) Composite (0-10 ft) Cells	% Comp	Kenney Reservoir (site 2) 2-ft depth Cells	% Comp	Kenney Reservoir (site 2) Composite (0-10 ft) Cells	% Comp
June 4, 1985--Continued								
BACILLARIOPHYTA (DIATOMS)--Continued								
PENNALES--Continued								
Synedra fasciculate	--	--	--	--	--	--	--	--
Synedra minuscula	--	--	--	--	--	--	--	--
Snyedra radiens	--	--	--	--	--	--	--	--
Synedra rumpens	--	--	--	--	--	--	--	--
Synedra rumpens var. *familiaris*	--	--	--	--	--	--	--	--
Synedra ulna	--	--	--	--	--	--	--	--
Synedra ulna var. *contracta*	--	--	--	--	--	--	--	--
Synedra ulna var. *danica*	--	--	--	--	--	--	--	--
Synedra ulna var. *oxyrhynchus*	--	--	--	--	--	--	--	--
Synedra sp.	--	--	14	2.7	--	--	57	15.4
Thalassiosira fluviatilis	--	--	--	--	--	--	--	--
CHLOROPHYTA (GREEN ALGAE)	120	9.4	11	2.2	0	0.0	0	0.0
Actinastrum hantzschii	--	--	--	--	--	--	--	--
Actinastrum sp.	--	--	--	--	--	--	--	--
Ankistrodesmus convolutus	--	--	--	--	--	--	--	--
Ankistrodesmus convolutus v. *acicularis*	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus var. *acicularis*	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus var. *mirabilis*	--	--	--	--	--	--	--	--
Carteria sp.	--	--	--	--	--	--	--	--
Chlamydomonas sp.	--	--	--	--	--	--	--	--
Chlorella sp.	--	--	--	--	--	--	--	--
Chlorococcum humicola	--	--	--	--	--	--	--	--
Chlorococcum sp.	--	--	--	--	--	--	--	--
Chlorogonium spirale	--	--	--	--	--	--	--	--

Chlorogonium sp.	--	--	--	--	--	--	--	--
Chodatella quadriseta	--	--	--	--	--	--	--	--
Closterium sp.	--	--	--	--	--	--	--	--
Coccomyxa minor	--	--	--	--	--	--	--	--
Crucigenia quadrata	110	8.7	4	0.8	--	--	--	--
Dictyosphaerium ehrenbergianum	--	--	--	--	--	--	--	--
Dictyosphaerium pulchellum	--	--	--	--	--	--	--	--
Dictyosphaerium sp.	--	--	--	--	--	--	--	--
Gloeocystis sp.	--	--	--	--	--	--	--	--
Golenkinia radiata	--	--	--	--	--	--	--	--
Golenkiniopsis solitaria	--	--	--	--	--	--	--	--
Gonium sp.	--	--	--	--	--	--	--	--
Kirchneriella contorta	--	--	--	--	--	--	--	--
Mesotaenium sp.	--	--	--	--	--	--	--	--
Micratinium pusillum	--	--	--	--	--	--	--	--
Micratinium sp.	--	--	--	--	--	--	--	--
Mougeotia sp.	--	--	--	--	--	--	--	--
Oocytis sp.	14	1.1	7	1.4	--	--	--	--
Pandorina morum	--	--	--	--	--	--	--	--
Phacotus lenticularis	--	--	--	--	--	--	--	--
Phacotus sp.	--	--	--	--	--	--	--	--
Platymonas sp.	--	--	--	--	--	--	--	--
Pteromonas sp.	--	--	--	--	--	--	--	--
Scenedesmus armatus	--	--	--	--	--	--	--	--
Scenedesmus bijuga	--	--	--	--	--	--	--	--
Scenedesmus dimorphus	--	--	--	--	--	--	--	--
Scenedesmus quadricauda	--	--	--	--	--	--	--	--
Scenedesmus serratus	--	--	--	--	--	--	--	--
Scenedesmus sp.	--	--	--	--	--	--	--	--
Schroederia judayi	--	--	--	--	--	--	--	--
Schroederia setigera	--	--	--	--	--	--	--	--
Selenastrum minutum	--	--	--	--	--	--	--	--
Sphaerocystis schroeteri	--	--	--	--	--	--	--	--
Staurastrum sp.	--	--	--	--	--	--	--	--
Treubaria sp.	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
				June 4, 1985--Continued				
CHRYSOPHYTA (GOLDEN-BROWN ALGAE)	14	1.1	0	0.0	28	9.3	0	0.0
Dinobryon divergens	--	--	--	--	--	--	--	--
Kephyrion spirale	--	--	--	--	--	--	--	--
Kephyrion sp.	--	--	--	--	--	--	--	--
Mallomonas acaroides	--	--	--	--	--	--	--	--
Mallomonas akrokonos	--	--	--	--	--	--	--	--
Mallomonas globosa	--	--	--	--	28	9.3	--	--
Mallomonas sp.	14	1.1	--	--	--	--	--	--
Pleurosigma delicatulum	--	--	--	--	--	--	--	--
Pleurosigma sp.	--	--	--	--	--	--	--	--
Ochromonas sp.	--	--	--	--	--	--	--	--
CYANOPHYTA (BLUE-GREEN ALGAE)	110	8.7	0	0.0	0	0.0	0	0.0
Anabaena sp.	--	--	--	--	--	--	--	--
Aphanocapsa delicatissima	--	--	--	--	--	--	--	--
Aphanocapsa sp.	--	--	--	--	--	--	--	--
Aphanothece sp.	--	--	--	--	--	--	--	--
Chroococcus dispersus	--	--	--	--	--	--	--	--
Chroococcus limneticus	--	--	--	--	--	--	--	--
Chroococcus sp.	--	--	--	--	--	--	--	--
Dactylococcopsis fascicularis	--	--	--	--	--	--	--	--
Dactylococcopsis sp.	--	--	--	--	--	--	--	--
Lyngbya limnetica	--	--	--	--	--	--	--	--
Lyngbya nana	--	--	--	--	--	--	--	--
Marssoniella elegans	--	--	--	--	--	--	--	--
Oscillatoria angusta	--	--	--	--	--	--	--	--
Oscillatoria angustissima	--	--	--	--	--	--	--	--
Oscillatoria limnetica	110	8.7	--	--	--	--	--	--
Oscillatoria tenuis	--	--	--	--	--	--	--	--
Oscillatoria sp.	--	--	--	--	--	--	--	--

Phormidium sp.	--	--	--	--	--	--	--	--
Synechococcus lineare	--	--	--	--	--	--	--	--
Synechococcus sigmoidea	--	--	--	--	--	--	--	--
Synechococcus sigmoidea f. *minor*	--	--	--	--	--	--	--	--
Synechococcus sp.	--	--	--	--	--	--	--	--
CRYPTOPHYTA (CRYPTOMONADS)	300	23.6	14	2.7	0	0.0	0	0.0
Chroomonas sp.	140	11.0	--	--	--	--	--	--
Cryptomonas erosa	--	--	--	--	--	--	--	--
Cryptomonas marsonii	--	--	--	--	--	--	--	--
Cryptomonas ovata	--	--	--	--	--	--	--	--
Cryptomonas rostrata	--	--	--	--	--	--	--	--
Cryptomonas rostratiformis	--	--	--	--	--	--	--	--
Cryptomonas sp.	160	12.6	14	2.7	--	--	--	--
Rhodomonas minuta	--	--	--	--	--	--	--	--
EUGLENOPHYTA (EUGLENOIDS)	0	0.0	0	0.0	0	0.0	0	0.0
Euglena acus	--	--	--	--	--	--	--	--
Euglena viridis	--	--	--	--	--	--	--	--
Euglena sp.	--	--	--	--	--	--	--	--
Trachelomonas sp.	--	--	--	--	--	--	--	--
PYRRHOPHYTA (DINOFLAGELLATES)	0	0.0	0	0.0	0	0.0	0	0.0
Ceratium hirundinella	--	--	--	--	--	--	--	--
Gymnodinium sp.	--	--	--	--	--	--	--	--
Peridinium biceps	--	--	--	--	--	--	--	--
Peridinium inconspicua	--	--	--	--	--	--	--	--
Peridinium sp.	--	--	--	--	--	--	--	--
Total cells and percent composition	1,270	100	510	99	300	99	370	100
Number of species	17	--	17	--	8	--	12	--
Diversity index (DI) at species level	3.23	--	3.24	--	2.75	--	3.47	--
Biomass (mg/L dry weight)	3.1	--	2.6	--	1.9	--	1.9	--
Chlorophyll a (µg/L)	7.9	--	8.6	--	--	--	--	--
Chlorophyll *b* (µg/L)	4.2	--	1.7	--	--	--	--	--
Chlorophyll *c* (µg/L)	12.3	--	7.7	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1) 2-ft depth Cells	Kenney Reservoir (site 1) 2-ft depth % Comp	Kenney Reservoir (site 1) Composite (0-10 ft) Cells	Kenney Reservoir (site 1) Composite (0-10 ft) % Comp	Kenney Reservoir (site 2) 2-ft depth Cells	Kenney Reservoir (site 2) 2-ft depth % Comp	Kenney Reservoir (site 2) Composite (0-10 ft) Cells	Kenney Reservoir (site 2) Composite (0-10 ft) % Comp
				June 27, 1985				
BACILLARIOPHYTA (DIATOMS)	410	23.8	1,920	52.2	600	54.5	370	100.0
CENTRALES	220	12.8	1,200	32.6	240	21.8	110	29.7
Cyclotella bodanica	--	--	--	--	--	--	--	--
Cyclotella kutzingiana	--	--	--	--	--	--	--	--
Cyclotella meneghiniana	140	8.1	510	13.9	170	15.5	57	15.4
Cyclotella pseudostelligera	--	--	--	--	--	--	--	--
Cyclotella stelligera	57	3.3	630	17.1	74	6.7	28	7.6
Melosira granulata var. *angustissima*	--	--	--	--	--	--	--	--
Melosira italica	--	--	--	--	--	--	--	--
Melosira lirata	--	--	--	--	--	--	--	--
Melosira sp.	--	--	--	--	--	--	--	--
Rhizosolenia eriensis	--	--	--	--	--	--	--	--
Stephanodiscus alpinus	--	--	--	--	--	--	--	--
Stephanodiscus astrea	--	--	--	--	--	--	--	--
Stephanodiscus niagarae	--	--	--	--	--	--	--	--
Stephanodiscus tenuis	--	--	--	--	--	--	--	--
Stephanodiscus sp.	28	1.6	57	1.5	--	--	28	7.6
PENNALES	190	11.0	720	19.6	360	32.7	260	70.3
Achnanthes affinis	--	--	--	--	--	--	--	--
Achnanthes lanceolata	--	--	--	--	--	--	--	--
Achnanthes minutissima	--	--	--	--	--	--	28	7.6
Amphora perpusilla	--	--	--	--	--	--	--	--
Amphora veneta	--	--	--	--	--	--	--	--
Amphora sp.	--	--	--	--	--	--	--	--
Asterionella formosa	--	--	--	--	--	--	--	--
Cocconeis placentula	--	--	--	--	--	--	--	--
Cylindrotheca gracilis	--	--	--	--	--	--	--	--
Cylindrotheca sp.	--	--	--	--	--	--	--	--
Cymatopleura solea	--	--	--	--	--	--	--	--

Cymbella affinis	--	--	--	--	--	--	--	--
Cymbella minuta	--	--	--	--	--	--	--	--
Cymbella minuta f. *latens*	--	--	--	--	--	--	--	--
Cymbella minuta var. *silesica*	--	--	--	--	--	--	--	--
Cymbella sinuata	--	--	--	--	--	--	--	--
Diatoma anceps	--	--	--	--	--	--	--	--
Diatoma hiemale var. *mesodon*	--	--	--	--	--	--	--	--
Diatoma tenue var. *elongatum*	--	--	--	--	--	--	--	--
Diatoma vulgare	--	--	--	--	--	--	--	--
Diploneis sp.	--	--	--	--	--	--	--	--
Epithemia sorex	--	--	--	--	--	--	--	--
Eunotia sp.	--	--	--	--	28	2.5	--	--
Fragilaria capucina	--	--	--	--	--	--	--	--
Fragilaria crotonensis	--	--	--	--	--	--	--	--
Fragilaria pinnata	--	--	--	--	--	--	28	7.6
Fragilaria vaucheriae	--	--	--	--	--	--	--	--
Gomphonema angustatum	--	--	--	--	--	--	--	--
Gyrosigma spencerii	--	--	--	--	--	--	--	--
Hannaea arcus	--	--	--	--	--	--	--	--
Hannaea arcus var. *amphioxys*	--	--	--	--	--	--	--	--
Hannaea arcus var. *arcus*	--	--	--	--	--	--	--	--
Hantzschia amphioxys	--	--	--	--	--	--	--	--
Meridion circulare	--	--	--	--	--	--	57	15.4
Navicula arvensis	7	0.4	14	0.4	28	2.5	14	3.8
Navicula capitata	--	--	--	--	--	--	--	--
Navicula cryptocephala	--	--	--	--	--	--	--	--
Navicula cryptocephala var. *veneta*	--	--	45	1.2	--	--	57	15.4
Navicula gastrum	--	--	--	--	--	--	--	--
Navicula heufleri	--	--	--	--	--	--	--	--
Navicula lanceolata	--	--	--	--	--	--	--	--
Navicula luzonensis	7	0.4	28	0.8	14	1.3	7	1.9
Navicula menisculus var. *upsaliensis*	--	--	--	--	--	--	--	--
Navicula minima	57	3.3	140	3.8	7	0.6	14	3.8
Navicula minuscula	--	--	--	--	--	--	--	--
Navicula mutica	--	--	--	--	--	--	--7	--
Navicula notha	--	--	--	--	--	--	--	--
Navicula pellicosa	--	--	--	--	--	--	--	--
Navicula pupula	--	--	--	--	--	--	--	--
Navicula radiosa	--	--	--	--	--	--	--	--
Navicula radiosa var. *tenella*	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
	June 27, 1985--Continued							
BACILLARIOPHYTA (DIATOMS)--Continued								
PENNALES--Continued								
Navicula rhyncocephala	--	--	--	--	--	--	--	--
Navicula sabinians var. *intermedia*	--	--	--	--	--	--	--	--
Navicula tantula	--	--	7	0.2	--	--	--	--
Navicula tripunctata	--	--	--	--	--	--	--	--
Navicula viridula	--	--	--	--	--	--	--	--
Navicula viridula var. *aveame*	--	--	--	--	--	--	--	--
Navicula viridula var. *avenacea*	--	--	--	--	--	--	--	--
Navicula sp.	--	--	--	--	--	--	--	--
Nitzschia acicularis	7	0.4	--	--	--	--	--	--
Nitzschia communis	--	--	--	--	57	5.2	--	--
Nitzschia dissipata	--	--	--	--	--	--	--	--
Nitzschia filiformis	--	--	--	--	--	--	--	--
Nitzschia frustulum	--	--	--	--	--	--	--	--
Nitzschia hantzschiana	--	--	28	0.8	100	9.1	--	--
Nitzschia hungarica	--	--	--	--	--	--	--	--
Nitzschia ignorata	--	--	--	--	--	--	--	--
Nitzschia intermedia	--	--	85	2.3	--	--	--	--
Nitzschia latens	--	--	57	1.5	--	--	--	--
Nitzschia linearis	28	1.6	14	0.4	28	2.5	--	--
Nitzschia longissima var. *reversa*	--	--	--	--	--	--	--	--
Nitzschia microcephala	--	--	--	--	--	--	--	--
Nitzschia palea	28	1.6	85	2.3	28	2.5	57	15.4
Nitzschia paleacea	--	--	170	4.6	--	--	--	--
Nitzschia pusilla	--	--	7	0.2	--	--	--	--
Nitzschia romana	--	--	7	0.2	42	3.8	--	--
Nitzschia thermalis	--	--	--	--	--	--	--	--
Nitzschia tryblionella var. *debilis*	--	--	--	--	--	--	--	--
Nitzschia sp.	--	--	--	--	--	--	--	--

Pleurosigma delicatalum	--	--	--	--	--	--	--	--
Rhoicosphenia curvata	--	--	--	--	--	--	--	--
Rhopalodia musculus	--	--	--	--	--	--	--	--
Surirella angustata	--	--	--	--	--	--	--	--
Surirella ovalis	--	--	--	--	--	--	--	--
Surirella ovata	--	--	--	--	28	2.5	--	--
Synedra acus	--	--	--	--	--	--	--	--
Synedra delicatissima	--	--	--	--	--	--	--	--
Synedra fasciculate	--	--	--	--	--	--	--	--
Synedra minuscula	--	--	--	--	--	--	--	--
Snyedra radiens	--	--	--	--	--	--	--	--
Synedra rumpens	--	--	--	--	--	--	--	--
Synedra rumpens var. *familiaris*	--	--	--	--	--	--	--	--
Synedra ulna	57	3.3	28	0.8	--	--	--	--
Synedra ulna var. *contracta*	--	--	--	--	--	--	--	--
Synedra ulna var. *danica*	--	--	--	--	--	--	--	--
Synedra ulna var. *oxyrhynchus*	--	--	--	--	--	--	--	--
Synedra sp.	--	--	--	--	--	--	--	--
Thalassiosira fluviatilis	--	--	--	--	--	--	--	--
CHLOROPHYTA (GREEN ALGAE)	170	9.9	170	4.6	0	0.0	0	0.0
Actinastrum hantzschii	--	--	--	--	--	--	--	--
Actinastrum sp.	--	--	--	--	--	--	--	--
Ankistrodesmus convolutus	--	--	--	--	--	--	--	--
Ankistrodesmus convolutus v. *acicularis*	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus var. *acicularis*	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus var. *mirabilis*	--	--	--	--	--	--	--	--
Carteria sp.	--	--	--	--	--	--	--	--
Chlamydomonas sp.	--	--	--	--	--	--	--	--
Chlorella sp.	--	--	--	--	--	--	--	--
Chlorococcum humicola	--	--	--	--	--	--	--	--
Chlorococcum sp.	--	--	--	--	--	--	--	--
Chlorogonium spirale	--	--	--	--	--	--	--	--
Chlorogonium sp.	--	--	--	--	--	--	--	--
Chodatella quadriseta	--	--	--	--	--	--	--	--
Closterium sp.	--	--	28	0.8	--	--	--	--
Coccomyxa minor	--	--	--	--	--	--	--	--
Crucigenia quadrata	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
				June 27, 1985--Continued				
CHLOROPHYTA (GREEN ALGAE)--Continued								
Dictyosphaerium ehrenbergianum	--	--	--	--	--	--	--	--
Dictyosphaerium pulchellum	--	--	--	--	--	--	--	--
Dictyosphaerium sp.	--	--	--	--	--	--	--	--
Gloeocystis sp.	85	4.9	140	3.8	--	--	--	--
Golenkinia radiata	85	4.9	--	--	--	--	--	--
Golenkiniopsis solitaria	--	--	--	--	--	--	--	--
Gonium sp.	--	--	--	--	--	--	--	--
Kirchneriella contorta	--	--	--	--	--	--	--	--
Mesotaenium sp.	--	--	--	--	--	--	--	--
Micratinium pusillum	--	--	--	--	--	--	--	--
Micratinium sp.	--	--	--	--	--	--	--	--
Mougeotia sp.	--	--	--	--	--	--	--	--
Oocytis sp.	--	--	--	--	--	--	--	--
Pandorina morum	--	--	--	--	--	--	--	--
Phacotus lenticularis	--	--	--	--	--	--	--	--
Phacotus sp.	--	--	--	--	--	--	--	--
Platymonas sp.	--	--	--	--	--	--	--	--
Pteromonas sp.	--	--	--	--	--	--	--	--
Scenedesmus armatus	--	--	--	--	--	--	--	--
Scenedesmus bijuga	--	--	--	--	--	--	--	--
Scenedesmus dimorphus	--	--	--	--	--	--	--	--
Scenedesmus quadricauda	--	--	--	--	--	--	--	--
Scenedesmus serratus	--	--	--	--	--	--	--	--
Scenedesmus sp.	--	--	--	--	--	--	--	--
Schroederia judayi	--	--	--	--	--	--	--	--
Schroederia setigera	--	--	--	--	--	--	--	--
Selenastrum minutum	--	--	--	--	--	--	--	--
Sphaerocystis schroeteri	--	--	--	--	--	--	--	--
Staurastrum sp.	--	--	--	--	--	--	--	--
Treubaria sp.	--	--	--	--	--	--	--	--

CHRYSOPHYTA (GOLDEN-BROWN ALGAE)	0	0.0	0	0.0	0	0.0	0	0.0
Dinobryon divergens	--	--	--	--	--	--	--	--
Kephyrion spirale	--	--	--	--	--	--	--	--
Kephyrion sp.	--	--	--	--	--	--	--	--
Mallomonas acaroides	--	--	--	--	--	--	--	--
Mallomonas akrokonos	--	--	--	--	--	--	--	--
Mallomonas globosa	--	--	--	--	--	--	--	--
Mallomonas sp.	--	--	--	--	--	--	--	--
Pleurosigma delicatulum	--	--	--	--	--	--	--	--
Pleurosigma sp.	--	--	--	--	--	--	--	--
Ochromonas sp.	--	--	--	--	--	--	--	--
CYANOPHYTA (BLUE-GREEN ALGAE)	1,050	61.0	1,560	42.4	420	38.2	0	0.0
Anabaena sp.	--	--	--	--	--	--	--	--
Aphanocapsa delicatissima	--	--	230	6.3	--	--	--	--
Aphanocapsa sp.	--	--	--	--	--	--	--	--
Aphanothece sp.	--	--	--	--	--	--	--	--
Chroococcus dispersus	--	--	--	--	--	--	--	--
Chroococcus limneticus	--	--	--	--	--	--	--	--
Chroococcus sp.	28	1.6	28	0.8	--	--	--	--
Dactylococcopsis fascicularis	28	1.6	85	2.3	--	--	--	--
Dactylococcopsis sp.	--	--	28	0.8	--	--	--	--
Lyngbya limnetica	--	--	--	--	--	--	--	--
Lyngbya nana	--	--	--	--	310	28.2	--	--
Marssoniella elegans	--	--	--	--	--	--	--	--
Oscillatoria angusta	--	--	--	--	--	--	--	--
Oscillatoria angustissima	--	--	--	--	--	--	--	--
Oscillatoria limnetica	--	--	--	--	--	--	--	--
Oscillatoria tenuis	--	--	--	--	--	--	--	--
Oscillatoria sp.	--	--	--	--	110	10.0	--	--
Phormidium sp.	--	--	--	--	--	--	--	--
Synechococcus lineare	110	6.4	280	7.6	--	--	--	--
Synechococcus sigmoidea	--	--	--	--	--	--	--	--
Synechococcus sigmoidea f. minor	--	--	--	--	--	--	--	--
Synechococcus sp.	880	51.2	910	24.7	--	--	--	--
CRYPTOPHYTA (CRYPTOMONADS)	85	4.9	28	0.8	85	7.7	0	0.0
Chroomonas sp.	--	--	--	--	--	--	--	--
Cryptomonas erosa	28	1.6	28	0.8	--	--	--	--
Cryptomonas marsonii	--	--	--	--	--	--	--	--
Cryptomonas ovata	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1) 2-ft depth Cells	% Comp	Kenney Reservoir (site 1) Composite (0-10 ft) Cells	% Comp	Kenney Reservoir (site 2) 2-ft depth Cells	% Comp	Kenney Reservoir (site 2) Composite (0-10 ft) Cells	% Comp
			June 27, 1985--Continued					
CRYPTOPHYTA (CRYPTOMONADS)--Continued								
Cryptomonas rostrata	--	--	--	--	--	--	--	--
Cryptomonas rostratiformis	--	--	--	--	--	--	--	--
Cryptomonas sp.	57	3.3	--	--	85	7.7	--	--
Rhodomonas minuta	--	--	--	--	--	--	--	--
EUGLENOPHYTA (EUGLENOIDS)	0	0.0	0	0.0	0	0.0	0	0.0
Euglena acus	--	--	--	--	--	--	--	--
Euglena viridis	--	--	--	--	--	--	--	--
Euglena sp.	--	--	--	--	--	--	--	--
Trachelomonas sp.	--	--	--	--	--	--	--	--
PYRRHOPHYTA (DINOFLAGELLATES)	0	0.0	0	0.0	0	0.0	0	0.0
Ceratium hirundinella	--	--	--	--	--	--	--	--
Gymnodinium sp.	--	--	--	--	--	--	--	--
Peridinium biceps	--	--	--	--	--	--	--	--
Peridinium inconspicua	--	--	--	--	--	--	--	--
Peridinium sp.	--	--	--	--	--	--	--	--
Total cells and percent composition	1,720	100	3,680	100	1,100	100	370	100
Number of species	18	--	26	--	15	--	11	--
Diversity index (DI) at species level	2.81	--	3.56	--	3.31	--	3.23	--
Biomass (mg/L dry weight)	1.2	--	3.0	--	1.9	--	1.6	--
Chlorophyll *a* (μg/L)	0.20	--	--	--	--	--	--	--
Chlorophyll *b* (μg/L)	0.06	--	--	--	--	--	--	--
Chlorophyll *c* (μg/L)	0.23	--	--	--	--	--	--	--

July 19, 1985

BACILLARIOPHYTA (DIATOMS)	3,800	27.1	4,100	41.0	5,100	68.0	7,100	80.7
CENTRALES	1,700	12.1	3,000	30.0	200	2.7	310	3.5
Cyclotella bodanica	--	--	--	--	--	--	--	--
Cyclotella kutzingiana	--	--	--	--	--	--	--	--
Cyclotella meneghiniana	59	0.4	--	--	--	--	--	--
Cyclotella pseudostelligera	880	6.3	1,800	18.0	140	1.9	310	3.5
Cyclotella stelligera	--	--	--	--	--	--	--	--
Melosira granulata var. *angustissima*	--	--	--	--	--	--	--	--
Melosira italica	--	--	--	--	--	--	--	--
Melosira lirata	--	--	--	--	--	--	--	--
Melosira sp.	--	--	--	--	28	0.4	--	--
Rhizosolenia eriensis	430	3.1	260	2.6	28	0.4	--	--
Stephanodiscus alpinus	--	--	--	--	--	--	--	--
Stephanodiscus astrea	110	0.8	400	4.0	--	--	--	--
Stephanodiscus niagarae	--	--	--	--	--	--	--	--
Stephanodiscus tenuis	--	--	--	--	--	--	--	--
Stephanodiscus sp.	180	1.3	560	5.6	--	--	--	--
PENNALES	2,100	15.0	1,100	11.0	4,900	65.3	6,800	77.3
Achnanthes affinis	--	--	--	--	--	--	--	--
Achnanthes lanceolata	--	--	--	--	--	--	--	--
Achnanthes minutissima	--	--	--	--	--	--	--	--
Amphora perpusilla	--	--	--	--	--	--	--	--
Amphora veneta	--	--	--	--	--	--	--	--
Amphora sp.	--	--	--	--	28	0.4	--	--
Asterionella formosa	--	--	--	--	--	--	--	--
Cocconeis placentula	--	--	--	--	--	--	7	0.1
Cylindrotheca gracilis	--	--	--	--	--	--	--	--
Cylindrotheca sp.	--	--	--	--	--	--	--	--
Cymatopleura solea	--	--	--	--	--	--	--	--
Cymbella affinis	--	--	--	--	600	8.0	710	8.1
Cymbella minuta	--	--	--	--	--	--	--	--
Cymbella minuta f. *latens*	--	--	--	--	--	--	--	--
Cymbella minuta var. *silesica*	--	--	--	--	--	--	--	--
Cymbella sinuata	--	--	--	--	--	--	--	--
Diatoma anceps	--	--	--	--	--	--	--	--
Diatoma hiemale var. *mesodon*	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
	July 19, 1985--Continued							
BACILLARIOPHYTA (DIATOMS)--Continued								
PENNALES--Continued								
Diatoma tenue var. *elongatum*	--	--	--	--	--	--	--	--
Diatoma vulgare	--	--	--	--	28	0.4	28	0.3
Diploneis sp.	--	--	--	--	--	--	--	--
Epithemia sorex	--	--	--	--	--	--	--	--
Eunotia sp.	--	--	--	--	--	--	--	--
Fragilaria capucina	--	--	--	--	--	--	--	--
Fragilaria crotonensis	--	--	--	--	--	--	--	--
Fragilaria pinnata	--	--	--	--	--	--	--	--
Fragilaria vaucheriae	--	--	--	--	--	--	--	--
Gomphonema angustatum	--	--	--	--	--	--	--	--
Gyrosigma spencerii	--	--	--	--	--	--	--	--
Hannaea arcus	--	--	--	--	14	0.2	--	--
Hannaea arcus var. *amphioxys*	--	--	--	--	--	--	--	--
Hannaea arcus var. *arcus*	--	--	--	--	--	--	--	--
Hantzschia amphioxys	--	--	--	--	--	--	--	--
Meridion circulare	--	--	--	--	--	--	--	--
Navicula arvensis	14	0.1	--	--	68	0.9	--	--
Navicula capitata	--	--	--	--	--	--	--	--
Navicula cryptocephala	--	--	--	--	--	--	--	--
Navicula cryptocephala var. *veneta*	--	--	--	--	--	--	57	0.6
Navicula gastrum	--	--	--	--	--	--	--	--
Navicula heufleri	--	--	--	--	--	--	19	0.2
Navicula lanceolata	--	--	--	--	--	--	--	--
Navicula luzonensis	--	--	--	--	--	--	38	0.4
Navicula menisculus var. *upsaliensis*	--	--	--	--	--	--	--	--
Navicula minima	--	--	--	--	--	--	--	--
Navicula minuscula	--	--	--	--	68	0.9	--	--
Navicula mutica	--	--	--	--	--	--	--	--
Navicula notha	--	--	--	--	28	0.4	19	0.2

Navicula pellicosa	--	--	--	--	--	--	--	--
Navicula pupula	--	--	--	--	--	--	--	--
Navicula radiosa	--	--	--	--	--	--	--	--
Navicula radiosa var. *tenella*	--	--	--	--	--	--	--	--
Navicula rhyncocephala	14	0.1	--	--	200	2.1	19	0.2
Navicula sabinians var. *intermedia*	--	--	--	--	--	--	--	--
Navicula tantula	--	--	--	--	--	--	--	--
Navicula tripunctata	--	--	--	--	--	--	19	0.2
Navicula viridula	--	--	--	--	--	--	--	--
Navicula viridula var. *aveame*	--	--	--	--	--	--	57	0.6
Navicula viridula var. *avenacea*	--	--	--	--	--	--	--	--
Navicula sp.	--	--	--	--	--	--	--	--
Nitzschia acicularis	--	--	--	--	--	--	--	--
Nitzschia communis	12	0.1	--	--	--	--	--	--
Nitzschia dissipata	--	--	32	0.3	180	2.4	960	10.9
Nitzschia filiformis	--	--	--	--	--	--	--	--
Nitzschia frustulum	--	--	--	--	--	--	--	--
Nitzschia hantzschiana	--	--	--	--	--	--	--	--
Nitzschia hungarica	--	--	--	--	--	--	--	--
Nitzschia ignorata	--	--	--	--	--	--	240	2.7
Nitzschia intermedia	--	--	--	--	--	--	--	--
Nitzschia latens	--	--	--	--	--	--	--	--
Nitzschia linearis	--	--	--	--	90	1.2	--	--
Nitzschia longissima var. *reversa*	--	--	--	--	--	--	--	--
Nitzschia microcephala	--	--	--	--	--	--	--	--
Nitzschia palea	--	--	--	--	45	0.6	360	4.1
Nitzschia paleacea	310	2.2	81	0.8	450	6.0	960	10.9
Nitzschia pusilla	--	--	--	--	--	--	--	--
Nitzschia romana	--	--	--	--	--	--	--	--
Nitzschia thermalis	--	--	--	--	--	--	--	--
Nitzschia tryblionella var. *debilis*	--	--	--	--	--	--	--	--
Nitzschia sp.	--	--	--	--	--	--	120	1.4
Pleurosigma delicatalum	--	--	--	--	--	--	--	--
Rhoicosphenia curvata	--	--	--	--	--	--	--	--
Rhopalodia musculus	--	--	--	--	--	--	--	--
Surirella angustata	--	--	--	--	--	--	--	--
Surirella ovalis	--	--	--	--	--	--	--	--
Surirella ovata	--	--	--	--	--	--	--	--
Synedra acus	38	0.3	19	0.2	--	--	170	1.9
Synedra delicatissima	38	0.3	39	0.4	110	1.5	230	2.6

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1) 2-ft depth		Kenney Reservoir (site 1) Composite (0-10 ft)		Kenney Reservoir (site 2) 2-ft depth		Kenney Reservoir (site 2) Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
			July 19, 1985--Continued					
BACILLARIOPHYTA (DIATOMS)--Continued								
PENNALES--Continued								
Synedra fasciculate	--	--	--	--	--	--	--	--
Synedra minuscula	150	1.1	97	1.0	160	2.1	110	1.3
Snyedra radiens	580	4.1	210	2.1	--	--	450	5.1
Synedra rumpens	--	--	19	0.2	--	--	--	--
Synedra rumpens var. *familiaris*	770	5.5	350	3.5	--	--	57	0.6
Synedra ulna	150	1.1	190	1.9	1,600	21.3	1,300	14.8
Synedra ulna var. *contracta*	--	--	39	0.4	1,100	14.7	740	8.4
Synedra ulna var. *danica*	--	--	--	--	110	1.5	--	--
Synedra ulna var. *oxyrhynchus*	--	--	--	--	--	--	--	--
Synedra sp.	--	--	--	--	--	--	--	--
Thalassiosira fluviatilis	--	--	--	--	--	--	85	1.0
CHLOROPHYTA (GREEN ALGAE)	5,400	38.6	5,200	52.0	1,400	18.7	1,600	18.2
Actinastrum hantzschii	--	--	--	--	--	--	--	--
Actinastrum sp.	200	1.4	--	--	--	--	--	--
Ankistrodesmus convolutus	--	--	--	--	28	0.4	--	--
Ankistrodesmus convolutus v. *acicularis*	110	0.8	57	0.6	--	--	--	--
Ankistrodesmus falcatus	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus var. *acicularis*	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus var. *mirabilis*	--	--	--	--	--	--	--	--
Carteria sp.	--	--	--	--	--	--	--	--
Chlamydomonas sp.	--	--	--	--	--	--	28	0.3
Chlorella sp.	--	--	--	--	--	--	--	--
Chlorococcum humicola	--	--	--	--	--	--	--	--
Chlorococcum sp.	170	1.2	--	--	28	0.4	--	--
Chlorogonium spirale	--	--	--	--	--	--	--	--

Chlorogonium sp.	--	--	--	--	--	--	--	--
Chodatella quadriseta	--	--	--	--	--	--	--	--
Closterium sp.	--	--	--	--	--	--	--	--
Coccomyxa minor	--	--	--	--	--	--	--	--
Crucigenia quadrata	--	--	--	--	--	--	--	--
Dictyosphaerium ehrenbergianum	--	--	--	--	--	--	--	--
Dictyosphaerium pulchellum	--	--	--	--	--	--	--	--
Dictyosphaerium sp.	170	1.2	--	--	280	3.7	--	--
Gloeocystis sp.	--	--	--	--	28	0.4	--	--
Golenkinia radiata	--	--	--	--	--	--	--	--
Golenkiniopsis solitaria	--	--	280	2.8	--	--	--	--
Gonium sp.	--	--	--	--	--	--	--	--
Kirchneriella contorta	--	--	--	--	--	--	--	--
Mesotaenium sp.	--	--	--	--	--	--	--	--
Micratinium pusillum	4,600	32.9	4,700	47.0	800	10.7	800	9.1
Micratinium sp.	--	--	--	--	--	--	--	--
Mougeotia sp.	--	--	28	0.3	--	--	--	--
Oocytis sp.	--	--	--	--	--	--	--	--
Pandorina morum	--	--	--	--	--	--	340	3.9
Phacotus lenticularis	--	--	--	--	--	--	--	--
Phacotus sp.	85	0.6	110	1.1	140	1.9	450	5.1
Platymonas sp.	--	--	--	--	57	0.8	--	--
Pteromonas sp.	--	--	--	--	--	--	--	--
Scenedesmus armatus	--	--	--	--	--	--	--	--
Scenedesmus bijuga	--	--	--	--	--	--	--	--
Scenedesmus dimorphus	--	--	--	--	--	--	--	--
Scenedesmus quadricauda	--	--	--	--	--	--	--	--
Scenedesmus serratus	--	--	--	--	--	--	--	--
Scenedesmus sp.	57	0.4	--	--	--	--	--	--
Schroederia judayi	--	--	--	--	28	0.4	--	--
Schroederia setigera	--	--	--	--	--	--	28	0.3
Selenastrum minutum	28	0.2	--	--	--	--	--	--
Sphaerocystis schroeteri	--	--	--	--	--	--	--	--
Staurastrum sp.	--	--	--	--	--	--	--	--
Treubaria sp.	28	0.2	28	0.3	57	0.8	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
				July 19, 1985--Continued				
CHRYSOPHYTA (GOLDEN-BROWN ALGAE)	0	0.0	0	0.0	0	0.0	0	0.0
Dinobryon divergens	--	--	--	--	--	--	--	--
Kephyrion spirale	--	--	--	--	--	--	--	--
Kephyrion sp.	--	--	--	--	--	--	--	--
Mallomonas acaroides	--	--	--	--	--	--	--	--
Mallomonas akrokonos	--	--	--	--	--	--	--	--
Mallomonas globosa	--	--	--	--	--	--	--	--
Mallomonas sp.	--	--	--	--	--	--	--	--
Pleurosigma delicatulum	--	--	--	--	--	--	--	--
Pleurosigma sp.	--	--	--	--	--	--	--	--
Ochromonas sp.	--	--	--	--	--	--	--	--
CYANOPHYTA (BLUE-GREEN ALGAE)	4,300	30.7	540	5.4	910	12.1	0	0.0
Anabaena sp.	--	--	--	--	--	--	--	--
Aphanocapsa delicatissima	--	--	--	--	--	--	--	--
Aphanocapsa sp.	510	3.6	--	--	--	--	--	--
Aphanothece sp.	--	--	--	--	--	--	--	--
Chroococcus dispersus	1,700	12.1	230	2.3	--	--	--	--
Chroococcus limneticus	--	--	--	--	--	--	--	--
Chroococcus sp.	--	--	--	--	--	--	--	--
Dactylococcopsis fascicularis	110	0.8	--	--	--	--	--	--
Dactylococcopsis sp.	--	--	--	--	--	--	--	--
Lyngbya limnetica	--	--	--	--	--	--	--	--
Lyngbya nana	--	--	--	--	--	--	--	--
Marssoniella elegans	--	--	--	--	--	--	--	--
Oscillatoria angusta	--	--	--	--	--	--	--	--
Oscillatoria angustissima	--	--	--	--	--	--	--	--
Oscillatoria limnetica	230	1.6	--	--	--	--	--	--
Oscillatoria tenuis	--	--	--	--	--	--	--	--
Oscillatoria sp.	--	--	280	2.8	--	--	--	--

Phormidium sp.	--	--	--	--	--	--	--	--
Synechococcus lineare	57	0.4	--	--	--	--	--	--
Synechococcus sigmoidea	--	--	--	--	--	--	--	--
Synechococcus sigmoidea f. *minor*	--	--	--	--	--	--	--	--
Synechococcus sp.	1,700	12.1	28	0.3	910	12.1	--	--
CRYPTOPHYTA (CRYPTOMONADS)	57	0.4	85	0.9	57	0.8	28	0.3
Chroomonas sp.	57	0.4	28	0.3	--	--	--	--
Cryptomonas erosa	--	--	57	0.6	57	0.8	28	0.3
Cryptomonas marsonii	--	--	--	--	--	--	--	--
Cryptomonas ovata	--	--	--	--	--	--	--	--
Cryptomonas rostrata	--	--	--	--	--	--	--	--
Cryptomonas rostratiformis	--	--	--	--	--	--	--	--
Cryptomonas sp.	--	--	--	--	--	--	--	--
Rhodomonas minuta	--	--	--	--	--	--	--	--
EUGLENOPHYTA (EUGLENOIDS)	28	0.2	0	0.0	0	0.0	57	0.6
Euglena acus	--	--	--	--	--	--	--	--
Euglena viridis	--	--	--	--	--	--	--	--
Euglena sp.	--	--	--	--	--	--	57	0.6
Trachelomonas sp.	28	0.2	--	--	--	--	--	--
PYRRHOPHYTA (DINOFLAGELLATES)	56	0.4	28	0.3	56	0.7	0	0.0
Ceratium hirundinella	--	--	--	--	28	0.4	--	--
Gymnodinium sp.	--	--	--	--	--	--	--	--
Peridinium biceps	--	--	--	--	--	--	--	--
Peridinium inconspicua	28	0.2	--	--	28	0.4	--	--
Peridinium sp.	28	0.2	28	0.3	--	--	--	--
Total cells and percent composition	14,000	97	10,000	100	7,500	100	8,800	100
Number of species	34	--	26	--	33	--	31	--
Diversity index (DI) at species level	3.51	--	2.85	--	3.83	--	4.02	--
Biomass (mg/L dry weight)	3.2	--	3.5	--	4.4	--	6.5	--
Chlorophyll *a* (µg/L)	2.1	--	1.9	--	5.3	--	1.1	--
Chlorophyll *b* (µg/L)	3.4	--	0.3	--	7.5	--	1.4	--
Chlorophyll *c* (µg/L)	8.4	--	0.7	--	9.5	--	5.4	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
				August 7, 1985				
BACILLARIOPHYTA (DIATOMS)	4,900	44.5	3,700	42.2	1,300	52.0	740	27.4
CENTRALES	4,900	44.5	3,600	41.4	1,100	44.0	460	17.0
Cyclotella bodanica	--	--	--	--	--	--	--	--
Cyclotella kutzingiana	--	--	--	--	--	--	--	--
Cyclotella meneghiniana	28	0.3	--	--	85	3.4	57	2.1
Cyclotella pseudostelligera	4,800	43.6	3,600	41.4	1,000	40.0	370	13.7
Cyclotella stelligera	28	0.3	--	--	--	--	--	--
Melosira granulata var. *angustissima*	--	--	--	--	--	--	--	--
Melosira italica	--	--	--	--	--	--	--	--
Melosira lirata	--	--	--	--	--	--	--	--
Melosira sp.	--	--	--	--	--	--	--	--
Rhizosolenia eriensis	--	--	--	--	--	--	--	--
Stephanodiscus alpinus	--	--	--	--	--	--	--	--
Stephanodiscus astrea	--	--	--	--	--	--	--	--
Stephanodiscus niagarae	--	--	--	--	--	--	28	1.0
Stephanodiscus tenuis	--	--	--	--	--	--	--	--
Stephanodiscus sp.	--	--	--	--	--	--	--	--
PENNALES	28	0.3	57	0.7	204	8.2	280	10.4
Achnanthes affinis	--	--	--	--	--	--	--	--
Achnanthes lanceolata	--	--	--	--	--	--	--	--
Achnanthes minutissima	--	--	--	--	--	--	--	--
Amphora perpusilla	--	--	--	--	--	--	--	--
Amphora veneta	--	--	--	--	--	--	--	--
Amphora sp.	--	--	--	--	--	--	--	--
Asterionella formosa	--	--	--	--	--	--	--	--
Cocconeis placentula	--	--	--	--	--	--	--	--
Cylindrotheca gracilis	--	--	--	--	--	--	--	--
Cylindrotheca sp.	--	--	--	--	--	--	--	--
Cymatopleura solea	--	--	--	--	--	--	--	--

Cymbella affinis	--	--	--	--	28	1.1	--	--
Cymbella minuta	--	--	--	--	--	--	--	--
Cymbella minuta f. *latens*	--	--	--	--	--	--	--	--
Cymbella minuta var. *silesica*	--	--	--	--	--	--	--	--
Cymbella sinuata	--	--	--	--	--	--	--	--
Diatoma anceps	--	--	--	--	28	1.1	--	--
Diatoma hiemale var. *mesodon*	--	--	--	--	--	--	--	--
Diatoma tenue var. *elongatum*	--	--	--	--	--	--	--	--
Diatoma vulgare	--	--	--	--	--	--	--	--
Diploneis sp.	--	--	--	--	--	--	--	--
Epithemia sorex	--	--	--	--	--	--	--	--
Eunotia sp.	--	--	--	--	--	--	--	--
Fragilaria capucina	--	--	--	--	--	--	--	--
Fragilaria crotonensis	--	--	--	--	--	--	--	--
Fragilaria pinnata	--	--	--	--	--	--	--	--
Fragilaria vaucheriae	--	--	--	--	--	--	--	--
Gomphonema angustatum	--	--	--	--	--	--	--	--
Gyrosigma spencerii	--	--	--	--	--	--	--	--
Hannaea arcus	--	--	--	--	--	--	--	--
Hannaea arcus var. *amphioxys*	--	--	--	--	--	--	--	--
Hannaea arcus var. *arcus*	--	--	--	--	--	--	--	--
Hantzschia amphioxys	--	--	--	--	--	--	--	--
Meridion circulare	--	--	--	--	--	--	--	--
Navicula arvensis	--	--	--	--	--	--	--	--
Navicula capitata	--	--	--	--	--	--	--	--
Navicula cryptocephala	--	--	--	--	--	--	--	--
Navicula cryptocephala var. *veneta*	--	--	--	--	--	--	--	--
Navicula gastrum	--	--	--	--	--	--	--	--
Navicula heufleri	--	--	--	--	--	--	28	1.0
Navicula lanceolata	--	--	--	--	--	--	--	--
Navicula luzonensis	--	--	--	--	--	--	--	--
Navicula menisculus var. *upsaliensis*	--	--	--	--	7	0.3	--	--
Navicula minima	--	--	--	--	--	--	--	--
Navicula minuscula	--	--	--	--	28	1.1	--	--
Navicula mutica	--	--	--	--	--	--	--	--
Navicula notha	--	--	--	--	--	--	--	--
Navicula pellicosa	--	--	--	--	--	--	--	--
Navicula pupula	--	--	--	--	--	--	14	0.5
Navicula radiosa	--	--	--	--	--	--	--	--
Navicula radiosa var. *tenella*	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
	August 7, 1985--Continued							
BACILLARIOPHYTA (DIATOMS)--Continued								
PENNALES--Continued								
Navicula rhyncocephala	--	--	--	--	--	--	28	1.0
Navicula sabinians var. *intermedia*	--	--	--	--	--	--	--	--
Navicula tantula	--	--	--	--	--	--	--	--
Navicula tripunctata	--	--	--	--	--	--	28	1.0
Navicula viridula	--	--	--	--	--	--	--	--
Navicula viridula var. *aveame*	--	--	--	--	28	1.1	57	2.1
Navicula viridula var. *avenacea*	--	--	--	--	--	--	--	--
Navicula sp.	--	--	--	--	--	--	--	--
Nitzschia acicularis	--	--	57	0.7	--	--	14	0.5
Nitzschia communis	--	--	--	--	--	--	28	1.0
Nitzschia dissipata	--	--	--	--	28	1.1	28	1.0
Nitzschia filiformis	--	--	--	--	--	--	--	--
Nitzschia frustulum	--	--	--	--	--	--	--	--
Nitzschia hantzschiana	--	--	--	--	--	--	--	--
Nitzschia hungarica	--	--	--	--	--	--	--	--
Nitzschia ignorata	--	--	--	--	--	--	--	--
Nitzschia intermedia	--	--	--	--	--	--	--	--
Nitzschia latens	--	--	--	--	--	--	--	--
Nitzschia linearis	--	--	--	--	--	--	--	--
Nitzschia longissima var. *reversa*	--	--	--	--	--	--	--	--
Nitzschia microcephala	--	--	--	--	--	--	--	--
Nitzschia palea	--	--	--	--	--	--	--	--
Nitzschia paleacea	--	--	--	--	57	2.3	--	--
Nitzschia pusilla	--	--	--	--	--	--	--	--
Nitzschia romana	--	--	--	--	--	--	--	--
Nitzschia thermalis	--	--	--	--	--	--	--	--
Nitzschia tryblionella var. *debilis*	--	--	--	--	--	--	--	--
Nitzschia sp.	--	--	--	--	--	--	--	--

Pleurosigma delicatalum	--	--	--	--	--	--	--	--
Rhoicosphenia curvata	--	--	--	--	--	--	--	--
Rhopalodia musculus	--	--	--	--	--	--	--	--
Surirella angustata	--	--	--	--	--	--	--	--
Surirella ovalis	--	--	--	--	--	--	--	--
Surirella ovata	--	--	--	--	28	1.0	--	--
Synedra acus	--	--	--	--	--	--	--	--
Synedra delicatissima	--	--	--	--	--	--	--	--
Synedra fasciculate	--	--	--	--	--	--	--	--
Synedra minuscula	--	--	--	--	--	--	--	--
Snyedra radiens	--	--	--	--	--	--	--	--
Synedra rumpens	--	--	--	--	--	--	--	--
Synedra rumpens var. *familiaris*	--	--	--	--	--	--	--	--
Synedra ulna	28	0.3	--	--	--	--	28	1.0
Synedra ulna var. *contracta*	--	--	--	--	--	--	--	--
Synedra ulna var. *danica*	--	--	--	--	--	--	--	--
Synedra ulna var. *oxyrhynchus*	--	--	--	--	--	--	--	--
Synedra sp.	--	--	--	--	--	--	--	--
Thalassiosira fluviatilis	--	--	--	--	--	--	--	--
CHLOROPHYTA (GREEN ALGAE)	5,600	50.9	4,900	56.3	1,100	44.0	1,500	55.6
Actinastrum hantzschii	--	--	--	--	--	--	--	--
Actinastrum sp.	--	--	--	--	--	--	--	--
Ankistrodesmus convolutus	--	--	--	--	--	--	--	--
Ankistrodesmus convolutus v. *acicularis*	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus var. *acicularis*	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus var. *mirabilis*	--	--	--	--	--	--	--	--
Carteria sp.	110	1.0	28	0.3	--	--	28	1.0
Chlamydomonas sp.	--	--	57	0.7	28	1.1	170	6.3
Chlorella sp.	--	--	--	--	--	--	--	--
Chlorococcum humicola	--	--	--	--	--	--	--	--
Chlorococcum sp.	28	0.3	85	1.0	--	--	--	--
Chlorogonium spirale	--	--	--	--	--	--	--	--
Chlorogonium sp.	--	--	--	--	--	--	--	--
Chodatella quadriseta	--	--	--	--	--	--	--	--
Closterium sp.	--	--	--	--	--	--	--	--
Coccomyxa minor	--	--	--	--	--	--	--	--
Crucigenia quadrata	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
				August 7, 1985--Continued				
CHLOROPHYTA (GREEN ALGAE)--Continued								
Dictyosphaerium ehrenbergianum	--	--	--	--	--	--	--	--
Dictyosphaerium pulchellum	--	--	--	--	--	--	--	--
Dictyosphaerium sp.	--	--	--	--	--	--	--	--
Gloeocystis sp.	--	--	--	--	28	1.1	--	--
Golenkinia radiata	--	--	--	--	--	--	--	--
Golenkiniopsis solitaria	--	--	--	--	--	--	--	--
Gonium sp.	--	--	--	--	--	--	--	--
Kirchneriella contorta	--	--	--	--	--	--	--	--
Mesotaenium sp.	--	--	--	--	--	--	--	--
Micratinium pusillum	--	--	--	--	--	--	--	--
Micratinium sp.	--	--	--	--	--	--	--	--
Mougeotia sp.	--	--	--	--	--	--	--	--
Oocytis sp.	--	--	--	--	--	--	--	--
Pandorina morum	--	--	--	--	--	--	340	12.6
Phacotus lenticularis	--	--	--	--	--	--	--	--
Phacotus sp.	5,400	49.1	4,700	54.0	770	30.8	940	34.8
Platymonas sp.	--	--	--	--	--	--	--	--
Pteromonas sp.	--	--	--	--	--	--	28	1.0
Scenedesmus armatus	--	--	--	--	37	1.5	--	--
Scenedesmus bijuga	--	--	--	--	--	--	--	--
Scenedesmus dimorphus	--	--	--	--	--	--	--	--
Scenedesmus quadricauda	--	--	--	--	--	--	--	--
Scenedesmus serratus	--	--	--	--	--	--	--	--
Scenedesmus sp.	--	--	--	--	--	--	--	--
Schroederia judayi	--	--	--	--	--	--	--	--
Schroederia setigera	--	--	--	--	--	--	--	--
Selenastrum minutum	57	0.5	--	--	--	--	--	--
Sphaerocystis schroeteri	--	--	--	--	--	--	--	--
Staurastrum sp.	--	--	--	--	230	9.2	--	--
Treubaria sp.	--	--	--	--	--	--	--	--

CHRYSOPHYTA (GOLDEN-BROWN ALGAE)	0	0.0	28	0.3	57	2.3	28	1.0
Dinobryon divergens	--	--	--	--	--	--	--	--
Kephyrion spirale	--	--	--	--	--	--	--	--
Kephyrion sp.	--	--	28	0.3	--	--	--	--
Mallomonas acaroides	--	--	--	--	--	--	--	--
Mallomonas akrokonos	--	--	--	--	--	--	--	--
Mallomonas globosa	--	--	--	--	--	--	--	--
Mallomonas sp.	--	--	--	--	57	2.3	28	1.0
Pleurosigma delicatulum	--	--	--	--	--	--	--	--
Pleurosigma sp.	--	--	--	--	--	--	--	--
Ochromonas sp.	--	--	--	--	--	--	--	--
CYANOPHYTA (BLUE-GREEN ALGAE)	140	1.3	0	0.0	28	1.1	230	8.5
Anabaena sp.	--	--	--	--	--	--	--	--
Aphanocapsa delicatissima	--	--	--	--	--	--	230	8.5
Aphanocapsa sp.	--	--	--	--	--	--	--	--
Aphanothece sp.	--	--	--	--	--	--	--	--
Chroococcus dispersus	--	--	--	--	--	--	--	--
Chroococcus limneticus	85	0.8	--	--	--	--	--	--
Chroococcus sp.	--	--	--	--	--	--	--	--
Dactylococcopsis fascicularis	--	--	--	--	28	1.1	--	--
Dactylococcopsis sp.	--	--	--	--	--	--	--	--
Lyngbya limnetica	--	--	--	--	--	--	--	--
Lyngbya nana	--	--	--	--	--	--	--	--
Marssoniella elegans	--	--	--	--	--	--	--	--
Oscillatoria angusta	--	--	--	--	--	--	--	--
Oscillatoria angustissima	--	--	--	--	--	--	--	--
Oscillatoria limnetica	--	--	--	--	--	--	--	--
Oscillatoria tenuis	--	--	--	--	--	--	--	--
Oscillatoria sp.	--	--	--	--	--	--	--	--
Phormidium sp.	--	--	--	--	--	--	--	--
Synechococcus lineare	--	--	--	--	--	--	--	--
Synechococcus sigmoidea	--	--	--	--	--	--	--	--
Synechococcus sigmoidea f. *minor*	--	--	--	--	--	--	--	--
Synechococcus sp.	57	0.5	--	--	--	--	--	--
CRYPTOPHYTA (CRYPTOMONADS)	56	0.5	28	0.3	56	2.2	230	8.4
Chroomonas sp.	--	--	--	--	--	--	--	--
Cryptomonas erosa	28	0.3	--	--	28	1.1	85	3.1
Cryptomonas marsonii	--	--	--	--	28	1.1	57	2.1
Cryptomonas ovata	--	--	28	0.3	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1) 2-ft depth Cells	% Comp	Composite (0-10 ft) Cells	% Comp	Kenney Reservoir (site 2) 2-ft depth Cells	% Comp	Composite (0-10 ft) Cells	% Comp
			August 7, 1985--Continued					
CRYPTOPHYTA (CRYPTOMONADS)--Continued								
Cryptomonas rostrata	--	--	--	--	--	--	--	--
Cryptomonas rostratiformis	--	--	--	--	--	--	--	--
Cryptomonas sp.	28	0.3	--	--	--	--	85	3.1
Rhodomonas minuta	--	--	--	--	--	--	--	--
EUGLENOPHYTA (EUGLENOIDS)	0	0.0	0	0.0	0	0.0	0	0.0
Euglena acus	--	--	--	--	--	--	--	--
Euglena viridis	--	--	--	--	--	--	--	--
Euglena sp.	--	--	--	--	--	--	--	--
Trachelomonas sp.	--	--	--	--	--	--	--	--
PYRRHOPHYTA (DINOFLAGELLATES)	0	0.0	0	0.0	0	0.0	0	0.0
Ceratium hirundinella	--	--	--	--	--	--	--	--
Gymnodinium sp.	--	--	--	--	--	--	--	--
Peridinium biceps	--	--	--	--	--	--	--	--
Peridinium inconspicua	--	--	--	--	--	--	--	--
Peridinium sp.	--	--	--	--	--	--	--	--
Total cells and percent composition	11,000	97	8,700	99	2,500	102	2,700	101
Number of species	12	--	8	--	18	--	23	--
Diversity index (DI) at species level	1.36	--	1.24	--	2.60	--	3.33	--
Biomass (mg/L dry weight)	5.0	--	3.4	--	1.9	--	1.8	--
Chlorophyll *a* (μg/L)	1.6	--	1.8	--	0.8	--	1.0	--
Chlorophyll *b* (μg/L)	2.1	--	2.7	--	1.9	--	0.3	--
Chlorophyll *c* (μg/L)	2.0	--	1.4	--	2.7	--	0.0	--

				August 28, 1985				
BACILLARIOPHYTA (DIATOMS)	0	0.0	610	38.1	330	23.6	590	31.1
CENTRALES	0	0.0	580	36.3	160	11.4	14	0.7
Cyclotella bodanica	--	--	--	--	--	--	--	--
Cyclotella kutzingiana	--	--	--	--	--	--	--	--
Cyclotella meneghiniana	--	--	85	5.3	57	4.1	14	0.7
Cyclotella pseudostelligera	--	--	--	--	--	--	--	--
Cyclotella stelligera	--	--	500	31.3	99	7.1	--	--
Melosira granulata var. *angustissima*	--	--	--	--	--	--	--	--
Melosira italica	--	--	--	--	--	--	--	--
Melosira lirata	--	--	--	--	--	--	--	--
Melosira sp.	--	--	--	--	--	--	--	--
Rhizosolenia eriensis	--	--	--	--	--	--	--	--
Stephanodiscus alpinus	--	--	--	--	--	--	--	--
Stephanodiscus astrea	--	--	--	--	--	--	--	--
Stephanodiscus niagarae	--	--	--	--	--	--	--	--
Stephanodiscus tenuis	--	--	--	--	--	--	--	--
Stephanodiscus sp.	--	--	--	--	--	--	--	--
PENNALES	0	0.0	28	1.8	170	12.1	580	30.5
Achnanthes affinis	--	--	--	--	--	--	--	--
Achnanthes lanceolata	--	--	--	--	--	--	--	--
Achnanthes minutissima	--	--	--	--	--	--	--	--
Amphora perpusilla	--	--	--	--	--	--	--	--
Amphora veneta	--	--	--	--	--	--	--	--
Amphora sp.	--	--	--	--	--	--	--	--
Asterionella formosa	--	--	--	--	--	--	--	--
Cocconeis placentula	--	--	--	--	--	--	--	--
Cylindrotheca gracilis	--	--	--	--	14	1.0	--	--
Cylindrotheca sp.	--	--	--	--	--	--	--	--
Cymatopleura solea	--	--	--	--	--	--	14	0.7
Cymbella affinis	--	--	--	--	57	4.1	71	3.7
Cymbella minuta	--	--	--	--	--	--	--	--
Cymbella minuta f. *latens*	--	--	--	--	--	--	--	--
Cymbella minuta var. *silesica*	--	--	--	--	--	--	--	--
Cymbella sinuata	--	--	--	--	--	--	--	--
Diatoma anceps	--	--	--	--	--	--	--	--
Diatoma hiemale var. *mesodon*	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
	August 28, 1985--Continued							
BACILLARIOPHYTA (DIATOMS)--Continued								
PENNALES--Continued								
Diatoma tenue var. *elongatum*	--	--	--	--	--	--	--	--
Diatoma vulgare	--	--	--	--	--	--	--	--
Diploneis sp.	--	--	--	--	--	--	--	--
Epithemia sorex	--	--	--	--	--	--	--	--
Eunotia sp.	--	--	--	--	--	--	--	--
Fragilaria capucina	--	--	--	--	--	--	--	--
Fragilaria crotonensis	--	--	--	--	--	--	--	--
Fragilaria pinnata	--	--	--	--	--	--	--	--
Fragilaria vaucheriae	--	--	--	--	--	--	--	--
Gomphonema angustatum	--	--	--	--	--	--	--	--
Gyrosigma spencerii	--	--	--	--	--	--	14	0.7
Hannaea arcus	--	--	--	--	--	--	--	--
Hannaea arcus var. *amphioxys*	--	--	--	--	--	--	--	--
Hannaea arcus var. *arcus*	--	--	--	--	--	--	--	--
Hantzschia amphioxys	--	--	--	--	--	--	--	--
Meridion circulare	--	--	--	--	--	--	--	--
Navicula arvensis	--	--	--	--	--	--	--	--
Navicula capitata	--	--	--	--	--	--	--	--
Navicula cryptocephala	--	--	--	--	--	--	--	--
Navicula cryptocephala var. *veneta*	--	--	--	--	--	--	14	0.7
Navicula gastrum	--	--	--	--	--	--	--	--
Navicula heufleri	--	--	--	--	--	--	28	1.5
Navicula lanceolata	--	--	--	--	--	--	--	--
Navicula luzonensis	--	--	--	--	--	--	--	--
Navicula menisculus var. *upsaliensis*	--	--	--	--	--	--	--	--
Navicula minima	--	--	--	--	--	--	--	--
Navicula minuscula	--	--	--	--	--	--	--	--
Navicula mutica	--	--	--	--	--	--	--	--
Navicula notha	--	--	--	--	--	--	14	0.7

Navicula pellicosa	--	--	--	--	--	--	--	--
Navicula pupula	--	--	--	--	--	--	--	--
Navicula radiosa	--	--	--	--	--	--	--	--
Navicula radiosa var. *tenella*	--	--	--	--	--	--	--	--
Navicula rhyncocephala	--	--	--	--	--	--	43	2.3
Navicula sabinians var. *intermedia*	--	--	--	--	--	--	--	--
Navicula tantula	--	--	--	--	--	--	--	--
Navicula tripunctata	--	--	--	--	--	--	14	0.7
Navicula viridula	--	--	--	--	--	--	--	--
Navicula viridula var. *aveame*	--	--	--	--	--	--	28	1.5
Navicula viridula var. *avenacea*	--	--	--	--	--	--	--	--
Navicula sp.	--	--	--	--	--	--	--	--
Nitzschia acicularis	--	--	--	--	--	--	--	--
Nitzschia communis	--	--	--	--	--	--	--	--
Nitzschia dissipata	--	--	--	--	14	1.0	7	0.4
Nitzschia filiformis	--	--	--	--	--	--	--	--
Nitzschia frustulum	--	--	--	--	--	--	--	--
Nitzschia hantzschiana	--	--	--	--	7	0.5	7	0.4
Nitzschia hungarica	--	--	--	--	--	--	14	0.7
Nitzschia ignorata	--	--	--	--	--	--	28	1.5
Nitzschia intermedia	--	--	--	--	--	--	--	--
Nitzschia latens	--	--	--	--	--	--	14	0.7
Nitzschia linearis	--	--	--	--	--	--	43	2.3
Nitzschia longissima var. *reversa*	--	--	--	--	--	--	43	2.3
Nitzschia microcephala	--	--	--	--	--	--	7	0.4
Nitzschia palea	--	--	--	--	14	1.0	43	2.3
Nitzschia paleacea	--	--	--	--	--	--	71	3.7
Nitzschia pusilla	--	--	--	--	43	3.1	7	0.4
Nitzschia romana	--	--	--	--	7	0.5	14	0.7
Nitzschia thermalis	--	--	--	--	--	--	--	--
Nitzschia tryblionella var. *debilis*	--	--	--	--	--	--	14	0.7
Nitzschia sp.	--	--	--	--	--	--	--	--
Pleurosigma delicatalum	--	--	--	--	--	--	--	--
Rhoicosphenia curvata	--	--	--	--	--	--	14	0.7
Rhopalodia musculus	--	--	--	--	--	--	--	--
Surirella angustata	--	--	--	--	--	--	--	--
Surirella ovalis	--	--	--	--	--	--	--	--
Surirella ovata	--	--	--	--	14	1.0	--	--
Synedra acus	--	--	--	--	--	--	--	--
Synedra delicatissima	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
	August 28, 1985--Continued							
BACILLARIOPHYTA (DIATOMS)--Continued								
PENNALES--Continued								
Synedra fasciculate	--	--	--	--	--	--	--	--
Synedra minuscula	--	--	--	--	--	--	--	--
Snyedra radiens	--	--	28	1.8	--	--	--	--
Synedra rumpens	--	--	--	--	--	--	--	--
Synedra rumpens var. *familiaris*	--	--	--	--	--	--	--	--
Synedra ulna	--	--	--	--	--	--	--	--
Synedra ulna var. *contracta*	--	--	--	--	--	--	14	0.7
Synedra ulna var. *danica*	--	--	--	--	--	--	--	--
Synedra ulna var. *oxyrhynchus*	--	--	--	--	--	--	--	--
Synedra sp.	--	--	--	--	--	--	--	--
Thalassiosira fluviatilis	--	--	--	--	--	--	--	--
CHLOROPHYTA (GREEN ALGAE)	370	52.1	680	42.5	270	19.3	0	0.0
Actinastrum hantzschii	--	--	--	--	--	--	--	--
Actinastrum sp.	--	--	--	--	--	--	--	--
Ankistrodesmus convolutus	--	--	--	--	--	--	--	--
Ankistrodesmus convolutus v. *acicularis*	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus var. *acicularis*	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus var. *mirabilis*	--	--	--	--	--	--	--	--
Carteria sp.	--	--	--	--	14	1.0	--	--
Chlamydomonas sp.	28	3.9	28	1.8	--	--	--	--
Chlorella sp.	--	--	--	--	--	--	--	--
Chlorococcum humicola	--	--	--	--	--	--	--	--
Chlorococcum sp.	260	36.6	310	19.4	28	2.0	--	--
Chlorogonium spirale	--	--	--	--	--	--	--	--

Chlorogonium sp.	--	--	--	--	--	--	--	--
Chodatella quadriseta	--	--	--	--	--	--	--	--
Closterium sp.	--	--	--	--	--	--	--	--
Coccomyxa minor	--	--	--	--	--	--	--	--
Crucigenia quadrata	--	--	--	--	--	--	--	--
Dictyosphaerium ehrenbergianum	--	--	--	--	--	--	--	--
Dictyosphaerium pulchellum	--	--	--	--	--	--	--	--
Dictyosphaerium sp.	--	--	--	--	--	--	--	--
Gloeocystis sp.	--	--	--	--	--	--	--	--
Golenkinia radiata	--	--	--	--	--	--	--	--
Golenkiniopsis solitaria	--	--	--	--	--	--	--	--
Gonium sp.	--	--	--	--	--	--	--	--
Kirchneriella contorta	--	--	--	--	--	--	--	--
Mesotaenium sp.	--	--	--	--	--	--	--	--
Micratinium pusillum	--	--	--	--	28	2.0	--	--
Micratinium sp.	--	--	--	--	--	--	--	--
Mougeotia sp.	--	--	--	--	--	--	--	--
Oocytis sp.	28	3.9	280	17.5	--	--	--	--
Pandorina morum	--	--	--	--	170	12.1	--	--
Phacotus lenticularis	--	--	--	--	--	--	--	--
Phacotus sp.	57	8.0	57	3.6	14	1.0	--	--
Platymonas sp.	--	--	--	--	--	--	--	--
Pteromonas sp.	--	--	--	--	--	--	--	--
Scenedesmus armatus	--	--	--	--	--	--	--	--
Scenedesmus bijuga	--	--	--	--	--	--	--	--
Scenedesmus dimorphus	--	--	--	--	--	--	--	--
Scenedesmus quadricauda	--	--	--	--	--	--	--	--
Scenedesmus serratus	--	--	--	--	--	--	--	--
Scenedesmus sp.	--	--	--	--	--	--	--	--
Schroederia judayi	--	--	--	--	--	--	--	--
Schroederia setigera	--	--	--	--	14	1.0	--	--
Selenastrum minutum	--	--	--	--	--	--	--	--
Sphaerocystis schroeteri	--	--	--	--	--	--	--	--
Staurastrum sp.	--	--	--	--	--	--	--	--
Treubaria sp.	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
				August 28, 1985--Continued				
CHRYSOPHYTA (GOLDEN-BROWN ALGAE)	28	3.9	7	0.4	500	35.7	490	25.8
Dinobryon divergens	--	--	--	--	360	25.7	450	23.7
Kephyrion spirale	--	--	--	--	--	--	--	--
Kephyrion sp.	--	--	--	--	110	7.9	14	0.7
Mallomonas acaroides	--	--	--	--	--	--	--	--
Mallomonas akrokonos	--	--	--	--	--	--	--	--
Mallomonas globosa	--	--	--	--	--	--	--	--
Mallomonas sp.	28	3.9	7	0.4	28	2.0	14	0.7
Pleurosigma delicatulum	--	--	--	--	--	--	--	--
Pleurosigma sp.	--	--	--	--	--	--	14	0.7
Ochromonas sp.	--	--	--	--	--	--	--	--
CYANOPHYTA (BLUE-GREEN ALGAE)	0	0.0	85	5.3	57	4.1	580	30.5
Anabaena sp.	--	--	--	--	--	--	--	--
Aphanocapsa delicatissima	--	--	--	--	--	--	--	--
Aphanocapsa sp.	--	--	--	--	--	--	--	--
Aphanothece sp.	--	--	--	--	--	--	--	--
Chroococcus dispersus	--	--	--	--	--	--	--	--
Chroococcus limneticus	--	--	--	--	--	--	--	--
Chroococcus sp.	--	--	--	--	57	4.1	14	0.7
Dactylococcopsis fascicularis	--	--	--	--	--	--	--	--
Dactylococcopsis sp.	--	--	--	--	--	--	--	--
Lyngbya limnetica	--	--	--	--	--	--	--	--
Lyngbya nana	--	--	--	--	--	--	--	--
Marssoniella elegans	--	--	--	--	--	--	--	--
Oscillatoria angusta	--	--	--	--	--	--	310	16.3
Oscillatoria angustissima	--	--	--	--	--	--	--	--
Oscillatoria limnetica	--	--	--	--	--	--	--	--
Oscillatoria tenuis	--	--	--	--	--	--	--	--
Oscillatoria sp.	--	--	--	--	--	--	260	13.7

Phormidium sp.	--	--	--	--	--	--	--	--
Synechococcus lineare	--	--	--	--	--	--	--	--
Synechococcus sigmoidea	--	--	--	--	--	--	--	--
Synechococcus sigmoidea f. *minor*	--	--	--	--	--	--	--	--
Synechococcus sp.	--	--	85	5.3	--	--	--	--
CRYPTOPHYTA (CRYPTOMONADS)	310	43.7	170	10.6	28	2.0	0	0.0
Chroomonas sp.	--	--	28	1.8	14	1.0	--	--
Cryptomonas erosa	--	--	28	1.8	--	--	--	--
Cryptomonas marsonii	28	3.9	57	3.6	--	--	--	--
Cryptomonas ovata	--	--	--	--	--	--	--	--
Cryptomonas rostrata	--	--	--	--	14	1.0	--	--
Cryptomonas rostratiformis	--	--	--	--	--	--	--	--
Cryptomonas sp.	280	39.4	57	3.6	--	--	--	--
Rhodomonas minuta	--	--	--	--	--	--	--	--
EUGLENOPHYTA (EUGLENOIDS)	0	0.0	0	0.0	200	14.3	190	10.0
Euglena acus	--	--	--	--	--	--	--	--
Euglena viridis	--	--	--	--	--	--	--	--
Euglena sp.	--	--	--	--	200	14.3	190	10.0
Trachelomonas sp.	--	--	--	--	--	--	--	--
PYRRHOPHYTA (DINOFLAGELLATES)	0	0.0	0	0.0	14	1.0	14	0.7
Ceratium hirundinella	--	--	--	--	--	--	--	--
Gymnodinium sp.	--	--	--	--	14	1.0	--	--
Peridinium biceps	--	--	--	--	--	--	--	--
Peridinium inconspicua	--	--	--	--	--	--	14	0.7
Peridinium sp.	--	--	--	--	--	--	--	--
Total cells and percent composition	710	100	1,600	97	1,400	100	1,900	98
Number of species	7	--	13	--	24	--	34	--
Diversity index (DI) at species level	2.09	--	2.87	--	3.65	--	3.80	--
Biomass (mg/L dry weight)	1.8	--	3.2	--	4.5	--	10.8	--
Chlorophyll *a* (μg/L)	0.7	--	1.9	--	2.0	--	2.4	--
Chlorophyll *b* (μg/L)	0.0	--	0.5	--	0.9	--	1.4	--
Chlorophyll *c* (μg/L)	2.9	--	1.6	--	2.4	--	7.7	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
				September 17, 1985				
BACILLARIOPHYTA (DIATOMS)	110	23.9	470	67.1	1,200	80.0	2,600	89.7
CENTRALES	99	21.5	160	22.9	28	1.9	85	2.9
Cyclotella bodanica	--	--	--	--	--	--	--	--
Cyclotella kutzingiana	--	--	--	--	--	--	--	--
Cyclotella meneghiniana	28	6.1	14	2.0	28	1.9	85	2.9
Cyclotella pseudostelligera	57	12.4	99	14.1	--	--	--	--
Cyclotella stelligera	--	--	28	4.0	--	--	--	--
Melosira granulata var. *angustissima*	--	--	--	--	--	--	--	--
Melosira italica	--	--	--	--	--	--	--	--
Melosira lirata	--	--	--	--	--	--	--	--
Melosira sp.	--	--	--	--	--	--	--	--
Rhizosolenia eriensis	14	3.0	14	2.0	--	--	--	--
Stephanodiscus alpinus	--	--	--	--	--	--	--	--
Stephanodiscus astrea	--	--	--	--	--	--	--	--
Stephanodiscus niagarae	--	--	--	--	--	--	--	--
Stephanodiscus tenuis	--	--	--	--	--	--	--	--
Stephanodiscus sp.	--	--	--	--	--	--	--	--
PENNALES	14	3.0	310	44.3	1,200	80.0	2,500	86.2
Achnanthes affinis	--	--	--	--	--	--	57	2.0
Achnanthes lanceolata	--	--	--	--	--	--	--	--
Achnanthes minutissima	--	--	--	--	--	--	--	--
Amphora perpusilla	--	--	--	--	--	--	--	--
Amphora veneta	--	--	--	--	--	--	--	--
Amphora sp.	--	--	--	--	--	--	--	--
Asterionella formosa	--	--	--	--	--	--	--	--
Cocconeis placentula	--	--	--	--	--	--	--	--
Cylindrotheca gracilis	--	--	--	--	--	--	--	--
Cylindrotheca sp.	--	--	--	--	--	--	--	--
Cymatopleura solea	--	--	--	--	--	--	--	--

Cymbella affinis	--	--	--	--	57	3.8	450	15.5
Cymbella minuta	--	--	--	--	--	--	--	--
Cymbella minuta f. *latens*	--	--	--	--	--	--	--	--
Cymbella minuta var. *silesica*	--	--	--	--	--	--	--	--
Cymbella sinuata	--	--	--	--	--	--	28	1.0
Diatoma anceps	--	--	--	--	--	--	--	--
Diatoma hiemale var. *mesodon*	--	--	--	--	--	--	--	--
Diatoma tenue var. *elongatum*	--	--	--	--	--	--	--	--
Diatoma vulgare	--	--	--	--	--	--	28	1.0
Diploneis sp.	--	--	--	--	--	--	--	--
Epithemia sorex	--	--	--	--	--	--	--	--
Eunotia sp.	--	--	--	--	--	--	--	--
Fragilaria capucina	--	--	--	--	--	--	--	--
Fragilaria crotonensis	--	--	310	44.3	--	--	--	--
Fragilaria pinnata	--	--	--	--	--	--	--	--
Fragilaria vaucheriae	--	--	--	--	--	--	--	--
Gomphonema angustatum	--	--	--	--	--	--	--	--
Gyrosigma spencerii	--	--	--	--	28	1.9	28	1.0
Hannaea arcus	--	--	--	--	--	--	--	--
Hannaea arcus var. *amphioxys*	--	--	--	--	--	--	--	--
Hannaea arcus var. *arcus*	--	--	--	--	--	--	--	--
Hantzschia amphioxys	--	--	--	--	--	--	--	--
Meridion circulare	--	--	--	--	--	--	--	--
Navicula arvensis	--	--	--	--	--	--	--	--
Navicula capitata	--	--	--	--	--	--	28	1.0
Navicula cryptocephala	--	--	--	--	4	0.3	28	1.0
Navicula cryptocephala var. *veneta*	14	3.0	4	0.6	--	--	28	1.0
Navicula gastrum	--	--	--	--	--	--	28	1.0
Navicula heufleri	--	--	--	--	--	--	--	--
Navicula lanceolata	--	--	--	--	--	--	28	1.0
Navicula luzonensis	--	--	--	--	--	--	--	--
Navicula menisculus var. *upsaliensis*	--	--	--	--	--	--	--	--
Navicula minima	--	--	--	--	--	--	--	--
Navicula minuscula	--	--	--	--	--	--	--	--
Navicula mutica	--	--	--	--	--	--	--	--
Navicula notha	--	--	--	--	--	--	--	--
Navicula pellicosa	--	--	--	--	--	--	--	--
Navicula pupula	--	--	--	--	--	--	28	1.0
Navicula radiosa	--	--	--	--	--	--	--	--
Navicula radiosa var. *tenella*	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
	September 17, 1985--Continued							
BACILLARIOPHYTA (DIATOMS)--Continued								
PENNALES--Continued								
Navicula rhyncocephala	--	--	--	--	310	20.7	940	32.4
Navicula sabinians var. *intermedia*	--	--	--	--	--	--	--	--
Navicula tantula	--	--	--	--	--	--	--	--
Navicula tripunctata	--	--	--	--	--	--	--	--
Navicula viridula	--	--	--	--	--	--	--	--
Navicula viridula var. *aveame*	--	--	--	--	230	15.3	280	9.7
Navicula viridula var. *avenacea*	--	--	--	--	--	--	--	--
Navicula sp.	--	--	--	--	--	--	--	--
Nitzschia acicularis	--	--	--	--	110	7.3	85	2.9
Nitzschia communis	--	--	--	--	140	9.3	57	2.0
Nitzschia dissipata	--	--	--	--	--	--	--	--
Nitzschia filiformis	--	--	--	--	--	--	--	--
Nitzschia frustulum	--	--	--	--	--	--	--	--
Nitzschia hantzschiana	--	--	--	--	--	--	--	--
Nitzschia hungarica	--	--	--	--	--	--	--	--
Nitzschia ignorata	--	--	--	--	28	1.9	4	0.1
Nitzschia intermedia	--	--	--	--	28	1.9	--	--
Nitzschia latens	--	--	--	--	28	1.9	--	--
Nitzschia linearis	--	--	--	--	--	--	110	3.8
Nitzschia longissima var. *reversa*	--	--	--	--	--	--	--	--
Nitzschia microcephala	--	--	--	--	--	--	--	--
Nitzschia palea	--	--	--	--	140	9.3	57	2.0
Nitzschia paleacea	--	--	--	--	57	3.8	200	6.9
Nitzschia pusilla	--	--	--	--	28	1.9	--	--
Nitzschia romana	--	--	--	--	--	--	--	--
Nitzschia thermalis	--	--	--	--	--	--	--	--
Nitzschia tryblionella var. *debilis*	--	--	--	--	--	--	--	--
Nitzschia sp.	--	--	--	--	--	--	--	--

Pleurosigma delicatalum	--	--	--	--	--	--	--	--
Rhoicosphenia curvata	--	--	--	--	--	--	--	--
Rhopalodia musculus	--	--	--	--	--	--	--	--
Surirella angustata	--	--	--	--	--	--	--	--
Surirella ovalis	--	--	--	--	--	--	--	--
Surirella ovata	--	--	--	--	--	--	--	--
Synedra acus	--	--	--	--	--	--	--	--
Synedra delicatissima	--	--	--	--	--	--	--	--
Synedra fasciculate	--	--	--	--	--	--	--	--
Synedra minuscula	--	--	--	--	--	--	--	--
Snyedra radiens	--	--	--	--	--	--	--	--
Synedra rumpens	--	--	--	--	--	--	--	--
Synedra rumpens var. *familiaris*	--	--	--	--	--	--	--	--
Synedra ulna	--	--	--	--	--	--	--	--
Synedra ulna var. *contracta*	--	--	--	--	--	--	--	--
Synedra ulna var. *danica*	--	--	--	--	--	--	--	--
Synedra ulna var. *oxyrhynchus*	--	--	--	--	--	--	--	--
Synedra sp.	--	--	--	--	--	--	--	--
Thalassiosira fluviatilis	--	--	--	--	--	--	--	--
CHLOROPHYTA (GREEN ALGAE)	99	21.5	46	6.6	230	15.3	200	6.9
Actinastrum hantzschii	--	--	--	--	--	--	--	--
Actinastrum sp.	--	--	--	--	--	--	--	--
Ankistrodesmus convolutus	--	--	--	--	--	--	--	--
Ankistrodesmus convolutus v. *acicularis*	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus var. *acicularis*	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus var. *mirabilis*	--	--	--	--	--	--	--	--
Carteria sp.	--	--	--	--	--	--	--	--
Chlamydomonas sp.	--	--	--	--	--	--	--	--
Chlorella sp.	--	--	--	--	--	--	--	--
Chlorococcum humicola	--	--	--	--	--	--	--	--
Chlorococcum sp.	71	15.4	14	2.0	--	--	--	--
Chlorogonium spirale	--	--	--	--	--	--	--	--
Chlorogonium sp.	14	3.0	4	0.6	--	--	--	--
Chodatella quadriseta	--	--	--	--	--	--	--	--
Closterium sp.	--	--	--	--	--	--	--	--
Coccomyxa minor	--	--	--	--	--	--	--	--
Crucigenia quadrata	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
	September 17, 1985--Continued							
CHLOROPHYTA (GREEN ALGAE)--Continued								
Dictyosphaerium ehrenbergianum	--	--	--	--	--	--	--	--
Dictyosphaerium pulchellum	--	--	--	--	--	--	--	--
Dictyosphaerium sp.	--	--	--	--	--	--	--	--
Gloeocystis sp.	--	--	--	--	--	--	28	1.0
Golenkinia radiata	--	--	14	2.0	--	--	--	--
Golenkiniopsis solitaria	--	--	--	--	--	--	--	--
Gonium sp.	--	--	--	--	--	--	--	--
Kirchneriella contorta	--	--	--	--	--	--	--	--
Mesotaenium sp.	14	3.0	--	--	--	--	--	--
Micratinium pusillum	--	--	--	--	--	--	--	--
Micratinium sp.	--	--	--	--	--	--	--	--
Mougeotia sp.	--	--	--	--	--	--	--	--
Oocytis sp.	--	--	--	--	--	--	--	--
Pandorina morum	--	--	--	--	--	--	--	--
Phacotus lenticularis	--	--	14	2.0	--	--	--	--
Phacotus sp.	--	--	--	--	--	--	--	--
Platymonas sp.	--	--	--	--	--	--	--	--
Pteromonas sp.	--	--	--	--	--	--	--	--
Scenedesmus armatus	--	--	--	--	--	--	--	--
Scenedesmus bijuga	--	--	--	--	--	--	--	--
Scenedesmus dimorphus	--	--	--	--	--	--	--	--
Scenedesmus quadricauda	--	--	--	--	--	--	--	--
Scenedesmus serratus	--	--	--	--	--	--	--	--
Scenedesmus sp.	--	--	--	--	230	15.3	170	5.9
Schroederia judayi	--	--	--	--	--	--	--	--
Schroederia setigera	--	--	--	--	--	--	--	--
Selenastrum minutum	--	--	--	--	--	--	--	--
Sphaerocystis schroeteri	--	--	--	--	--	--	--	--
Staurastrum sp.	--	--	--	--	--	--	--	--
Treubaria sp.	--	--	--	--	--	--	--	--

CHRYSOPHYTA (GOLDEN-BROWN ALGAE)	28	6.1	7	1.0	28	1.9	28	1.0
Dinobryon divergens	--	--	--	--	--	--	--	--
Kephyrion spirale	--	--	--	--	--	--	--	--
Kephyrion sp.	--	--	--	--	--	--	--	--
Mallomonas acaroides	28	6.1	7	1.0	--	--	--	--
Mallomonas akrokonos	--	--	--	--	--	--	--	--
Mallomonas globosa	--	--	--	--	--	--	--	--
Mallomonas sp.	--	--	--	--	--	--	--	--
Pleurosigma delicatulum	--	--	--	--	28	1.9	28	1.0
Pleurosigma sp.	--	--	--	--	--	--	--	--
Ochromonas sp.	--	--	--	--	--	--	--	--
CYANOPHYTA (BLUE-GREEN ALGAE)	190	41.3	71	10.1	0	0.0	0	0.0
Anabaena sp.	--	--	--	--	--	--	--	--
Aphanocapsa delicatissima	28	6.1	57	8.1	--	--	--	--
Aphanocapsa sp.	--	--	--	--	--	--	--	--
Aphanothece sp.	--	--	--	--	--	--	--	--
Chroococcus dispersus	--	--	--	--	--	--	--	--
Chroococcus limneticus	--	--	--	--	--	--	--	--
Chroococcus sp.	--	--	--	--	--	--	--	--
Dactylococcopsis fascicularis	--	--	--	--	--	--	--	--
Dactylococcopsis sp.	--	--	--	--	--	--	--	--
Lyngbya limnetica	--	--	--	--	--	--	--	--
Lyngbya nana	--	--	--	--	--	--	--	--
Marssoniella elegans	--	--	--	--	--	--	--	--
Oscillatoria angusta	--	--	--	--	--	--	--	--
Oscillatoria angustissima	--	--	--	--	--	--	--	--
Oscillatoria limnetica	--	--	--	--	--	--	--	--
Oscillatoria tenuis	--	--	--	--	--	--	--	--
Oscillatoria sp.	--	--	--	--	--	--	--	--
Phormidium sp.	--	--	--	--	--	--	--	--
Synechococcus lineare	--	--	--	--	--	--	--	--
Synechococcus sigmoidea	--	--	--	--	--	--	--	--
Synechococcus sigmoidea f. *minor*	--	--	--	--	--	--	--	--
Synechococcus sp.	160	34.8	14	2.0	--	--	--	--
CRYPTOPHYTA (CRYPTOMONADS)	28	6.1	110	15.7	28	1.9	28	1.0
Chroomonas sp.	--	--	14	2.0	--	--	--	--
Cryptomonas erosa	14	3.0	28	4.0	--	--	--	--
Cryptomonas marsonii	--	--	--	--	--	--	--	--
Cryptomonas ovata	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
	September 17, 1985--Continued							
CRYPTOPHYTA (CRYPTOMONADS)--Continued								
Cryptomonas rostrata	--	--	--	--	--	--	--	--
Cryptomonas rostratiformis	--	--	--	--	--	--	--	--
Cryptomonas sp.	14	3.0	71	10.1	28	1.9	28	1.0
Rhodomonas minuta	--	--	--	--	--	--	--	--
EUGLENOPHYTA (EUGLENOIDS)	0	0.0	0	0.0	0	0.0	0	0.0
Euglena acus	--	--	--	--	--	--	--	--
Euglena viridis	--	--	--	--	--	--	--	--
Euglena sp.	--	--	--	--	--	--	--	--
Trachelomonas sp.	--	--	--	--	--	--	--	--
PYRRHOPHYTA (DINOFLAGELLATES)	0	0.0	0	0.0	0	0.0	0	0.0
Ceratium hirundinella	--	--	--	--	--	--	--	--
Gymnodinium sp.	--	--	--	--	--	--	--	--
Peridinium biceps	--	--	--	--	--	--	--	--
Peridinium inconspicua	--	--	--	--	--	--	--	--
Peridinium sp.	--	--	--	--	--	--	--	--
Total cells and percent composition	460	99	700	101	1,500	99	2,900	98
Number of species	12	--	16	--	17	--	24	--
Diversity index (DI) at species level	3.00	--	2.85	--	3.45	--	3.43	--
Biomass (mg/L dry weight)	0.8	--	0.0	--	1.6	--	3.0	--
Chlorophyll *a* (μg/L)	1.1	--	0.0	--	1.6	--	1.8	--
Chlorophyll *b* (μg/L)	2.8	--	0.0	--	5.8	--	5.0	--
Chlorophyll *c* (μg/L)	0.4	--	1.5	--	6.3	--	9.6	--

October 21, 1985

BACILLARIOPHYTA (DIATOMS)	140	100.0	230	95.8	710	86.6	990	76.2
CENTRALES	99	70.7	180	75.0	0	0.0	0	0.0
Cyclotella bodanica	--	--	--	--	--	--	--	--
Cyclotella kutzingiana	--	--	--	--	--	--	--	--
Cyclotella meneghiniana	71	50.7	170	70.8	--	--	--	--
Cyclotella pseudostelligera	--	--	--	--	--	--	--	--
Cyclotella stelligera	28	20.0	14	5.8	--	--	--	--
Melosira granulata var. *angustissima*	--	--	--	--	--	--	--	--
Melosira italica	--	--	--	--	--	--	--	--
Melosira lirata	--	--	--	--	--	--	--	--
Melosira sp.	--	--	--	--	--	--	--	--
Rhizosolenia eriensis	--	--	--	--	--	--	--	--
Stephanodiscus alpinus	--	--	--	--	--	--	--	--
Stephanodiscus astrea	--	--	--	--	--	--	--	--
Stephanodiscus niagarae	--	--	--	--	--	--	--	--
Stephanodiscus tenuis	--	--	--	--	--	--	--	--
Stephanodiscus sp.	--	--	--	--	--	--	--	--
PENNALES	42	30.0	53	22.1	710	86.6	990	76.2
Achnanthes affinis	--	--	--	--	28	3.4	--	--
Achnanthes lanceolata	--	--	--	--	--	--	--	--
Achnanthes minutissima	--	--	--	--	--	--	--	--
Amphora perpusilla	--	--	--	--	--	--	--	--
Amphora veneta	--	--	--	--	--	--	--	--
Amphora sp.	--	--	--	--	--	--	--	--
Asterionella formosa	--	--	--	--	--	--	57	4.4
Cocconeis placentula	--	--	--	--	--	--	--	--
Cylindrotheca gracilis	--	--	--	--	28	3.4	28	2.2
Cylindrotheca sp.	--	--	--	--	--	--	--	--
Cymatopleura solea	--	--	--	--	--	--	--	--
Cymbella affinis	--	--	--	--	85	10.4	85	6.5
Cymbella minuta	--	--	--	--	--	--	--	--
Cymbella minuta f. *latens*	--	--	--	--	--	--	--	--
Cymbella minuta var. *silesica*	--	--	--	--	--	--	57	4.4
Cymbella sinuata	--	--	--	--	--	--	--	--
Diatoma anceps	--	--	--	--	--	--	--	--
Diatoma hiemale var. *mesodon*	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
	October 21, 1985--Continued							
BACILLARIOPHYTA (DIATOMS)--Continued								
PENNALES--Continued								
Diatoma tenue var. *elongatum*	--	--	--	--	--	--	--	--
Diatoma vulgare	--	--	--	--	28	3.4	170	13.1
Diploneis sp.	--	--	--	--	--	--	--	--
Epithemia sorex	--	--	--	--	--	--	--	--
Eunotia sp.	--	--	--	--	--	--	--	--
Fragilaria capucina	--	--	--	--	--	--	--	--
Fragilaria crotonensis	--	--	--	--	--	--	--	--
Fragilaria pinnata	--	--	--	--	--	--	--	--
Fragilaria vaucheriae	--	--	--	--	28	3.4	--	--
Gomphonema angustatum	--	--	--	--	--	--	--	--
Gyrosigma spencerii	--	--	--	--	--	--	14	0.7
Hannaea arcus	--	--	28	11.7	--	--	--	--
Hannaea arcus var. *amphioxys*	--	--	--	--	--	--	--	--
Hannaea arcus var. *arcus*	--	--	--	--	--	--	--	--
Hantzschia amphioxys	--	--	--	--	--	--	--	--
Meridion circulare	--	--	--	--	--	--	--	--
Navicula arvensis	--	--	--	--	--	--	--	--
Navicula capitata	--	--	--	--	--	--	--	--
Navicula cryptocephala	--	--	--	--	--	--	--	--
Navicula cryptocephala var. *veneta*	14	10.0	--	--	28	3.4	57	4.4
Navicula gastrum	--	--	--	--	--	--	--	--
Navicula heufleri	--	--	--	--	--	--	--	--
Navicula lanceolata	--	--	--	--	--	--	--	--
Navicula luzonensis	--	--	--	--	--	--	--	--
Navicula menisculus var. *upsaliensis*	--	--	--	--	--	--	--	--
Navicula minima	--	--	--	--	--	--	--	--
Navicula minuscula	--	--	--	--	--	--	--	--
Navicula mutica	--	--	--	--	--	--	--	--
Navicula notha	--	--	--	--	28	3.4	28	2.2

Navicula pellicosa	--	--	--	--	--	--	--	--
Navicula pupula	--	--	--	--	--	--	--	--
Navicula radiosa	--	--	--	--	--	--	--	--
Navicula radiosa var. *tenella*	--	--	--	--	--	--	--	--
Navicula rhyncocephala	--	--	--	--	--	--	114	8.8
Navicula sabinians var. *intermedia*	--	--	--	--	--	--	--	--
Navicula tantula	--	--	--	--	--	--	--	--
Navicula tripunctata	--	--	--	--	--	--	--	--
Navicula viridula	--	--	--	--	--	--	114	8.9
Navicula viridula var. *aveame*	--	--	--	--	370	45.1	140	10.8
Navicula viridula var. *avenacea*	--	--	--	--	--	--	--	--
Navicula sp.	--	--	--	--	--	--	--	--
Nitzschia acicularis	--	--	--	--	--	--	--	--
Nitzschia communis	--	--	--	--	--	--	--	--
Nitzschia dissipata	14	10.0	7	2.9	--	--	57	4.4
Nitzschia filiformis	--	--	--	--	--	--	--	--
Nitzschia frustulum	--	--	--	--	--	--	--	--
Nitzschia hantzschiana	--	--	--	--	28	3.4	28	2.2
Nitzschia hungarica	--	--	--	--	--	--	--	--
Nitzschia ignorata	--	--	--	--	--	--	--	--
Nitzschia intermedia	--	--	--	--	--	--	--	--
Nitzschia latens	--	--	--	--	--	--	--	--
Nitzschia linearis	--	--	--	--	--	--	--	--
Nitzschia longissima var. *reversa*	--	--	--	--	--	--	--	--
Nitzschia microcephala	--	--	--	--	--	--	--	--
Nitzschia palea	--	--	--	--	28	3.4	28	2.2
Nitzschia paleacea	14	10.0	4	1.7	--	--	--	--
Nitzschia pusilla	--	--	--	--	--	--	--	--
Nitzschia romana	--	--	--	--	--	--	--	--
Nitzschia thermalis	--	--	--	--	--	--	--	--
Nitzschia tryblionella var. *debilis*	--	--	--	--	--	--	--	--
Nitzschia sp.	--	--	--	--	--	--	28	2.2
Pleurosigma delicatalum	--	--	--	--	--	--	--	--
Rhoicosphenia curvata	--	--	--	--	--	--	--	--
Rhopalodia musculus	--	--	--	--	--	--	--	--
Surirella angustata	--	--	--	--	--	--	--	--
Surirella ovalis	--	--	--	--	--	--	--	--
Surirella ovata	--	--	--	--	28	3.4	--	--
Synedra acus	--	--	--	--	--	--	--	--
Synedra delicatissima	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
	October 21, 1985--Continued							
BACILLARIOPHYTA (DIATOMS)--Continued								
PENNALES--Continued								
Synedra fasciculate	--	--	14	5.8	--	--	--	--
Synedra minuscula	--	--	--	--	--	--	--	--
Snyedra radiens	--	--	--	--	--	--	--	--
Synedra rumpens	--	--	--	--	--	--	--	--
Synedra rumpens var. *familiaris*	--	--	--	--	--	--	--	--
Synedra ulna	--	--	--	--	--	--	--	--
Synedra ulna var. *contracta*	--	--	--	--	--	--	--	--
Synedra ulna var. *danica*	--	--	--	--	--	--	--	--
Synedra ulna var. *oxyrhynchus*	--	--	--	--	--	--	--	--
Synedra sp.	--	--	--	--	--	--	--	--
Thalassiosira fluviatilis	--	--	--	--	--	--	--	--
CHLOROPHYTA (GREEN ALGAE)	0	0.0	14	5.8	0	0.0	0	0.0
Actinastrum hantzschii	--	--	--	--	--	--	--	--
Actinastrum sp.	--	--	--	--	--	--	--	--
Ankistrodesmus convolutus	--	--	--	--	--	--	--	--
Ankistrodesmus convolutus v. *acicularis*	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus var. *acicularis*	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus var. *mirabilis*	--	--	--	--	--	--	--	--
Carteria sp.	--	--	--	--	--	--	--	--
Chlamydomonas sp.	--	--	14	5.8	--	--	--	--
Chlorella sp.	--	--	--	--	--	--	--	--
Chlorococcum humicola	--	--	--	--	--	--	--	--
Chlorococcum sp.	--	--	--	--	--	--	--	--
Chlorogonium spirale	--	--	--	--	--	--	--	--

Chlorogonium sp.	--	--	--	--	--	--	--	--
Chodatella quadriseta	--	--	--	--	--	--	--	--
Closterium sp.	--	--	--	--	--	--	--	--
Coccomyxa minor	--	--	--	--	--	--	--	--
Crucigenia quadrata	--	--	--	--	--	--	--	--
Dictyosphaerium ehrenbergianum	--	--	--	--	--	--	--	--
Dictyosphaerium pulchellum	--	--	--	--	--	--	--	--
Dictyosphaerium sp.	--	--	--	--	--	--	--	--
Gloeocystis sp.	--	--	--	--	--	--	--	--
Golenkinia radiata	--	--	--	--	--	--	--	--
Golenkiniopsis solitaria	--	--	--	--	--	--	--	--
Gonium sp.	--	--	--	--	--	--	--	--
Kirchneriella contorta	--	--	--	--	--	--	--	--
Mesotaenium sp.	--	--	--	--	--	--	--	--
Micratinium pusillum	--	--	--	--	--	--	--	--
Micratinium sp.	--	--	--	--	--	--	--	--
Mougeotia sp.	--	--	--	--	--	--	--	--
Oocytis sp.	--	--	--	--	--	--	--	--
Pandorina morum	--	--	--	--	--	--	--	--
Phacotus lenticularis	--	--	--	--	--	--	--	--
Phacotus sp.	--	--	--	--	--	--	--	--
Platymonas sp.	--	--	--	--	--	--	--	--
Pteromonas sp.	--	--	--	--	--	--	--	--
Scenedesmus armatus	--	--	--	--	--	--	--	--
Scenedesmus bijuga	--	--	--	--	--	--	--	--
Scenedesmus dimorphus	--	--	--	--	--	--	--	--
Scenedesmus quadricauda	--	--	--	--	--	--	--	--
Scenedesmus serratus	--	--	--	--	--	--	--	--
Scenedesmus sp.	--	--	--	--	--	--	--	--
Schroederia judayi	--	--	--	--	--	--	--	--
Schroederia setigera	--	--	--	--	--	--	--	--
Selenastrum minutum	--	--	--	--	--	--	--	--
Sphaerocystis schroeteri	--	--	--	--	--	--	--	--
Staurastrum sp.	--	--	--	--	--	--	--	--
Treubaria sp.	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
	October 21, 1985--Continued							
CHRYSOPHYTA (GOLDEN-BROWN ALGAE)	0	0.0	0	0.0	0	0.0	0	0.0
Dinobryon divergens	--	--	--	--	--	--	--	--
Kephyrion spirale	--	--	--	--	--	--	--	--
Kephyrion sp.	--	--	--	--	--	--	--	--
Mallomonas acaroides	--	--	--	--	--	--	--	--
Mallomonas akrokonos	--	--	--	--	--	--	--	--
Mallomonas globosa	--	--	--	--	--	--	--	--
Mallomonas sp.	--	--	--	--	--	--	--	--
Pleurosigma delicatulum	--	--	--	--	--	--	--	--
Pleurosigma sp.	--	--	--	--	--	--	--	--
Ochromonas sp.	--	--	--	--	--	--	--	--
CYANOPHYTA (BLUE-GREEN ALGAE)	0	0.0	0	0.0	110	13.4	280	21.5
Anabaena sp.	--	--	--	--	--	--	280	21.8
Aphanocapsa delicatissima	--	--	--	--	--	--	--	--
Aphanocapsa sp.	--	--	--	--	--	--	--	--
Aphanothece sp.	--	--	--	--	--	--	--	--
Chroococcus dispersus	--	--	--	--	--	--	--	--
Chroococcus limneticus	--	--	--	--	--	--	--	--
Chroococcus sp.	--	--	--	--	--	--	--	--
Dactylococcopsis fascicularis	--	--	--	--	--	--	--	--
Dactylococcopsis sp.	--	--	--	--	--	--	--	--
Lyngbya limnetica	--	--	--	--	--	--	--	--
Lyngbya nana	--	--	--	--	--	--	--	--
Marssoniella elegans	--	--	--	--	--	--	--	--
Oscillatoria angusta	--	--	--	--	--	--	--	--
Oscillatoria angustissima	--	--	--	--	--	--	--	--
Oscillatoria limnetica	--	--	--	--	110	13.4	--	--
Oscillatoria tenuis	--	--	--	--	--	--	--	--
Oscillatoria sp.	--	--	--	--	--	--	--	--

Phormidium sp.	--	--	--	--	--	--	--	--
Synechococcus lineare	--	--	--	--	--	--	--	--
Synechococcus sigmoidea	--	--	--	--	--	--	--	--
Synechococcus sigmoidea f. *minor*	--	--	--	--	--	--	--	--
Synechococcus sp.	--	--	--	--	--	--	--	--
CRYPTOPHYTA (CRYPTOMONADS)	0	0.0	0	0.0	0	0.0	0	0.0
Chroomonas sp.	--	--	--	--	--	--	--	--
Cryptomonas erosa	--	--	--	--	--	--	--	--
Cryptomonas marsonii	--	--	--	--	--	--	--	--
Cryptomonas ovata	--	--	--	--	--	--	--	--
Cryptomonas rostrata	--	--	--	--	--	--	--	--
Cryptomonas rostratiformis	--	--	--	--	--	--	--	--
Cryptomonas sp.	--	--	--	--	--	--	--	--
Rhodomonas minuta	--	--	--	--	--	--	--	--
EUGLENOPHYTA (EUGLENOIDS)	0	0.0	0	0.0	0	0.0	0	0.0
Euglena acus	--	--	--	--	--	--	--	--
Euglena viridis	--	--	--	--	--	--	--	--
Euglena sp.	--	--	--	--	--	--	--	--
Trachelomonas sp.	--	--	--	--	--	--	--	--
PYRRHOPHYTA (DINOFLAGELLATES)	0	0.0	0	0.0	0	0.0	0	0.0
Ceratium hirundinella	--	--	--	--	--	--	--	--
Gymnodinium sp.	--	--	--	--	--	--	--	--
Peridinium biceps	--	--	--	--	--	--	--	--
Peridinium inconspicua	--	--	--	--	--	--	--	--
Peridinium sp.	--	--	--	--	--	--	--	--
Total cells and percent composition	140	100	240	102	820	100	1,300	98
Number of species	5	--	7	--	12	--	15	--
Diversity index (DI) at species level	1.95	--	1.67	--	2.75	--	3.51	--
Biomass (mg/L dry weight)	3.0	--	2.5	--	4.6	--	4.6	--
Chlorophyll *a* (µg/L)	<0.1	--	<0.1	--	3.1	--	3.3	--
Chlorophyll *b* (µg/L)	0.0	--	0.0	--	0.0	--	0.0	--
Chlorophyll *c* (µg/L)	<0.1	--	<0.1	--	4.3	--	7.7	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
				April 24, 1986				
BACILLARIOPHYTA (DIATOMS)	1,400	58.3	1,300	92.9	220	22.0	1,100	100.0
CENTRALES	1,300	54.2	1,300	92.9	0	0.0	0	0.0
Cyclotella bodanica	--	--	--	--	--	--	--	--
Cyclotella kutzingiana	--	--	--	--	--	--	--	--
Cyclotella meneghiniana	28	1.2	28	2.0	--	--	--	--
Cyclotella pseudostelligera	--	--	--	--	--	--	--	--
Cyclotella stelligera	--	--	--	--	--	--	--	--
Melosira granulata var. *angustissima*	--	--	--	--	--	--	--	--
Melosira italica	--	--	--	--	--	--	--	--
Melosira lirata	--	--	--	--	--	--	--	--
Melosira sp.	--	--	--	--	--	--	--	--
Rhizosolenia eriensis	--	--	--	--	--	--	--	--
Stephanodiscus alpinus	--	--	--	--	--	--	--	--
Stephanodiscus astrea	--	--	--	--	--	--	--	--
Stephanodiscus niagarae	--	--	--	--	--	--	--	--
Stephanodiscus tenuis	--	--	--	--	--	--	--	--
Stephanodiscus sp.	1,300	54.2	1,300	92.9	--	--	--	--
PENNALES	56	2.3	42	3.0	220	22.4	1,100	103.6
Achnanthes affinis	--	--	--	--	--	--	--	--
Achnanthes lanceolata	--	--	--	--	--	--	--	--
Achnanthes minutissima	--	--	--	--	--	--	--	--
Amphora perpusilla	--	--	--	--	--	--	--	--
Amphora veneta	--	--	--	--	--	--	--	--
Amphora sp.	--	--	--	--	--	--	--	--
Asterionella formosa	--	--	--	--	--	--	--	--
Cocconeis placentula	--	--	--	--	--	--	--	--
Cylindrotheca gracilis	--	--	--	--	--	--	--	--
Cylindrotheca sp.	--	--	--	--	--	--	110	10.0
Cymatopleura solea	--	--	--	--	--	--	--	--

Cymbella affinis	--	--	--	--	--	--	230	20.9
Cymbella minuta	--	--	--	--	--	--	--	--
Cymbella minuta f. *latens*	--	--	--	--	--	--	--	--
Cymbella minuta var. *silesica*	--	--	--	--	57	5.7	--	--
Cymbella sinuata	--	--	--	--	--	--	--	--
Diatoma anceps	--	--	--	--	--	--	--	--
Diatoma hiemale var. *mesodon*	--	--	--	--	--	--	--	--
Diatoma tenue var. *elongatum*	--	--	--	--	--	--	--	--
Diatoma vulgare	--	--	--	--	--	--	230	20.9
Diploneis sp.	--	--	--	--	--	--	--	--
Epithemia sorex	--	--	--	--	--	--	--	--
Eunotia sp.	--	--	--	--	--	--	--	--
Fragilaria capucina	--	--	--	--	--	--	--	--
Fragilaria crotonensis	--	--	--	--	--	--	--	--
Fragilaria pinnata	--	--	--	--	--	--	--	--
Fragilaria vaucheriae	--	--	--	--	110	11.0	--	--
Gomphonema angustatum	--	--	--	--	--	--	--	--
Gyrosigma spencerii	--	--	--	--	--	--	--	--
Hannaea arcus	--	--	--	--	--	--	--	--
Hannaea arcus var. *amphioxys*	--	--	--	--	--	--	--	--
Hannaea arcus var. *arcus*	--	--	--	--	--	--	--	--
Hantzschia amphioxys	--	--	--	--	--	--	--	--
Meridion circulare	--	--	--	--	--	--	--	--
Navicula arvensis	--	--	--	--	--	--	--	--
Navicula capitata	--	--	--	--	--	--	--	--
Navicula cryptocephala	--	--	--	--	--	--	--	--
Navicula cryptocephala var. *veneta*	--	--	--	--	--	--	--	--
Navicula gastrum	--	--	--	--	--	--	--	--
Navicula heufleri	--	--	--	--	--	--	--	--
Navicula lanceolata	--	--	--	--	--	--	--	--
Navicula luzonensis	--	--	--	--	--	--	--	--
Navicula menisculus var. *upsaliensis*	--	--	--	--	--	--	--	--
Navicula minima	--	--	--	--	--	--	--	--
Navicula minuscula	--	--	--	--	--	--	--	--
Navicula mutica	--	--	--	--	--	--	--	--
Navicula notha	28	1.2	--	--	57	5.7	--	--
Navicula pellicosa	--	--	--	--	--	--	--	--
Navicula pupula	--	--	--	--	--	--	--	--
Navicula radiosa	--	--	--	--	--	--	--	--
Navicula radiosa var. *tenella*	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1) 2-ft depth Cells	% Comp	Kenney Reservoir (site 1) Composite (0-10 ft) Cells	% Comp	Kenney Reservoir (site 2) 2-ft depth Cells	% Comp	Kenney Reservoir (site 2) Composite (0-10 ft) Cells	% Comp
			April 24, 1986--Continued					
BACILLARIOPHYTA (DIATOMS)--Continued								
PENNALES--Continued								
Navicula rhyncocephala	--	--	--	--	--	--	--	--
Navicula sabinians var. *intermedia*	--	--	--	--	--	--	--	--
Navicula tantula	--	--	--	--	--	--	--	--
Navicula tripunctata	--	--	--	--	--	--	--	--
Navicula viridula	--	--	--	--	--	--	--	--
Navicula viridula var. *aveame*	--	--	--	--	--	--	570	51.8
Navicula viridula var. *avenacea*	--	--	--	--	--	--	--	--
Navicula sp.	28	1.2	--	--	--	--	--	--
Nitzschia acicularis	--	--	--	--	--	--	--	--
Nitzschia communis	--	--	14	1.0	--	--	--	--
Nitzschia dissipata	--	--	--	--	--	--	--	--
Nitzschia filiformis	--	--	--	--	--	--	--	--
Nitzschia frustulum	--	--	--	--	--	--	--	--
Nitzschia hantzschiana	--	--	14	1.0	--	--	--	--
Nitzschia hungarica	--	--	--	--	--	--	--	--
Nitzschia ignorata	--	--	--	--	--	--	--	--
Nitzschia intermedia	--	--	--	--	--	--	--	--
Nitzschia latens	--	--	--	--	--	--	--	--
Nitzschia linearis	--	--	--	--	--	--	--	--
Nitzschia longissima var. *reversa*	--	--	--	--	--	--	--	--
Nitzschia microcephala	--	--	--	--	--	--	--	--
Nitzschia palea	--	--	--	--	--	--	--	--
Nitzschia paleacea	--	--	14	1.0	--	--	--	--
Nitzschia pusilla	--	--	--	--	--	--	--	--
Nitzschia romana	--	--	--	--	--	--	--	--
Nitzschia thermalis	--	--	--	--	--	--	--	--
Nitzschia tryblionella var. *debilis*	--	--	--	--	--	--	--	--
Nitzschia sp.	--	--	--	--	--	--	--	--

Pleurosigma delicatalum	--	--	--	--	--	--	--	--
Rhoicosphenia curvata	--	--	--	--	--	--	--	--
Rhopalodia musculus	--	--	--	--	--	--	--	--
Surirella angustata	--	--	--	--	--	--	--	--
Surirella ovalis	--	--	--	--	--	--	--	--
Surirella ovata	--	--	--	--	--	--	--	--
Synedra acus	--	--	--	--	--	--	--	--
Synedra delicatissima	--	--	--	--	--	--	--	--
Synedra fasciculate	--	--	--	--	--	--	--	--
Synedra minuscula	--	--	--	--	--	--	--	--
Snyedra radiens	--	--	--	--	--	--	--	--
Synedra rumpens	--	--	--	--	--	--	--	--
Synedra rumpens var. *familiaris*	--	--	--	--	--	--	--	--
Synedra ulna	--	--	--	--	--	--	--	--
Synedra ulna var. *contracta*	--	--	--	--	--	--	--	--
Synedra ulna var. *danica*	--	--	--	--	--	--	--	--
Synedra ulna var. *oxyrhynchus*	--	--	--	--	--	--	--	--
Synedra sp.	--	--	--	--	--	--	--	--
Thalassiosira fluviatilis	--	--	--	--	--	--	--	--
CHLOROPHYTA (GREEN ALGAE)	850	35.4	84	6.0	0	0.0	0	0.0
Actinastrum hantzschii	--	--	--	--	--	--	--	--
Actinastrum sp.	--	--	--	--	--	--	--	--
Ankistrodesmus convolutus	--	--	--	--	--	--	--	--
Ankistrodesmus convolutus v. *acicularis*	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus var. *acicularis*	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus var. *mirabilis*	--	--	--	--	--	--	--	--
Carteria sp.	85	3.5	--	--	--	--	--	--
Chlamydomonas sp.	28	1.2	28	2.0	--	--	--	--
Chlorella sp.	--	--	--	--	--	--	--	--
Chlorococcum humicola	--	--	--	--	--	--	--	--
Chlorococcum sp.	--	--	--	--	--	--	--	--
Chlorogonium spirale	--	--	--	--	--	--	--	--
Chlorogonium sp.	--	--	--	--	--	--	--	--
Chodatella quadriseta	--	--	--	--	--	--	--	--
Closterium sp.	--	--	--	--	--	--	--	--
Coccomyxa minor	--	--	--	--	--	--	--	--
Crucigenia quadrata	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
			April 24, 1986--Continued					
CHLOROPHYTA (GREEN ALGAE)--Continued								
Dictyosphaerium ehrenbergianum	--	--	--	--	--	--	--	--
Dictyosphaerium pulchellum	--	--	--	--	--	--	--	--
Dictyosphaerium sp.	--	--	--	--	--	--	--	--
Gloeocystis sp.	740	30.8	28	2.0	--	--	--	--
Golenkinia radiata	--	--	--	--	--	--	--	--
Golenkiniopsis solitaria	--	--	--	--	--	--	--	--
Gonium sp.	--	--	28	2.0	--	--	--	--
Kirchneriella contorta	--	--	--	--	--	--	--	--
Mesotaenium sp.	--	--	--	--	--	--	--	--
Micratinium pusillum	--	--	--	--	--	--	--	--
Micratinium sp.	--	--	--	--	--	--	--	--
Mougeotia sp.	--	--	--	--	--	--	--	--
Oocytis sp.	--	--	--	--	--	--	--	--
Pandorina morum	--	--	--	--	--	--	--	--
Phacotus lenticularis	--	--	--	--	--	--	--	--
Phacotus sp.	--	--	--	--	--	--	--	--
Platymonas sp.	--	--	--	--	--	--	--	--
Pteromonas sp.	--	--	--	--	--	--	--	--
Scenedesmus armatus	--	--	--	--	--	--	--	--
Scenedesmus bijuga	--	--	--	--	--	--	--	--
Scenedesmus dimorphus	--	--	--	--	--	--	--	--
Scenedesmus quadricauda	--	--	--	--	--	--	--	--
Scenedesmus serratus	--	--	--	--	--	--	--	--
Scenedesmus sp.	--	--	--	--	--	--	--	--
Schroederia judayi	--	--	--	--	--	--	--	--
Schroederia setigera	--	--	--	--	--	--	--	--
Selenastrum minutum	--	--	--	--	--	--	--	--
Sphaerocystis schroeteri	--	--	--	--	--	--	--	--
Staurastrum sp.	--	--	--	--	--	--	--	--
Treubaria sp.	--	--	--	--	--	--	--	--

CHRYSOPHYTA (GOLDEN-BROWN ALGAE)	28	1.2	42	3.0	0	0.0	0	0.0
Dinobryon divergens	--	--	--	--	--	--	--	--
Kephyrion spirale	28	1.2	14	1.0	--	--	--	--
Kephyrion sp.	--	--	--	--	--	--	--	--
Mallomonas acaroides	--	--	--	--	--	--	--	--
Mallomonas akrokonos	--	--	--	--	--	--	--	--
Mallomonas globosa	--	--	--	--	--	--	--	--
Mallomonas sp.	--	--	28	2.0	--	--	--	--
Pleurosigma delicatulum	--	--	--	--	--	--	--	--
Pleurosigma sp.	--	--	--	--	--	--	--	--
Ochromonas sp.	--	--	--	--	--	--	--	--
CYANOPHYTA (BLUE-GREEN ALGAE)	28	1.2	0	0.0	800	80.0	0	0.0
Anabaena sp.	--	--	--	--	--	--	--	--
Aphanocapsa delicatissima	--	--	--	--	--	--	--	--
Aphanocapsa sp.	--	--	--	--	--	--	--	--
Aphanothece sp.	--	--	--	--	--	--	--	--
Chroococcus dispersus	--	--	--	--	--	--	--	--
Chroococcus limneticus	--	--	--	--	--	--	--	--
Chroococcus sp.	--	--	--	--	--	--	--	--
Dactylococcopsis fascicularis	28	1.2	--	--	--	--	--	--
Dactylococcopsis sp.	--	--	--	--	--	--	--	--
Lyngbya limnetica	--	--	--	--	230	23.0	--	--
Lyngbya nana	--	--	--	--	--	--	--	--
Marssoniella elegans	--	--	--	--	--	--	--	--
Oscillatoria angusta	--	--	--	--	--	--	--	--
Oscillatoria angustissima	--	--	--	--	--	--	--	--
Oscillatoria limnetica	--	--	--	--	--	--	--	--
Oscillatoria tenuis	--	--	--	--	--	--	--	--
Oscillatoria sp.	--	--	--	--	570	57.0	--	--
Phormidium sp.	--	--	--	--	--	--	--	--
Synechococcus lineare	--	--	--	--	--	--	--	--
Synechococcus sigmoidea	--	--	--	--	--	--	--	--
Synechococcus sigmoidea f. *minor*	--	--	--	--	--	--	--	--
Synechococcus sp.	--	--	--	--	--	--	--	--
CRYPTOPHYTA (CRYPTOMONADS)	110	4.6	14	1.0	0	0.0	0	0.0
Chroomonas sp.	--	--	--	--	--	--	--	--
Cryptomonas erosa	--	--	--	--	--	--	--	--
Cryptomonas marsonii	85	3.5	--	--	--	--	--	--
Cryptomonas ovata	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
	April 24, 1986--Continued							
CRYPTOPHYTA (CRYPTOMONADS)--Continued								
Cryptomonas rostrata	--	--	--	--	--	--	--	--
Cryptomonas rostratiformis	--	--	--	--	--	--	--	--
Cryptomonas sp.	--	--	--	--	--	--	--	--
Rhodomonas minuta	28	1.2	14	1.0	--	--	--	--
EUGLENOPHYTA (EUGLENOIDS)	0	0.0	0	0.0	0	0.0	0	0.0
Euglena acus	--	--	--	--	--	--	--	--
Euglena viridis	--	--	--	--	--	--	--	--
Euglena sp.	--	--	--	--	--	--	--	--
Trachelomonas sp.	--	--	--	--	--	--	--	--
PYRRHOPHYTA (DINOFLAGELLATES)	0	0.0	0	0.0	0	0.0	0	0.0
Ceratium hirundinella	--	--	--	--	--	--	--	--
Gymnodinium sp.	--	--	--	--	--	--	--	--
Peridinium biceps	--	--	--	--	--	--	--	--
Peridinium inconspicua	--	--	--	--	--	--	--	--
Peridinium sp.	--	--	--	--	--	--	--	--
Total cells and percent composition	2,400	101	1,400	103	1,000	102	1,100	100
Number of species	11	--	11	--	5	--	4	--
Diversity index (DI) at species level	1.86	--	1.05	--	1.77	--	1.76	--
Biomass (mg/L dry weight)	5.0	--	7.4	--	1.4	--	3.4	--
Chlorophyll *a* (μg/L)	--	--	--	--	--	--	--	--
Chlorophyll *b* (μg/L)	--	--	--	--	--	--	--	--
Chlorophyll *c* (μg/L)	--	--	--	--	--	--	--	--

June 3, 1986

BACILLARIOPHYTA (DIATOMS)	56	66.7	140	63.6	320	100.0	430	79.6
CENTRALES	0	0.0	0	0.0	85	26.6	57	10.6
Cyclotella bodanica	--	--	--	--	--	--	--	--
Cyclotella kutzingiana	--	--	--	--	--	--	--	--
Cyclotella meneghiniana	--	--	--	--	85	26.6	57	10.6
Cyclotella pseudostelligera	--	--	--	--	--	--	--	--
Cyclotella stelligera	--	--	--	--	--	--	--	--
Melosira granulata var. *angustissima*	--	--	--	--	--	--	--	--
Melosira italica	--	--	--	--	--	--	--	--
Melosira lirata	--	--	--	--	--	--	--	--
Melosira sp.	--	--	--	--	--	--	--	--
Rhizosolenia eriensis	--	--	--	--	--	--	--	--
Stephanodiscus alpinus	--	--	--	--	--	--	--	--
Stephanodiscus astrea	--	--	--	--	--	--	--	--
Stephanodiscus niagarae	--	--	--	--	--	--	--	--
Stephanodiscus tenuis	--	--	--	--	--	--	--	--
Stephanodiscus sp.	--	--	--	--	--	--	--	--
PENNALES	56	66.7	140	63.6	230	71.9	370	68.5
Achnanthes affinis	--	--	--	--	--	--	--	--
Achnanthes lanceolata	--	--	--	--	--	--	--	--
Achnanthes minutissima	28	33.3	28	12.7	--	--	--	--
Amphora perpusilla	--	--	28	12.7	--	--	--	--
Amphora veneta	--	--	--	--	--	--	--	--
Amphora sp.	--	--	--	--	--	--	--	--
Asterionella formosa	--	--	--	--	--	--	170	31.5
Cocconeis placentula	--	--	--	--	--	--	--	--
Cylindrotheca gracilis	--	--	--	--	--	--	--	--
Cylindrotheca sp.	--	--	--	--	--	--	--	--
Cymatopleura solea	--	--	--	--	--	--	--	--
Cymbella affinis	--	--	--	--	--	--	--	--
Cymbella minuta	--	--	--	--	--	--	--	--
Cymbella minuta f. *latens*	--	--	--	--	--	--	28	5.2
Cymbella minuta var. *silesica*	--	--	--	--	--	--	--	--
Cymbella sinuata	--	--	--	--	--	--	--	--
Diatoma anceps	--	--	--	--	--	--	--	--
Diatoma hiemale var. *mesodon*	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
	June 3, 1986--Continued							
BACILLARIOPHYTA (DIATOMS)--Continued								
PENNALES--Continued								
Diatoma tenue var. *elongatum*	--	--	--	--	--	--	--	--
Diatoma vulgare	--	--	--	--	--	--	--	--
Diploneis sp.	--	--	--	--	--	--	--	--
Epithemia sorex	--	--	--	--	--	--	--	--
Eunotia sp.	--	--	--	--	--	--	--	--
Fragilaria capucina	--	--	--	--	--	--	--	--
Fragilaria crotonensis	--	--	--	--	--	--	--	--
Fragilaria pinnata	--	--	--	--	--	--	--	--
Fragilaria vaucheriae	--	--	--	--	57	17.8	--	--
Gomphonema angustatum	--	--	--	--	--	--	--	--
Gyrosigma spencerii	--	--	--	--	--	--	--	--
Hannaea arcus	--	--	--	--	--	--	--	--
Hannaea arcus var. *amphioxys*	--	--	--	--	--	--	--	--
Hannaea arcus var. *arcus*	--	--	--	--	--	--	--	--
Hantzschia amphioxys	--	--	28	12.7	28	8.8	--	--
Meridion circulare	--	--	--	--	--	--	--	--
Navicula arvensis	--	--	--	--	--	--	--	--
Navicula capitata	--	--	--	--	--	--	--	--
Navicula cryptocephala	--	--	--	--	--	--	--	--
Navicula cryptocephala var. *veneta*	--	--	--	--	--	--	28	5.2
Navicula gastrum	--	--	--	--	--	--	--	--
Navicula heufleri	--	--	--	--	--	--	--	--
Navicula lanceolata	--	--	--	--	--	--	--	--
Navicula luzonensis	--	--	--	--	--	--	--	--
Navicula menisculus var. *upsaliensis*	--	--	--	--	--	--	--	--
Navicula minima	--	--	--	--	--	--	--	--
Navicula minuscula	--	--	--	--	--	--	--	--
Navicula mutica	--	--	--	--	--	--	--	--
Navicula notha	--	--	--	--	--	--	--	--

Navicula pellicosa	--	--	--	--	--	--	--	--
Navicula pupula	--	--	--	--	--	--	--	--
Navicula radiosa	--	--	--	--	--	--	--	--
Navicula radiosa var. *tenella*	--	--	--	--	--	--	--	--
Navicula rhyncocephala	--	--	--	--	--	--	--	--
Navicula sabinians var. *intermedia*	--	--	--	--	--	--	--	--
Navicula tantula	--	--	--	--	--	--	--	--
Navicula tripunctata	--	--	--	--	--	--	--	--
Navicula viridula	--	--	--	--	28	8.8	28	5.2
Navicula viridula var. *aveame*	--	--	--	--	--	--	--	--
Navicula viridula var. *avenacea*	--	--	--	--	--	--	--	--
Navicula sp.	--	--	--	--	--	--	--	--
Nitzschia acicularis	--	--	--	--	85	26.6	--	--
Nitzschia communis	--	--	--	--	--	--	--	--
Nitzschia dissipata	--	--	--	--	--	--	--	--
Nitzschia filiformis	--	--	--	--	--	--	--	--
Nitzschia frustulum	--	--	--	--	--	--	--	--
Nitzschia hantzschiana	--	--	--	--	28	8.8	57	10.6
Nitzschia hungarica	--	--	--	--	--	--	--	--
Nitzschia ignorata	--	--	--	--	--	--	--	--
Nitzschia intermedia	28	33.3	57	25.9	--	--	--	--
Nitzschia latens	--	--	--	--	--	--	--	--
Nitzschia linearis	--	--	--	--	--	--	--	--
Nitzschia longissima var. *reversa*	--	--	--	--	--	--	--	--
Nitzschia microcephala	--	--	--	--	--	--	--	--
Nitzschia palea	--	--	--	--	--	--	28	5.2
Nitzschia paleacea	--	--	--	--	--	--	--	--
Nitzschia pusilla	--	--	--	--	--	--	--	--
Nitzschia romana	--	--	--	--	--	--	--	--
Nitzschia thermalis	--	--	--	--	--	--	--	--
Nitzschia tryblionella var. *debilis*	--	--	--	--	--	--	--	--
Nitzschia sp.	--	--	--	--	--	--	--	--
Pleurosigma delicatalum	--	--	--	--	--	--	--	--
Rhoicosphenia curvata	--	--	--	--	--	--	--	--
Rhopalodia musculus	--	--	--	--	--	--	--	--
Surirella angustata	--	--	--	--	--	--	--	--
Surirella ovalis	--	--	--	--	--	--	--	--
Surirella ovata	--	--	--	--	--	--	--	--
Synedra acus	--	--	--	--	--	--	--	--
Synedra delicatissima	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
	June 3, 1986--Continued							
BACILLARIOPHYTA (DIATOMS)--Continued								
PENNALES--Continued								
Synedra fasciculate	--	--	--	--	--	--	--	--
Synedra minuscula	--	--	--	--	--	--	--	--
Snyedra radiens	--	--	--	--	--	--	--	--
Synedra rumpens	--	--	--	--	--	--	28	5.2
Synedra rumpens var. *familiaris*	--	--	--	--	--	--	--	--
Synedra ulna	--	--	--	--	--	--	--	--
Synedra ulna var. *contracta*	--	--	--	--	--	--	--	--
Synedra ulna var. *danica*	--	--	--	--	--	--	--	--
Synedra ulna var. *oxyrhynchus*	--	--	--	--	--	--	--	--
Synedra sp.	--	--	--	--	--	--	--	--
Thalassiosira fluviatilis	--	--	--	--	--	--	--	--
CHLOROPHYTA (GREEN ALGAE)	28	33.3	28	12.7	0	0.0	110	20.4
Actinastrum hantzschii	--	--	--	--	--	--	110	20.4
Actinastrum sp.	--	--	--	--	--	--	--	--
Ankistrodesmus convolutus	--	--	--	--	--	--	--	--
Ankistrodesmus convolutus v. *acicularis*	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus var. *acicularis*	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus var. *mirabilis*	--	--	--	--	--	--	--	--
Carteria sp.	--	--	--	--	--	--	--	--
Chlamydomonas sp.	28	33.3	--	--	--	--	--	--
Chlorella sp.	--	--	--	--	--	--	--	--
Chlorococcum humicola	--	--	28	12.7	--	--	--	--
Chlorococcum sp.	--	--	--	--	--	--	--	--
Chlorogonium spirale	--	--	--	--	--	--	--	--

Chlorogonium sp.	--	--	--	--	--	--	--	--
Chodatella quadriseta	--	--	--	--	--	--	--	--
Closterium sp.	--	--	--	--	--	--	--	--
Coccomyxa minor	--	--	--	--	--	--	--	--
Crucigenia quadrata	--	--	--	--	--	--	--	--
Dictyosphaerium ehrenbergianum	--	--	--	--	--	--	--	--
Dictyosphaerium pulchellum	--	--	--	--	--	--	--	--
Dictyosphaerium sp.	--	--	--	--	--	--	--	--
Gloeocystis sp.	--	--	--	--	--	--	--	--
Golenkinia radiata	--	--	--	--	--	--	--	--
Golenkiniopsis solitaria	--	--	--	--	--	--	--	--
Gonium sp.	--	--	--	--	--	--	--	--
Kirchneriella contorta	--	--	--	--	--	--	--	--
Mesotaenium sp.	--	--	--	--	--	--	--	--
Micratinium pusillum	--	--	--	--	--	--	--	--
Micratinium sp.	--	--	--	--	--	--	--	--
Mougeotia sp.	--	--	--	--	--	--	--	--
Oocytis sp.	--	--	--	--	--	--	--	--
Pandorina morum	--	--	--	--	--	--	--	--
Phacotus lenticularis	--	--	--	--	--	--	--	--
Phacotus sp.	--	--	--	--	--	--	--	--
Platymonas sp.	--	--	--	--	--	--	--	--
Pteromonas sp.	--	--	--	--	--	--	--	--
Scenedesmus armatus	--	--	--	--	--	--	--	--
Scenedesmus bijuga	--	--	--	--	--	--	--	--
Scenedesmus dimorphus	--	--	--	--	--	--	--	--
Scenedesmus quadricauda	--	--	--	--	--	--	--	--
Scenedesmus serratus	--	--	--	--	--	--	--	--
Scenedesmus sp.	--	--	--	--	--	--	--	--
Schroederia judayi	--	--	--	--	--	--	--	--
Schroederia setigera	--	--	--	--	--	--	--	--
Selenastrum minutum	--	--	--	--	--	--	--	--
Sphaerocystis schroeteri	--	--	--	--	--	--	--	--
Staurastrum sp.	--	--	--	--	--	--	--	--
Treubaria sp.	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1) 2-ft depth		Kenney Reservoir (site 1) Composite (0-10 ft)		Kenney Reservoir (site 2) 2-ft depth		Kenney Reservoir (site 2) Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
June 3, 1986--Continued								
CHRYSOPHYTA (GOLDEN-BROWN ALGAE)	0	0.0	0	0.0	0	0.0	0	0.0
Dinobryon divergens	--	--	--	--	--	--	--	--
Kephyrion spirale	--	--	--	--	--	--	--	--
Kephyrion sp.	--	--	--	--	--	--	--	--
Mallomonas acaroides	--	--	--	--	--	--	--	--
Mallomonas akrokonos	--	--	--	--	--	--	--	--
Mallomonas globosa	--	--	--	--	--	--	--	--
Mallomonas sp.	--	--	--	--	--	--	--	--
Pleurosigma delicatulum	--	--	--	--	--	--	--	--
Pleurosigma sp.	--	--	--	--	--	--	--	--
Ochromonas sp.	--	--	--	--	--	--	--	--
CYANOPHYTA (BLUE-GREEN ALGAE)	0	0.0	57	25.9	0	0.0	0	0.0
Anabaena sp.	--	--	--	--	--	--	--	--
Aphanocapsa delicatissima	--	--	--	--	--	--	--	--
Aphanocapsa sp.	--	--	--	--	--	--	--	--
Aphanothece sp.	--	--	--	--	--	--	--	--
Chroococcus dispersus	--	--	--	--	--	--	--	--
Chroococcus limneticus	--	--	--	--	--	--	--	--
Chroococcus sp.	--	--	--	--	--	--	--	--
Dactylococcopsis fascicularis	--	--	--	--	--	--	--	--
Dactylococcopsis sp.	--	--	--	--	--	--	--	--
Lyngbya limnetica	--	--	--	--	--	--	--	--
Lyngbya nana	--	--	--	--	--	--	--	--
Marssoniella elegans	--	--	--	--	--	--	--	--
Oscillatoria angusta	--	--	--	--	--	--	--	--
Oscillatoria angustissima	--	--	--	--	--	--	--	--
Oscillatoria limnetica	--	--	--	--	--	--	--	--
Oscillatoria tenuis	--	--	--	--	--	--	--	--
Oscillatoria sp.	--	--	--	--	--	--	--	--

Phormidium sp.	--	--	--	--	--	--	--	--
Synechococcus lineare	--	--	57	25.9	--	--	--	--
Synechococcus sigmoidea	--	--	--	--	--	--	--	--
Synechococcus sigmoidea f. *minor*	--	--	--	--	--	--	--	--
Synechococcus sp.	--	--	--	--	--	--	--	--
CRYPTOPHYTA (CRYPTOMONADS)	0	0.0	0	0.0	0	0.0	0	0.0
Chroomonas sp.	--	--	--	--	--	--	--	--
Cryptomonas erosa	--	--	--	--	--	--	--	--
Cryptomonas marsonii	--	--	--	--	--	--	--	--
Cryptomonas ovata	--	--	--	--	--	--	--	--
Cryptomonas rostrata	--	--	--	--	--	--	--	--
Cryptomonas rostratiformis	--	--	--	--	--	--	--	--
Cryptomonas sp.	--	--	--	--	--	--	--	--
Rhodomonas minuta	--	--	--	--	--	--	--	--
EUGLENOPHYTA (EUGLENOIDS)	0	0.0	0	0.0	0	0.0	0	0.0
Euglena acus	--	--	--	--	--	--	--	--
Euglena viridis	--	--	--	--	--	--	--	--
Euglena sp.	--	--	--	--	--	--	--	--
Trachelomonas sp.	--	--	--	--	--	--	--	--
PYRRHOPHYTA (DINOFLAGELLATES)	0	0.0	0	0.0	0	0.0	0	0.0
Ceratium hirundinella	--	--	--	--	--	--	--	--
Gymnodinium sp.	--	--	--	--	--	--	--	--
Peridinium biceps	--	--	--	--	--	--	--	--
Peridinium inconspicua	--	--	--	--	--	--	--	--
Peridinium sp.	--	--	--	--	--	--	--	--
Total cells and percent composition	84	100	220	102	320	100	540	100
Number of species	3	--	6	--	6	--	9	--
Diversity index (DI) at species level	1.58	--	2.50	--	2.41	--	2.80	--
Biomass (mg/L dry weight)	14.7	--	10.6	--	9.4	--	25.8	--
Chlorophyll a (μg/L)	--	--	--	--	--	--	--	--
Chlorophyll *b* (μg/L)	--	--	--	--	--	--	--	--
Chlorophyll *c* (μg/L)	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
				June 24, 1986				
BACILLARIOPHYTA (DIATOMS)	310	14.8	260	14.4	350	92.1	550	94.8
CENTRALES	110	5.4	57	3.2	99	26.1	128	22.1
Cyclotella bodanica	--	--	--	--	--	--	--	--
Cyclotella kutzingiana	--	--	--	--	--	--	--	--
Cyclotella meneghiniana	85	4.0	57	3.2	85	22.4	43	7.4
Cyclotella pseudostelligera	--	--	--	--	--	--	--	--
Cyclotella stelligera	--	--	--	--	14	3.7	--	--
Melosira granulata var. *angustissima*	--	--	--	--	--	--	--	--
Melosira italica	--	--	--	--	--	--	--	--
Melosira lirata	--	--	--	--	--	--	85	14.7
Melosira sp.	--	--	--	--	--	--	--	--
Rhizosolenia eriensis	--	--	--	--	--	--	--	--
Stephanodiscus alpinus	--	--	--	--	--	--	--	--
Stephanodiscus astrea	--	--	--	--	--	--	--	--
Stephanodiscus niagarae	28	1.3	--	--	--	--	--	--
Stephanodiscus tenuis	--	--	--	--	--	--	--	--
Stephanodiscus sp.	--	--	--	--	--	--	--	--
PENNALES	200	9.5	200	11.1	250	65.8	420	72.4
Achnanthes affinis	--	--	57	3.2	14	3.7	--	--
Achnanthes lanceolata	--	--	--	--	--	--	--	--
Achnanthes minutissima	--	--	--	--	--	--	--	--
Amphora perpusilla	--	--	--	--	--	--	--	--
Amphora veneta	--	--	28	1.6	--	--	--	--
Amphora sp.	--	--	--	--	--	--	--	--
Asterionella formosa	--	--	--	--	--	--	--	--
Cocconeis placentula	--	--	--	--	--	--	14	2.4
Cylindrotheca gracilis	--	--	--	--	--	--	--	--
Cylindrotheca sp.	--	--	--	--	--	--	--	--
Cymatopleura solea	--	--	--	--	--	--	--	--

Cymbella affinis	28	1.3	--	--	14	3.7	--	--
Cymbella minuta	--	--	--	--	--	--	--	--
Cymbella minuta f. *latens*	--	--	--	--	--	--	--	--
Cymbella minuta var. *silesica*	--	--	--	--	--	--	--	--
Cymbella sinuata	--	--	--	--	14	3.7	--	--
Diatoma anceps	--	--	--	--	--	--	--	--
Diatoma hiemale var. *mesodon*	--	--	--	--	--	--	--	--
Diatoma tenue var. *elongatum*	--	--	--	--	--	--	--	--
Diatoma vulgare	--	--	--	--	--	--	--	--
Diploneis sp.	--	--	--	--	--	--	--	--
Epithemia sorex	--	--	--	--	--	--	--	--
Eunotia sp.	--	--	--	--	--	--	--	--
Fragilaria capucina	--	--	--	--	--	--	--	--
Fragilaria crotonensis	--	--	--	--	--	--	260	44.8
Fragilaria pinnata	--	--	--	--	--	--	--	--
Fragilaria vaucheriae	--	--	--	--	--	--	--	--
Gomphonema angustatum	--	--	--	--	14	3.7	14	2.4
Gyrosigma spencerii	--	--	--	--	--	--	--	--
Hannaea arcus	--	--	--	--	--	--	--	--
Hannaea arcus var. *amphioxys*	--	--	--	--	14	3.7	--	--
Hannaea arcus var. *arcus*	--	--	--	--	14	3.7	14	2.4
Hantzschia amphioxys	--	--	--	--	--	--	--	--
Meridion circulare	--	--	--	--	--	--	--	--
Navicula arvensis	--	--	--	--	--	--	--	--
Navicula capitata	--	--	--	--	--	--	--	--
Navicula cryptocephala	--	--	--	--	--	--	--	--
Navicula cryptocephala var. *veneta*	--	--	--	--	--	--	--	--
Navicula gastrum	--	--	--	--	--	--	--	--
Navicula heufleri	--	--	--	--	--	--	--	--
Navicula lanceolata	--	--	--	--	--	--	--	--
Navicula luzonensis	--	--	--	--	--	--	--	--
Navicula menisculus var. *upsaliensis*	--	--	--	--	--	--	--	--
Navicula minima	--	--	--	--	--	--	--	--
Navicula minuscula	--	--	--	--	--	--	--	--
Navicula mutica	--	--	--	--	--	--	--	--
Navicula notha	--	--	--	--	--	--	--	--
Navicula pellicosa	--	--	--	--	--	--	--	--
Navicula pupula	--	--	--	--	--	--	--	--
Navicula radiosa	--	--	--	--	--	--	--	--
Navicula radiosa var. *tenella*	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
	June 24, 1986--Continued							
BACILLARIOPHYTA (DIATOMS)--Continued								
PENNALES--Continued								
Navicula rhyncocephala	--	--	--	--	--	--	--	--
Navicula sabinians var. *intermedia*	--	--	--	--	--	--	--	--
Navicula tantula	--	--	--	--	--	--	--	--
Navicula tripunctata	--	--	--	--	--	--	--	--
Navicula viridula	--	--	--	--	--	--	--	--
Navicula viridula var. *aveame*	--	--	--	--	--	--	--	--
Navicula viridula var. *avenacea*	--	--	--	--	14	3.7	28	4.8
Navicula sp.	--	--	--	--	--	--	--	--
Nitzschia acicularis	--	--	--	--	--	--	--	--
Nitzschia communis	--	--	--	--	--	--	--	--
Nitzschia dissipata	--	--	--	--	--	--	--	--
Nitzschia filiformis	--	--	--	--	--	--	--	--
Nitzschia frustulum	--	--	--	--	--	--	--	--
Nitzschia hantzschiana	57	2.7	57	3.2	57	15.0	28	4.8
Nitzschia hungarica	--	--	--	--	--	--	--	--
Nitzschia ignorata	--	--	--	--	--	--	14	2.4
Nitzschia intermedia	28	1.3	57	3.2	28	7.4	28	4.8
Nitzschia latens	--	--	--	--	--	--	--	--
Nitzschia linearis	--	--	--	--	--	--	--	--
Nitzschia longissima var. *reversa*	--	--	--	--	--	--	--	--
Nitzschia microcephala	--	--	--	--	--	--	--	--
Nitzschia palea	28	1.3	--	--	14	3.7	--	--
Nitzschia paleacea	--	--	--	--	--	--	--	--
Nitzschia pusilla	--	--	--	--	--	--	--	--
Nitzschia romana	--	--	--	--	14	3.7	14	2.4
Nitzschia thermalis	--	--	--	--	--	--	--	--
Nitzschia tryblionella var. *debilis*	--	--	--	--	--	--	--	--
Nitzschia sp.	--	--	--	--	14	3.7	--	--

Pleurosigma delicatalum	--	--	--	--	--	--	--	--
Rhoicosphenia curvata	--	--	--	--	--	--	--	--
Rhopalodia musculus	--	--	--	--	--	--	--	--
Surirella angustata	--	--	--	--	--	--	--	--
Surirella ovalis	--	--	--	--	--	--	--	--
Surirella ovata	--	--	--	--	14	3.7	14	2.4
Synedra acus	--	--	--	--	--	--	--	--
Synedra delicatissima	--	--	--	--	--	--	--	--
Synedra fasciculate	--	--	--	--	--	--	--	--
Synedra minuscula	--	--	--	--	--	--	--	--
Snyedra radiens	--	--	--	--	--	--	--	--
Synedra rumpens	--	--	--	--	--	--	--	--
Synedra rumpens var. *familiaris*	--	--	--	--	--	--	--	--
Synedra ulna	--	--	--	--	--	--	--	--
Synedra ulna var. *contracta*	--	--	--	--	--	--	--	--
Synedra ulna var. *danica*	--	--	--	--	--	--	--	--
Synedra ulna var. *oxyrhynchus*	57	2.7	--	--	14	3.7	--	--
Synedra sp.	--	--	--	--	--	--	--	--
Thalassiosira fluviatilis	--	--	--	--	--	--	--	--
CHLOROPHYTA (GREEN ALGAE)	1,700	81.0	1,500	83.3	0	0.0	28	4.8
Actinastrum hantzschii	--	--	--	--	--	--	--	--
Actinastrum sp.	--	--	--	--	--	--	--	--
Ankistrodesmus convolutus	--	--	--	--	--	--	--	--
Ankistrodesmus convolutus v. *acicularis*	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus var. *acicularis*	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus var. *mirabilis*	--	--	--	--	--	--	--	--
Carteria sp.	--	--	--	--	--	--	--	--
Chlamydomonas sp.	110	5.2	57	3.2	--	--	--	--
Chlorella sp.	--	--	--	--	--	--	--	--
Chlorococcum humicola	--	--	--	--	--	--	--	--
Chlorococcum sp.	--	--	--	--	--	--	--	--
Chlorogonium spirale	--	--	--	--	--	--	--	--
Chlorogonium sp.	--	--	--	--	--	--	--	--
Chodatella quadriseta	--	--	--	--	--	--	--	--
Closterium sp.	--	--	--	--	--	--	--	--
Coccomyxa minor	--	--	--	--	--	--	--	--
Crucigenia quadrata	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
	June 24, 1986--Continued							
CHLOROPHYTA (GREEN ALGAE)--Continued								
Dictyosphaerium ehrenbergianum	--	--	--	--	--	--	--	--
Dictyosphaerium pulchellum	--	--	--	--	--	--	--	--
Dictyosphaerium sp.	--	--	--	--	--	--	--	--
Gloeocystis sp.	--	--	--	--	--	--	28	4.8
Golenkinia radiata	--	--	--	--	--	--	--	--
Golenkiniopsis solitaria	--	--	--	--	--	--	--	--
Gonium sp.	--	--	--	--	--	--	--	--
Kirchneriella contorta	--	--	--	--	--	--	--	--
Mesotaenium sp.	--	--	--	--	--	--	--	--
Micratinium pusillum	--	--	--	--	--	--	--	--
Micratinium sp.	--	--	--	--	--	--	--	--
Mougeotia sp.	--	--	--	--	--	--	--	--
Oocytis sp.	--	--	--	--	--	--	--	--
Pandorina morum	1,600	76.2	1,400	77.8	--	--	--	--
Phacotus lenticularis	--	--	--	--	--	--	--	--
Phacotus sp.	--	--	--	--	--	--	--	--
Platymonas sp.	--	--	--	--	--	--	--	--
Pteromonas sp.	--	--	--	--	--	--	--	--
Scenedesmus armatus	--	--	--	--	--	--	--	--
Scenedesmus bijuga	--	--	--	--	--	--	--	--
Scenedesmus dimorphus	--	--	--	--	--	--	--	--
Scenedesmus quadricauda	--	--	--	--	--	--	--	--
Scenedesmus serratus	--	--	--	--	--	--	--	--
Scenedesmus sp.	--	--	--	--	--	--	--	--
Schroederia judayi	--	--	--	--	--	--	--	--
Schroederia setigera	--	--	--	--	--	--	--	--
Selenastrum minutum	--	--	--	--	--	--	--	--
Sphaerocystis schroeteri	--	--	--	--	--	--	--	--
Staurastrum sp.	--	--	--	--	--	--	--	--
Treubaria sp.	--	--	--	--	--	--	--	--

CHRYSOPHYTA (GOLDEN-BROWN ALGAE)	0	0.0	0	0.0	0	0.0	0	0.0
Dinobryon divergens	--	--	--	--	--	--	--	--
Kephyrion spirale	--	--	--	--	--	--	--	--
Kephyrion sp.	--	--	--	--	--	--	--	--
Mallomonas acaroides	--	--	--	--	--	--	--	--
Mallomonas akrokonos	--	--	--	--	--	--	--	--
Mallomonas globosa	--	--	--	--	--	--	--	--
Mallomonas sp.	--	--	--	--	--	--	--	--
Pleurosigma delicatulum	--	--	--	--	--	--	--	--
Pleurosigma sp.	--	--	--	--	--	--	--	--
Ochromonas sp.	--	--	--	--	--	--	--	--
CYANOPHYTA (BLUE-GREEN ALGAE)	0	0.0	0	0.0	14	3.7	0	0.0
Anabaena sp.	--	--	--	--	--	--	--	--
Aphanocapsa delicatissima	--	--	--	--	--	--	--	--
Aphanocapsa sp.	--	--	--	--	--	--	--	--
Aphanothece sp.	--	--	--	--	--	--	--	--
Chroococcus dispersus	--	--	--	--	--	--	--	--
Chroococcus limneticus	--	--	--	--	--	--	--	--
Chroococcus sp.	--	--	--	--	--	--	--	--
Dactylococcopsis fascicularis	--	--	--	--	14	3.7	--	--
Dactylococcopsis sp.	--	--	--	--	--	--	--	--
Lyngbya limnetica	--	--	--	--	--	--	--	--
Lyngbya nana	--	--	--	--	--	--	--	--
Marssoniella elegans	--	--	--	--	--	--	--	--
Oscillatoria angusta	--	--	--	--	--	--	--	--
Oscillatoria angustissima	--	--	--	--	--	--	--	--
Oscillatoria limnetica	--	--	--	--	--	--	--	--
Oscillatoria tenuis	--	--	--	--	--	--	--	--
Oscillatoria sp.	--	--	--	--	--	--	--	--
Phormidium sp.	--	--	--	--	--	--	--	--
Synechococcus lineare	--	--	--	--	--	--	--	--
Synechococcus sigmoidea	--	--	--	--	--	--	--	--
Synechococcus sigmoidea f. *minor*	--	--	--	--	--	--	--	--
Synechococcus sp.	--	--	--	--	--	--	--	--
CRYPTOPHYTA (CRYPTOMONADS)	57	2.7	0	0.0	14	3.7	0	0.0
Chroomonas sp.	--	--	--	--	--	--	--	--
Cryptomonas erosa	--	--	--	--	--	--	--	--
Cryptomonas marsonii	--	--	--	--	--	--	--	--
Cryptomonas ovata	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
	June 24, 1986--Continued							
CRYPTOPHYTA (CRYPTOMONADS)--Continued								
Cryptomonas rostrata	--	--	--	--	--	--	--	--
Cryptomonas rostratiformis	--	--	--	--	--	--	--	--
Cryptomonas sp.	--	--	--	--	14	3.7	--	--
Rhodomonas minuta	57	2.7	--	--	--	--	--	--
EUGLENOPHYTA (EUGLENOIDS)	0	0.0	0	0.0	0	0.0	0	0.0
Euglena acus	--	--	--	--	--	--	--	--
Euglena viridis	--	--	--	--	--	--	--	--
Euglena sp.	--	--	--	--	--	--	--	--
Trachelomonas sp.	--	--	--	--	--	--	--	--
PYRRHOPHYTA (DINOFLAGELLATES)	0	0.0	0	0.0	0	0.0	0	0.0
Ceratium hirundinella	--	--	--	--	--	--	--	--
Gymnodinium sp.	--	--	--	--	--	--	--	--
Peridinium biceps	--	--	--	--	--	--	--	--
Peridinium inconspicua	--	--	--	--	--	--	--	--
Peridinium sp.	--	--	--	--	--	--	--	--
Total cells and percent composition	2,100	98	1,800	98	380	99	580	100
Number of species	10	--	7	--	18	--	13	--
Diversity index (DI) at species level	1.48	--	1.17	--	3.80	--	2.83	--
Biomass (mg/L dry weight)	7.8	--	11.5	--	12.2	--	18.0	--
Chlorophyll *a* (μg/L)	--	--	--	--	--	--	--	--
Chlorophyll *b* (μg/L)	--	--	--	--	--	--	--	--
Chlorophyll *c* (μg/L)	--	--	--	--	--	--	--	--

	July 22, 1986							
BACILLARIOPHYTA (DIATOMS)	3,500	44.9	5,300	35.3	960	38.4	1,200	31.6
CENTRALES	3,400	43.6	5,100	34.0	880	35.2	950	25.0
Cyclotella bodanica	--	--	--	--	--	--	--	--
Cyclotella kutzingiana	--	--	--	--	--	--	--	--
Cyclotella meneghiniana	--	--	--	--	--	--	--	--
Cyclotella pseudostelligera	3,200	41.0	4,400	29.3	710	28.4	730	19.2
Cyclotella stelligera	--	--	--	--	--	--	--	--
Melosira granulata var. *angustissima*	--	--	--	--	--	--	--	--
Melosira italica	--	--	--	--	--	--	--	--
Melosira lirata	11	0.1	--	--	--	--	--	--
Melosira sp.	--	--	--	--	--	--	--	--
Rhizosolenia eriensis	--	--	--	--	--	--	--	--
Stephanodiscus alpinus	--	--	--	--	--	--	--	--
Stephanodiscus astrea	--	--	--	--	--	--	--	--
Stephanodiscus niagarae	--	--	--	--	--	--	110	2.9
Stephanodiscus tenuis	140	1.8	710	4.7	170	6.8	110	2.9
Stephanodiscus sp.	--	--	--	--	--	--	--	--
PENNALES	140	1.8	200	1.3	85	3.4	250	6.6
Achnanthes affinis	--	--	--	--	--	--	--	--
Achnanthes lanceolata	--	--	--	--	--	--	28	0.7
Achnanthes minutissima	--	--	--	--	--	--	--	--
Amphora perpusilla	--	--	--	--	--	--	--	--
Amphora veneta	--	--	--	--	--	--	--	--
Amphora sp.	--	--	--	--	--	--	--	--
Asterionella formosa	--	--	--	--	--	--	--	--
Cocconeis placentula	--	--	--	--	--	--	--	--
Cylindrotheca gracilis	--	--	--	--	--	--	--	--
Cylindrotheca sp.	--	--	--	--	--	--	--	--
Cymatopleura solea	--	--	--	--	--	--	--	--
Cymbella affinis	--	--	--	--	--	--	--	--
Cymbella minuta	--	--	--	--	--	--	--	--
Cymbella minuta f. *latens*	--	--	--	--	--	--	--	--
Cymbella minuta var. *silesica*	--	--	--	--	--	--	--	--
Cymbella sinuata	--	--	--	--	--	--	--	--
Diatoma anceps	--	--	--	--	--	--	--	--
Diatoma hiemale var. *mesodon*	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
	July 22, 1986--Continued							
BACILLARIOPHYTA (DIATOMS)--Continued								
PENNALES--Continued								
Diatoma tenue var. *elongatum*	--	--	--	--	--	--	--	--
Diatoma vulgare	--	--	--	--	--	--	--	--
Diploneis sp.	--	--	28	0.2	--	--	--	--
Epithemia sorex	--	--	--	--	--	--	--	--
Eunotia sp.	--	--	--	--	--	--	--	--
Fragilaria capucina	--	--	--	--	--	--	--	--
Fragilaria crotonensis	--	--	--	--	--	--	--	--
Fragilaria pinnata	--	--	--	--	--	--	--	--
Fragilaria vaucheriae	--	--	--	--	--	--	--	--
Gomphonema angustatum	--	--	--	--	--	--	--	--
Gyrosigma spencerii	--	--	--	--	--	--	--	--
Hannaea arcus	--	--	--	--	--	--	--	--
Hannaea arcus var. *amphioxys*	--	--	--	--	--	--	--	--
Hannaea arcus var. *arcus*	--	--	--	--	--	--	--	--
Hantzschia amphioxys	--	--	--	--	--	--	28	0.7
Meridion circulare	--	--	--	--	--	--	--	--
Navicula arvensis	--	--	--	--	--	--	--	--
Navicula capitata	--	--	--	--	--	--	--	--
Navicula cryptocephala	--	--	--	--	--	--	--	--
Navicula cryptocephala var. *veneta*	--	--	--	--	--	--	--	--
Navicula gastrum	--	--	--	--	--	--	--	--
Navicula heufleri	--	--	--	--	--	--	--	--
Navicula lanceolata	--	--	--	--	--	--	--	--
Navicula luzonensis	--	--	--	--	--	--	--	--
Navicula menisculus var. *upsaliensis*	--	--	--	--	--	--	--	--
Navicula minima	--	--	--	--	--	--	--	--
Navicula minuscula	85	1.1	14	0.1	--	--	28	0.7
Navicula mutica	--	--	--	--	--	--	--	--
Navicula notha	--	--	--	--	--	--	--	--

Navicula pellicosa	--	--	--	--	--	--	--	--
Navicula pupula	--	--	--	--	--	--	--	--
Navicula radiosa	--	--	--	--	--	--	--	--
Navicula radiosa var. *tenella*	--	--	--	--	--	--	--	--
Navicula rhyncocephala	--	--	--	--	--	--	--	--
Navicula sabinians var. *intermedia*	--	--	--	--	--	--	--	--
Navicula tantula	--	--	--	--	--	--	--	--
Navicula tripunctata	--	--	--	--	--	--	--	--
Navicula viridula	--	--	--	--	--	--	--	--
Navicula viridula var. *aveame*	--	--	--	--	--	--	--	--
Navicula viridula var. *avenacea*	--	--	--	--	--	--	57	1.5
Navicula sp.	--	--	--	--	--	--	--	--
Nitzschia acicularis	57	0.7	85	0.6	--	--	--	--
Nitzschia communis	--	--	14	0.1	--	--	--	--
Nitzschia dissipata	--	--	--	--	--	--	--	--
Nitzschia filiformis	--	--	--	--	--	--	--	--
Nitzschia frustulum	--	--	--	--	--	--	--	--
Nitzschia hantzschiana	--	--	--	--	--	--	28	0.7
Nitzschia hungarica	--	--	--	--	--	--	--	--
Nitzschia ignorata	--	--	--	--	--	--	28	0.7
Nitzschia intermedia	--	--	--	--	--	--	--	--
Nitzschia latens	--	--	--	--	--	--	--	--
Nitzschia linearis	--	--	--	--	--	--	--	--
Nitzschia longissima var. *reversa*	--	--	--	--	--	--	--	--
Nitzschia microcephala	--	--	--	--	--	--	--	--
Nitzschia palea	--	--	--	--	--	--	28	0.7
Nitzschia paleacea	--	--	--	--	--	--	--	--
Nitzschia pusilla	--	--	--	--	--	--	--	--
Nitzschia romana	--	--	28	0.2	85	3.4	28	0.7
Nitzschia thermalis	--	--	--	--	--	--	--	--
Nitzschia tryblionella var. *debilis*	--	--	--	--	--	--	--	--
Nitzschia sp.	--	--	--	--	--	--	--	--
Pleurosigma delicatalum	--	--	--	--	--	--	--	--
Rhoicosphenia curvata	--	--	--	--	--	--	--	--
Rhopalodia musculus	--	--	--	--	--	--	--	--
Surirella angustata	--	--	--	--	--	--	--	--
Surirella ovalis	--	--	--	--	--	--	--	--
Surirella ovata	--	--	--	--	--	--	--	--
Synedra acus	--	--	--	--	--	--	--	--
Synedra delicatissima	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
	July 22, 1986--Continued							
BACILLARIOPHYTA (DIATOMS)--Continued								
PENNALES--Continued								
Synedra fasciculate	--	--	--	--	--	--	--	--
Synedra minuscula	--	--	28	0.2	--	--	--	--
Snyedra radiens	--	--	--	--	--	--	--	--
Synedra rumpens	--	--	--	--	--	--	--	--
Synedra rumpens var. *familiaris*	--	--	--	--	--	--	--	--
Synedra ulna	--	--	--	--	--	--	--	--
Synedra ulna var. *contracta*	--	--	--	--	--	--	--	--
Synedra ulna var. *danica*	--	--	--	--	--	--	--	--
Synedra ulna var. *oxyrhynchus*	--	--	--	--	--	--	--	--
Synedra sp.	--	--	--	--	--	--	--	--
Thalassiosira fluviatilis	--	--	--	--	--	--	--	--
CHLOROPHYTA (GREEN ALGAE)	2,900	37.2	6,300	42.0	1,200	48.0	1,700	44.7
Actinastrum hantzschii	--	--	--	--	--	--	--	--
Actinastrum sp.	740	9.5	170	1.1	--	--	280	7.4
Ankistrodesmus convolutus	--	--	--	--	--	--	28	0.7
Ankistrodesmus convolutus v. *acicularis*	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus	--	--	28	0.2	--	--	--	--
Ankistrodesmus falcatus var. *acicularis*	85	1.1	110	0.7	--	--	28	0.7
Ankistrodesmus falcatus var. *mirabilis*	--	--	110	0.7	--	--	57	1.5
Carteria sp.	280	3.6	140	0.9	170	6.8	110	2.9
Chlamydomonas sp.	--	--	--	--	--	--	28	0.7
Chlorella sp.	85	1.1	110	0.7	--	--	430	11.3
Chlorococcum humicola	--	--	--	--	--	--	--	--
Chlorococcum sp.	--	--	--	--	--	--	--	--
Chlorogonium spirale	--	--	28	0.2	--	--	--	--

Chlorogonium sp.	--	--	--	--	--	--	--	--
Chodatella quadriseta	--	--	110	0.7	--	--	--	--
Closterium sp.	--	--	--	--	--	--	28	0.7
Coccomyxa minor	--	--	200	1.3	--	--	--	--
Crucigenia quadrata	--	--	--	--	--	--	--	--
Dictyosphaerium ehrenbergianum	--	--	--	--	--	--	--	--
Dictyosphaerium pulchellum	--	--	--	--	230	9.2	170	4.5
Dictyosphaerium sp.	--	--	650	4.3	--	--	--	--
Gloeocystis sp.	--	--	--	--	--	--	--	--
Golenkinia radiata	--	--	--	--	--	--	--	--
Golenkiniopsis solitaria	--	--	--	--	--	--	--	--
Gonium sp.	--	--	--	--	--	--	--	--
Kirchneriella contorta	--	--	28	0.2	--	--	28	0.7
Mesotaenium sp.	--	--	--	--	--	--	--	--
Micratinium pusillum	--	--	--	--	--	--	--	--
Micratinium sp.	1,600	20.5	3,500	23.3	--	--	--	--
Mougeotia sp.	--	--	--	--	--	--	--	--
Oocytis sp.	--	--	28	0.2	--	--	--	--
Pandorina morum	--	--	910	6.1	800	32.0	450	11.8
Phacotus lenticularis	--	--	--	--	--	--	--	--
Phacotus sp.	--	--	--	--	--	--	--	--
Platymonas sp.	--	--	--	--	--	--	--	--
Pteromonas sp.	--	--	--	--	--	--	--	--
Scenedesmus armatus	--	--	--	--	--	--	--	--
Scenedesmus bijuga	--	--	--	--	--	--	--	--
Scenedesmus dimorphus	--	--	--	--	--	--	--	--
Scenedesmus quadricauda	--	--	--	--	--	--	--	--
Scenedesmus serratus	--	--	--	--	--	--	--	--
Scenedesmus sp.	110	1.4	--	--	--	--	--	--
Schroederia judayi	--	--	--	--	28	1.1	85	2.2
Schroederia setigera	--	--	--	--	--	--	--	--
Selenastrum minutum	--	--	--	--	--	--	--	--
Sphaerocystis schroeteri	--	--	--	--	--	--	--	--
Staurastrum sp.	--	--	--	--	--	--	--	--
Treubaria sp.	--	--	170	1.1	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
	July 22, 1986--Continued							
CHRYSOPHYTA (GOLDEN-BROWN ALGAE)	85	1.1	85	0.6	0	0.0	0	0.0
Dinobryon divergens	--	--	--	--	--	--	--	--
Kephyrion spirale	--	--	--	--	--	--	--	--
Kephyrion sp.	--	--	--	--	--	--	--	--
Mallomonas acaroides	--	--	--	--	--	--	--	--
Mallomonas akrokonos	--	--	--	--	--	--	--	--
Mallomonas globosa	--	--	--	--	--	--	--	--
Mallomonas sp.	85	1.1	57	0.4	--	--	--	--
Pleurosigma delicatulum	--	--	--	--	--	--	--	--
Pleurosigma sp.	--	--	--	--	--	--	--	--
Ochromonas sp.	--	--	28	0.2	--	--	--	--
CYANOPHYTA (BLUE-GREEN ALGAE)	1,100	14.1	3,700	24.7	310	12.4	810	21.3
Anabaena sp.	--	--	--	--	--	--	--	--
Aphanocapsa delicatissima	--	--	110	0.7	--	--	230	6.1
Aphanocapsa sp.	--	--	--	--	--	--	--	--
Aphanothece sp.	--	--	620	4.1	--	--	--	--
Chroococcus dispersus	620	7.9	910	6.1	--	--	--	--
Chroococcus limneticus	--	--	57	0.4	--	--	--	--
Chroococcus sp.	--	--	--	--	--	--	--	--
Dactylococcopsis fascicularis	85	1.1	340	2.3	28	1.1	57	1.5
Dactylococcopsis sp.	--	--	--	--	--	--	--	--
Lyngbya limnetica	--	--	--	--	--	--	--	--
Lyngbya nana	--	--	--	--	--	--	--	--
Marssoniella elegans	--	--	--	--	--	--	--	--
Oscillatoria angusta	--	--	--	--	--	--	230	6.1
Oscillatoria angustissima	--	--	--	--	--	--	--	--
Oscillatoria limnetica	--	--	510	3.4	280	11.2	290	7.6
Oscillatoria tenuis	--	--	--	--	--	--	--	--
Oscillatoria sp.	--	--	--	--	--	--	--	--

Phormidium sp.	--	--	--	--	--	--	--	--
Synechococcus lineare	--	--	--	--	--	--	--	--
Synechococcus sigmoidea	430	5.5	170	1.1	--	--	--	--
Synechococcus sigmoidea f. *minor*	--	--	830	5.5	--	--	--	--
Synechococcus sp.	--	--	110	0.7	--	--	--	--
CRYPTOPHYTA (CRYPTOMONADS)	110	1.4	28	0.2	28	1.1	28	0.7
Chroomonas sp.	--	--	--	--	--	--	--	--
Cryptomonas erosa	--	--	--	--	--	--	--	--
Cryptomonas marsonii	--	--	28	0.2	28	1.1	28	0.7
Cryptomonas ovata	--	--	--	--	--	--	--	--
Cryptomonas rostrata	--	--	--	--	--	--	--	--
Cryptomonas rostratiformis	--	--	--	--	--	--	--	--
Cryptomonas sp.	28	0.4	--	--	--	--	--	--
Rhodomonas minuta	85	1.1	--	--	--	--	--	--
EUGLENOPHYTA (EUGLENOIDS)	0	0.0	28	0.2	0	0.0	0	0.0
Euglena acus	--	--	28	0.2	--	--	--	--
Euglena viridis	--	--	--	--	--	--	--	--
Euglena sp.	--	--	--	--	--	--	57	0.6
Trachelomonas sp.	--	--	--	--	--	--	--	--
PYRRHOPHYTA (DINOFLAGELLATES)	85	1.1	0	0.0	0	0.0	28	0.7
Ceratium hirundinella	--	--	--	--	--	--	--	--
Gymnodinium sp.	--	--	--	--	--	--	--	--
Peridinium biceps	--	--	--	--	--	--	--	--
Peridinium inconspicua	--	--	--	--	--	--	--	--
Peridinium sp.	85	1.1	--	--	--	--	--	--
Total cells and percent composition	7,800	100	15,000	103	2,500	100	3,800	99
Number of species	18	--	36	--	10	--	29	--
Diversity index (DI) at species level	2.79	--	3.54	--	2.61	--	4.01	--
Biomass (mg/L dry weight)	1.2	--	0.8	--	21.8	--	12.4	--
Chlorophyll *a* (µg/L)	5.3	--	5.7	--	--	--	3.7	--
Chlorophyll *b* (µg/L)	2.1	--	1.8	--	--	--	2.9	--
Chlorophyll *c* (µg/L)	10.9	--	1.6	--	--	--	2.0	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
				August 20, 1986				
BACILLARIOPHYTA (DIATOMS)	400	25.0	340	21.3	340	91.9	870	58.0
CENTRALES	400	25.0	310	19.4	28	7.6	110	7.3
Cyclotella bodanica	--	--	--	--	--	--	--	--
Cyclotella kutzingiana	19	1.2	14	0.9	--	--	--	--
Cyclotella meneghiniana	38	2.4	--	--	28	7.6	110	7.3
Cyclotella pseudostelligera	--	--	--	--	--	--	--	--
Cyclotella stelligera	340	21.3	300	18.8	--	--	--	--
Melosira granulata var. *angustissima*	--	--	--	--	--	--	--	--
Melosira italica	--	--	--	--	--	--	--	--
Melosira lirata	--	--	--	--	--	--	--	--
Melosira sp.	--	--	--	--	--	--	--	--
Rhizosolenia eriensis	--	--	--	--	--	--	--	--
Stephanodiscus alpinus	--	--	--	--	--	--	--	--
Stephanodiscus astrea	--	--	--	--	--	--	--	--
Stephanodiscus niagarae	--	--	--	--	--	--	--	--
Stephanodiscus tenuis	--	--	--	--	--	--	--	--
Stephanodiscus sp.	--	--	--	--	--	--	--	--
PENNALES	0	0.0	28	1.8	310	83.8	760	50.7
Achnanthes affinis	--	--	--	--	--	--	--	--
Achnanthes lanceolata	--	--	--	--	--	--	--	--
Achnanthes minutissima	--	--	--	--	--	--	--	--
Amphora perpusilla	--	--	--	--	--	--	57	3.8
Amphora veneta	--	--	--	--	--	--	--	--
Amphora sp.	--	--	--	--	--	--	--	--
Asterionella formosa	--	--	--	--	--	--	--	--
Cocconeis placentula	--	--	--	--	--	--	--	--
Cylindrotheca gracilis	--	--	--	--	--	--	--	--
Cylindrotheca sp.	--	--	--	--	--	--	--	--
Cymatopleura solea	--	--	--	--	--	--	--	--

Cymbella affinis	--	--	--	--	140	37.8	57	3.8
Cymbella minuta	--	--	--	--	--	--	--	--
Cymbella minuta f. *latens*	--	--	--	--	--	--	--	--
Cymbella minuta var. *silesica*	--	--	--	--	--	--	--	--
Cymbella sinuata	--	--	--	--	--	--	--	--
Diatoma anceps	--	--	--	--	--	--	--	--
Diatoma hiemale var. *mesodon*	--	--	--	--	--	--	--	--
Diatoma tenue var. *elongatum*	--	--	--	--	--	--	--	--
Diatoma vulgare	--	--	--	--	--	--	28	1.9
Diploneis sp.	--	--	14	0.9	--	--	--	--
Epithemia sorex	--	--	--	--	--	--	--	--
Eunotia sp.	--	--	--	--	--	--	--	--
Fragilaria capucina	--	--	--	--	--	--	--	--
Fragilaria crotonensis	--	--	--	--	--	--	--	--
Fragilaria pinnata	--	--	--	--	--	--	--	--
Fragilaria vaucheriae	--	--	--	--	--	--	280	18.7
Gomphonema angustatum	--	--	--	--	--	--	--	--
Gyrosigma spencerii	--	--	--	--	--	--	--	--
Hannaea arcus	--	--	--	--	--	--	28	1.9
Hannaea arcus var. *amphioxys*	--	--	--	--	--	--	--	--
Hannaea arcus var. *arcus*	--	--	--	--	14	3.7	14	2.4
Hantzschia amphioxys	--	--	--	--	--	--	--	--
Meridion circulare	--	--	--	--	--	--	--	--
Navicula arvensis	--	--	--	--	--	--	--	--
Navicula capitata	--	--	--	--	--	--	--	--
Navicula cryptocephala	--	--	--	--	--	--	--	--
Navicula cryptocephala var. *veneta*	--	--	--	--	28	7.6	--	--
Navicula gastrum	--	--	--	--	--	--	--	--
Navicula heufleri	--	--	--	--	--	--	--	--
Navicula lanceolata	--	--	--	--	28	7.6	57	3.8
Navicula luzonensis	--	--	--	--	--	--	--	--
Navicula menisculus var. *upsaliensis*	--	--	--	--	--	--	--	--
Navicula minima	--	--	--	--	--	--	--	--
Navicula minuscula	--	--	--	--	--	--	--	--
Navicula mutica	--	--	--	--	--	--	--	--
Navicula notha	--	--	--	--	--	--	57	3.8
Navicula pellicosa	--	--	--	--	--	--	--	--
Navicula pupula	--	--	--	--	--	--	--	--
Navicula radiosa	--	--	--	--	--	--	--	--
Navicula radiosa var. *tenella*	--	--	--	--	--	--	28	1.9

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
	August 20, 1986--Continued							
BACILLARIOPHYTA (DIATOMS)--Continued								
PENNALES--Continued								
Navicula rhyncocephala	--	--	--	--	--	--	28	1.9
Navicula sabinians var. *intermedia*	--	--	--	--	--	--	57	3.8
Navicula tantula	--	--	--	--	--	--	--	--
Navicula tripunctata	--	--	--	--	--	--	--	--
Navicula viridula	--	--	--	--	--	--	--	--
Navicula viridula var. *aveame*	--	--	--	--	--	--	--	--
Navicula viridula var. *avenacea*	--	--	--	--	--	--	--	--
Navicula sp.	--	--	--	--	--	--	--	--
Nitzschia acicularis	--	--	--	--	--	--	--	--
Nitzschia communis	--	--	--	--	--	--	--	--
Nitzschia dissipata	--	--	--	--	28	7.6	--	--
Nitzschia filiformis	--	--	--	--	--	--	--	--
Nitzschia frustulum	--	--	--	--	--	--	--	--
Nitzschia hantzschiana	--	--	--	--	--	--	--	--
Nitzschia hungarica	--	--	--	--	--	--	--	--
Nitzschia ignorata	--	--	--	--	--	--	--	--
Nitzschia intermedia	--	--	--	--	--	--	--	--
Nitzschia latens	--	--	--	--	--	--	--	--
Nitzschia linearis	--	--	--	--	28	7.6	--	--
Nitzschia longissima var. *reversa*	--	--	--	--	--	--	28	1.9
Nitzschia microcephala	--	--	--	--	--	--	--	--
Nitzschia palea	--	--	--	--	57	15.4	28	1.9
Nitzschia paleacea	--	--	--	--	--	--	--	--
Nitzschia pusilla	--	--	--	--	--	--	--	--
Nitzschia romana	--	--	--	--	--	--	--	--
Nitzschia thermalis	--	--	--	--	--	--	--	--
Nitzschia tryblionella var. *debilis*	--	--	--	--	--	--	--	--
Nitzschia sp.	--	--	--	--	--	--	--	--

Pleurosigma delicatalum	--	--	--	--	--	--	--	--
Rhoicosphenia curvata	--	--	--	--	--	--	--	--
Rhopalodia musculus	--	--	--	--	--	--	--	--
Surirella angustata	--	--	14	0.9	--	--	--	--
Surirella ovalis	--	--	--	--	--	--	28	1.9
Surirella ovata	--	--	--	--	--	--	--	--
Synedra acus	--	--	--	--	--	--	--	--
Synedra delicatissima	--	--	--	--	--	--	--	--
Synedra fasciculate	--	--	--	--	--	--	--	--
Synedra minuscula	--	--	--	--	--	--	--	--
Snyedra radiens	--	--	--	--	--	--	--	--
Synedra rumpens	--	--	--	--	--	--	--	--
Synedra rumpens var. *familiaris*	--	--	--	--	--	--	--	--
Synedra ulna	--	--	--	--	--	--	--	--
Synedra ulna var. *contracta*	--	--	--	--	--	--	--	--
Synedra ulna var. *danica*	--	--	--	--	--	--	--	--
Synedra ulna var. *oxyrhynchus*	--	--	--	--	--	--	--	--
Synedra sp.	--	--	--	--	--	--	--	--
Thalassiosira fluviatilis	--	--	--	--	--	--	--	--
CHLOROPHYTA (GREEN ALGAE)	230	14.4	500	31.3	0	0.0	0	0.0
Actinastrum hantzschii	--	--	--	--	--	--	--	--
Actinastrum sp.	--	--	--	--	--	--	--	--
Ankistrodesmus convolutus	--	--	--	--	--	--	--	--
Ankistrodesmus convolutus v. *acicularis*	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus var. *acicularis*	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus var. *mirabilis*	--	--	--	--	--	--	--	--
Carteria sp.	--	--	--	--	--	--	--	--
Chlamydomonas sp.	--	--	--	--	--	--	--	--
Chlorella sp.	19	1.2	130	8.1	--	--	--	--
Chlorococcum humicola	--	--	--	--	--	--	--	--
Chlorococcum sp.	--	--	43	2.7	--	--	--	--
Chlorogonium spirale	--	--	--	--	--	--	--	--
Chlorogonium sp.	--	--	--	--	--	--	--	--
Chodatella quadriseta	--	--	--	--	--	--	--	--
Closterium sp.	--	--	--	--	--	--	--	--
Coccomyxa minor	--	--	--	--	--	--	--	--
Crucigenia quadrata	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
			August 20, 1986--Continued					
CHLOROPHYTA (GREEN ALGAE)--Continued								
Dictyosphaerium ehrenbergianum	--	--	--	--	--	--	--	--
Dictyosphaerium pulchellum	--	--	--	--	--	--	--	--
Dictyosphaerium sp.	--	--	--	--	--	--	--	--
Gloeocystis sp.	--	--	--	--	--	--	28	4.8
Golenkinia radiata	--	--	--	--	--	--	--	--
Golenkiniopsis solitaria	--	--	--	--	--	--	--	--
Gonium sp.	--	--	--	--	--	--	--	--
Kirchneriella contorta	--	--	--	--	--	--	--	--
Mesotaenium sp.	--	--	--	--	--	--	--	--
Micratinium pusillum	--	--	--	--	--	--	--	--
Micratinium sp.	--	--	--	--	--	--	--	--
Mougeotia sp.	--	--	--	--	--	--	--	--
Oocytis sp.	--	--	--	--	--	--	--	--
Pandorina morum	--	--	--	--	--	--	--	--
Phacotus lenticularis	210	13.1	330	20.6	--	--	--	--
Phacotus sp.	--	--	--	--	--	--	--	--
Platymonas sp.	--	--	--	--	--	--	--	--
Pteromonas sp.	--	--	--	--	--	--	--	--
Scenedesmus armatus	--	--	--	--	--	--	--	--
Scenedesmus bijuga	--	--	--	--	--	--	--	--
Scenedesmus dimorphus	--	--	--	--	--	--	--	--
Scenedesmus quadricauda	--	--	--	--	--	--	--	--
Scenedesmus serratus	--	--	--	--	--	--	--	--
Scenedesmus sp.	--	--	--	--	--	--	--	--
Schroederia judayi	--	--	--	--	--	--	--	--
Schroederia setigera	--	--	--	--	--	--	--	--
Selenastrum minutum	--	--	--	--	--	--	--	--
Sphaerocystis schroeteri	--	--	--	--	--	--	--	--
Staurastrum sp.	--	--	--	--	--	--	--	--
Treubaria sp.	--	--	--	--	--	--	--	--

CHRYSOPHYTA (GOLDEN-BROWN ALGAE)	300	18.8	350	21.9	0	0.0	0	0.0
Dinobryon divergens	--	--	--	--	--	--	--	--
Kephyrion spirale	--	--	--	--	--	--	--	--
Kephyrion sp.	280	17.5	280	17.5	--	--	--	--
Mallomonas acaroides	--	--	--	--	--	--	--	--
Mallomonas akrokonos	--	--	--	--	--	--	--	--
Mallomonas globosa	--	--	--	--	--	--	--	--
Mallomonas sp.	19	1.2	71	4.4	--	--	--	--
Pleurosigma delicatulum	--	--	--	--	--	--	--	--
Pleurosigma sp.	--	--	--	--	--	--	--	--
Ochromonas sp.	--	--	--	--	--	--	--	--
CYANOPHYTA (BLUE-GREEN ALGAE)	250	15.6	28	1.8	0	0.0	620	41.3
Anabaena sp.	--	--	--	--	--	--	--	--
Aphanocapsa delicatissima	--	--	--	--	--	--	--	--
Aphanocapsa sp.	--	--	--	--	--	--	--	--
Aphanothece sp.	--	--	--	--	--	--	--	--
Chroococcus dispersus	250	15.6	28	1.8	--	--	--	--
Chroococcus limneticus	--	--	--	--	--	--	--	--
Chroococcus sp.	--	--	--	--	--	--	--	--
Dactylococcopsis fascicularis	--	--	--	--	--	--	--	--
Dactylococcopsis sp.	--	--	--	--	--	--	--	--
Lyngbya limnetica	--	--	--	--	--	--	--	--
Lyngbya nana	--	--	--	--	--	--	--	--
Marssoniella elegans	--	--	--	--	--	--	--	--
Oscillatoria angusta	--	--	--	--	--	--	--	--
Oscillatoria angustissima	--	--	--	--	--	--	--	--
Oscillatoria limnetica	--	--	--	--	--	--	--	--
Oscillatoria tenuis	--	--	--	--	--	--	--	--
Oscillatoria sp.	--	--	--	--	--	--	620	41.3
Phormidium sp.	--	--	--	--	--	--	--	--
Synechococcus lineare	--	--	--	--	--	--	--	--
Synechococcus sigmoidea	--	--	--	--	--	--	--	--
Synechococcus sigmoidea f. *minor*	--	--	--	--	--	--	--	--
Synechococcus sp.	--	--	--	--	--	--	--	--
CRYPTOPHYTA (CRYPTOMONADS)	400	25.0	310	19.4	0	0.0	0	0.0
Chroomonas sp.	--	--	--	--	--	--	--	--
Cryptomonas erosa	19	1.2	--	--	--	--	--	--
Cryptomonas marsonii	360	22.5	200	12.5	--	--	--	--
Cryptomonas ovata	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1) 2-ft depth Cells	Kenney Reservoir (site 1) 2-ft depth % Comp	Kenney Reservoir (site 1) Composite (0-10 ft) Cells	Kenney Reservoir (site 1) Composite (0-10 ft) % Comp	Kenney Reservoir (site 2) 2-ft depth Cells	Kenney Reservoir (site 2) 2-ft depth % Comp	Kenney Reservoir (site 2) Composite (0-10 ft) Cells	Kenney Reservoir (site 2) Composite (0-10 ft) % Comp
			August 20, 1986--Continued					
CRYPTOPHYTA (CRYPTOMONADS)--Continued								
Cryptomonas rostrata	--	--	--	--	--	--	--	--
Cryptomonas rostratiformis	--	--	--	--	--	--	--	--
Cryptomonas sp.	19	1.2	43	2.7	--	--	--	--
Rhodomonas minuta	--	--	71	4.4	--	--	--	--
EUGLENOPHYTA (EUGLENOIDS)	0	0.0	0	0.0	28	7.6	0	0.0
Euglena acus	--	--	--	--	--	--	--	--
Euglena viridis	--	--	--	--	--	--	--	--
Euglena sp.	--	--	--	--	28	7.6	--	--
Trachelomonas sp.	--	--	--	--	--	--	--	--
PYRRHOPHYTA (DINOFLAGELLATES)	0	0.0	28	1.8	0	0.0	--	--
Ceratium hirundinella	--	--	--	--	--	--	--	--
Gymnodinium sp.	--	--	--	--	--	--	--	--
Peridinium biceps	--	--	--	--	--	--	--	--
Peridinium inconspicua	--	--	28	1.8	--	--	--	--
Peridinium sp.	--	--	--	--	--	--	--	--
Total cells and percent composition	1,600	99	1,600	97	370	99	1,500	99
Number of species	11	--	14	--	8	--	15	--
Diversity index (DI) at species level	2.73	--	3.13	--	2.65	--	2.91	--
Biomass (mg/L dry weight)	3.3	--	3.4	--	18.0	--	3.8	--
Chlorophyll *a* (μg/L)	2.0	--	2.0	--	--	--	--	--
Chlorophyll *b* (μg/L)	0.0	--	0.0	--	--	--	--	--
Chlorophyll *c* (μg/L)	0.0	--	0.0	--	--	--	--	--

	September 16, 1986							
BACILLARIOPHYTA (DIATOMS)	28	3.5	180	23.1	620	68.9	520	89.7
CENTRALES	14	1.8	71	9.1	28	3.1	57	9.8
Cyclotella bodanica	--	--	--	--	--	--	--	--
Cyclotella kutzingiana	--	--	--	--	--	--	--	--
Cyclotella meneghiniana	--	--	28	3.6	--	--	--	--
Cyclotella pseudostelligera	--	--	--	--	--	--	--	--
Cyclotella stelligera	--	--	43	5.5	28	3.1	57	9.8
Melosira granulata var. *angustissima*	--	--	--	--	--	--	--	--
Melosira italica	--	--	--	--	--	--	--	--
Melosira lirata	--	--	--	--	--	--	--	--
Melosira sp.	--	--	--	--	--	--	--	--
Rhizosolenia eriensis	--	--	--	--	--	--	--	--
Stephanodiscus alpinus	--	--	--	--	--	--	--	--
Stephanodiscus astrea	--	--	--	--	--	--	--	--
Stephanodiscus niagarae	--	--	--	--	--	--	--	--
Stephanodiscus tenuis	--	--	--	--	--	--	--	--
Stephanodiscus sp.	14	1.8	--	--	--	--	--	--
PENNALES	14	1.8	110	14.1	590	65.6	460	79.3
Achnanthes affinis	--	--	--	--	--	--	--	--
Achnanthes lanceolata	--	--	--	--	--	--	--	--
Achnanthes minutissima	--	--	--	--	--	--	--	--
Amphora perpusilla	--	--	--	--	--	--	--	--
Amphora veneta	--	--	--	--	--	--	--	--
Amphora sp.	--	--	--	--	--	--	--	--
Asterionella formosa	--	--	--	--	--	--	--	--
Cocconeis placentula	--	--	--	--	--	--	--	--
Cylindrotheca gracilis	--	--	--	--	--	--	--	--
Cylindrotheca sp.	--	--	--	--	--	--	--	--
Cymatopleura solea	--	--	--	--	--	--	--	--
Cymbella affinis	--	--	--	--	--	--	--	--
Cymbella minuta	--	--	--	--	--	--	--	--
Cymbella minuta f. *latens*	--	--	--	--	--	--	--	--
Cymbella minuta var. *silesica*	--	--	--	--	--	--	--	--
Cymbella sinuata	--	--	--	--	--	--	--	--
Diatoma anceps	--	--	--	--	--	--	--	--
Diatoma hiemale var. *mesodon*	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
	September 16, 1986--Continued							
BACILLARIOPHYTA (DIATOMS)--Continued								
PENNALES--Continued								
Diatoma tenue var. *elongatum*	--	--	--	--	--	--	--	--
Diatoma vulgare	--	--	--	--	--	--	--	--
Diploneis sp.	14	1.8	--	--	--	--	--	--
Epithemia sorex	--	--	--	--	--	--	--	--
Eunotia sp.	--	--	--	--	--	--	--	--
Fragilaria capucina	--	--	--	--	--	--	--	--
Fragilaria crotonensis	--	--	57	7.3	--	--	--	--
Fragilaria pinnata	--	--	--	--	--	--	--	--
Fragilaria vaucheriae	--	--	--	--	--	--	--	--
Gomphonema angustatum	--	--	--	--	--	--	--	--
Gyrosigma spencerii	--	--	--	--	--	--	--	--
Hannaea arcus	--	--	--	--	--	--	--	--
Hannaea arcus var. *amphioxys*	--	--	--	--	--	--	--	--
Hannaea arcus var. *arcus*	--	--	--	--	--	--	--	--
Hantzschia amphioxys	--	--	--	--	--	--	--	--
Meridion circulare	--	--	--	--	--	--	--	--
Navicula arvensis	--	--	--	--	--	--	--	--
Navicula capitata	--	--	--	--	--	--	--	--
Navicula cryptocephala	--	--	--	--	--	--	--	--
Navicula cryptocephala var. *veneta*	--	--	--	--	--	--	--	--
Navicula gastrum	--	--	--	--	--	--	--	--
Navicula heufleri	--	--	--	--	--	--	--	--
Navicula lanceolata	--	--	--	--	--	--	--	--
Navicula luzonensis	--	--	--	--	--	--	--	--
Navicula menisculus var. *upsaliensis*	--	--	--	--	--	--	--	--
Navicula minima	--	--	--	--	--	--	--	--
Navicula minuscula	--	--	--	--	--	--	--	--
Navicula mutica	--	--	--	--	--	--	--	--
Navicula notha	--	--	--	--	--	--	--	--

Navicula pellicosa	--	--	--	--	--	--	--	--
Navicula pupula	--	--	--	--	--	--	--	--
Navicula radiosa	--	--	--	--	--	--	--	--
Navicula radiosa var. *tenella*	--	--	--	--	--	--	--	--
Navicula rhyncocephala	--	--	--	--	--	--	--	--
Navicula sabinians var. *intermedia*	--	--	--	--	310	34.4	230	39.7
Navicula tantula	--	--	--	--	--	--	--	--
Navicula tripunctata	--	--	--	--	--	--	--	--
Navicula viridula	--	--	--	--	--	--	--	--
Navicula viridula var. *aveame*	--	--	--	--	--	--	--	--
Navicula viridula var. *avenacea*	--	--	--	--	--	--	--	--
Navicula sp.	--	--	14	1.8	--	--	--	--
Nitzschia acicularis	--	--	--	--	57	6.3	--	--
Nitzschia communis	--	--	14	1.8	--	--	--	--
Nitzschia dissipata	--	--	--	--	--	--	--	--
Nitzschia filiformis	--	--	--	--	--	--	--	--
Nitzschia frustulum	--	--	--	--	--	--	--	--
Nitzschia hantzschiana	--	--	--	--	57	6.3	--	--
Nitzschia hungarica	--	--	--	--	28	3.1	--	--
Nitzschia ignorata	--	--	28	3.6	--	--	--	--
Nitzschia intermedia	--	--	--	--	--	--	--	--
Nitzschia latens	--	--	--	--	--	--	--	--
Nitzschia linearis	--	--	--	--	--	--	--	--
Nitzschia longissima var. *reversa*	--	--	--	--	--	--	--	--
Nitzschia microcephala	--	--	--	--	--	--	--	--
Nitzschia palea	--	--	--	--	--	--	--	--
Nitzschia paleacea	--	--	--	--	140	15.6	140	24.1
Nitzschia pusilla	--	--	--	--	--	--	--	--
Nitzschia romana	--	--	--	--	--	--	--	--
Nitzschia thermalis	--	--	--	--	--	--	--	--
Nitzschia tryblionella var. *debilis*	--	--	--	--	--	--	--	--
Nitzschia sp.	--	--	--	--	--	--	--	--
Pleurosigma delicatalum	--	--	--	--	--	--	57	9.8
Rhoicosphenia curvata	--	--	--	--	--	--	--	--
Rhopalodia musculus	--	--	--	--	--	--	--	--
Surirella angustata	--	--	--	--	--	--	--	--
Surirella ovalis	--	--	--	--	--	--	--	--
Surirella ovata	--	--	--	--	--	--	28	4.8
Synedra acus	--	--	--	--	--	--	--	--
Synedra delicatissima	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1) 2-ft depth Cells	% Comp	Kenney Reservoir (site 1) Composite (0-10 ft) Cells	% Comp	Kenney Reservoir (site 2) 2-ft depth Cells	% Comp	Kenney Reservoir (site 2) Composite (0-10 ft) Cells	% Comp
			September 16, 1986--Continued					
BACILLARIOPHYTA (DIATOMS)--Continued								
PENNALES--Continued								
Synedra fasciculate	--	--	--	--	--	--	--	--
Synedra minuscula	--	--	--	--	--	--	--	--
Snyedra radiens	--	--	--	--	--	--	--	--
Synedra rumpens	--	--	--	--	--	--	--	--
Synedra rumpens var. *familiaris*	--	--	--	--	--	--	--	--
Synedra ulna	--	--	--	--	--	--	--	--
Synedra ulna var. *contracta*	--	--	--	--	--	--	--	--
Synedra ulna var. *danica*	--	--	--	--	--	--	--	--
Synedra ulna var. *oxyrhynchus*	--	--	--	--	--	--	--	--
Synedra sp.	--	--	--	--	--	--	--	--
Thalassiosira fluviatilis	--	--	--	--	--	--	--	--
CHLOROPHYTA (GREEN ALGAE)	260	32.5	270	34.6	0	0.0	28	4.8
Actinastrum hantzschii	--	--	--	--	--	--	--	--
Actinastrum sp.	--	--	--	--	--	--	--	--
Ankistrodesmus convolutus	--	--	--	--	--	--	--	--
Ankistrodesmus convolutus v. *acicularis*	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus var. *acicularis*	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus var. *mirabilis*	--	--	14	1.8	--	--	--	--
Carteria sp.	--	--	--	--	--	--	--	--
Chlamydomonas sp.	--	--	--	--	--	--	--	--
Chlorella sp.	--	--	--	--	--	--	--	--
Chlorococcum humicola	--	--	--	--	--	--	--	--
Chlorococcum sp.	43	5.4	14	1.8	--	--	--	--
Chlorogonium spirale	--	--	--	--	--	--	--	--

Chlorogonium sp.	--	--	--	--	--	--	--	--
Chodatella quadriseta	--	--	--	--	--	--	--	--
Closterium sp.	--	--	--	--	--	--	--	--
Coccomyxa minor	--	--	--	--	--	--	--	--
Crucigenia quadrata	--	--	--	--	--	--	--	--
Dictyosphaerium ehrenbergianum	--	--	--	--	--	--	--	--
Dictyosphaerium pulchellum	--	--	--	--	--	--	--	--
Dictyosphaerium sp.	--	--	--	--	--	--	--	--
Gloeocystis sp.	71	8.9	14	1.8	--	--	--	--
Golenkinia radiata	--	--	--	--	--	--	--	--
Golenkiniopsis solitaria	--	--	--	--	--	--	--	--
Gonium sp.	--	--	--	--	--	--	--	--
Kirchneriella contorta	--	--	--	--	--	--	--	--
Mesotaenium sp.	--	--	--	--	--	--	--	--
Micratinium pusillum	--	--	140	17.9	--	--	28	4.8
Micratinium sp.	--	--	--	--	--	--	--	--
Mougeotia sp.	--	--	--	--	--	--	--	--
Oocytis sp.	14	1.8	14	1.8	--	--	--	--
Pandorina morum	--	--	--	--	--	--	--	--
Phacotus lenticularis	--	--	14	1.8	--	--	--	--
Phacotus sp.	--	--	--	--	--	--	--	--
Platymonas sp.	--	--	--	--	--	--	--	--
Pteromonas sp.	--	--	--	--	--	--	--	--
Scenedesmus armatus	--	--	--	--	--	--	--	--
Scenedesmus bijuga	--	--	--	--	--	--	--	--
Scenedesmus dimorphus	--	--	--	--	--	--	--	--
Scenedesmus quadricauda	--	--	--	--	--	--	--	--
Scenedesmus serratus	--	--	--	--	--	--	--	--
Scenedesmus sp.	--	--	--	--	--	--	--	--
Schroederia judayi	130	16.3	57	7.3	--	--	--	--
Schroederia setigera	--	--	--	--	--	--	--	--
Selenastrum minutum	--	--	--	--	--	--	--	--
Sphaerocystis schroeteri	--	--	--	--	--	--	--	--
Staurastrum sp.	--	--	--	--	--	--	--	--
Treubaria sp.	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
				September 16, 1986--Continued				
CHRYSOPHYTA (GOLDEN-BROWN ALGAE)	85	10.6	100	12.8	0	0.0	0	0.0
Dinobryon divergens	--	--	--	--	--	--	--	--
Kephyrion spirale	--	--	--	--	--	--	--	--
Kephyrion sp.	--	--	--	--	--	--	--	--
Mallomonas acaroides	--	--	--	--	--	--	--	--
Mallomonas akrokonos	71	8.9	57	7.3	--	--	--	--
Mallomonas globosa	--	--	--	--	--	--	--	--
Mallomonas sp.	14	1.8	43	5.5	--	--	--	--
Pleurosigma delicatulum	--	--	--	--	--	--	--	--
Pleurosigma sp.	--	--	--	--	--	--	--	--
Ochromonas sp.	--	--	--	--	--	--	--	--
CYANOPHYTA (BLUE-GREEN ALGAE)	380	47.5	99	12.7	280	31.1	28	4.8
Anabaena sp.	--	--	--	--	--	--	--	--
Aphanocapsa delicatissima	180	22.5	14	1.8	--	--	--	--
Aphanocapsa sp.	--	--	--	--	--	--	--	--
Aphanothece sp.	--	--	--	--	--	--	--	--
Chroococcus dispersus	--	--	--	--	--	--	28	4.8
Chroococcus limneticus	--	--	--	--	--	--	--	--
Chroococcus sp.	--	--	--	--	--	--	--	--
Dactylococcopsis fascicularis	--	--	--	--	--	--	--	--
Dactylococcopsis sp.	--	--	--	--	--	--	--	--
Lyngbya limnetica	--	--	--	--	--	--	--	--
Lyngbya nana	--	--	--	--	--	--	--	--
Marssoniella elegans	--	--	--	--	--	--	--	--
Oscillatoria angusta	--	--	--	--	--	--	--	--
Oscillatoria angustissima	--	--	--	--	--	--	--	--
Oscillatoria limnetica	--	--	--	--	--	--	--	--
Oscillatoria tenuis	--	--	--	--	--	--	--	--
Oscillatoria sp.	200	25.0	85	10.9	280	31.1	--	--

Phormidium sp.	--	--	--	--	--	--	--	--
Synechococcus lineare	--	--	--	--	--	--	--	--
Synechococcus sigmoidea	--	--	--	--	--	--	--	--
Synechococcus sigmoidea f. *minor*	--	--	--	--	--	--	--	--
Synechococcus sp.	--	--	--	--	--	--	--	--
CRYPTOPHYTA (CRYPTOMONADS)	42	5.3	130	16.7	0	0.0	0	0.0
Chroomonas sp.	--	--	--	--	--	--	--	--
Cryptomonas erosa	--	--	--	--	--	--	--	--
Cryptomonas marsonii	28	3.5	28	3.6	--	--	--	--
Cryptomonas ovata	--	--	--	--	--	--	--	--
Cryptomonas rostrata	--	--	--	--	--	--	--	--
Cryptomonas rostratiformis	--	--	28	3.6	--	--	--	--
Cryptomonas sp.	--	--	14	1.8	--	--	--	--
Rhodomonas minuta	14	1.8	57	7.3	--	--	--	--
EUGLENOPHYTA (EUGLENOIDS)	0	0.0	0	0.0	0	0.0	0	0.0
Euglena acus	--	--	--	--	--	--	--	--
Euglena viridis	--	--	--	--	--	--	--	--
Euglena sp.	--	--	--	--	--	--	--	--
Trachelomonas sp.	--	--	--	--	--	--	--	--
PYRRHOPHYTA (DINOFLAGELLATES)	0	0.0	0	0.0	0	0.0	0	0.0
Ceratium hirundinella	--	--	--	--	--	--	--	--
Gymnodinium sp.	--	--	--	--	--	--	--	--
Peridinium biceps	--	--	--	--	--	--	--	--
Peridinium inconspicua	--	--	--	--	--	--	--	--
Peridinium sp.	--	--	--	--	--	--	--	--
Total cells and percent composition	800	99	780	100	900	100	580	99
Number of species	12	--	21	--	7	--	7	--
Diversity index (DI) at species level	2.95	--	3.99	--	2.28	--	2.34	--
Biomass (mg/L dry weight)	0.2	--	--	--	2.0	--	3.5	--
Chlorophyll *a* (µg/L)	1.4	--	1.1	--	1.2	--	3.5	--
Chlorophyll *b* (µg/L)	0.0	--	0.0	--	0.0	--	0.0	--
Chlorophyll *c* (µg/L)	0.5	--	0.0	--	0.0	--	1.3	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
				June 9, 1987				
BACILLARIOPHYTA (DIATOMS)	440	0.6	--	--	280	1.6	--	--
CENTRALES	170	0.2	--	--	110	0.6	--	--
Cyclotella bodanica	--	--	--	--	--	--	--	--
Cyclotella kutzingiana	--	--	--	--	--	--	--	--
Cyclotella meneghiniana	--	--	--	--	--	--	--	--
Cyclotella pseudostelligera	--	--	--	--	--	--	--	--
Cyclotella stelligera	170	0.2	--	--	110	0.6	--	--
Melosira granulata var. *angustissima*	--	--	--	--	--	--	--	--
Melosira italica	--	--	--	--	--	--	--	--
Melosira lirata	--	--	--	--	--	--	--	--
Melosira sp.	--	--	--	--	--	--	--	--
Rhizosolenia eriensis	--	--	--	--	--	--	--	--
Stephanodiscus alpinus	--	--	--	--	--	--	--	--
Stephanodiscus astrea	--	--	--	--	--	--	--	--
Stephanodiscus niagarae	--	--	--	--	--	--	--	--
Stephanodiscus tenuis	--	--	--	--	--	--	--	--
Stephanodiscus sp.	--	--	--	--	--	--	--	--
PENNALES	270	0.4	--	--	170	1.0	--	--
Achnanthes affinis	--	--	--	--	--	--	--	--
Achnanthes lanceolata	--	--	--	--	--	--	--	--
Achnanthes minutissima	--	--	--	--	--	--	--	--
Amphora perpusilla	--	--	--	--	--	--	--	--
Amphora veneta	--	--	--	--	--	--	--	--
Amphora sp.	--	--	--	--	--	--	--	--
Asterionella formosa	--	--	--	--	--	--	--	--
Cocconeis placentula	--	--	--	--	--	--	--	--
Cylindrotheca gracilis	--	--	--	--	--	--	--	--
Cylindrotheca sp.	--	--	--	--	--	--	--	--
Cymatopleura solea	--	--	--	--	--	--	--	--

Cymbella affinis	--	--	--	--	--	--	--	--
Cymbella minuta	--	--	--	--	57	0.3	--	--
Cymbella minuta f. *latens*	--	--	--	--	--	--	--	--
Cymbella minuta var. *silesica*	--	--	--	--	--	--	--	--
Cymbella sinuata	--	--	--	--	--	--	--	--
Diatoma anceps	--	--	--	--	--	--	--	--
Diatoma hiemale var. *mesodon*	--	--	--	--	--	--	--	--
Diatoma tenue var. *elongatum*	--	--	--	--	--	--	--	--
Diatoma vulgare	--	--	--	--	--	--	--	--
Diploneis sp.	57	0.1	--	--	--	--	--	--
Epithemia sorex	--	--	--	--	--	--	--	--
Eunotia sp.	--	--	--	--	--	--	--	--
Fragilaria capucina	--	--	--	--	--	--	--	--
Fragilaria crotonensis	--	--	--	--	--	--	--	--
Fragilaria pinnata	--	--	--	--	--	--	--	--
Fragilaria vaucheriae	--	--	--	--	--	--	--	--
Gomphonema angustatum	--	--	--	--	--	--	--	--
Gyrosigma spencerii	--	--	--	--	--	--	--	--
Hannaea arcus	14	0.0	--	--	--	--	--	--
Hannaea arcus var. *amphioxys*	--	--	--	--	--	--	--	--
Hannaea arcus var. *arcus*	--	--	--	--	--	--	--	--
Hantzschia amphioxys	--	--	--	--	--	--	--	--
Meridion circulare	--	--	--	--	--	--	--	--
Navicula arvensis	--	--	--	--	--	--	--	--
Navicula capitata	--	--	--	--	--	--	--	--
Navicula cryptocephala	--	--	--	--	--	--	--	--
Navicula cryptocephala var. *veneta*	--	--	--	--	--	--	--	--
Navicula gastrum	--	--	--	--	--	--	--	--
Navicula heufleri	--	--	--	--	--	--	--	--
Navicula lanceolata	--	--	--	--	--	--	--	--
Navicula luzonensis	--	--	--	--	--	--	--	--
Navicula menisculus var. *upsaliensis*	--	--	--	--	--	--	--	--
Navicula minima	--	--	--	--	--	--	--	--
Navicula minuscula	--	--	--	--	--	--	--	--
Navicula mutica	--	--	--	--	--	--	--	--
Navicula notha	--	--	--	--	--	--	--	--
Navicula pellicosa	57	0.1	--	--	--	--	--	--
Navicula pupula	--	--	--	--	--	--	--	--
Navicula radiosa	--	--	--	--	--	--	--	--
Navicula radiosa var. *tenella*	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1) 2-ft depth Cells	Kenney Reservoir (site 1) 2-ft depth % Comp	Kenney Reservoir (site 1) Composite (0-10 ft) Cells	Kenney Reservoir (site 1) Composite (0-10 ft) % Comp	Kenney Reservoir (site 2) 2-ft depth Cells	Kenney Reservoir (site 2) 2-ft depth % Comp	Kenney Reservoir (site 2) Composite (0-10 ft) Cells	Kenney Reservoir (site 2) Composite (0-10 ft) % Comp
			June 9, 1987--Continued					
BACILLARIOPHYTA (DIATOMS)--Continued								
PENNALES--Continued								
Navicula rhyncocephala	--	--	--	--	--	--	--	--
Navicula sabinians var. *intermedia*	--	--	--	--	--	--	--	--
Navicula tantula	--	--	--	--	--	--	--	--
Navicula tripunctata	--	--	--	--	--	--	--	--
Navicula viridula	--	--	--	--	--	--	--	--
Navicula viridula var. *aveame*	--	--	--	--	--	--	--	--
Navicula viridula var. *avenacea*	--	--	--	--	--	--	--	--
Navicula sp.	--	--	--	--	--	--	--	--
Nitzschia acicularis	--	--	--	--	--	--	--	--
Nitzschia communis	--	--	--	--	--	--	--	--
Nitzschia dissipata	57	0.1	--	--	--	--	--	--
Nitzschia filiformis	--	--	--	--	--	--	--	--
Nitzschia frustulum	--	--	--	--	--	--	--	--
Nitzschia hantzschiana	--	--	--	--	--	--	--	--
Nitzschia hungarica	--	--	--	--	--	--	--	--
Nitzschia ignorata	--	--	--	--	--	--	--	--
Nitzschia intermedia	--	--	--	--	--	--	--	--
Nitzschia latens	--	--	--	--	--	--	--	--
Nitzschia linearis	--	--	--	--	--	--	--	--
Nitzschia longissima var. *reversa*	--	--	--	--	--	--	--	--
Nitzschia microcephala	--	--	--	--	--	--	--	--
Nitzschia palea	28	0.0	--	--	--	--	--	--
Nitzschia paleacea	--	--	--	--	--	--	--	--
Nitzschia pusilla	--	--	--	--	--	--	--	--
Nitzschia romana	--	--	--	--	--	--	--	--
Nitzschia thermalis	--	--	--	--	--	--	--	--
Nitzschia tryblionella var. *debilis*	--	--	--	--	--	--	--	--
Nitzschia sp.	57	0.1	--	--	110	0.6	--	--

Pleurosigma delicatalum	--	--	--	--	--	--	--	--
Rhoicosphenia curvata	--	--	--	--	--	--	--	--
Rhopalodia musculus	--	--	--	--	--	--	--	--
Surirella angustata	--	--	--	--	--	--	--	--
Surirella ovalis	--	--	--	--	--	--	--	--
Surirella ovata	--	--	--	--	--	--	--	--
Synedra acus	--	--	--	--	--	--	--	--
Synedra delicatissima	--	--	--	--	--	--	--	--
Synedra fasciculate	--	--	--	--	--	--	--	--
Synedra minuscula	--	--	--	--	--	--	--	--
Snyedra radiens	--	--	--	--	--	--	--	--
Synedra rumpens	--	--	--	--	--	--	--	--
Synedra rumpens var. *familiaris*	--	--	--	--	--	--	--	--
Synedra ulna	--	--	--	--	--	--	--	--
Synedra ulna var. *contracta*	--	--	--	--	--	--	--	--
Synedra ulna var. *danica*	--	--	--	--	--	--	--	--
Synedra ulna var. *oxyrhynchus*	--	--	--	--	--	--	--	--
Synedra sp.	--	--	--	--	--	--	--	--
Thalassiosira fluviatilis	--	--	--	--	--	--	--	--
CHLOROPHYTA (GREEN ALGAE)	280	0.4	--	--	57	0.3	--	--
Actinastrum hantzschii	--	--	--	--	--	--	--	--
Actinastrum sp.	--	--	--	--	--	--	--	--
Ankistrodesmus convolutus	--	--	--	--	--	--	--	--
Ankistrodesmus convolutus v. *acicularis*	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus var. *acicularis*	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus var. *mirabilis*	--	--	--	--	--	--	--	--
Carteria sp.	--	--	--	--	--	--	--	--
Chlamydomonas sp.	--	--	--	--	57	0.3	--	--
Chlorella sp.	57	0.1	--	--	--	--	--	--
Chlorococcum humicola	--	--	--	--	--	--	--	--
Chlorococcum sp.	--	--	--	--	--	--	--	--
Chlorogonium spirale	--	--	--	--	--	--	--	--
Chlorogonium sp.	--	--	--	--	--	--	--	--
Chodatella quadriseta	--	--	--	--	--	--	--	--
Closterium sp.	--	--	--	--	--	--	--	--
Coccomyxa minor	--	--	--	--	--	--	--	--
Crucigenia quadrata	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
	June 9, 1987--Continued							
CHLOROPHYTA (GREEN ALGAE)--Continued								
Dictyosphaerium ehrenbergianum	--	--	--	--	--	--	--	--
Dictyosphaerium pulchellum	--	--	--	--	--	--	--	--
Dictyosphaerium sp.	--	--	--	--	--	--	--	--
Gloeocystis sp.	--	--	--	--	--	--	--	--
Golenkinia radiata	--	--	--	--	--	--	--	--
Golenkiniopsis solitaria	--	--	--	--	--	--	--	--
Gonium sp.	--	--	--	--	--	--	--	--
Kirchneriella contorta	--	--	--	--	--	--	--	--
Mesotaenium sp.	110	0.2	--	--	--	--	--	--
Micratinium pusillum	--	--	--	--	--	--	--	--
Micratinium sp.	--	--	--	--	--	--	--	--
Mougeotia sp.	--	--	--	--	--	--	--	--
Oocytis sp.	--	--	--	--	--	--	--	--
Pandorina morum	--	--	--	--	--	--	--	--
Phacotus lenticularis	--	--	--	--	--	--	--	--
Phacotus sp.	--	--	--	--	--	--	--	--
Platymonas sp.	--	--	--	--	--	--	--	--
Pteromonas sp.	--	--	--	--	--	--	--	--
Scenedesmus armatus	--	--	--	--	--	--	--	--
Scenedesmus bijuga	--	--	--	--	--	--	--	--
Scenedesmus dimorphus	--	--	--	--	--	--	--	--
Scenedesmus quadricauda	--	--	--	--	--	--	--	--
Scenedesmus serratus	--	--	--	--	--	--	--	--
Scenedesmus sp.	110	0.2	--	--	--	--	--	--
Schroederia judayi	--	--	--	--	--	--	--	--
Schroederia setigera	--	--	--	--	--	--	--	--
Selenastrum minutum	--	--	--	--	--	--	--	--
Sphaerocystis schroeteri	--	--	--	--	--	--	--	--
Staurastrum sp.	--	--	--	--	--	--	--	--
Treubaria sp.	--	--	--	--	--	--	--	--

CHRYSOPHYTA (GOLDEN-BROWN ALGAE)	0	0.0	--	--	0	0.0	--	--
Dinobryon divergens	--	--	--	--	--	--	--	--
Kephyrion spirale	--	--	--	--	--	--	--	--
Kephyrion sp.	--	--	--	--	--	--	--	--
Mallomonas acaroides	--	--	--	--	--	--	--	--
Mallomonas akrokonos	--	--	--	--	--	--	--	--
Mallomonas globosa	--	--	--	--	--	--	--	--
Mallomonas sp.	--	--	--	--	--	--	--	--
Pleurosigma delicatulum	--	--	--	--	--	--	--	--
Pleurosigma sp.	--	--	--	--	--	--	--	--
Ochromonas sp.	--	--	--	--	--	--	--	--
CYANOPHYTA (BLUE-GREEN ALGAE)	0	0.0	--	--	0	0.0	--	--
Anabaena sp.	--	--	--	--	--	--	--	--
Aphanocapsa delicatissima	--	--	--	--	--	--	--	--
Aphanocapsa sp.	--	--	--	--	--	--	--	--
Aphanothece sp.	--	--	--	--	--	--	--	--
Chroococcus dispersus	--	--	--	--	--	--	--	--
Chroococcus limneticus	--	--	--	--	--	--	--	--
Chroococcus sp.	--	--	--	--	--	--	--	--
Dactylococcopsis fascicularis	--	--	--	--	--	--	--	--
Dactylococcopsis sp.	--	--	--	--	--	--	--	--
Lyngbya limnetica	--	--	--	--	--	--	--	--
Lyngbya nana	--	--	--	--	--	--	--	--
Marssoniella elegans	--	--	--	--	--	--	--	--
Oscillatoria angusta	--	--	--	--	--	--	--	--
Oscillatoria angustissima	--	--	--	--	--	--	--	--
Oscillatoria limnetica	--	--	--	--	--	--	--	--
Oscillatoria tenuis	--	--	--	--	--	--	--	--
Oscillatoria sp.	--	--	--	--	--	--	--	--
Phormidium sp.	--	--	--	--	--	--	--	--
Synechococcus lineare	--	--	--	--	--	--	--	--
Synechococcus sigmoidea	--	--	--	--	--	--	--	--
Synechococcus sigmoidea f. *minor*	--	--	--	--	--	--	--	--
Synechococcus sp.	--	--	--	--	--	--	--	--
CRYPTOPHYTA (CRYPTOMONADS)	0	0.0	--	--	0	0.0	--	--
Chroomonas sp.	--	--	--	--	--	--	--	--
Cryptomonas erosa	--	--	--	--	--	--	--	--
Cryptomonas marsonii	--	--	--	--	--	--	--	--
Cryptomonas ovata	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
	June 9, 1987--Continued							
CRYPTOPHYTA (CRYPTOMONADS)--Continued								
Cryptomonas rostrata	--	--	--	--	--	--	--	--
Cryptomonas rostratiformis	--	--	--	--	--	--	--	--
Cryptomonas sp.	--	--	--	--	--	--	--	--
Rhodomonas minuta	--	--	--	--	--	--	--	--
EUGLENOPHYTA (EUGLENOIDS)	14	0.0	--	--	0	0.0	--	--
Euglena acus	--	--	--	--	--	--	--	--
Euglena viridis	14	0.0	--	--	--	--	--	--
Euglena sp.	--	--	--	--	--	--	--	--
Trachelomonas sp.	--	--	--	--	--	--	--	--
PYRRHOPHYTA (DINOFLAGELLATES)	71,000	98.6	--	--	17,000	100.0	--	--
Ceratium hirundinella	--	--	--	--	--	--	--	--
Gymnodinium sp.	--	--	--	--	--	--	--	--
Peridinium biceps	71,000	98.6	--	--	17,000	100.0	--	--
Peridinium inconspicua	--	--	--	--	--	--	--	--
Peridinium sp.	--	--	--	--	--	--	--	--
Total cells and percent composition	72,000	100	--	--	17,000	102	--	--
Number of species	12	--	--	--	5	--	--	--
Diversity index (DI) at species level	0.11	--	--	--	0.18	--	--	--
Biomass (mg/L dry weight)	276.2	--	--	--	66.8	--	--	--
Chlorophyll a (μg/L)	--	--	--	--	--	--	--	--
Chlorophyll *b* (μg/L)	--	--	--	--	--	--	--	--
Chlorophyll c (μg/L)	--	--	--	--	--	--	--	--

June 19, 1987

BACILLARIOPHYTA (DIATOMS)	230	13.5	110	16.4	400	76.9	410	87.2
CENTRALES	200	11.8	71	10.6	100	19.2	100	21.3
Cyclotella bodanica	--	--	--	--	--	--	--	--
Cyclotella kutzingiana	28	1.6	71	10.6	57	11.0	57	12.1
Cyclotella meneghiniana	170	10.0	--	--	43	8.3	43	9.1
Cyclotella pseudostelligera	--	--	--	--	--	--	--	--
Cyclotella stelligera	--	--	--	--	--	--	--	--
Melosira granulata var. *angustissima*	--	--	--	--	--	--	--	--
Melosira italica	--	--	--	--	--	--	--	--
Melosira lirata	--	--	--	--	--	--	--	--
Melosira sp.	--	--	--	--	--	--	--	--
Rhizosolenia eriensis	--	--	--	--	--	--	--	--
Stephanodiscus alpinus	--	--	--	--	--	--	--	--
Stephanodiscus astrea	--	--	--	--	--	--	--	--
Stephanodiscus niagarae	--	--	--	--	--	--	--	--
Stephanodiscus tenuis	--	--	--	--	--	--	--	--
Stephanodiscus sp.	--	--	--	--	--	--	--	--
PENNALES	28	1.6	42	6.3	300	57.7	310	66.0
Achnanthes affinis	--	--	--	--	--	--	--	--
Achnanthes lanceolata	--	--	--	--	--	--	--	--
Achnanthes minutissima	--	--	--	--	--	--	--	--
Amphora perpusilla	--	--	--	--	--	--	--	--
Amphora veneta	--	--	--	--	--	--	--	--
Amphora sp.	--	--	--	--	--	--	--	--
Asterionella formosa	--	--	--	--	--	--	--	--
Cocconeis placentula	--	--	--	--	--	--	--	--
Cylindrotheca gracilis	--	--	--	--	--	--	--	--
Cylindrotheca sp.	--	--	--	--	--	--	--	--
Cymatopleura solea	--	--	--	--	--	--	--	--
Cymbella affinis	--	--	--	--	--	--	--	--
Cymbella minuta	--	--	--	--	--	--	--	--
Cymbella minuta f. *latens*	--	--	--	--	--	--	--	--
Cymbella minuta var. *silesica*	--	--	--	--	--	--	--	--
Cymbella sinuata	--	--	--	--	--	--	--	--
Diatoma anceps	--	--	--	--	--	--	--	--
Diatoma hiemale var. *mesodon*	--	--	--	--	--	--	14	3.0

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
	June 19, 1987--Continued							
BACILLARIOPHYTA (DIATOMS)--Continued								
PENNALES--Continued								
Diatoma tenue var. *elongatum*	--	--	--	--	--	--	--	--
Diatoma vulgare	--	--	--	--	--	--	--	--
Diploneis sp.	--	--	--	--	--	--	--	--
Epithemia sorex	--	--	--	--	--	--	--	--
Eunotia sp.	--	--	--	--	--	--	--	--
Fragilaria capucina	--	--	--	--	--	--	--	--
Fragilaria crotonensis	--	--	--	--	--	--	--	--
Fragilaria pinnata	--	--	--	--	--	--	--	--
Fragilaria vaucheriae	--	--	--	--	--	--	--	--
Gomphonema angustatum	--	--	--	--	--	--	--	--
Gyrosigma spencerii	--	--	--	--	--	--	--	--
Hannaea arcus	--	--	--	--	--	--	28	6.0
Hannaea arcus var. *amphioxys*	--	--	--	--	--	--	--	--
Hannaea arcus var. *arcus*	--	--	--	--	--	--	--	--
Hantzschia amphioxys	--	--	--	--	--	--	--	--
Meridion circulare	--	--	--	--	--	--	--	--
Navicula arvensis	--	--	--	--	--	--	--	--
Navicula capitata	--	--	--	--	--	--	--	--
Navicula cryptocephala	--	--	--	--	--	--	--	--
Navicula cryptocephala var. *veneta*	--	--	--	--	--	--	--	--
Navicula gastrum	--	--	--	--	--	--	--	--
Navicula heufleri	--	--	--	--	--	--	--	--
Navicula lanceolata	--	--	--	--	--	--	--	--
Navicula luzonensis	--	--	--	--	--	--	--	--
Navicula menisculus var. *upsaliensis*	--	--	--	--	--	--	--	--
Navicula minima	--	--	--	--	--	--	--	--
Navicula minuscula	--	--	--	--	--	--	--	--
Navicula mutica	--	--	--	--	--	--	--	--
Navicula notha	--	--	--	--	28	5.4	28	6.0

Navicula pellicosa	--	--	--	--	--	--	--	--
Navicula pupula	--	--	--	--	--	--	--	--
Navicula radiosa	--	--	--	--	--	--	--	--
Navicula radiosa var. *tenella*	--	--	--	--	--	--	--	--
Navicula rhyncocephala	--	--	--	--	--	--	--	--
Navicula sabinians var. *intermedia*	--	--	--	--	--	--	--	--
Navicula tantula	--	--	--	--	--	--	--	--
Navicula tripunctata	--	--	--	--	--	--	--	--
Navicula viridula	--	--	--	--	--	--	--	--
Navicula viridula var. *aveame*	--	--	--	--	57	11.0	110	23.4
Navicula viridula var. *avenacea*	--	--	--	--	--	--	--	--
Navicula sp.	--	--	--	--	--	--	--	--
Nitzschia acicularis	--	--	28	4.2	57	11.0	28	6.0
Nitzschia communis	--	--	--	--	--	--	--	--
Nitzschia dissipata	--	--	--	--	--	--	14	3.0
Nitzschia filiformis	--	--	--	--	--	--	--	--
Nitzschia frustulum	--	--	--	--	--	--	--	--
Nitzschia hantzschiana	--	--	--	--	57	11.0	14	3.0
Nitzschia hungarica	--	--	--	--	--	--	--	--
Nitzschia ignorata	--	--	--	--	14	2.7	7	1.5
Nitzschia intermedia	--	--	14	2.1	28	5.4	14	3.0
Nitzschia latens	--	--	--	--	28	5.4	--	--
Nitzschia linearis	--	--	--	--	--	--	--	--
Nitzschia longissima var. *reversa*	--	--	--	--	--	--	--	--
Nitzschia microcephala	--	--	--	--	--	--	--	--
Nitzschia palea	--	--	--	--	--	--	--	--
Nitzschia paleacea	--	--	--	--	--	--	--	--
Nitzschia pusilla	--	--	--	--	--	--	--	--
Nitzschia romana	28	1.6	--	--	14	2.7	14	3.0
Nitzschia thermalis	--	--	--	--	--	--	--	--
Nitzschia tryblionella var. *debilis*	--	--	--	--	--	--	--	--
Nitzschia sp.	--	--	--	--	--	--	--	--
Pleurosigma delicatalum	--	--	--	--	--	--	--	--
Rhoicosphenia curvata	--	--	--	--	--	--	--	--
Rhopalodia musculus	--	--	--	--	--	--	--	--
Surirella angustata	--	--	--	--	--	--	--	--
Surirella ovalis	--	--	--	--	--	--	--	--
Surirella ovata	--	--	--	--	--	--	--	--
Synedra acus	--	--	--	--	--	--	--	--
Synedra delicatissima	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
	June 19, 1987--Contined							
BACILLARIOPHYTA (DIATOMS)--Continued								
PENNALES--Continued								
Synedra fasciculate	--	--	--	--	--	--	--	--
Synedra minuscula	--	--	--	--	--	--	--	--
Snyedra radiens	--	--	--	--	--	--	--	--
Synedra rumpens	--	--	--	--	--	--	--	--
Synedra rumpens var. *familiaris*	--	--	--	--	--	--	--	--
Synedra ulna	--	--	--	--	14	2.7	43	9.1
Synedra ulna var. *contracta*	--	--	--	--	--	--	--	--
Synedra ulna var. *danica*	--	--	--	--	--	--	--	--
Synedra ulna var. *oxyrhynchus*	--	--	--	--	--	--	--	--
Synedra sp.	--	--	--	--	--	--	--	--
Thalassiosira fluviatilis	--	--	--	--	--	--	--	--
CHLOROPHYTA (GREEN ALGAE)	310	18.2	320	47.8	110	21.2	14	3.0
Actinastrum hantzschii	--	--	--	--	--	--	--	--
Actinastrum sp.	--	--	--	--	--	--	--	--
Ankistrodesmus convolutus	--	--	--	--	--	--	--	--
Ankistrodesmus convolutus v. *acicularis*	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus var. *acicularis*	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus var. *mirabilis*	--	--	--	--	--	--	--	--
Carteria sp.	--	--	--	--	--	--	--	--
Chlamydomonas sp.	--	--	--	--	--	--	--	--
Chlorella sp.	--	--	--	--	--	--	--	--
Chlorococcum humicola	--	--	--	--	--	--	--	--
Chlorococcum sp.	--	--	--	--	--	--	--	--
Chlorogonium spirale	--	--	--	--	--	--	--	--

Chlorogonium sp.	--	--	--	--	--	--	--	--
Chodatella quadriseta	--	--	--	--	--	--	--	--
Closterium sp.	--	--	--	--	--	--	--	--
Coccomyxa minor	--	--	--	--	--	--	--	--
Crucigenia quadrata	--	--	--	--	--	--	--	--
Dictyosphaerium ehrenbergianum	--	--	--	--	110	21.2	--	--
Dictyosphaerium pulchellum	--	--	--	--	--	--	--	--
Dictyosphaerium sp.	--	--	--	--	--	--	--	--
Gloeocystis sp.	--	--	--	--	--	--	14	3.0
Golenkinia radiata	--	--	--	--	--	--	--	--
Golenkiniopsis solitaria	--	--	--	--	--	--	--	--
Gonium sp.	--	--	--	--	--	--	--	--
Kirchneriella contorta	--	--	--	--	--	--	--	--
Mesotaenium sp.	28	1.6	--	--	--	--	--	--
Micratinium pusillum	--	--	--	--	--	--	--	--
Micratinium sp.	--	--	--	--	--	--	--	--
Mougeotia sp.	--	--	--	--	--	--	--	--
Oocytis sp.	--	--	--	--	--	--	--	--
Pandorina morum	280	16.5	260	38.8	--	--	--	--
Phacotus lenticularis	--	--	--	--	--	--	--	--
Phacotus sp.	--	--	--	--	--	--	--	--
Platymonas sp.	--	--	--	--	--	--	--	--
Pteromonas sp.	--	--	--	--	--	--	--	--
Scenedesmus armatus	--	--	--	--	--	--	--	--
Scenedesmus bijuga	--	--	--	--	--	--	--	--
Scenedesmus dimorphus	--	--	57	8.5	--	--	--	--
Scenedesmus quadricauda	--	--	--	--	--	--	--	--
Scenedesmus serratus	--	--	--	--	--	--	--	--
Scenedesmus sp.	--	--	--	--	--	--	--	--
Schroederia judayi	--	--	--	--	--	--	--	--
Schroederia setigera	--	--	--	--	--	--	--	--
Selenastrum minutum	--	--	--	--	--	--	--	--
Sphaerocystis schroeteri	--	--	--	--	--	--	--	--
Staurastrum sp.	--	--	--	--	--	--	--	--
Treubaria sp.	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
				June 19, 1987--Continued				
CHRYSOPHYTA (GOLDEN-BROWN ALGAE)	28	1.6	43	6.4	0	0.0	0	0.0
Dinobryon divergens	--	--	--	--	--	--	--	--
Kephyrion spirale	--	--	--	--	--	--	--	--
Kephyrion sp.	--	--	--	--	--	--	--	--
Mallomonas acaroides	--	--	--	--	--	--	--	--
Mallomonas akrokonos	--	--	--	--	--	--	--	--
Mallomonas globosa	--	--	--	--	--	--	--	--
Mallomonas sp.	28	1.6	43	6.4	--	--	--	--
Pleurosigma delicatulum	--	--	--	--	--	--	--	--
Pleurosigma sp.	--	--	--	--	--	--	--	--
Ochromonas sp.	--	--	--	--	--	--	--	--
CYANOPHYTA (BLUE-GREEN ALGAE)	790	46.5	14	2.1	0	0.0	14	3.0
Anabaena sp.	--	--	--	--	--	--	--	--
Aphanocapsa delicatissima	--	--	--	--	--	--	--	--
Aphanocapsa sp.	--	--	--	--	--	--	--	--
Aphanothece sp.	--	--	--	--	--	--	--	--
Chroococcus dispersus	140	8.2	14	2.1	--	--	--	--
Chroococcus limneticus	--	--	--	--	--	--	--	--
Chroococcus sp.	--	--	--	--	--	--	--	--
Dactylococcopsis fascicularis	--	--	--	--	--	--	14	3.0
Dactylococcopsis sp.	--	--	--	--	--	--	--	--
Lyngbya limnetica	--	--	--	--	--	--	--	--
Lyngbya nana	--	--	--	--	--	--	--	--
Marssoniella elegans	--	--	--	--	--	--	--	--
Oscillatoria angusta	--	--	--	--	--	--	--	--
Oscillatoria angustissima	--	--	--	--	--	--	--	--
Oscillatoria limnetica	--	--	--	--	--	--	--	--
Oscillatoria tenuis	--	--	--	--	--	--	--	--
Oscillatoria sp.	620	36.5	--	--	--	--	--	--

Phormidium sp.	--	--	--	--	--	--	--	--
Synechococcus lineare	--	--	--	--	--	--	--	--
Synechococcus sigmoidea	--	--	--	--	--	--	--	--
Synechococcus sigmoidea f. *minor*	--	--	--	--	--	--	--	--
Synechococcus sp.	28	1.6	--	--	--	--	--	--
CRYPTOPHYTA (CRYPTOMONADS)	260	15.3	0	0.0	0	0.0	14	3.0
Chroomonas sp.	--	--	--	--	--	--	--	--
Cryptomonas erosa	--	--	--	--	--	--	--	--
Cryptomonas marsonii	28	1.6	--	--	--	--	--	--
Cryptomonas ovata	--	--	--	--	--	--	--	--
Cryptomonas rostrata	--	--	--	--	--	--	--	--
Cryptomonas rostratiformis	--	--	--	--	--	--	--	--
Cryptomonas sp.	--	--	--	--	--	--	--	--
Rhodomonas minuta	230	13.5	--	--	--	--	14	3.0
EUGLENOPHYTA (EUGLENOIDS)	0	0.0	0	0.0	0	0.0	14	3.0
Euglena acus	--	--	--	--	--	--	--	--
Euglena viridis	--	--	--	--	--	--	--	--
Euglena sp.	--	--	--	--	--	--	--	--
Trachelomonas sp.	--	--	--	--	--	--	14	3.0
PYRRHOPHYTA (DINOFLAGELLATES)	110	6.5	180	26.9	14	2.7	0	0.0
Ceratium hirundinella	--	--	--	--	--	--	--	--
Gymnodinium sp.	--	--	--	--	--	--	--	--
Peridinium biceps	110	6.5	180	26.9	14	2.7	--	--
Peridinium inconspicua	--	--	--	--	--	--	--	--
Peridinium sp.	--	--	--	--	--	--	--	--
Total cells and percent composition	1,700	102	670	100	520	101	470	99
Number of species	12	--	8	--	13	--	17	--
Diversity index (DI) at species level	2.80	--	2.37	--	3.40	--	3.65	--
Biomass (mg/L dry weight)	3.4	--	3.9	--	11.1	--	12.7	--
Chlorophyll *a* (µg/L)	--	--	--	--	--	--	--	--
Chlorophyll *b* (µg/L)	--	--	--	--	--	--	--	--
Chlorophyll *c* (µg/L)	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
				July 15, 1987				
BACILLARIOPHYTA (DIATOMS)	170	27.0	71	15.8	320	74.4	870	30.0
CENTRALES	130	20.6	14	3.1	70	16.3	140	4.8
Cyclotella bodanica	--	--	--	--	--	--	--	--
Cyclotella kutzingiana	--	--	--	--	--	--	--	--
Cyclotella meneghiniana	71	11.3	14	3.1	14	3.3	--	--
Cyclotella pseudostelligera	--	--	--	--	--	--	--	--
Cyclotella stelligera	--	--	--	--	28	6.5	--	--
Melosira granulata var. *angustissima*	57	9.0	--	--	--	--	--	--
Melosira italica	--	--	--	--	--	--	--	--
Melosira lirata	--	--	--	--	--	--	140	4.8
Melosira sp.	--	--	--	--	28	6.5	--	--
Rhizosolenia eriensis	--	--	--	--	--	--	--	--
Stephanodiscus alpinus	--	--	--	--	--	--	--	--
Stephanodiscus astrea	--	--	--	--	--	--	--	--
Stephanodiscus niagarae	--	--	--	--	--	--	--	--
Stephanodiscus tenuis	--	--	--	--	--	--	--	--
Stephanodiscus sp.	--	--	--	--	--	--	--	--
PENNALES	42	6.7	57	12.7	250	58.1	730	25.2
Achnanthes affinis	--	--	--	--	--	--	--	--
Achnanthes lanceolata	--	--	--	--	--	--	--	--
Achnanthes minutissima	--	--	--	--	--	--	--	--
Amphora perpusilla	--	--	--	--	--	--	--	--
Amphora veneta	--	--	--	--	--	--	--	--
Amphora sp.	--	--	--	--	--	--	--	--
Asterionella formosa	--	--	--	--	--	--	--	--
Cocconeis placentula	--	--	--	--	--	--	--	--
Cylindrotheca gracilis	--	--	--	--	--	--	--	--
Cylindrotheca sp.	--	--	--	--	--	--	--	--
Cymatopleura solea	--	--	--	--	--	--	--	--

Cymbella affinis	--	--	--	--	--	--	--	--
Cymbella minuta	--	--	--	--	--	--	--	--
Cymbella minuta f. *latens*	--	--	--	--	--	--	--	--
Cymbella minuta var. *silesica*	--	--	--	--	--	--	--	--
Cymbella sinuata	--	--	--	--	--	--	--	--
Diatoma anceps	--	--	--	--	--	--	--	--
Diatoma hiemale var. *mesodon*	--	--	--	--	--	--	--	--
Diatoma tenue var. *elongatum*	--	--	--	--	--	--	--	--
Diatoma vulgare	--	--	--	--	--	--	28	1.0
Diploneis sp.	--	--	--	--	--	--	--	--
Epithemia sorex	--	--	--	--	--	--	--	--
Eunotia sp.	--	--	--	--	--	--	--	--
Fragilaria capucina	--	--	--	--	--	--	--	--
Fragilaria crotonensis	--	--	--	--	--	--	--	--
Fragilaria pinnata	--	--	--	--	--	--	--	--
Fragilaria vaucheriae	14	2.2	--	--	--	--	--	--
Gomphonema angustatum	--	--	--	--	--	--	--	--
Gyrosigma spencerii	--	--	--	--	--	--	--	--
Hannaea arcus	--	--	--	--	--	--	--	--
Hannaea arcus var. *amphioxys*	--	--	--	--	--	--	--	--
Hannaea arcus var. *arcus*	--	--	--	--	--	--	--	--
Hantzschia amphioxys	--	--	--	--	--	--	--	--
Meridion circulare	--	--	--	--	--	--	--	--
Navicula arvensis	--	--	--	--	--	--	--	--
Navicula capitata	--	--	--	--	--	--	--	--
Navicula cryptocephala	--	--	--	--	--	--	--	--
Navicula cryptocephala var. *veneta*	--	--	--	--	--	--	--	--
Navicula gastrum	--	--	--	--	--	--	--	--
Navicula heufleri	--	--	--	--	--	--	--	--
Navicula lanceolata	--	--	--	--	--	--	--	--
Navicula luzonensis	--	--	--	--	--	--	--	--
Navicula menisculus var. *upsaliensis*	--	--	--	--	--	--	--	--
Navicula minima	--	--	--	--	--	--	--	--
Navicula minuscula	--	--	--	--	--	--	--	--
Navicula mutica	--	--	--	--	--	--	--	--
Navicula notha	--	--	--	--	--	--	--	--
Navicula pellicosa	--	--	--	--	--	--	--	--
Navicula pupula	--	--	--	--	--	--	--	--
Navicula radiosa	--	--	--	--	14	3.3	110	3.8
Navicula radiosa var. *tenella*	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
	July 15, 1987--Continued							
BACILLARIOPHYTA (DIATOMS)--Continued								
PENNALES--Continued								
Navicula rhyncocephala	--	--	--	--	--	--	--	--
Navicula sabinians var. *intermedia*	--	--	--	--	--	--	--	--
Navicula tantula	--	--	--	--	--	--	--	--
Navicula tripunctata	--	--	--	--	--	--	--	--
Navicula viridula	--	--	--	--	--	--	--	--
Navicula viridula var. *aveame*	--	--	--	--	14	3.3	28	1.0
Navicula viridula var. *avenacea*	--	--	--	--	--	--	--	--
Navicula sp.	--	--	--	--	--	--	--	--
Nitzschia acicularis	--	--	14	3.1	--	--	57	2.0
Nitzschia communis	--	--	--	--	--	--	--	--
Nitzschia dissipata	--	--	--	--	14	3.3	28	1.0
Nitzschia filiformis	--	--	--	--	--	--	--	--
Nitzschia frustulum	--	--	--	--	--	--	--	--
Nitzschia hantzschiana	28	4.4	43	9.6	71	16.5	140	4.8
Nitzschia hungarica	--	--	--	--	--	--	--	--
Nitzschia ignorata	--	--	--	--	--	--	--	--
Nitzschia intermedia	--	--	--	--	--	--	85	2.9
Nitzschia latens	--	--	--	--	71	16.5	85	2.9
Nitzschia linearis	--	--	--	--	--	--	28	1.0
Nitzschia longissima var. *reversa*	--	--	--	--	--	--	--	--
Nitzschia microcephala	--	--	--	--	--	--	--	--
Nitzschia palea	--	--	--	--	28	6.5	--	--
Nitzschia paleacea	--	--	--	--	14	3.3	--	--
Nitzschia pusilla	--	--	--	--	--	--	--	--
Nitzschia romana	--	--	--	--	28	6.5	140	4.8
Nitzschia thermalis	--	--	--	--	--	--	--	--
Nitzschia tryblionella var. *debilis*	--	--	--	--	--	--	--	--
Nitzschia sp.	--	--	--	--	--	--	--	--

Pleurosigma delicatalum	--	--	--	--	--	--	--	--
Rhoicosphenia curvata	--	--	--	--	--	--	--	--
Rhopalodia musculus	--	--	--	--	--	--	--	--
Surirella angustata	--	--	--	--	--	--	--	--
Surirella ovalis	--	--	--	--	--	--	--	--
Surirella ovata	--	--	--	--	--	--	--	--
Synedra acus	--	--	--	--	--	--	--	--
Synedra delicatissima	--	--	--	--	--	--	--	--
Synedra fasciculate	--	--	--	--	--	--	--	--
Synedra minuscula	--	--	--	--	--	--	--	--
Snyedra radiens	--	--	--	--	--	--	--	--
Synedra rumpens	--	--	--	--	--	--	--	--
Synedra rumpens var. *familiaris*	--	--	--	--	--	--	--	--
Synedra ulna	--	--	--	--	--	--	--	--
Synedra ulna var. contracta	--	--	--	--	--	--	--	--
Synedra ulna var. *danica*	--	--	--	--	--	--	--	--
Synedra ulna var. *oxyrhynchus*	--	--	--	--	--	--	--	--
Synedra sp.	--	--	--	--	--	--	--	--
Thalassiosira fluviatilis	--	--	--	--	--	--	--	--
CHLOROPHYTA (GREEN ALGAE)	280	44.4	56	12.4	0	0.0	0	0.0
Actinastrum hantzschii	--	--	--	--	--	--	--	--
Actinastrum sp.	--	--	--	--	--	--	--	--
Ankistrodesmus convolutus	14	2.2	--	--	--	--	--	--
Ankistrodesmus convolutus v. *acicularis*	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus var. *acicularis*	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus var. *mirabilis*	14	2.2	--	--	--	--	--	--
Carteria sp.	--	--	--	--	--	--	--	--
Chlamydomonas sp.	--	--	--	--	--	--	--	--
Chlorella sp.	--	--	--	--	--	--	--	--
Chlorococcum humicola	--	--	--	--	--	--	--	--
Chlorococcum sp.	14	2.2	14	3.1	--	--	--	--
Chlorogonium spirale	--	--	--	--	--	--	--	--
Chlorogonium sp.	--	--	--	--	--	--	--	--
Chodatella quadriseta	--	--	--	--	--	--	--	--
Closterium sp.	--	--	--	--	--	--	--	--
Coccomyxa minor	--	--	--	--	--	--	--	--
Crucigenia quadrata	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
	July 15, 1987--Continued							
CHLOROPHYTA (GREEN ALGAE)--Continued								
Dictyosphaerium ehrenbergianum	--	--	--	--	--	--	--	--
Dictyosphaerium pulchellum	--	--	--	--	--	--	--	--
Dictyosphaerium sp.	--	--	--	--	--	--	--	--
Gloeocystis sp.	14	2.2	14	3.1	--	--	--	--
Golenkinia radiata	--	--	--	--	--	--	--	--
Golenkiniopsis solitaria	--	--	--	--	--	--	--	--
Gonium sp.	--	--	--	--	--	--	--	--
Kirchneriella contorta	--	--	--	--	--	--	--	--
Mesotaenium sp.	--	--	--	--	--	--	--	--
Micratinium pusillum	140	22.2	28	6.2	--	--	--	--
Micratinium sp.	--	--	--	--	--	--	--	--
Mougeotia sp.	--	--	--	--	--	--	--	--
Oocytis sp.	--	--	--	--	--	--	--	--
Pandorina morum	--	--	--	--	--	--	--	--
Phacotus lenticularis	28	4.4	--	--	--	--	--	--
Phacotus sp.	--	--	--	--	--	--	--	--
Platymonas sp.	--	--	--	--	--	--	--	--
Pteromonas sp.	--	--	--	--	--	--	--	--
Scenedesmus armatus	--	--	--	--	--	--	--	--
Scenedesmus bijuga	--	--	--	--	--	--	--	--
Scenedesmus dimorphus	--	--	--	--	--	--	--	--
Scenedesmus quadricauda	57	9.0	--	--	--	--	--	--
Scenedesmus serratus	--	--	--	--	--	--	--	--
Scenedesmus sp.	--	--	--	--	--	--	--	--
Schroederia judayi	--	--	--	--	--	--	--	--
Schroederia setigera	--	--	--	--	--	--	--	--
Selenastrum minutum	--	--	--	--	--	--	--	--
Sphaerocystis schroeteri	--	--	--	--	--	--	--	--
Staurastrum sp.	--	--	--	--	--	--	--	--
Treubaria sp.	--	--	--	--	--	--	--	--

CHRYSOPHYTA (GOLDEN-BROWN ALGAE)	42	6.7	28	6.2	0	0.0	0	0.0
Dinobryon divergens	--	--	--	--	--	--	--	--
Kephyrion spirale	--	--	--	--	--	--	--	--
Kephyrion sp.	28	4.4	14	3.1	--	--	--	--
Mallomonas acaroides	--	--	--	--	--	--	--	--
Mallomonas akrokonos	--	--	--	--	--	--	--	--
Mallomonas globosa	--	--	--	--	--	--	--	--
Mallomonas sp.	14	2.2	14	3.1	--	--	--	--
Pleurosigma delicatulum	--	--	--	--	--	--	--	--
Pleurosigma sp.	--	--	--	--	--	--	--	--
Ochromonas sp.	--	--	--	--	--	--	--	--
CYANOPHYTA (BLUE-GREEN ALGAE)	85	13.5	57	12.7	85	19.8	2,000	69.0
Anabaena sp.	--	--	--	--	--	--	--	--
Aphanocapsa delicatissima	--	--	--	--	--	--	--	--
Aphanocapsa sp.	--	--	--	--	--	--	--	--
Aphanothece sp.	--	--	--	--	--	--	--	--
Chroococcus dispersus	--	--	--	--	--	--	--	--
Chroococcus limneticus	--	--	--	--	--	--	--	--
Chroococcus sp.	--	--	--	--	--	--	--	--
Dactylococcopsis fascicularis	--	--	--	--	28	6.5	28	1.0
Dactylococcopsis sp.	--	--	--	--	--	--	--	--
Lyngbya limnetica	--	--	--	--	--	--	--	--
Lyngbya nana	--	--	--	--	57	13.3	230	7.9
Marssoniella elegans	--	--	--	--	--	--	--	--
Oscillatoria angusta	--	--	--	--	--	--	--	--
Oscillatoria angustissima	--	--	--	--	--	--	--	--
Oscillatoria limnetica	--	--	--	--	--	--	--	--
Oscillatoria tenuis	--	--	--	--	--	--	1,500	51.7
Oscillatoria sp.	--	--	--	--	--	--	260	9.0
Phormidium sp.	--	--	--	--	--	--	--	--
Synechococcus lineare	--	--	--	--	--	--	--	--
Synechococcus sigmoidea	--	--	--	--	--	--	--	--
Synechococcus sigmoidea f. *minor*	--	--	--	--	--	--	--	--
Synechococcus sp.	85	13.5	57	12.7	--	--	--	--
CRYPTOPHYTA (CRYPTOMONADS)	57	9.0	240	53.3	14	3.3	0	0.0
Chroomonas sp.	--	--	--	--	--	--	--	--
Cryptomonas erosa	--	--	--	--	--	--	--	--
Cryptomonas marsonii	57	9.0	240	53.3	14	3.3	--	--
Cryptomonas ovata	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
	July 15, 1987--Continued							
CRYPTOPHYTA (CRYPTOMONADS)--Continued								
Cryptomonas rostrata	--	--	--	--	--	--	--	--
Cryptomonas rostratiformis	--	--	--	--	--	--	--	--
Cryptomonas sp.	--	--	--	--	--	--	--	--
Rhodomonas minuta	--	--	--	--	--	--	--	--
EUGLENOPHYTA (EUGLENOIDS)	0	0.0	0	0.0	14	3.3	0	0.0
Euglena acus	--	--	--	--	--	--	--	--
Euglena viridis	--	--	--	--	--	--	--	--
Euglena sp.	--	--	--	--	14	3.3	--	--
Trachelomonas sp.	--	--	--	--	--	--	--	--
PYRRHOPHYTA (DINOFLAGELLATES)	0	0.0	0	0.0	0	0.0	28	1.0
Ceratium hirundinella	--	--	--	--	--	--	--	--
Gymnodinium sp.	--	--	--	--	--	--	--	--
Peridinium biceps	--	--	--	--	--	--	28	1.0
Peridinium inconspicua	--	--	--	--	--	--	--	--
Peridinium sp.	--	--	--	--	--	--	--	--
Total cells and percent composition	630	101	450	100	430	101	2,900	100
Number of species	15	--	10	--	15	--	16	--
Diversity index (DI) at species level	3.48	--	2.36	--	3.62	--	2.68	--
Biomass (mg/L dry weight)	12.1	--	12.2	--	1.7	--	2.8	--
Chlorophyll *a* (µg/L)	--	--	--	--	--	--	--	--
Chlorophyll *b* (µg/L)	--	--	--	--	--	--	--	--
Chlorophyll *c* (µg/L)	--	--	--	--	--	--	--	--

	August 13, 1987							
BACILLARIOPHYTA (DIATOMS)	630	39.4	580	41.4	920	70.8	640	64.0
CENTRALES	420	26.3	420	30.0	200	15.4	110	11.0
Cyclotella bodanica	--	--	--	--	--	--	--	--
Cyclotella kutzingiana	--	--	--	--	--	--	--	--
Cyclotella meneghiniana	14	0.9	--	--	170	13.1	110	11.0
Cyclotella pseudostelligera	--	--	--	--	--	--	--	--
Cyclotella stelligera	71	4.4	110	7.9	28	2.2	--	--
Melosira granulata var. *angustissima*	330	20.6	310	22.1	--	--	--	--
Melosira italica	--	--	--	--	--	--	--	--
Melosira lirata	--	--	--	--	--	--	--	--
Melosira sp.	--	--	--	--	--	--	--	--
Rhizosolenia eriensis	--	--	--	--	--	--	--	--
Stephanodiscus alpinus	--	--	--	--	--	--	--	--
Stephanodiscus astrea	--	--	--	--	--	--	--	--
Stephanodiscus niagarae	--	--	--	--	--	--	--	--
Stephanodiscus tenuis	--	--	--	--	--	--	--	--
Stephanodiscus sp.	--	--	--	--	--	--	--	--
PENNALES	210	13.1	160	11.4	720	55.4	530	53.0
Achnanthes affinis	--	--	--	--	--	--	--	--
Achnanthes lanceolata	--	--	--	--	--	--	--	--
Achnanthes minutissima	--	--	--	--	--	--	--	--
Amphora perpusilla	--	--	--	--	--	--	--	--
Amphora veneta	--	--	--	--	--	--	--	--
Amphora sp.	--	--	--	--	--	--	--	--
Asterionella formosa	--	--	--	--	--	--	--	--
Cocconeis placentula	--	--	--	--	--	--	--	--
Cylindrotheca gracilis	--	--	--	--	--	--	--	--
Cylindrotheca sp.	--	--	--	--	--	--	--	--
Cymatopleura solea	--	--	--	--	--	--	--	--
Cymbella affinis	--	--	--	--	--	--	--	--
Cymbella minuta	--	--	--	--	--	--	--	--
Cymbella minuta f. *latens*	--	--	--	--	--	--	--	--
Cymbella minuta var. *silesica*	--	--	--	--	--	--	--	--
Cymbella sinuata	--	--	--	--	--	--	--	--
Diatoma anceps	--	--	--	--	--	--	--	--
Diatoma hiemale var. *mesodon*	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
	August 13, 1987--Continued							
BACILLARIOPHYTA (DIATOMS)--Continued								
PENNALES--Continued								
Diatoma tenue var. *elongatum*	--	--	--	--	--	--	--	--
Diatoma vulgare	--	--	--	--	--	--	--	--
Diploneis sp.	--	--	--	--	--	--	--	--
Epithemia sorex	--	--	--	--	--	--	--	--
Eunotia sp.	--	--	--	--	--	--	--	--
Fragilaria capucina	--	--	--	--	--	--	--	--
Fragilaria crotonensis	200	12.5	160	11.4	--	--	--	--
Fragilaria pinnata	--	--	--	--	--	--	--	--
Fragilaria vaucheriae	--	--	--	--	--	--	--	--
Gomphonema angustatum	--	--	--	--	--	--	--	--
Gyrosigma spencerii	--	--	--	--	--	--	--	--
Hannaea arcus	--	--	--	--	--	--	--	--
Hannaea arcus var. *amphioxys*	--	--	--	--	--	--	--	--
Hannaea arcus var. *arcus*	--	--	--	--	--	--	--	--
Hantzschia amphioxys	--	--	--	--	--	--	--	--
Meridion circulare	--	--	--	--	--	--	--	--
Navicula arvensis	--	--	--	--	--	--	--	--
Navicula capitata	--	--	--	--	--	--	--	--
Navicula cryptocephala	--	--	--	--	--	--	--	--
Navicula cryptocephala var. *veneta*	--	--	--	--	--	--	--	--
Navicula gastrum	--	--	--	--	--	--	--	--
Navicula heufleri	--	--	--	--	--	--	--	--
Navicula lanceolata	--	--	--	--	--	--	--	--
Navicula luzonensis	--	--	--	--	--	--	--	--
Navicula menisculus var. *upsaliensis*	--	--	--	--	--	--	--	--
Navicula minima	--	--	--	--	--	--	--	--
Navicula minuscula	--	--	--	--	--	--	--	--
Navicula mutica	--	--	--	--	--	--	--	--
Navicula notha	--	--	--	--	85	6.5	57	5.7

Navicula pellicosa	--	--	--	--	--	--	--	--
Navicula pupula	--	--	--	--	--	--	--	--
Navicula radiosa	--	--	--	--	--	--	--	--
Navicula radiosa var. *tenella*	--	--	--	--	14	1.1	7	0.7
Navicula rhyncocephala	--	--	--	--	85	6.5	57	5.7
Navicula sabinians var. *intermedia*	--	--	--	--	--	--	--	--
Navicula tantula	--	--	--	--	--	--	--	--
Navicula tripunctata	--	--	--	--	--	--	--	--
Navicula viridula	--	--	--	--	--	--	--	--
Navicula viridula var. *aveame*	--	--	--	--	--	--	--	--
Navicula viridula var. *avenacea*	--	--	--	--	57	4.4	28	2.8
Navicula sp.	--	--	--	--	--	--	--	--
Nitzschia acicularis	--	--	--	--	--	--	--	--
Nitzschia communis	--	--	--	--	--	--	--	--
Nitzschia dissipata	--	--	--	--	57	4.4	14	1.4
Nitzschia filiformis	--	--	--	--	--	--	--	--
Nitzschia frustulum	--	--	--	--	--	--	--	--
Nitzschia hantzschiana	--	--	--	--	85	6.5	85	8.5
Nitzschia hungarica	--	--	--	--	--	--	--	--
Nitzschia ignorata	--	--	--	--	--	--	--	--
Nitzschia intermedia	--	--	--	--	28	2.2	85	8.5
Nitzschia latens	--	--	--	--	--	--	--	--
Nitzschia linearis	--	--	--	--	--	--	28	2.8
Nitzschia longissima var. *reversa*	--	--	--	--	--	--	--	--
Nitzschia microcephala	--	--	--	--	--	--	--	--
Nitzschia palea	--	--	--	--	--	--	--	--
Nitzschia paleacea	--	--	--	--	--	--	--	--
Nitzschia pusilla	--	--	--	--	--	--	--	--
Nitzschia romana	--	--	--	--	280	21.5	140	14.0
Nitzschia thermalis	--	--	--	--	28	2.2	--	--
Nitzschia tryblionella var. *debilis*	--	--	--	--	--	--	--	--
Nitzschia sp.	--	--	--	--	--	--	28	2.8
Pleurosigma delicatalum	--	--	--	--	--	--	--	--
Rhoicosphenia curvata	--	--	--	--	--	--	--	--
Rhopalodia musculus	--	--	--	--	--	--	--	--
Surirella angustata	--	--	--	--	--	--	--	--
Surirella ovalis	--	--	--	--	--	--	--	--
Surirella ovata	--	--	--	--	--	--	--	--
Synedra acus	--	--	--	--	--	--	--	--
Synedra delicatissima	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
	August 13, 1987--Continued							
BACILLARIOPHYTA (DIATOMS)--Continued								
PENNALES--Continued								
Synedra fasciculate	--	--	--	--	--	--	--	--
Synedra minuscula	--	--	--	--	--	--	--	--
Snyedra radiens	14	0.9	--	--	--	--	--	--
Synedra rumpens	--	--	--	--	--	--	--	--
Synedra rumpens var. *familiaris*	--	--	--	--	--	--	--	--
Synedra ulna	--	--	--	--	--	--	--	--
Synedra ulna var. *contracta*	--	--	--	--	--	--	--	--
Synedra ulna var. *danica*	--	--	--	--	--	--	--	--
Synedra ulna var. *oxyrhynchus*	--	--	--	--	--	--	--	--
Synedra sp.	--	--	--	--	--	--	--	--
Thalassiosira fluviatilis	--	--	--	--	--	--	--	--
CHLOROPHYTA (GREEN ALGAE)	420	26.3	200	14.3	28	2.2	28	2.8
Actinastrum hantzschii	--	--	--	--	--	--	--	--
Actinastrum sp.	--	--	--	--	--	--	--	--
Ankistrodesmus convolutus	--	--	--	--	--	--	--	--
Ankistrodesmus convolutus v. *acicularis*	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus var. *acicularis*	--	--	14	1.0	--	--	--	--
Ankistrodesmus falcatus var. *mirabilis*	--	--	--	--	--	--	--	--
Carteria sp.	--	--	--	--	--	--	--	--
Chlamydomonas sp.	--	--	--	--	--	--	--	--
Chlorella sp.	--	--	--	--	--	--	--	--
Chlorococcum humicola	--	--	--	--	28	2.2	28	2.8
Chlorococcum sp.	--	--	--	--	--	--	--	--
Chlorogonium spirale	--	--	--	--	--	--	--	--

Chlorogonium sp.	--	--	--	--	--	--	--	--
Chodatella quadriseta	--	--	--	--	--	--	--	--
Closterium sp.	--	--	--	--	--	--	--	--
Coccomyxa minor	--	--	--	--	--	--	--	--
Crucigenia quadrata	--	--	--	--	--	--	--	--
Dictyosphaerium ehrenbergianum	--	--	--	--	--	--	--	--
Dictyosphaerium pulchellum	--	--	--	--	--	--	--	--
Dictyosphaerium sp.	57	3.6	57	4.1	--	--	--	--
Gloeocystis sp.	--	--	--	--	--	--	--	--
Golenkinia radiata	--	--	--	--	--	--	--	--
Golenkiniopsis solitaria	--	--	--	--	--	--	--	--
Gonium sp.	--	--	--	--	--	--	--	--
Kirchneriella contorta	--	--	--	--	--	--	--	--
Mesotaenium sp.	--	--	14	1.0	--	--	--	--
Micratinium pusillum	--	--	--	--	--	--	--	--
Micratinium sp.	--	--	--	--	--	--	--	--
Mougeotia sp.	--	--	--	--	--	--	--	--
Oocytis sp.	14	0.9	--	--	--	--	--	--
Pandorina morum	--	--	--	--	--	--	--	--
Phacotus lenticularis	160	10.0	57	4.1	--	--	--	--
Phacotus sp.	--	--	--	--	--	--	--	--
Platymonas sp.	--	--	--	--	--	--	--	--
Pteromonas sp.	--	--	--	--	--	--	--	--
Scenedesmus armatus	--	--	--	--	--	--	--	--
Scenedesmus bijuga	170	10.6	--	--	--	--	--	--
Scenedesmus dimorphus	--	--	--	--	--	--	--	--
Scenedesmus quadricauda	--	--	--	--	--	--	--	--
Scenedesmus serratus	--	--	--	--	--	--	--	--
Scenedesmus sp.	--	--	--	--	--	--	--	--
Schroederia judayi	--	--	14	1.0	--	--	--	--
Schroederia setigera	14	0.9	43	3.1	--	--	--	--
Selenastrum minutum	--	--	--	--	--	--	--	--
Sphaerocystis schroeteri	--	--	--	--	--	--	--	--
Staurastrum sp.	--	--	--	--	--	--	--	--
Treubaria sp.	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
				August 13, 1987--Continued				
CHRYSOPHYTA (GOLDEN-BROWN ALGAE)	240	15.0	170	12.1	0	0.0	0	0.0
Dinobryon divergens	--	--	--	--	--	--	--	--
Kephyrion spirale	--	--	--	--	--	--	--	--
Kephyrion sp.	--	--	--	--	--	--	--	--
Mallomonas acaroides	--	--	--	--	--	--	--	--
Mallomonas akrokonos	240	15.0	170	12.1	--	--	--	--
Mallomonas globosa	--	--	--	--	--	--	--	--
Mallomonas sp.	--	--	--	--	--	--	--	--
Pleurosigma delicatulum	--	--	--	--	--	--	--	--
Pleurosigma sp.	--	--	--	--	--	--	--	--
Ochromonas sp.	--	--	--	--	--	--	--	--
CYANOPHYTA (BLUE-GREEN ALGAE)	120	7.5	340	24.3	370	28.5	340	34.0
Anabaena sp.	--	--	--	--	--	--	--	--
Aphanocapsa delicatissima	--	--	--	--	--	--	--	--
Aphanocapsa sp.	--	--	--	--	--	--	--	--
Aphanothece sp.	--	--	--	--	--	--	--	--
Chroococcus dispersus	110	6.9	340	24.3	28	2.2	57	5.7
Chroococcus limneticus	--	--	--	--	--	--	--	--
Chroococcus sp.	--	--	--	--	--	--	--	--
Dactylococcopsis fascicularis	--	--	--	--	--	--	--	--
Dactylococcopsis sp.	--	--	--	--	--	--	--	--
Lyngbya limnetica	--	--	--	--	--	--	--	--
Lyngbya nana	--	--	--	--	--	--	--	--
Marssoniella elegans	--	--	--	--	--	--	--	--
Oscillatoria angusta	--	--	--	--	--	--	--	--
Oscillatoria angustissima	--	--	--	--	--	--	--	--
Oscillatoria limnetica	--	--	--	--	--	--	--	--
Oscillatoria tenuis	--	--	--	--	--	--	--	--
Oscillatoria sp.	--	--	--	--	340	26.2	280	28.0

Phormidium sp.	--	--	--	--	--	--	--	--
Synechococcus lineare	--	--	--	--	--	--	--	--
Synechococcus sigmoidea	--	--	--	--	--	--	--	--
Synechococcus sigmoidea f. *minor*	--	--	--	--	--	--	--	--
Synechococcus sp.	14	0.9	--	--	--	--	--	--
CRYPTOPHYTA (CRYPTOMONADS)	220	13.8	140	10.0	0	0.0	0	0.0
Chroomonas sp.	--	--	--	--	--	--	--	--
Cryptomonas erosa	--	--	--	--	--	--	--	--
Cryptomonas marsonii	28	1.8	43	3.1	--	--	--	--
Cryptomonas ovata	--	--	--	--	--	--	--	--
Cryptomonas rostrata	--	--	--	--	--	--	--	--
Cryptomonas rostratiformis	--	--	--	--	--	--	--	--
Cryptomonas sp.	--	--	--	--	--	--	--	--
Rhodomonas minuta	190	11.9	99	7.1	--	--	--	--
EUGLENOPHYTA (EUGLENOIDS)	0	0.0	0	0.0	0	0.0	0	0.0
Euglena acus	--	--	--	--	--	--	--	--
Euglena viridis	--	--	--	--	--	--	--	--
Euglena sp.	--	--	--	--	--	--	--	--
Trachelomonas sp.	--	--	--	--	--	--	--	--
PYRRHOPHYTA (DINOFLAGELLATES)	0	0.0	0	0.0	0	0.0	0	0.0
Ceratium hirundinella	--	--	--	--	--	--	--	--
Gymnodinium sp.	--	--	--	--	--	--	--	--
Peridinium biceps	--	--	--	--	--	--	--	--
Peridinium inconspicua	--	--	--	--	--	--	--	--
Peridinium sp.	--	--	--	--	--	--	--	--
Total cells and percent composition	1,600	102	1,400	102	1,300	101	1,000	101
Number of species	15	--	13	--	14	--	14	--
Diversity index (DI) at species level	3.31	--	3.11	--	3.18	--	3.27	--
Biomass (mg/L dry weight)	4.8	--	6.0	--	81.0	--	76.2	--
Chlorophyll *a* (µg/L)	--	--	--	--	--	--	--	--
Chlorophyll *b* (µg/L)	--	--	--	--	--	--	--	--
Chlorophyll *c* (µg/L)	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1) 2-ft depth		Kenney Reservoir (site 1) Composite (0-10 ft)		Kenney Reservoir (site 2) 2-ft depth		Kenney Reservoir (site 2) Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
				September 3, 1987				
BACILLARIOPHYTA (DIATOMS)	2,000	34.5	1,700	18.9	84	49.4	120	63.2
CENTRALES	200	3.4	200	2.2	0	0.0	28	14.7
Cyclotella bodanica	--	--	--	--	--	--	--	--
Cyclotella kutzingiana	--	--	--	--	--	--	--	--
Cyclotella meneghiniana	28	0.5	57	0.6	--	--	28	14.7
Cyclotella pseudostelligera	--	--	--	--	--	--	--	--
Cyclotella stelligera	85	1.5	140	1.6	--	--	--	--
Melosira granulata var. *angustissima*	57	1.0	--	--	--	--	--	--
Melosira italica	--	--	--	--	--	--	--	--
Melosira lirata	--	--	--	--	--	--	--	--
Melosira sp.	--	--	--	--	--	--	--	--
Rhizosolenia eriensis	--	--	--	--	--	--	--	--
Stephanodiscus alpinus	--	--	--	--	--	--	--	--
Stephanodiscus astrea	--	--	--	--	--	--	--	--
Stephanodiscus niagarae	--	--	--	--	--	--	--	--
Stephanodiscus tenuis	--	--	--	--	--	--	--	--
Stephanodiscus sp.	28	0.5	--	--	--	--	--	--
PENNALES	1,800	31.0	1,500	16.7	84	49.4	91	47.9
Achnanthes affinis	--	--	--	--	--	--	--	--
Achnanthes lanceolata	--	--	--	--	--	--	--	--
Achnanthes minutissima	--	--	--	--	--	--	--	--
Amphora perpusilla	--	--	--	--	--	--	--	--
Amphora veneta	--	--	--	--	--	--	--	--
Amphora sp.	--	--	--	--	--	--	--	--
Asterionella formosa	--	--	--	--	--	--	--	--
Cocconeis placentula	--	--	--	--	--	--	--	--
Cylindrotheca gracilis	--	--	--	--	--	--	--	--
Cylindrotheca sp.	--	--	--	--	--	--	--	--
Cymatopleura solea	--	--	--	--	--	--	--	--

Cymbella affinis	--	--	--	--	--	--	--	--
Cymbella minuta	--	--	--	--	--	--	--	--
Cymbella minuta f. *latens*	--	--	--	--	--	--	--	--
Cymbella minuta var. *silesica*	--	--	--	--	--	--	--	--
Cymbella sinuata	--	--	--	--	--	--	14	7.4
Diatoma anceps	--	--	--	--	--	--	--	--
Diatoma hiemale var. *mesodon*	--	--	--	--	--	--	--	--
Diatoma tenue var. *elongatum*	--	--	--	--	--	--	--	--
Diatoma vulgare	--	--	--	--	--	--	--	--
Diploneis sp.	--	--	--	--	--	--	--	--
Epithemia sorex	--	--	--	--	28	16.5	14	7.4
Eunotia sp.	--	--	--	--	--	--	--	--
Fragilaria capucina	170	2.9	--	--	--	--	--	--
Fragilaria crotonensis	1,600	27.6	1,400	15.6	--	--	--	--
Fragilaria pinnata	--	--	--	--	--	--	--	--
Fragilaria vaucheriae	14	2.2	--	--	--	--	--	--
Gomphonema angustatum	--	--	--	--	--	--	--	--
Gyrosigma spencerii	--	--	--	--	--	--	--	--
Hannaea arcus	--	--	--	--	--	--	--	--
Hannaea arcus var. *amphioxys*	--	--	--	--	--	--	--	--
Hannaea arcus var. *arcus*	--	--	--	--	--	--	--	--
Hantzschia amphioxys	--	--	--	--	--	--	--	--
Meridion circulare	--	--	--	--	--	--	--	--
Navicula arvensis	--	--	--	--	--	--	--	--
Navicula capitata	--	--	--	--	--	--	--	--
Navicula cryptocephala	--	--	--	--	--	--	--	--
Navicula cryptocephala var. *veneta*	--	--	--	--	--	--	--	--
Navicula gastrum	--	--	--	--	--	--	--	--
Navicula heufleri	--	--	--	--	28	16.5	28	14.7
Navicula lanceolata	--	--	--	--	--	--	--	--
Navicula luzonensis	--	--	--	--	--	--	--	--
Navicula menisculus var. *upsaliensis*	--	--	--	--	--	--	--	--
Navicula minima	--	--	--	--	--	--	--	--
Navicula minuscula	--	--	--	--	--	--	--	--
Navicula mutica	--	--	--	--	--	--	--	--
Navicula notha	--	--	--	--	--	--	--	--
Navicula pellicosa	--	--	--	--	--	--	--	--
Navicula pupula	--	--	--	--	--	--	--	--
Navicula radiosa	--	--	--	--	--	--	--	--
Navicula radiosa var. *tenella*	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
				September 3, 1987--Continued				
BACILLARIOPHYTA (DIATOMS)--Continued								
PENNALES--Continued								
Navicula rhyncocephala	--	--	--	--	--	--	--	--
Navicula sabinians var. *intermedia*	--	--	--	--	--	--	--	--
Navicula tantula	--	--	--	--	--	--	--	--
Navicula tripunctata	--	--	--	--	--	--	--	--
Navicula viridula	--	--	--	--	--	--	--	--
Navicula viridula var. *aveame*	--	--	--	--	--	--	--	--
Navicula viridula var. *avenacea*	--	--	--	--	--	--	--	--
Navicula sp.	--	--	--	--	--	--	--	--
Nitzschia acicularis	--	--	--	--	--	--	--	--
Nitzschia communis	--	--	28	0.3	--	--	--	--
Nitzschia dissipata	--	--	--	--	--	--	--	--
Nitzschia filiformis	--	--	--	--	--	--	--	--
Nitzschia frustulum	--	--	--	--	--	--	--	--
Nitzschia hantzschiana	28	0.5	28	0.3	28	16.5	28	14.7
Nitzschia hungarica	--	--	--	--	--	--	--	--
Nitzschia ignorata	--	--	--	--	--	--	--	--
Nitzschia intermedia	--	--	--	--	--	--	7	3.7
Nitzschia latens	--	--	--	--	--	--	--	--
Nitzschia linearis	--	--	--	--	--	--	--	--
Nitzschia longissima var. *reversa*	--	--	--	--	--	--	--	--
Nitzschia microcephala	--	--	--	--	--	--	--	--
Nitzschia palea	--	--	--	--	--	--	--	--
Nitzschia paleacea	--	--	--	--	--	--	--	--
Nitzschia pusilla	--	--	--	--	--	--	--	--
Nitzschia romana	--	--	--	--	--	--	--	--
Nitzschia thermalis	--	--	--	--	--	--	--	--
Nitzschia tryblionella var. *debilis*	--	--	--	--	--	--	--	--
Nitzschia sp.	--	--	--	--	--	--	--	--

Pleurosigma delicatalum	--	--	--	--	--	--	--	--
Rhoicosphenia curvata	--	--	--	--	--	--	--	--
Rhopalodia musculus	--	--	--	--	--	--	--	--
Surirella angustata	--	--	--	--	--	--	--	--
Surirella ovalis	--	--	--	--	--	--	--	--
Surirella ovata	--	--	--	--	--	--	--	--
Synedra acus	--	--	--	--	--	--	--	--
Synedra delicatissima	--	--	--	--	--	--	--	--
Synedra fasciculate	--	--	--	--	--	--	--	--
Synedra minuscula	--	--	--	--	--	--	--	--
Snyedra radiens	--	--	--	--	--	--	--	--
Synedra rumpens	--	--	--	--	--	--	--	--
Synedra rumpens var. *familiaris*	--	--	--	--	--	--	--	--
Synedra ulna	--	--	--	--	--	--	--	--
Synedra ulna var. *contracta*	--	--	--	--	--	--	--	--
Synedra ulna var. *danica*	--	--	--	--	--	--	--	--
Synedra ulna var. *oxyrhynchus*	--	--	--	--	--	--	--	--
Synedra sp.	--	--	--	--	--	--	--	--
Thalassiosira fluviatilis	--	--	--	--	--	--	--	--
CHLOROPHYTA (GREEN ALGAE)	85	1.5	330	3.7	28	16.5	28	14.7
Actinastrum hantzschii	--	--	--	--	--	--	--	--
Actinastrum sp.	--	--	--	--	--	--	--	--
Ankistrodesmus convolutus	--	--	--	--	--	--	--	--
Ankistrodesmus convolutus v. *acicularis*	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus var. *acicularis*	--	--	--	--	--	--	--	--
Ankistrodesmus falcatus var. *mirabilis*	--	--	--	--	--	--	--	--
Carteria sp.	--	--	--	--	--	--	--	--
Chlamydomonas sp.	--	--	--	--	--	--	--	--
Chlorella sp.	--	--	--	--	--	--	--	--
Chlorococcum humicola	--	--	--	--	--	--	--	--
Chlorococcum sp.	28	0.5	28	0.3	28	16.5	--	--
Chlorogonium spirale	--	--	--	--	--	--	--	--
Chlorogonium sp.	--	--	--	--	--	--	--	--
Chodatella quadriseta	--	--	--	--	--	--	--	--
Closterium sp.	--	--	--	--	--	--	--	--
Coccomyxa minor	--	--	--	--	--	--	--	--
Crucigenia quadrata	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
	September 3, 1987--Continued							
CHLOROPHYTA (GREEN ALGAE)--Continued								
Dictyosphaerium ehrenbergianum	--	--	--	--	--	--	--	--
Dictyosphaerium pulchellum	--	--	--	--	--	--	--	--
Dictyosphaerium sp.	--	--	--	--	--	--	--	--
Gloeocystis sp.	--	--	--	--	--	--	--	--
Golenkinia radiata	--	--	--	--	--	--	--	--
Golenkiniopsis solitaria	--	--	--	--	--	--	--	--
Gonium sp.	--	--	--	--	--	--	--	--
Kirchneriella contorta	--	--	--	--	--	--	--	--
Mesotaenium sp.	--	--	--	--	--	--	--	--
Micratinium pusillum	--	--	--	--	--	--	--	--
Micratinium sp.	--	--	--	--	--	--	--	--
Mougeotia sp.	--	--	--	--	--	--	--	--
Oocytis sp.	--	--	--	--	--	--	--	--
Pandorina morum	--	--	--	--	--	--	--	--
Phacotus lenticularis	57	1.0	140	1.6	--	--	28	14.7
Phacotus sp.	--	--	--	--	--	--	--	--
Platymonas sp.	--	--	--	--	--	--	--	--
Pteromonas sp.	--	--	--	--	--	--	--	--
Scenedesmus armatus	--	--	--	--	--	--	--	--
Scenedesmus bijuga	--	--	--	--	--	--	--	--
Scenedesmus dimorphus	--	--	--	--	--	--	--	--
Scenedesmus quadricauda	--	--	--	--	--	--	--	--
Scenedesmus serratus	--	--	110	1.2	--	--	--	--
Scenedesmus sp.	--	--	--	--	--	--	--	--
Schroederia judayi	--	--	--	--	--	--	--	--
Schroederia setigera	--	--	28	0.3	--	--	--	--
Selenastrum minutum	--	--	--	--	--	--	--	--
Sphaerocystis schroeteri	--	--	28	0.3	--	--	--	--
Staurastrum sp.	--	--	--	--	--	--	--	--
Treubaria sp.	--	--	--	--	--	--	--	--

CHRYSOPHYTA (GOLDEN-BROWN ALGAE)	170	2.9	28	0.3	0	0.0	0	0.0
Dinobryon divergens	--	--	--	--	--	--	--	--
Kephyrion spirale	--	--	--	--	--	--	--	--
Kephyrion sp.	--	--	--	--	--	--	--	--
Mallomonas acaroides	--	--	--	--	--	--	--	--
Mallomonas akrokonos	--	--	--	--	--	--	--	--
Mallomonas globosa	--	--	--	--	--	--	--	--
Mallomonas sp.	85	1.5	28	0.3	--	--	--	--
Pleurosigma delicatulum	--	--	--	--	--	--	--	--
Pleurosigma sp.	--	--	--	--	--	--	--	--
Ochromonas sp.	85	1.5	--	--	--	--	--	--
CYANOPHYTA (BLUE-GREEN ALGAE)	3,400	58.6	6,500	72.2	0	0.0	0	0.0
Anabaena sp.	--	--	--	--	--	--	--	--
Aphanocapsa delicatissima	680	11.7	850	9.4	--	--	--	--
Aphanocapsa sp.	--	--	--	--	--	--	--	--
Aphanothece sp.	--	--	910	10.1	--	--	--	--
Chroococcus dispersus	28	0.5	140	1.6	--	--	--	--
Chroococcus limneticus	--	--	--	--	--	--	--	--
Chroococcus sp.	--	--	--	--	--	--	--	--
Dactylococcopsis fascicularis	--	--	--	--	--	--	--	--
Dactylococcopsis sp.	--	--	--	--	--	--	--	--
Lyngbya limnetica	--	--	--	--	--	--	--	--
Lyngbya nana	--	--	--	--	--	--	--	--
Marssoniella elegans	2,700	46.6	4,600	51.1	--	--	--	--
Oscillatoria angusta	--	--	--	--	--	--	--	--
Oscillatoria angustissima	--	--	--	--	--	--	--	--
Oscillatoria limnetica	--	--	--	--	--	--	--	--
Oscillatoria tenuis	--	--	--	--	--	--	--	--
Oscillatoria sp.	--	--	--	--	--	--	--	--
Phormidium sp.	--	--	--	--	--	--	--	--
Synechococcus lineare	--	--	--	--	--	--	--	--
Synechococcus sigmoidea	--	--	--	--	--	--	--	--
Synechococcus sigmoidea f. *minor*	--	--	--	--	--	--	--	--
Synechococcus sp.	--	--	--	--	--	--	--	--
CRYPTOPHYTA (CRYPTOMONADS)	56	1.0	460	5.1	57	33.5	14	7.4
Chroomonas sp.	--	--	--	--	--	--	--	--
Cryptomonas erosa	--	--	--	--	--	--	--	--
Cryptomonas marsonii	--	--	--	--	--	--	--	--
Cryptomonas ovata	--	--	--	--	--	--	--	--

Table 15.--*Taxa, numbers, and percent composition of phytoplankton at sites 1 and 2 in Kenney Reservoir, water years 1985-87*--Continued

PHYLUM ORDER Genus species	Kenney Reservoir (site 1)				Kenney Reservoir (site 2)			
	2-ft depth		Composite (0-10 ft)		2-ft depth		Composite (0-10 ft)	
	Cells	% Comp	Cells	% Comp	Cells	% Comp	Cells	% Comp
			September 3, 1987--Continued					
CRYPTOPHYTA (CRYPTOMONADS)--Continued								
Cryptomonas rostrata	--	--	--	--	--	--	--	--
Cryptomonas rostratiformis	--	--	--	--	--	--	--	--
Cryptomonas sp.	28	0.5	28	0.3	--	--	--	--
Rhodomonas minuta	28	0.5	430	4.8	57	33.5	14	7.4
EUGLENOPHYTA (EUGLENOIDS)	85	1.5	28	0.3	0	0.0	28	14.7
Euglena acus	--	--	--	--	--	--	--	--
Euglena viridis	--	--	--	--	--	--	--	--
Euglena sp.	85	1.5	28	0.3	--	--	28	14.7
Trachelomonas sp.	--	--	--	--	--	--	--	--
PYRRHOPHYTA (DINOFLAGELLATES)	0	0.0	0	0.0	0	0.0	0	0.0
Ceratium hirundinella	--	--	--	--	--	--	--	--
Gymnodinium sp.	--	--	--	--	--	--	--	--
Peridinium biceps	--	--	--	--	--	--	--	--
Peridinium inconspicua	--	--	--	--	--	--	--	--
Peridinium sp.	--	--	--	--	--	--	--	--
Total cells and percent composition	5,800	100	9,000	101	170	99	190	100
Number of species	17	--	18	--	5	--	9	--
Diversity index (DI) at species level	2.28	--	2.39	--	2.25	--	3.05	--
Biomass (mg/L dry weight)	7.4	--	13.4	--	27.1	--	26.5	--
Chlorophyll *a* (µg/L)	--	--	--	--	--	--	--	--
Chlorophyll *b* (µg/L)	--	--	--	--	--	--	--	--
Chlorophyll *c* (µg/L)	--	--	--	--	--	--	--	--

U.S. GOVERNMENT PRINTING OFFICE: 1991-573-207/40006