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Distribution of Phytoplankton in North Carolina Lakes

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DISTRIBUTION OF PHYTOPLANKTON IN NORTH CAROLINA LAKES

by

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FOREWORD

Protection of the environment requires effective regulatory actions which are based on sound technical and scientific information. This information must include the quantitative description and linking of pollutant sources, transport mechanisms, interactions, and resulting effects on man and his environment. Because of the complexities involved, assessment of specific pollutants in the environment requires a total systems approach which transcends the media of air, water, and land. The Environmental Monitoring and Support Laboratory-Las Vegas contributes to the formation and enhancement of a sound integrated monitoring data base through multidisciplinary, multimedia programs designed to:

- develop and optimize systems and strategies for monitoring pollutants and their impact on the environment
- demonstrate new monitoring systems and technologies by applying them to fulfill special monitoring needs of the Agency's operating programs

This report presents the species and abundance of phytoplankton in the 16 lakes sampled by the National Eutrophication Survey in the State of North Carolina, along with results from the calculation of several commonly used biological indices of water quality and community structure. These data can be used to biologically characterize the study lakes, and as baseline data for future investigations. This report was written for use by Federal, State, and local governmental agencies concerned with water quality analysis, monitoring, and/or regulation. Private industry and individuals similarly involved with the biological aspects of water quality will find the document useful. For further information contact the Water and Land Quality Branch, Monitoring Operations Division.

George B. Morgan
Director
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INTRODUCTION

The collection and analysis of phytoplankton data were included in the National Eutrophication Survey in an effort to determine relationships between algal characteristics and trophic status of individual lakes.

During spring, summer, and fall of 1973, the Survey sampled 250 lakes in 17 States. Over 700 algal species and varieties were identified and enumerated from the 743 water samples examined.

This report presents the species and abundance of phytoplankton in the 16 lakes sampled in the State of North Carolina (Table 1). The Nygaard's Trophic State (Nygaard 1949), Palmer's Organic Pollution (Palmer 1969), and species diversity and abundance indices are also included.

TABLE 1. LAKES SAMPLED IN THE STATE OF NORTH CAROLINA

STORET #	LAKE NAME	COUNTY
3701	Badin Lake	Montgomery, Stanly
3702	Blewett Falls Lake	Richmond, Anson
3704	Fontana Lake	Swain, Graham
3705	Lake Hickory (Lake Oxford)	Alexander, Caldwell, Catawba
3706	High Rock Lake	Davidson, Rowan
3707	Hiwassee Lake	Cherokee
3708	Lake James	Burke, McDowell
3709	Lake Junaluska	Haywood
3710	Lookout Shoals Lake	Catawba, Alexander, Iredell
3711	Mount Island Lake	Gaston, Mecklenburg
3713	Norman Lake	Catawba, Iredell, Lincoln, Mecklenburg
3715	Rhodhiss Lake	Caldwell, Burke

(Continued)

TABLE 1. LAKES SAMPLED IN THE STATE OF NORTH CAROLINA (Continued)

STORET #	LAKE NAME	COUNTY
3716	Lake Santeelah	Graham
3717	Tillery Lake	Stanly, Montgomery
3718	Waterville Lake	Haywood
3719	Lake Waccamaw	Columbus

MATERIALS AND METHODS

LAKE AND SITE SELECTION

Lakes and reservoirs included in the Survey were selected through discussions with State water pollution agency personnel and U.S. Environmental Protection Agency Regional Offices (U.S. Environmental Protection Agency 1975). Screening and selection strongly emphasized lakes with actual or potential accelerated eutrophication problems. As a result, the selection was limited to lakes:

(1) impacted by one or more municipal sewage treatment plant outfalls either directly into the lake or by discharge to an inlet tributary within approximately 40 kilometers of the lake;

(2) 40 hectares or larger in size; and

(3) with a mean hydraulic retention time of at least 30 days.

Specific selection criteria were waived for some lakes of particular State interest.

Sampling sites for a lake were selected based on available information on lake morphometry, potential major sources of nutrient input, and on-site judgment of the field limnologist (U.S. Environmental Protection Agency 1975). Primary sampling sites were chosen to reflect the deepest portion of each major basin in a test lake. Where many basins were present, selection was guided by nutrient source information on hand: At each sampling site, a depth-integrated phytoplankton sample was taken. Depth-integrated samples were uniform mixtures of water from the surface to a depth of 15 feet (4.6 meters) or from the surface to the lower limit of the photic zone representing 1 percent of the incident light, whichever was greater. If the depth at the sampling site was less than 15 feet (4.6 meters), the sample was taken from just off the bottom to the surface. Normally, a lake was sampled three times in 1 year, providing information on spring, summer, and fall conditions.

SAMPLE PREPARATION

To preserve the sample 4 milliliters (ml) of Acid-Lugol's solution (Prescott 1970) were added to each 130-ml sample from each site at the time of collection. The samples were shipped to the Environmental Monitoring and Support Laboratory, Las Vegas, Nevada, where equal volumes from each site were mixed to form two 130-ml composite samples for a given lake. One composite sample was put into storage and the other was used for the examination.

Prior to examination, the composite samples were concentrated by the settling method. Solids were allowed to settle for at least 24 hours prior to siphoning off the supernate. The volume of the removed supernate and the volume of the remaining concentrate were measured and concentrations determined. A small (8 ml) library subsample of the concentrate was then taken. The remaining concentrate was gently agitated to resuspend the plankton and poured into a capped, graduated test tube. If a preliminary examination of a sample indicated the need for a more concentrated sample, the contents of the test tube were further concentrated by repeating the settling method. Final concentrations varied from 15 to 40 times the original.

Permanent slides were prepared from concentrated samples after analysis was complete. A drop of superconcentrate from the bottom of the test tube was placed in a ring of clear Karo® Corn Syrup with phenol (a few crystals of phenol were added to each 100 ml of syrup) on a glass slide, thoroughly mixed, and topped with a coverglass. After the syrup at the edges of the coverglass had hardened, the excess was scraped away and the mount was sealed with clear fingernail polish. Permanent diatom slides were prepared by drying sample material on a coverglass, heating in a muffle furnace at 400° C for 45 minutes, and mounting in Hyrax®. Finally, the mounts were sealed with clear fingernail polish.

Backup samples, library samples, permanent sample slides, and Hyrax®mounted diatom slides are being stored and maintained at the Environmental Monitoring and Support Laboratory-Las Vegas.

EXAMINATION

The phytoplankton samples were examined with the aid of binocular compound microscopes. A preliminary examination was performed to precisely identify and list all forms encountered. The length of this examination varied depending on the complexity of the sample. An attempt was made to find and identify all of the forms present in each sample. Often forms were observed which could not be identified to species or to genus. Abbreviated descriptions were used to keep a record of these forms (e.g., lunate cell, blue-green filament, Navicula #1). Diatom slides were examined using a standard light microscope. If greater resolution was essential to accurately identify the diatoms, a phase-contrast microscope was used.

After the species list was compiled, phytoplankton were enumerated using a Neubauer Counting Chamber with a 40X objective lens and a 10X ocular lens. All forms within each field were counted. The count was continued until a minimum of 100 fields had been viewed, or until the dominant form had been observed a minimum of 100 times.

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QUALITY CONTROL

Internal quality control intercomparisons on species identifications and counts were performed on a regular basis among project phycologists at the rate of 7 percent. Although an individual had primary responsibility for analyzing a sample, taxonomic problems were discussed among the phycologists.

Additional quality control checks were performed on the Survey samples by Dr. G. W. Prescott of the University of Montana at the rate of 5 percent. Quality control checks were made on 75 percent of these samples to verify species identifications while checks were made on the remaining 25 percent of the samples to verify genus counts. Presently, the agreement between quality control checks for species identification and genus enumerations is satisfactory.

RESULTS

The Appendix summarizes all of the phytoplankton data collected from the State by the Survey. It is organized by lake, including an alphabetical phytoplankton species list with concentrations for individual species given by sampling date. Results from the application of several indices are presented (Nygaard's Trophic State, Palmer's Organic Pollution, and species diversity and abundance). Each lake has been assigned a four-digit STORET number. [STORET (STOrage and RETrieval) is the U.S. Environmental Protection Agency's computer system which processes and maintains water quality data.] The first two digits of the STORET number identify the State; the last two digits identify the lake.

NYGAARD'S TROPHIC STATE INDICES

Five indices devised by Nygaard (1949) were proposed under the assumption that certain algal groups are indicative of levels of nutrient enrichment. These indices were calculated in order to aid in determining the surveyed lakes' trophic status. As a general rule, Cyanophyta, Euglenophyta, centric diatoms, and members of the Chlorococcales are found in waters that are eutrophic (rich in nutrients), while desmids and many pennate diatoms generally cannot tolerate high nutrient levels and so are found in oligotrophic waters (poor in nutrients).

In applying the indices to the Survey data, the number of taxa in each major group was determined from the species list for each sample. The ratios of these groups give numerical values which can be used as a biological index of water richness. The five indices and the ranges of values established for Danish lakes by Nygaard for each trophic state are presented in Table 2. The appropriate symbol, (E) eutrophic and (O) oligotrophic, follows each calculated value in the tables in the Appendix. A question mark (?) following a calculated value in these tables was entered when that value was within the range of both classifications.

PALMER'S ORGANIC POLLUTION INDICES

Palmer (1969) analyzed reports from 165 authors and developed algal pollution indices for use in rating water samples with high organic pollution. Two lists of organic pollution-tolerant forms were prepared, one containing 20 genera, the other, 20 species (Tables 3 and 4). Each form was assigned a pollution index number ranging from 1 for moderately tolerant forms to 6 for extremely tolerant forms. Palmer based the index numbers on occurrence records and/or where emphasized by the authors as being especially tolerant of organic pollution.

TABLE 2. NYGAARD'S TROPHIC STATE INDICES ADAPTED FROM HUTCHINSON (1967)

Index	Calculation	Oligotrophic	Eutrophic
Myxophycean	Myxophyceae / Desmideae	0.0-0.4	0.1-3.0
Chlorophycean	Chlorococcales / Desmideae	0.0-0.7	0.2-9.0
Diatom	Centric Diatoms / Pennate Diatoms	0.0-0.3	0.0-1.75
Euglenophyte	Euglenophyta / Myxophyceae + Chlorococcales	0.0-0.2	0.0-1.0
Compound	Myxophyceae + Chlorococcales + Centric Diatoms + Euglenophyta / Desmideae	0.0-1.0	1.2-25

TABLE 3. ALGAL GENUS POLLUTION INDEX (Palmer 1969)

Genus	Pollution Index
Anacystis	1
Ankistrodesmus	2
Chlamydomonas	4
Chlorella	3
Closterium	1
Cyclotella	1
Euglena	5
Gomphonema	1
Lepocinclis	1
Melosira	1
Micractinium	1
Navicula	3
Nitzschia	3
Oscillatoria	5
Pandorina	1
Phacus	2
Phormidium	1
Scenedesmus	4
Stigeoclonium	2
Synedra	2

TABLE 4. ALGAL SPECIES POLLUTION INDEX (Palmer 1969)

Species	Pollution Index
Ankistrodesmus falcatus	3
Arthrospira jenneri	2
Chlorella vulgaris	2
Cyclotella meneghiniana	2
Euglena gracilis	1
Euglena viridis	6
Gomphonema parvulum	1
Melosira varians	2
Navicula cryptocephala	1
Nitzschia acicularis	1
Nitzschia palea	5
Oscillatoria chlorina	2
Oscillatoria limosa	4
Oscillatoria princeps	1
Oscillatoria putrida	1
Oscillatoria tenuis	4
Pandorina morum	3
Scenedesmus quadricauda	4
Stigeoclonium tenue	3
Synedra ulna	3

In analyzing a water sample, any of the 20 genera or species of algae present in concentrations of 50 per milliliter or more are recorded. The pollution index numbers of the algae present are totaled, providing a genus score and a species score. Palmer determined that a score of 20 or more for either index can be taken as evidence of high organic pollution, while a score of 15 to 19 is taken as probable evidence of high organic pollution. Lower figures suggest that the organic pollution of the sample is not high, that the sample is not representative, or that some substance or factor interfering with algal persistence is present and active.

SPECIES DIVERSITY AND ABUNDANCE INDICES

"Information content" of biological samples is being used commonly by biologists as a measure of diversity. Diversity in this connection means the degree of uncertainty attached to the specific identity of any randomly selected individual. The greater the number of taxa and the more equal their proportions, the greater the uncertainty, and hence, the diversity (Pielou 1966). There are several methods of measuring diversity, e.g., the formulas given by Brillouin (1962) and Shannon and Weaver (1963). The method which is appropriate depends on the type of biological sample on hand.

Pielou (1966) classifies the types of biological samples and gives the measure of diversity appropriate for each type. The Survey phytoplankton samples are what she classifies as larger samples (collections in Pielou's terminology) from which random subsamples can be drawn. According to Pielou, the average diversity per individual (H) for these types of samples can be estimated from the Shannon-Wiener formula (Shannon and Weaver 1963):

$$H = -\sum_{i=1}^{S} P_i \log_x P_i$$

where P is the proportion of the ith taxon in the sample, which is calculated from n_i/N; n_i is the number of individuals per milliliter of the ith taxon; N is the total number of individuals per ml; and S is the total number of taxa.

However, Basharin (1959) and Pielou (1966) have pointed out that H calculated from the subsample is a biased estimator of the sample H, and if this bias is to be accounted for, we must know the total number of taxa present in the sample since the magnitude of this bias depends on it.

Pielou (1966) suggests that if the number of taxa in the subsample falls only slightly short of the number in the larger sample, no appreciable error will result in considering S, estimated from the subsample, as being equal to the sample value. Even though considerable effort was made to find and identify all taxa, the Survey samples undoubtedly contain a fair number of rare phytoplankton taxa which were not encountered.

In the Shannon-Wiener formula, an increase in the number of taxa and/or an increase in the evenness of the distribution of individuals among taxa will increase the average diversity per individual from its minimal value of zero. Sager and Hasler (1969) found that the richness of taxa was of minor importance in determination of average diversity per individual for phytoplankton and they concluded that phytoplankton taxa in excess of the 10 to 15 most abundant ones have little effect on H. This was verified by our own calculations. Our counts are in number per milliliter and since logarithms to the base 2 were used in our calculations, H is expressed in units of bits per individual. When individuals of a taxon were so rare that they were not counted, a value of 1/130 per milliliter or 0.008 per milliliter was used in the calculations since at least one individual of the taxon must have been present in the collection.

A Survey sample for a given lake represents a composite of all phytoplankton collected at different sampling sites on a lake during a given sampling period. Since the number of samples (M) making up a composite is a function of both the complexity of the lake sampled and its size, it should affect the richness-of-taxa component of the diversity of our phytoplankton collections. The maximum diversity (MaxH) (i.e., when the individuals are distributed among the taxa as evenly as possible) was estimated from $\log_2 S$, the total diversity (D) was calculated from HN, and the evenness component of diversity (J) was estimated from H/MaxH (Pielou 1966). Also given in the Appendix are L (the mean number of individuals per taxa per milliliter) and K (the number of individuals per milliliter of the most abundant taxon in the sample).

Zand (1976) suggests that diversity indices be expressed in units of "sits", i.e., in logarithms to base S (where S is the total number of taxa in the sample) instead of in "bits", i.e., in logarithms to base 2. Zand points out that the diversity index in sits per individual is a normalized number ranging from 1 for the most evenly distributed samples to 0 for the least evenly distributed samples. Also, it can be used to compare different samples, independent of the number of taxa in each. The diversity in bits per individual should not be used in direct comparisons involving various samples which have different numbers of species. Since MaxH equals log S, the expression in sits is equal to $\log_S S$, or 1. Therefore diversity in sits per individual is numerically equivalent to J, the evenness component for the Shannon-Wiener formula.

SPECIES OCCURRENCE AND ABUNDANCE

The alphabetic phytoplankton species list for each lake, presented in the Appendix, gives the concentrations of individual species by sampling date. Concentrations are in cells, colonies, or filaments (CEL, COL, FIL) per milliliter. An "X" after a species name indicates the species identified in the preliminary examination was in such a low concentration that it did not appear in the count. A blank space indicates that the organism was not found in the sample collected on that date. Column S is used to designate the examiner's subjective opinion of the five dominant taxa in a sample, based upon relative size and concentration of the organism. The percent column (%C) presents, by abundance, the percentage composition of each taxon.

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APPENDIX. SUMMARY OF PHYTOPLANKTON DATA

This appendix was generated by computer. Because it was only possible to use upper case letters in the printout, all scientific names are printed in upper case and are not italicized.

The alphabetic phytoplankton lists include taxa without species names (e.g., EUNOTIA, EUNOTIA #1, FLAGELLATE, FLAGELLATES, MICROSYSTIS INCERTA ?, CHLOROPHYTAN COCCOID CELLED COLONY). When species determinations were not possible, symbols or descriptive phrases were used to separate taxa for enumeration purposes. Each name on a list, however, represents a unique species different from any other name on the same list, unless otherwise noted, for counting purposes.

Numbers were used to separate unidentified species of the same genus. A generic name listed alone is also a unique species. A question mark (?) is placed immediately after the portion of a name which was assigned with uncertainty. Numbered, questioned, or otherwise designated taxa were established on a lake-by-lake basis; therefore NAVICULA #2 from lake A cannot be compared to NAVICULA #2 from lake B. Pluralized categories (e.g., FLAGELLATES, CENTRIC DIATOMS, SPP.) were used for counting purposes when taxa could not be properly differentiated on the counting chamber.

LAKE NAME: BADIN LAKE
STORET NUMBER: 3701

NYGAARD TROPHIC STATE INDICES

DATE	03 24 73	09 19 73
MYXOPHYCEAN	0/0 O	1.50 E
CHLOROPHYCEAN	02/0 E	1.00 E
EUGLENOPHYTE	1.00 E	0.20 ?
DIATOM	0.56 E	0.67 E
COMPOUND	09/0 E	4.00 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	03 24 73	09 19 73
GENUS	01	10
SPECIES	00	02

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE		03 24 73	09 19 73
AVERAGE DIVERSITY	H	2.95	0.49
NUMBER OF TAXA	S	23.00	15.00
NUMBER OF SAMPLES COMPOSITED	M	4.00	4.00
MAXIMUM DIVERSITY	MAXH	4.52	3.91
TOTAL DIVERSITY	D	1109.20	8323.14
TOTAL NUMBER OF INDIVIDUALS/ML	N	376.00	16986.00
EVENESS COMPONENT	J	0.65	0.13
MEAN NUMBER OF INDIVIDUALS/TAXA	L	16.35	1132.40
NUMBER/ML OF MOST ABUNDANT TAXON	K	77.00	15705.00

LAKE NAME: BADIN LAKE
STORET NUMBER: 3701

CONTINUED

TAXA	FORM	03 24 73 S	03 24 73 %C	03 24 73 ALGAL UNITS PER ML	09 19 73 S	09 19 73 %C	09 19 73 ALGAL UNITS PER ML
ANKISTRODESMUS FALCATUS	CEL		5.1	19			
ASTERIONELLA FORMOSA	CEL	5	12.8	48			
CALONEIS	CEL			X			
CERATIUM HIRUNDINELLA F. BRACHYCERAS	CEL						X
CHLOROPHYTAN FLAGELLATE	CEL						X
CRYPTOMONAS EROSA	CEL	1	18.1	68			
CRYPTOMONAS OVATA	CEL	2	20.5	77			
CYCLOTELLA MICHIGANIANA	CEL			X			
CYMBELLA	CEL			X			
DESMIDIUM BAILEYII	CEL						X
DINOBRYON	CEL			X			
EUASTRUM DENTICULATUM	CEL						X
EUGLENA	CEL		5.1	19			
FLAGELLATE #1	CEL		7.7	29			
GOMPHONEMA	CEL			X			
MELOSIRA DISTANS	CEL	4	15.4	58			
MELOSIRA GRANULATA	CEL			X			
MELOSIRA GRANULATA V. ANGUSTISSIMA	CEL			X			
MELOSIRA GRANULATA V. ANGUSTISSIMA F. SPIRALIS	CEL						X
MELOSIRA VARIANS ?	CEL				4	0.8	128
MERISMOPEDIA TENUISSIMA	COL					0.2	32
NAVICULA	CEL			X			
NITZSCHIA	CEL			X			
NITZSCHIA #2	CEL						X
OSCILLATORIA	FIL				3	5.3	897
PANDORINA MORUM	COL			X			
PEDIASTRUM TETRAS V. TETRADON	COL						X
PINNULARIA	CEL			X			

LAKE NAME: BADIN LAKE
STORET NUMBER: 3701

CONTINUED

TAXA	FORM	03 24 73 S	03 24 73 %C	03 24 73 ALGAL UNITS PER ML	09 19 73 S	09 19 73 %C	09 19 73 ALGAL UNITS PER ML
RAPHIDIOPSIS CURVATA	FIL				1	92.5	15705
RHIZOSCLENIA	CEL			X			
SCENEDESMUS ARMATUS	COL				2	1.1	192
SYNEDRA	CEL				5	0.2	32
SYNEDRA #1	CEL		2.7	10			
SYNEDRA ACTINASTROIDES ?	CEL						X
TABELLARIA FENESTRATA	CEL			X			
TETRASTRUM STAURCGENIAEFORME	COL			X			
TRACHELCMONAS	CEL						X
TRACHELCMONAS PULCHELLA	CEL	3	12.8	48			
TOTAL				376			16986

LAKE NAME: BLEWETT FALLS LAKE
STORET NUMBER: 3702

NYGAARD TROPHIC STATE INDICES

DATE	03 23 73	07 05 73	09 19 73
MYXOPHYCEAN	2.00 E	2.50 E	06/0 E
CHLOROPHYCEAN	2.00 E	4.50 E	10/0 E
EUGLENOPHYTE	0.25 E	0.14 ?	0.06 ?
DIATOM	0.22 ?	0.44 E	1.00 E
COMPOUND	7.00 E	10.0 E	22/0 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	03 23 73	07 05 73	09 19 73
GENUS	00	13	06
SPECIES	00	00	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE		03 23 73	07 05 73	09 19 73
AVERAGE DIVERSITY	H	2.79	3.12	1.99
NUMBER OF TAXA	S	22.00	36.00	29.00
NUMBER OF SAMPLES COMPOSITED	M	3.00	3.00	3.00
MAXIMUM DIVERSITY	MAXH	4.46	5.17	4.86
TOTAL DIVERSITY	D	304.11	2155.92	3510.36
TOTAL NUMBER OF INDIVIDUALS/ML	N	109.00	691.00	1764.00
EVENESS COMPONENT	J	0.63	0.60	0.41
MEAN NUMBER OF INDIVIDUALS/TAXA	L	4.95	19.19	60.83
NUMBER/ML OF MOST ABUNDANT TAXON	K	29.00	202.00	1173.00

LAKE NAME: BLEWETT FALLS LAKE CONTINUED
STORET NUMBER: 3702

TAXA	FORM	03 23 73 S	03 23 73 %C	03 23 73 ALGAL UNITS PER ML	07 05 73 S	07 05 73 %C	07 05 73 ALGAL UNITS PER ML	09 19 73 S	09 19 73 %C	09 19 73 ALGAL UNITS PER ML
ACHNANTHES ? MICROCEPHALA	CEL						X			
ACHNANTHES MICROCEPHALA	CEL			X						
ACHNANTHES MICROCEPHALA ?	CEL								1.1	20
ANKISTRODESMUS	CEL						X			
ANKISTRODESMUS FALCATUS	CEL		6.4	7						
ASTERICNELLA FORMOSA	CEL			X						
CHLAMYDCMONAS	CEL			X						
CHLOROGCNIUM	CEL						X			
CHLOROPHYTAN COCCOID CELL	CEL		6.4	7						
CHLOROPHYTAN COLCNY	COL			X						
CLCSTERIUM	CEL				4	2.0	14			
COCCCID CELL	CEL			X						
COELASTRUM	COL								1.1	20
CRUCIGENIA APICULATA	COL						X			
CRYPTOMCNAS	CEL				3	10.4	72			
CRYPTOMONAS EROSA	CEL	2	20.2	22			X			
CYANOPHYTAN FILAMENT	FIL								1.1	20
DACTYLOCOCCOPSIS FASCICULARIS	CEL			X						
EUASTRUM	CEL						X			
EUGLENA GRACILIS	CEL			X			X			X
EUNOTIA	CEL						X			
FLAGELLATES	CEL							3	8.8	156
FRANCEIA OVALIS	CEL									X
GLENODINIUM	CEL						X			
GCMPHONEMA	CEL						X			
GYMNODINIUM ORDINATUM	CEL									X
GYROSIGMA	CEL						X			
LYNGBYA	FIL								1.1	20
MELOSIRA #2	CEL			X						
MELOSIRA DISTANS	CEL			X		4.2	29			X
MELOSIRA GRANULATA	CEL							2	5.6	98
MELOSIRA GRANULATA V. ANGLSTISSIMA	CEL				1	29.2	202			X

LAKE NAME: BLEWETT FALLS LAKE CONTINUED
STORET NUMBER: 3702

TAXA	FORM	03 23 73 S	03 23 73 %C	03 23 73 ALGAL UNITS PER ML	07 05 73 S	07 05 73 %C	07 05 73 ALGAL UNITS PER ML	09 19 73 S	09 19 73 %C	09 19 73 ALGAL UNITS PER ML
MELOSIRA VARIANS	CEL						X		1.1	20
MERISMOPEDIA TENUISSIMA	COL						X		1.1	20
MICRACTINIUM ? PUSILLUM	COL						X			
MICROCYSTIS INCERTA	COL					2.0	14			
NAVICULA	CEL			X					1.1	20
NAVICULA GOTTLANDICA	CEL			X						
NAVICULA LATEROPUNCTATA	CEL			X						
NITZSCHIA	CEL				2	18.8	130	4	5.6	98
OSCILLATORIA	FIL	4	26.6	29						
OSCILLATORIA #1	FIL						X			X
OSCILLATORIA #2	FIL				5	8.4	58			X
OSCILLATORIA GEMINATA	FIL						X			
PANDORINA MORUM	COL						X			
PEDIASTRUM BIRADIATUM V. LONGECORNUTUM	COL									X
RAPHIDIOPSIS CURVATA	FIL							1	66.5	1173
SCENEDESMUS #1	COL					2.0	14			
SCENEDESMUS ABUNDANS	COL					2.0	14			
SCENEDESMUS ABUNDANS V. LONGICAUDA	COL									X
SCENEDESMUS DENTICULATUS	COL						X			X
SCENEDESMUS DIMORPHUS	COL									X
SCENEDESMUS INTERMEDIUS	COL						X			
SCENEDESMUS INTERMEDIUS V. BICAUDATUS	COL					4.2	29			X
SCENEDESMUS OPOLIENSIS	COL					2.0	14			
SCENEDESMUS QUADRICAUDA	COL		6.4	7						
STAURASTRUM	CEL			X						
STAURONEIS	CEL						X			
STEPHANODISCUS	CEL					8.4	58		1.1	20
SURIRELLA	CEL						X			
SURIRELLA ANGUSTATA	CEL			X						

LAKE NAME: BLEWETT FALLS LAKE CONTINUED
STORET NUMBER: 3702

TAXA	FORM	03 23 73 S	03 23 73 %C	03 23 73 ALGAL UNITS PER ML	07 05 73 S	07 05 73 %C	07 05 73 ALGAL UNITS PER ML	09 19 73 S	09 19 73 %C	09 19 73 ALGAL UNITS PER ML
SYNEDRA #1	CEL	1	13.8	15						
SYNEDRA #2	CEL					6.2	43	5	3.3	59
SYNEDRA ULNA	CEL	3	13.8	15			X			X
TABELLARIA FENESTRATA	CEL	5	6.4	7						
TETRAEDRON	CEL								1.1	20
TETRASTRUM HETERACANTHUM	COL									X
TRACHELCMONAS HISPIDA	CEL						X			
TREUBARIA	CEL									X
TOTAL				109			691			1764

LAKE NAME: FONTANA LAKE
STORET NUMBER: 3704

NYGAARD TROPHIC STATE INDICES

DATE	06 03 73	08 21 73	10 25 73
MYXOPHYCEAN	02/0 E	2.00 E	1.5 E
CHLOROPHYCEAN	01/0 E	3.00 E	0/5 O
EUGLENOPHYTE	0/03 ?	0/05 ?	0/4 ?
DIATOM	1.00 E	1.33 E	1.75 E
COMPOUND	09/0 E	9.00 E	5.5 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	06 03 73	08 21 73	10 25 73
GENUS	02	09	04
SPECIES	00	03	0

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE		06 03 73	08 21 73	10 25 73
AVERAGE DIVERSITY	H	1.80	2.42	3.24
NUMBER OF TAXA	S	20.00	16.00	25.00
NUMBER OF SAMPLES COMPOSITED	M	7.00	7.00	7.00
MAXIMUM DIVERSITY	MAXH	4.32	4.00	4.64
TOTAL DIVERSITY	D	5875.20	5241.72	3246.48
TOTAL NUMBER OF INDIVIDUALS/ML	N	3264.00	2166.00	1002.00
EVENESS COMPONENT	J	0.42	0.61	0.70
MEAN NUMBER OF INDIVIDUALS/TAXA	L	163.20	135.38	40.08
NUMBER/ML OF MOST ABUNDANT TAXON	K	1892.00	894.00	265.00

LAKE NAME: FONTANA LAKE
STORET NUMBER: 3704

CONTINUED

TAXA	FORM	06 03 73 S	06 03 73 %C	06 03 73 ALGAL UNITS PER ML	08 21 73 S	08 21 73 %C	08 21 73 ALGAL UNITS PER ML	10 25 73 S	10 25 73 %C	10 25 73 ALGAL UNITS PER ML
ANABAENA	FIL									X
ANABAENA ?	FIL			X						
ANKISTRODESMUS ?	CEL								0.5	5
ANKISTRODESMUS FALCATUS	CEL					2.5	54			
ASTERIONELLA FORMOSA	CEL	5	2.1	68						
ATTHEYA ZACHARIASI	CEL									X
CHRYSOPHYTAN CELLS	CEL			X						
CLOSTERIUM ?	CEL					1.2	27			
COCCOID COLONY	COL								0.5	5
COSMARIUM	CEL								0.5	5
CYANOPHYTAN FILAMENT	FIL			X	3	11.3	244		0.5	5
CYCLOTELLA MENEGHINIANA	CEL									X
CYCLOTELLA SPP.	CEL	1	58.0	1892	2	28.8	623		12.9	129
CYCLOTELLA STELLIGERA	CEL			X			X			X
CYMBELLA	CEL			X						
DACTYLOCOCCOPSIS	CEL								5.1	51
DINOFLAGELLATE	CEL		0.4	13				2	3.4	34
DINOFLAGELLATE #1	CEL								1.8	18
DINOFLAGELLATE #3	CEL				4	3.7	81			
ELAKATOTHRIX GELATINOSA	COL		0.4	13						
FLAGELLATE #1	CEL							3	11.4	114
FLAGELLATE #2	CEL		0.6	20				1	15.1	151
FLAGELLATES	CEL	3	15.2	495	1	41.3	894		4.0	40
MALLOMONAS	CEL			X						X
MELOSIRA	CEL		0.8	26						
MELOSIRA #2	CEL			X			X			
MELOSIRA DISTANS	CEL	2	19.5	637		2.5	54		6.9	69
MELOSIRA GRANULATA V. ANGUSTISSIMA	CEL								0.9	9
NAVICULA	CEL									X
NITZSCHIA	CEL					2.5	54			
OSCILLATORIA	FIL						X			

LAKE NAME: FONTANA LAKE
STORET NUMBER: 3704

CONTINUED

TAXA	FORM	06 03 73 S	06 03 73 %C	06 03 73 ALGAL UNITS PER ML	08 21 73 S	08 21 73 %C	08 21 73 ALGAL UNITS PER ML	10 25 73 S	10 25 73 %C	10 25 73 ALGAL UNITS PER ML
PEDIASTRUM DUPLEX V. RETICULATUM	COL						X			
PENNATE DIATOM	CEL		0.4	13						
PENNATE DIATOMS	CEL								0.5	5
PERIDINIUM WISCONSINENSE	CEL				5	1.2	27	5	0.6	6
RHIZOSOLENIA ERIENSIS	CEL			X						X
SCENEDESMUS DIMORPHUS	COL					1.2	27			
STAURASTRUM	CEL								0.6	6
SYNECRA	CEL					2.5	54			
SYNEDRA RADIANS	CEL		0.6	19				4	26.4	265
TABELLARIA FENESTRATA	CEL	4	2.1	68		1.2	27		8.5	85
TABELLARIA FLOCCULOSA	CEL			X						
TOTAL				3264			2166			1002

LAKE NAME: LAKE HICKORY
STORET NUMBER: 3705

NYGAARD TROPHIC STATE INDICES

DATE	03 30 73	07 07 73	09 24 73
MYXOPHYCEAN	0/0 ?	7.00 E	4.00 E
CHLOROPHYCEAN	2/0 E	9.00 E	11.0 E
EUGLENOPHYTE	0/2 ?	0/16 ?	0.03 ?
DIATOM	0.57 E	1.33 E	1.00 E
COMPOUND	6/0 E	20.0 E	19.0 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	03 30 73	07 07 73	09 24 73
GENUS	01	11	13
SPECIES	00	00	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE		03 30 73	07 07 73	09 24 73
AVERAGE DIVERSITY	H	1.76	3.63	3.39
NUMBER OF TAXA	S	15.00	33.00	54.00
NUMBER OF SAMPLES COMPOSITED	M	4.00	4.00	4.00
MAXIMUM DIVERSITY	MAXH	3.91	5.04	5.75
TOTAL DIVERSITY	D	1135.20	7633.89	17814.45
TOTAL NUMBER OF INDIVIDUALS/ML	N	645.00	2103.00	5255.00
EVENESS COMPONENT	J	0.45	0.72	0.59
MEAN NUMBER OF INDIVIDUALS/TAXA	L	43.00	63.73	97.31
NUMBER/ML OF MOST ABUNDANT TAXON	K	353.00	460.00	1671.00

LAKE NAME: LAKE HICKORY
STORET NUMBER: 3705

CONTINUED

TAXA	FORM	03 30 73 S	03 30 73 %C	03 30 73 ALGAL UNITS PER ML	07 07 73 S	07 07 73 %C	07 07 73 ALGAL UNITS PER ML	09 24 73 S	09 24 73 %C	09 24 73 ALGAL UNITS PER ML
ACHNANTHES LANCEOLATA V. DUBIA	CEL			X						X
ACTINASTRUM HANTZSCHII	CEL									X
ANABAENA	FIL				1	21.9	460			
ANABAENA #1	FIL								8.5	449
ANABAENA #2	FIL						X			
ANKISTRODESMUS	CEL								0.3	15
ANKISTRODESMUS ?	CEL	5	2.9	19						
APHANIZOMENON	FIL					5.0	106			
ASTERIONELLA FORMOSA	CEL	3	8.8	57						
CENTRIC DIATOM	CEL								0.3	15
CERATIUM HIRUNDINELLA F. BRACHYCERAS	CEL					1.7	35			
CHLAMYDOMONAS	CEL					1.7	35			
CHLOROPHYTAN CELL	CEL					0.9	18			
CHLOROPHYTAN FLAGELLATE #1	CEL						X			
CHROOCOCCUS ?	COL								2.6	139
CLOSTERIUM ?	CEL					1.7	35			
COCCONEIS PLACENTULA V. LINEATA	CEL			X						
COELASTRUM RETICULATUM	COL						X			
COELASTRUM SPHAERICUM	COL									X
COSCINODISCUS ?	CEL		1.4	9						
COSMARIUM	CEL									X
CRUCIGENIA CRUCIFERA ?	COL									X
CYANOPHYTAN COLONY	COL								2.6	139
CYANOPHYTAN FILAMENTS	FIL								31.8	1671
CYCLOTELLA PSEUDOSTELLIGERA	CEL								5.3	278
CYCLOTELLA STELLIGERA	CEL				5	6.7	141			X
CYMBELLA	CEL						X			
DACTYLOCOCCOPSIS	CEL					5.0	106			
DINOBRYON	CEL								0.3	15

LAKE NAME: LAKE HICKORY CONTINUED
STORET NUMBER: 3705

TAXA	FORM	03 30 73 S	03 30 73 %C	03 30 73 ALGAL UNITS PER ML	07 07 73 S	07 07 73 %C	07 07 73 ALGAL UNITS PER ML	09 24 73 S	09 24 73 %C	09 24 73 ALGAL UNITS PER ML
DINOFLAGELLATE	CEL								0.6	31
DINOFLAGELLATE #2	CEL								0.3	15
EUASTRUM DENTICULATUM ?	CEL								0.6	31
EUDORINA ELEGANS	CEL						X			
EUGLENA	CEL									X
FLAGELLATE #1	CEL					6.7	141			
FLAGELLATES	CEL	2	28.1	181	3	10.9	230		8.8	464
FRANCEIA OVALIS	CEL									X
LYNGBYA LIMNETICA	FIL								8.0	418
MALLOMONAS	CEL									X
MELOSIRA #2	CEL			X			X			
MELOSIRA DISTANS	CEL			X	4	10.1	212		0.6	31
MELOSIRA GRANULATA	CEL									X
MELOSIRA GRANULATA ? V. ANGUSTISSIMA	CEL	1	54.7	353						
MELOSIRA GRANULATA V. ANGUSTISSIMA	CEL					2.5	53			X
MERISMOPEDIA TENUISSIMA	COL						X		4.1	217
MICROCYSTIS INCERTA	COL					4.2	88			
NAVICULA	CEL					0.9	18			
NAVICULA EXIGUA ?	CEL			X						
NAVICULA RHYNCHOCEPHALA	CEL									X
NITZSCHIA	CEL			X		2.5	53			
NITZSCHIA ACICULARIS	CEL									X
NITZSCHIA HOLSATICA ?	CEL									X
OSCILLATORIA ?	FIL				2	14.3	300			
OSCILLATORIA LIMNETICA	FIL								2.4	124
PANDORINA MORUM	COL			X		0.9	18			X
PEDIASTRUM BIRADIATUM	COL								0.3	15
PEDIASTRUM BIRADIATUM V. LONGECORNUTUM	COL						X			X
PEDIASTRUM DUPLEX V. RETICULATUM	COL						X			

LAKE NAME: LAKE HICKORY CONTINUED
STORET NUMBER: 3705

TAXA	FORM	03 30 73 S	03 30 73 %C	03 30 73 ALGAL UNITS PER ML	07 07 73 S	07 07 73 %C	07 07 73 ALGAL UNITS PER ML	09 24 73 S	09 24 73 %C	09 24 73 ALGAL UNITS PER ML
PEDIASTRUM DUPLEX										
V. RETICULATUM ?	COL									X
PEDIASTRUM TETRAS										
V. TETRACDON	COL								0.3	15
PENNATE DIATOM	CEL		1.4	9					2.4	124
PERIDINIUM PUSILLUM	CEL						X			
RAPHIDIOPSIS CURVATA	FIL								15.0	789
RHIZOSOLENIA	CEL									X
SCENEDESMUS ABUNDANS	COL					0.9	18		0.3	15
SCENEDESMUS ARMATUS	COL						X			
SCENEDESMUS ARMATUS										
V. BICAUDATUS	COL									X
SCENEDESMUS BIJUGA	CCL						X			X
SCENEDESMUS BRASILIENSIS	COL									X
SCENEDESMUS DENTICULATUS	COL								0.3	15
SCENEDESMUS DENTICULATUS										
V. LINEARIS	COL					0.9	18			
SCENEDESMUS DIMORPHUS	COL						X			X
SCENEDESMUS INTERMEDIUS										
V. BICAUDATUS	COL									X
SCENEDESMUS QUADRICAUDA	COL			X						X
SCENEDESMUS SPP.	COL								2.1	108
SCHROEDERIA SETIGERA	CEL								0.3	15
SYNEDRA ? #2	CEL								1.5	77
SYNEDRA #1	CEL									X
SYNEDRA RADIANS	CEL	4	2.6	17						
TETRAEDRON	CEL					0.9	18			
TETRAEDRON GRACILE	CEL								0.3	15
TETRAEDRON MINIMUM										
V. SCROBICULATUM	CEL									X
TETRAEDRON QUADRICUSPIDATUM ?	CEL									X
TETRAEDRON TRIGONUM										
V. GRACILE	CEL								0.3	15
TOTAL				645			2103			5255

LAKE NAME: HIGH ROCK LAKE
STORET NUMBER: 3706

NYGAARD TROPHIC STATE INDICES

DATE	03 24 73	07 11 73	09 19 73
MYXOPHYCEAN	01/0 E	3.00 E	9.00 E
CHLOROPHYCEAN	04/0 E	6.00 E	15.0 E
EUGLENOPHYTE	0.20 ?	0.41 E	0.25 E
DIATOM	0.44 E	0.35 E	0.86 E
COMPOUND	10/0 E	15.0 E	36.0 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	03 24 73	07 11 73	09 19 73
GENUS	03	20	14
SPECIES	00	06	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE		03 24 73	07 11 73	09 19 73
AVERAGE DIVERSITY	H	1.99	3.10	1.92
NUMBER OF TAXA	S	23.00	75.00	49.00
NUMBER OF SAMPLES COMPOSITED	M	4.00	4.00	4.00
MAXIMUM DIVERSITY	MAXH	4.52	6.23	5.61
TOTAL DIVERSITY	D	1582.05	30020.40	32601.60
TOTAL NUMBER OF INDIVIDUALS/ML	N	795.00	9684.00	16980.00
EVENESS COMPONENT	J	0.44	0.50	0.34
MEAN NUMBER OF INDIVIDUALS/TAXA	L	34.57	129.12	346.53
NUMBER/ML OF MOST ABUNDANT TAXON	K	477.00	4652.00	11637.00

LAKE NAME: HIGH ROCK LAKE CONTINUED
STORET NUMBER: 3706

TAXA	FORM	03 24 73 S	03 24 73 %C	03 24 73 ALGAL UNITS PER ML	07 11 73 S	07 11 73 %C	07 11 73 ALGAL UNITS PER ML	09 19 73 S	09 19 73 %C	09 19 73 ALGAL UNITS PER ML
ACHNANTHES	CEL						X			
ACHNANTHES MICROCEPHALA	CEL									X
ANABAENA #1	FIL									X
ANABAENA #2	FIL									X
ANABAENA SPP.	FIL					1.8	179			
ANABAENOPSIS PHILIPPINENSIS	FIL							5	1.5	247
ANKISTRODESMUS	CEL	4	13.3	106		0.2	23			X
ASTERICNELLA FORMOSA	CEL			X			X			
ATTHEYA	CEL						X			
CERATIUM HIRUNDINELLA	CEL						X			
CERATIUM HIRUNDINELLA F. BRACHYCERAS	CEL						X			
CHLORELLA VULGARIS ?	CEL					3.2	306			
CHLOROGCNIUM	CEL									X
CLOSTERIUM #1	CEL					0.1	8			
CLOSTERIUM #2	CEL									X
COCCCID COLONY	COL			X						
COELASTRUM SPHAERICUM ?	COL						X			
CCSMARIUM	CEL						X			
CRUCIGENIA TETRAPEDIA	COL									X
CRYPTOMONAS	CEL					0.9	84			
CYANOPHYTAN FILAMENT #1	FIL							3	4.4	740
CYANOPHYTAN FILAMENT #2	FIL					1.2	120			
CYCLOTELLA STELLIGERA	CEL	3	8.9	71	3	1.7	165		0.7	123
CYMBELLA	CEL			X			X			
CYMBELLA VENTRICCSA ?	CEL			X						
DACTYLOCOCCOPSIS	CEL									X
DICTYOSPHAERIUM PULCHELLUM	COL			X						
DINOFLAGELLATE #1	CEL		2.3	18					0.2	41
DINOFLAGELLATE #2	CEL					0.1	8			X
ELAKATCTHRIX GELATINOSA	COL						X			
EUGLENA	CEL						X			X

LAKE NAME: HIGH ROCK LAKE CONTINUED
STORET NUMBER: 3706

TAXA	FORM	03 24 73 S	03 24 73 %C	03 24 73 ALGAL UNITS PER ML	07 11 73 S	07 11 73 %C	07 11 73 ALGAL UNITS PER ML	09 19 73 S	09 19 73 %C	09 19 73 ALGAL UNITS PER ML
EUGLENA #1	CEL					0.1	8			
EUGLENA ACUS	CEL					0.3	28			
EUGLENA GRACILIS	CEL						X			
EUGLENA KLEBSII	CEL						X			
FILAMENT	FIL		4.4	35						
FLAGELLATES	CEL	1	60.0	477	4	3.6	346	2	10.2	1727
FRAGILARIA CROTONENSIS	CEL			X			X			
FRANCEIA	CEL									X
FRUSTULIA RHOMBOIDES V. SAXONICA	CEL						X			
GLENODINIUM PENARDI	CEL					0.3	28			
GYMNODINIUM	CEL					0.3	28			
GYROSIGMA	CEL			X						
LEPOCINCLIS	CEL						X			
LYNGBYA	FIL					1.9	180		0.7	123
LYNGBYA LIMNETICA	FIL				3	3.2	306			
MELOSIRA #3	CEL								0.5	82
MELOSIRA #4	CEL									X
MELOSIRA DISTANS	CEL			X		0.8	75		0.5	82
MELOSIRA GRANULATA V. ANGUSTISSIMA	CEL			X	1	2.1	204		0.5	82
MELOSIRA GRANULATA V. ANGUSTISSIMA F. SPIRALIS	CEL						X			
MELOSIRA VARIANS	CEL			X			X			
MERISMOPEDIA TENUISSIMA	COL					0.6	61		1.9	329
MESOSTIGMA	CEL					0.1	8		1.5	247
MICROCYSTIS INCERTA	COL					8.9	862			
NAVICULA	CEL						X			
NAVICULA #1	CEL			X						
NAVICULA #2	CEL			X			X			X
NAVICULA #3	CEL			X			X			
NAVICULA #4	CEL									X

LAKE NAME: HIGH ROCK LAKE CONTINUED
STORET NUMBER: 3706

TAXA	FORM	03 24 73 S	03 24 73 %C	03 24 73 ALGAL UNITS PER ML	07 11 73 S	07 11 73 %C	07 11 73 ALGAL UNITS PER ML	09 19 73 S	09 19 73 %C	09 19 73 ALGAL UNITS PER ML
NITZSCHIA	CEL						X			
NITZSCHIA #1	CEL	5	4.4	35	5	1.0	98		0.5	82
NITZSCHIA #2	CEL						X			
NITZSCHIA ACICULARIS	CEL					0.5	46			
NITZSCHIA SPP.	CEL								0.7	123
OSCILLATORIA	FIL		2.3	18	2	10.0	973			
OSCILLATORIA LIMNETICA	FIL								4.4	740
PANDORINA MORUM	COL						X			
PEDIASTRUM BIRADIATUM										
V. LONGECORNUTUM	COL					0.1	8			
PEDIASTRUM DUPLEX										
V. RETICULATUM	COL						X			
PEDIASTRUM TETRAS										
V. TETRAODON	COL						X			
PENNATE DIATOMS	CEL				5	4.0	389			
PHACUS	CEL						X			X
PHACUS LONGICAUDA	CEL						X			
PHAGUS PYRUM	CEL									X
PINNULARIA	CEL						X			
PLANKTOSPHAERIA ? GELATINOSA	COL						X			
RAPHIDIOPSIS CURVATA	FIL				2	48.0	4652			
RAPHIDIOPSIS CURVATA ?	FIL							1	68.5	11637
SCENEDESMUS #1	COL			X						
SCENEDESMUS #2	COL					0.1	8			
SCENEDESMUS #3	COL									X
SCENEDESMUS #4	COL								0.2	41
SCENEDESMUS ABUNDANS	COL					0.2	15			
SCENEDESMUS ARMATUS										
V. BICAUDATUS	COL									X
SCENEDESMUS BIJUGA	COL					0.1	8			
SCENEDESMUS DENTICULATUS	COL						X			X
SCENEDESMUS DIMORPHUS	COL			X			X			X

LAKE NAME: HIGH ROCK LAKE
STORET NUMBER: 3706

CONTINUED

TAXA	FORM	03 24 73 S	03 24 73 %C	03 24 73 ALGAL UNITS PER ML	07 11 73 S	07 11 73 %C	07 11 73 ALGAL UNITS PER ML	09 19 73 S	09 19 73 %C	09 19 73 ALGAL UNITS PER ML
SCENEDESMUS INTERMEDIUS	COL					0.9	84		0.2	41
SCENEDESMUS INTERMEDIUS V. BICAUDATUS	COL						X			X
SCENEDESMUS OPOLIENSIS	COL					0.2	23			
SCENEDESMUS PROTUBERANS	COL									X
SCENEDESMUS QUADRICAUDA	COL					1.7	167			
SCHROEDERIA SETIGERA	CEL					0.2	15			
STAURASTRUM	CEL						X			
STAURONEIS	CEL						X			
STEPHANODISCUS	CEL							4	2.4	411
SURIRELLA	CEL						X			
SYNEDRA	CEL					0.9	84			
SYNEDRA PULCHELLA	CEL						X			
SYNEDRA RUMPENS	CEL									X
SYNEDRA ULNA	CEL						X			X
TABELLARIA FENESTRATA	CEL					0.1	8			
TETRAEDRON	CEL									X
TETRAEDRON HASTATUM	CEL									X
TETRAEDRON MINIMUM V. SCROBICULATUM	CEL									X
TETRAEDRON MUTICUM	CEL									X
TRACHELOMONAS	CEL					0.6	56			
TRACHELOMONAS #1	CEL					0.1	8			X
TRACHELOMONAS #2	CEL	2	4.4	35		0.2	15			X
TRACHELOMONAS #3	CEL								0.5	82
TOTAL				795			9684			16980

LAKE NAME: HIWASSEE LAKE
STORET NUMBER: 3707

NYGAARD TROPHIC STATE INDICES

DATE	06 01 73	08 23 73	10 26 73
MYXOPHYCEAN	05/0 E	4.00 E	9.00 E
CHLOROPHYCEAN	01/0 E	1.00 E	3.00 E
EUGLENOPHYTE	0/06 ?	0/05 ?	0/12 ?
DIATOM	0.22 ?	0.50 E	0.86 E
COMPOUND	08/0 E	9.00 E	18.0 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	06 01 73	08 23 73	10 26 73
GENUS	08	01	04
SPECIES	03	00	03

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE		06 01 73	08 23 73	10 26 73
AVERAGE DIVERSITY	H	2.58	3.27	2.91
NUMBER OF TAXA	S	25.00	26.00	38.00
NUMBER OF SAMPLES COMPOSITED	M	6.00	6.00	6.00
MAXIMUM DIVERSITY	MAXH	4.64	4.70	5.25
TOTAL DIVERSITY	D	23170.98	4241.19	4754.94
TOTAL NUMBER OF INDIVIDUALS/ML	N	8981.00	1297.00	1634.00
EVENESS COMPONENT	J	0.56	0.70	0.55
MEAN NUMBER OF INDIVIDUALS/TAXA	L	359.24	49.88	43.00
NUMBER/ML OF MOST ABUNDANT TAXON	K	4176.00	269.00	615.00

LAKE NAME: HIWASSEE LAKE
STORET NUMBER: 3707

CONTINUED

TAXA	FORM	06 01 73 S	06 01 73 %C	06 01 73 ALGAL UNITS PER ML	08 23 73 S	08 23 73 %C	08 23 73 ALGAL UNITS PER ML	10 26 73 S	10 26 73 %C	10 26 73 ALGAL UNITS PER ML
ANABAENA	FIL			X						
ANABAENA CIRCINALIS ?	FIL				4	5.2	67			X
ANABAENA LEVANDERI	FIL							2	9.8	160
ANABAENA LEVANDERI ?	FIL				1	17.4	226			
APHANIZOMENON FLOS-AQUAE	FIL									X
APHANOTHECE	CEL						X			
ASTERIONELLA FORMOSA	CEL	4	0.4	34					5.2	85
ATTHEYA	CEL									X
CERATIUM HIRUNDINELLA	CEL								0.5	8
CERATIUM HIRUNDINELLA F. CARINTHIACEUM	CEL						X			
CHLAMYDOMONAS	CEL									X
CHLOROPHYTAN COCCOID CELL	CEL		0.9	79		12.9	167			
CHROOCOCCUS	COL									X
COCCONEIS ?	CEL						X			
COCCONEIS DIMINUTA	CEL		0.1	12						
COELOSPHAERIUM	COL								0.5	8
COSMARIUM	CEL					2.5	33			
CRYPTOMONAS	CEL	5	0.3	23						
CRYPTOMONAS OVATA	CEL					3.9	50		1.9	31
CYANOPHYTAN COCCOID CELL	CEL	5	8.8	793						
CYCLOTELLA MICHIGANIANA	CEL									X
CYCLOTELLA STELLIGERA	CEL		1.8	160			X	1	37.6	615
CYMBELLA	CEL					1.3	17			
CYMBELLA VENTRICOSA	CEL			X						
DICTYOSPHAERIUM	COL									X
DINOBRYON BAVARICUM	CEL								0.9	15
DINOBRYON SERTULARIA	CEL									X
DINOBRYON SOCIALE ?	CEL					5.2	67			
DINOFLAGELLATE #1	CEL		0.1	12						
FLAGELLATE	CEL		0.9	84						
FLAGELLATE #1	CEL		0.6	57	5	11.6	151	4	13.7	224

LAKE NAME: HIWASSEE LAKE
STORET NUMBER: 3707

CONTINUED

TAXA	FORM	06 01 73 S	06 01 73 %C	06 01 73 ALGAL UNITS PER ML	08 23 73 S	08 23 73 %C	08 23 73 ALGAL UNITS PER ML	10 26 73 S	10 26 73 %C	10 26 73 ALGAL UNITS PER ML
FLAGELLATE #9	CEL			X						
FRUSTULIA RHOMBOIDES	CEL									X
GLENODINIUM	CEL									X
GLOEOCYSTIS	COL				2	20.7	268			
GYMNODINIUM NEGLECTUM	CEL									X
KIRCHNERIELLA	CEL						X			
KIRCHNERIELLA ?	CEL								0.5	8
LYNGBYA LIMNETICA	FIL		0.9	84						
LYNGBYA SUBTILIS	FIL						X		3.4	56
MALLOMONAS	CEL				3	10.3	134		1.5	25
MELOSIRA #1	CEL					5.2	67	3	15.9	259
MELOSIRA #2	CEL						X			
MELOSIRA AMBIGUA	CEL									X
MELOSIRA DISTANS ?	CEL			X						
MERISMOPEDIA	COL									X
MICROCYSTIS	COL		0.5	42					0.5	8
NAVICULA CRYPTOCEPHALA ?	CEL			X						
NEPHROCYTIUM ?	CEL			X						
NITZSCHIA	CEL			X						
OSCILLATORIA	FIL	4	46.5	4176						
PENNATE DIATOM	CEL					2.5	33		0.5	8
PENNATE DIATOM #1	CEL						X			
PENNATE DIATOM #2	CEL						X			
PERIDINIUM	CEL			X						
PERIDINIUM INCONSPICUUM	CEL						X			X
RAPHIDIOPSIS CURVATA	FIL									X
RHIZOSOLENIA	CEL					1.3	17			
SCENEDESMUS QUADRICAUDA	COL								0.5	8
STAURASTRUM	CEL									X
STEPHANODISCUS	CEL									X
SYNEDRA #1	CEL						X			X
SYNEDRA RADIANS	CEL	1	6.3	563						

LAKE NAME: HIWASSEE LAKE
STORET NUMBER: 3707

CONTINUED

TAXA	FORM	06 01 73 S	06 01 73 %C	06 01 73 ALGAL UNITS PER ML	08 23 73 S	08 23 73 %C	08 23 73 ALGAL UNITS PER ML	10 26 73 S	10 26 73 %C	10 26 73 ALGAL UNITS PER ML
SYNEDRA RUMPENS	CEL									X
SYNEDRA RUMPENS V. FAMILIARIS	CEL	2	10.2	919						
SYNEDRA ULNA	CEL	1	14.0	1253				5	3.1	50
SYNEDRA ULNA V. OXYRHYNCHUS	CEL						X			
SYNURA	CEL		0.9	84					0.5	8
SYNURA UVELLA	CEL									X
TABELLARIA FENESTRATA	CEL	3	6.7	606			X		3.5	58
TOTAL				8981			1297			1634

LAKE NAME: LAKE JAMES
STORET NUMBER: 3708

NYGAARD TROPHIC STATE INDICES

DATE	03 24 73	07 05 73	09 24 73
MYXOPHYCEAN	01/0 E	1.50 E	8.00 E
CHLOROPHYCEAN	02/0 E	2.50 E	5.00 E
EUGLENOPHYTE	0/03 ?	0/08 ?	0.08 ?
DIATOM	0.43 E	0.62 E	0.67 E
COMPOUND	06/0 E	6.50 E	16.0 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	03 24 73	07 05 73	09 24 73
GENUS	02	01	16
SPECIES	00	00	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE		03 24 73	07 05 73	09 24 73
AVERAGE DIVERSITY	H	2.59	2.23	3.79
NUMBER OF TAXA	S	17.00	33.00	30.00
NUMBER OF SAMPLES COMPOSITED	M	5.00	5.00	5.00
MAXIMUM DIVERSITY	MAXH	4.09	5.04	4.91
TOTAL DIVERSITY	D	2494.17	4228.08	22429.22
TOTAL NUMBER OF INDIVIDUALS/ML	N	963.00	1896.00	5918.00
EVENESS COMPONENT	J	0.63	0.44	0.77
MEAN NUMBER OF INDIVIDUALS/TAXA	L	56.65	57.45	197.27
NUMBER/ML OF MOST ABUNDANT TAXON	K	482.00	821.00	1371.00

LAKE NAME: LAKE JAMES
STORET NUMBER: 3708

CONTINUED

TAXA	FORM	03 24 73 S	03 24 73 %C	03 24 73 ALGAL UNITS PER ML	07 05 73 S	07 05 73 %C	07 05 73 ALGAL UNITS PER ML	09 24 73 S	09 24 73 %C	09 24 73 ALGAL UNITS PER ML
ACHNANTHES COARCTATA	CEL		1.2	12						
ANABAENA #1	FIL					0.6	12			
ANABAENA #2	FIL				1	33.1	628	5	6.0	353
ANKISTRODESMUS	CEL						X			
ANKISTRODESMUS FALCATUS	CEL		2.6	25						
ASTERIONELLA FORMOSA	CEL	2	11.5	111			X			
CERATIUM HIRUNDINELLA F. BRACHYCERAS	CEL					0.6	12			
CERATIUM HIRUNDINELLA F. CARINTHIACEUM	CEL								0.7	39
CHLAMYDOMONAS	CEL					0.6	12		0.7	39
CHLAMYDOMONAS SNOWII	CEL									X
CHLORELLA	CEL								0.7	39
CHLOROPHYTAN FLAGELLATE	CEL						X			
CHROOCOCCUS #1	COL							2	9.9	588
CHROOCOCCUS #3	COL								6.0	353
CHROOCOCCUS MINOR ?	COL								9.3	549
CLOSTERIUM	CEL						X			
COELASTRUM CAMBRICUM	COL						X			
CRYPTOMONAS	CEL				4	4.5	85		2.7	157
CRYPTOMONAS EROSA	CEL	5	3.8	37						
CYCLOTELLA	CEL								2.7	157
CYCLOTELLA STELLIGERA	CEL	4	9.0	87		1.3	24			
DICTYOSPHAERIUM ?	COL								0.7	39
DINOBRYON DIVERGENS	CEL						X			
DINOBRYON SERTULARIA	CEL		1.2	12						
DINOFLAGELLATE	CEL									X
EUGLENA	CEL								1.3	78
FLAGELLATE	CEL		3.8	37						
FLAGELLATE #1	CEL							4	9.9	588
FLAGELLATE #9	CEL						X			
FLAGELLATES	CEL				5	4.5	85			

LAKE NAME: LAKE JAMES
STORET NUMBER: 3708

CONTINUED

TAXA	FORM	03 24 73 S	03 24 73 %C	03 24 73 ALGAL UNITS PER ML	07 05 73 S	07 05 73 %C	07 05 73 ALGAL UNITS PER ML	09 24 73 S	09 24 73 %C	09 24 73 ALGAL UNITS PER ML
GLENODINIUM ACICULIFERUM	CEL									X
GYMNODINIUM	CEL		1.2	12						
GYMNODINIUM NEGLECTUM	CEL								2.7	157
KIRCHNERIELLA	CEL		1.2	12					2.7	157
LYNGBYA #2	FIL								2.7	157
LYNGBYA LIMNETICA	FIL							1	23.2	1371
MALLOMONAS	CEL								0.7	39
MELOSIRA #1	CEL	1	50.1	482	3	7.0	133		0.7	39
MELOSIRA DISTANS	CEL					1.3	24			
MELOSIRA GRANULATA V. ANGUSTISSIMA	CEL					1.3	24			
MELOSIRA ITALICA	CEL	3	7.7	74			X			
MICROCYSTIS INCERTA	COL					1.3	24			
NAVICULA	CEL								2.0	118
NAVICULA #1	CEL						X			
NAVICULA #2	CEL						X			
NITZSCHIA	CEL					0.6	12			
NITZSCHIA ACICULARIS	CEL			X						
NITZSCHIA PALEA ?	CEL			X						
OSCILLATORIA	FIL								0.7	39
OSCILLATORIA ?	FIL			X						
PANDORINA	COL						X			
PENNATE DIATOM #1	CEL		3.8	37						
PERIDINIUM BEROLINENSE ?	CEL						X			
PERIDINIUM INCONSPICUUM ?	CEL									X
PERIDINIUM WISCONSINENSE	CEL						X			
RAPHIDIOPSIS ? CURVATA	FIL							3	9.3	549
SCENEDESMUS	COL								1.3	78
SCENEDESMUS DENTICULATUS	COL						X			
SCENEDESMUS DENTICULATUS V. LINEARIS	COL						X			
SELENASTRUM	CEL									X

LAKE NAME: LAKE JAMES
STORET NUMBER: 3708

CONTINUED

TAXA	FORM	03 24 73 S	03 24 73 %C	03 24 73 ALGAL UNITS PER ML	07 05 73 S	07 05 73 %C	07 05 73 ALGAL UNITS PER ML	09 24 73 S	09 24 73 %C	09 24 73 ALGAL UNITS PER ML
STAURASTRUM	CEL						X			X
SYNEDRA	CEL						X			
SYNEDRA RUMPENS ?	CEL			X			X		3.3	196
TABELLARIA FENESTRATA	CEL		2.6	25	2	43.3	821		0.7	39
TABELLARIA FLOCCULOSA	CEL						X			
TETRAEDRON MINIMUM										
V. SCROBICULATUM	CEL						X			
TOTAL				963			1896			5918

LAKE NAME: LAKE JUNALUSKA
STORET NUMBER: 3709

NYGAARD TROPHIC STATE INDICES

DATE	07 05 73	09 20 73
MYXOPHYCEAN	02/0 E	1.50 E
CHLOROPHYCEAN	04/0 E	4.00 E
EUGLENOPHYTE	0/06 ?	0.18 ?
DIATOM	0.40 E	0.50 E
COMPOUND	10/0 E	7.00 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	07 05 73	09 20 73
GENUS	03	08
SPECIES	00	02

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE		07 05 73	09 20 73
AVERAGE DIVERSITY	H	3.32	2.06
NUMBER OF TAXA	S	27.00	25.00
NUMBER OF SAMPLES COMPOSITED	M	1.00	1.00
MAXIMUM DIVERSITY	MAXH	4.75	4.64
TOTAL DIVERSITY	D	2885.08	12399.14
TOTAL NUMBER OF INDIVIDUALS/ML	N	869.00	6019.00
EVENESS COMPONENT	J	0.70	0.44
MEAN NUMBER OF INDIVIDUALS/TAXA	L	32.19	240.76
NUMBER/ML OF MOST ABUNDANT TAXON	K	290.00	3023.00

LAKE NAME: LAKE JUNALUSKA CONTINUED
STORET NUMBER: 3709

TAXA	FORM	07 05 73 S	07 05 73 %C	07 05 73 ALGAL UNITS PER ML	09 20 73 S	09 20 73 %C	09 20 73 ALGAL UNITS PER ML
ACHNANTHES LANCEOLATA ?	CEL			X			
ANABAENA	FIL						X
ANKISTRODESMUS FALCATUS	CEL		2.1	18			X
APHANIZOMENON FLOS-AQUAE	FIL				3	27.0	1626
ASTERIONELLA FORMOSA	CEL		1.0	9			
CHLORELLA VULGARIS	CEL					1.3	76
CHRYSOPHYTAN COCCOID CELL	CEL					0.4	25
CHRYSOPHYTAN FLAGELLATE	CEL						X
COELASTRUM	COL		1.0	9			
COSMARIUM	CEL						X
CRYPTOMONAS	CEL		2.1	18	5	2.1	127
CYCLOTELLA STELLIGERA	CEL		2.1	18			
CYST	CEL		9.4	82			
DIATOMA ?	CEL			X			
DINOBRYON BAVARICUM	CEL	4	9.4	82			
EUGLENA ACUS	CEL						X
EUNOTIA EXIGUA ?	CEL		1.0	9			
FLAGELLATE #1	CEL			X	2	12.2	737
FLAGELLATE #9	CEL					0.8	51
FLAGELLATES	CEL		3.1	27			
GLOEOCYSTIS	COL				1	50.2	3023
GOLENKINIA RADIATA	CEL		2.1	18			
LYNGBYA	FIL		2.1	18			
MALLOMONAS	CEL		1.0	9			
MELOSIRA AMBIGUA	CEL						X
MELOSIRA GRANULATA ?	CEL	1	33.4	290			
MELOSIRA GRANULATA V. ANGUSTISSIMA	CEL			X			
MELOSIRA ITALICA ?	CEL	2	13.6	118			
MICROCYSTIS INCERTA	COL			X	4	2.1	127
NAVICULA	CEL			X		0.4	25
NITZSCHIA FILIFORMIS ?	CEL			X			

LAKE NAME: LAKE JUNALUSKA
STORET NUMBER: 3709

CONTINUED

TAXA	FORM	07 05 73 S	07 05 73 %C	07 05 73 ALGAL UNITS PER ML	09 20 73 S	09 20 73 %C	09 20 73 ALGAL UNITS PER ML
PANDORINA MORUM	COL			X			
PEDIASTRUM DUPLEX							
V. GRACILIMUM	COL						X
PEDIASTRUM OBTUSUM	COL						X
PEDIASTRUM TETRAS							
V. TETRAODON	COL		1.0	9			
PENNATE DIATOM #1	CEL	5	7.2	63			
PENNATE DIATOM #2	CEL		1.0	9			
SCENEDESMUS BIJUGA	COL					1.3	76
SCENEDESMUS OPOLIENSIS	COL					0.4	25
SCENEDESMUS QUADRICAUDA	COL					0.4	25
STAURASTRUM	CEL						X
SYNEDRA	CEL		2.1	18			
SYNEDRA ACUS	CEL	3	5.2	45			X
SYNURA UVELLA	CEL					0.4	25
TETRAEDRON MINIMUM	CEL					0.8	51
TRACHELOMONAS	CEL						X
TOTAL				869			6019

LAKE NAME: LOOKOUT SHOALS LAKE
STORET NUMBER: 3710

NYGAARD TROPHIC STATE INDICES

DATE	03 30 73	07 07 73	09 24 73
MYXOPHYCEAN	01/0 E	06/0 E	09/0 E
CHLOROPHYCEAN	02/0 E	10/0 E	12/0 E
EUGLENOPHYTE	0/03 ?	0.06 ?	0.05 ?
DIATOM	0.50 E	0.27 ?	0.33 E
COMPOUND	07/0 E	20/0 E	25/0 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	03 30 73	07 07 73	09 24 73
GENUS	01	14	10
SPECIES	00	00	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE		03 30 73	07 07 73	09 24 73
AVERAGE DIVERSITY	H	2.40	3.95	3.15
NUMBER OF TAXA	S	18.00	36.00	39.00
NUMBER OF SAMPLES COMPOSITED	M	2.00	2.00	2.00
MAXIMUM DIVERSITY	MAXH	4.17	5.17	5.29
TOTAL DIVERSITY	D	2241.60	8733.45	19848.15
TOTAL NUMBER OF INDIVIDUALS/ML	N	934.00	2211.00	6301.00
EVENESS COMPONENT	J	0.58	0.76	0.60
MEAN NUMBER OF INDIVIDUALS/TAXA	L	51.89	61.42	161.56
NUMBER/ML OF MOST ABUNDANT TAXON	K	475.00	318.00	1781.00

LAKE NAME: LOOKOUT SHOALS LAKE CONTINUED
STORET NUMBER: 3710

TAXA	FORM	03 30 73 S	03 30 73 %C	03 30 73 ALGAL UNITS PER ML	07 07 73 S	07 07 73 %C	07 07 73 ALGAL UNITS PER ML	09 24 73 S	09 24 73 %C	09 24 73 ALGAL UNITS PER ML
ACHNANTHES	CEL						X			
ACHNANTHES MICROCEPHALA	CEL								0.4	27
AMPHORA	CEL		1.6	15						
ANABAENA	FIL								0.4	27
ANABAENA HELICOIDEA	FIL					1.8	40			
ANKISTRODESMUS	CEL					0.9	20			
ANKISTRODESMUS FALCATUS	CEL			X						
APHANOCAPSA	CEL									X
APHANOTHECE	CEL									X
ASTERIONELLA FORMOSA	CEL			X						
CERATIUM HIRUNDINELLA										
F. BRACHYCERAS	CEL					1.8	40			
CHLAMYDOMONAS	CEL					9.0	200			
CHROOCOCCUS	COL							2	19.6	1233
CHRYSOCOCCUS ?	COL								1.3	82
COCCONEIS	CEL						X			
COELASTRUM ?	COL									X
CRUCIGENIA	COL					0.9	20			
CRUCIGENIA QUADRATA	COL						X			
CRYPTOMONAS EROSA	CEL		1.6	15		7.2	159			
CYCLOTELLA	CEL			X						
CYCLOTELLA GLOMERATA ?	CEL								2.2	137
CYCLOTELLA STELLIGERA	CEL				5	14.4	318			
CYMBELLA	CEL		1.6	15						
CYMBELLA ? #1	CEL						X			
CYMBELLA TUMIDA	CEL									X
CYMBELLA VENTRICOSA	CEL			X		1.8	40			
DINOBRYON	CEL									X
DINOFLAGELLATE CYST	CEL				2	9.0	200			
EUGLENA	CEL					2.7	60			
EUNOTIA MAJOR	CEL								0.4	27
FLAGELLATE	CEL	5	3.3	31	4	10.8	238			

LAKE NAME: LOOKOUT SHOALS LAKE CONTINUED
STORET NUMBER: 3710

TAXA	FORM	03 30 73 S	03 30 73 %C	03 30 73 ALGAL UNITS PER ML	07 07 73 S	07 07 73 %C	07 07 73 ALGAL UNITS PER ML	09 24 73 S	09 24 73 %C	09 24 73 ALGAL UNITS PER ML
FLAGELLATE #1	CEL								1.7	110
FRAGILARIA	CEL					6.3	139			
GOLENKINIA	CEL					0.9	20			
GOMPHONEMA PARVULUM	CEL						X			X
GYMNODINIUM	CEL								0.9	55
KIRCHNERIELLA	CEL					9.0	200	5	6.1	384
KIRCHNERIELLA LUNARIS	CEL									X
LEPOCINCLIS	CEL									X
LYNGBYA	FIL	4	13.2	123						
LYNGBYA #1	FIL					1.8	40			
LYNGBYA SUBTILIS	FIL				3	9.9	218	3	10.4	658
MALLOMONAS	CEL	3	4.9	46					0.9	55
MELOSIRA	CEL	2	14.8	138	1	3.6	79			
MELOSIRA AMBIGUA	CEL								1.3	82
MELOSIRA DISTANS ?	CEL									X
MELOSIRA GRANULATA V. ANGUSTISSIMA	CEL	1	50.9	475						
MELOSIRA ISLANDICA	CEL						X			
MELOSIRA VARIANS ?	CEL			X						
MERISMOPEDIA TENUISSIMA	COL						X		4.8	301
MICROCYSTIS	COL					0.9	20			
MICROCYSTIS INCERTA	COL							4	15.7	987
NAVICULA #1	CEL					2.7	60			X
NAVICULA #2	CEL						X			
NAVICULA #3	CEL								2.6	164
NITZSCHIA	CEL									X
NITZSCHIA HOLSATICA	CEL						X			
OSCILLATORIA PRINCEPS	FIL								0.4	27
PEDIASTRUM BIRADIATUM	COL						X			
PEDIASTRUM BIRADIATUM V. LONGECORNUTUM	COL									X
PEDIASTRUM DUPLEX	COL									X

LAKE NAME: LOOKOUT SHOALS LAKE CONTINUED
STORET NUMBER: 3710

TAXA	FORM	03 30 73 S	03 30 73 %C	03 30 73 ALGAL UNITS PER ML	07 07 73 S	07 07 73 %C	07 07 73 ALGAL UNITS PER ML	09 24 73 S	09 24 73 %C	09 24 73 ALGAL UNITS PER ML
PENNATE DIATOM #1	CEL			X						
PENNATE DIATOM #2	CEL		1.6	15						
PENNATE DIATOM #3	CEL		3.3	31						
RAPHIDIOPSIS	FIL						X	1	28.3	1781
SCENEDESMUS ABUNDANS	COL								0.9	55
SCENEDESMUS DIMORPHUS	COL									X
SCENEDESMUS DISPAR	COL									X
SCENEDESMUS INTERMEDIUS	COL									X
SCENEDESMUS QUADRICAUDA	COL		1.6	15			X		0.4	27
SCENEDESMUS QUADRICAUDA V. LONGISPINA F. ASYMMETRICUS	COL					0.9	20			
SELENASTRUM	CEL					1.8	40			
SYNEDRA	CEL		1.6	15						
SYNEDRA #1	CEL					0.9	20			
SYNEDRA RUMPENS	CEL								0.4	27
SYNEDRA ULNA	CEL						X			X
TETRAEDRON	CEL					0.9	20		0.9	55
TETRAEDRON MINIMUM	CEL									X
TOTAL				934			2211			6301

LAKE NAME: MOUNT ISLAND LAKE
STORET NUMBER: 3711

NYGAARD TROPHIC STATE INDICES

DATE	04 02 73	07 10 73	09 19 73
MYXOPHYCEAN	02/0 E	1.33 E	2.00 E
CHLOROPHYCEAN	01/0 E	3.00 E	2.40 E
EUGLENOPHYTE	0.33 E	0/13 ?	0/22 ?
DIATOM	0.75 E	0.50 E	0.53 E
COMPOUND	10/0 E	6.33 E	6.20 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	04 02 73	07 10 73	09 19 73
GENUS	01	03	10
SPECIES	00	00	02

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE		04 02 73	07 10 73	09 19 73
AVERAGE DIVERSITY	H	2.07	3.69	3.94
NUMBER OF TAXA	S	20.00	39.00	68.00
NUMBER OF SAMPLES COMPOSITED	M	3.00	3.00	3.00
MAXIMUM DIVERSITY	MAXH	4.32	5.29	6.09
TOTAL DIVERSITY	D	3986.82	5796.99	9302.34
TOTAL NUMBER OF INDIVIDUALS/ML	N	1926.00	1571.00	2361.00
EVENESS COMPONENT	J	0.48	0.70	0.65
MEAN NUMBER OF INDIVIDUALS/TAXA	L	96.30	40.28	34.72
NUMBER/ML OF MOST ABUNDANT TAXON	K	761.00	246.00	525.00

LAKE NAME: MOUNT ISLAND LAKE CONTINUED
STORET NUMBER: 3711

TAXA	FORM	04 02 73 S	04 02 73 %C	04 02 73 ALGAL UNITS PER ML	07 10 73 S	07 10 73 %C	07 10 73 ALGAL UNITS PER ML	09 19 73 S	09 19 73 %C	09 19 73 ALGAL UNITS PER ML
ACHNANTHES LANCEOLATA V. DUBIA	CEL			X			X			
ANABAENA	FIL						X			
ANABAENA #1	FIL								0.5	11
ANABAENOPSIS ?	FIL						X			
ANKISTRODESMUS ?	CEL					0.6	10			
APHANIZOMENON FLOS-AQUAE	FIL							5	6.6	156
ASTERIONELLA FORMOSA	CEL	4	3.2	61		0.6	10			X
CENTRIC DIATOM	CEL					1.6	25			
CHLORELLA VULGARIS	CEL								10.0	235
CHLOROPHYTAN COCCOID CELL	CEL								0.9	22
CHLOROPHYTAN LUNATE CELLED COLONY	COL								0.5	11
CHROOCOCCUS	COL								0.5	11
CHROOCOCCUS LIMNETICUS ?	COL									X
CLOSTERIOPSIS	CEL			X						
COCCOID CELL	CEL								0.5	11
COCCONEIS	CEL									X
COELASTRUM CAMBRICUM V. INTERMEDIUM	COL								0.5	11
COELASTRUM RETICULATUM ?	COL									X
COSMARIUM	CEL									X
COSMARIUM #1	CEL					6.3	99			
COSMARIUM #2	CEL						X			
CRYPTOMONAS OVATA	CEL							4	8.5	201
CYANOPHYTAN COCCOID CELLED COLONY	COL								0.9	22
CYANOPHYTAN FILAMENT	FIL					0.6	10			
CYANOPHYTAN FILAMENT #1	FIL									X
CYANOPHYTAN FILAMENT #2	FIL									X
CYANOPHYTAN FILAMENT #3	FIL					0.8	12			
CYCLOTELLA MICHIGANIANA ?	CEL									X
CYCLOTELLA STELLIGERA	CEL			X		1.6	25			X
CYMBELLA	CEL			X			X			X

LAKE NAME: MOUNT ISLAND LAKE CONTINUED
STORET NUMBER: 3711

TAXA	FORM	04 02 73 S	04 02 73 %C	04 02 73 ALGAL UNITS PER ML	07 10 73 S	07 10 73 %C	07 10 73 ALGAL UNITS PER ML	09 19 73 S	09 19 73 %C	09 19 73 ALGAL UNITS PER ML
DACTYLOCOCCOPSIS	CEL		1.3	25						
DICTYOSPHAERIUM ?	COL					0.8	12			
DINOBRYON	CEL						X		0.5	11
DINOBRYON BAVARICUM	CEL									X
DINOBRYON CYLINDRICUM	CEL			X						
DIPLONEIS	CEL									X
EUASTRUM DENTICULATUM	CEL									X
FLAGELLATE #1	CEL									X
FLAGELLATE #2	CEL									X
FLAGELLATES	CEL	2	32.5	626	5	14.5	228		4.7	112
FRANCEIA	CEL								0.5	11
GLENODINIUM #1	CEL								0.5	11
LYNGBYA LIMNETICA	FIL							1	22.2	525
MALLOMONAS	CEL									X
MELOSIRA #1	CEL									X
MELOSIRA #2	CEL									X
MELOSIRA #3	CEL									X
MELOSIRA #4	CEL									X
MELOSIRA DISTANS	CEL	5	4.5	86	3	15.3	241		0.9	22
MELOSIRA GRANULATA V. ANGUSTISSIMA	CEL				1	15.7	246			
MELOSIRA GRANULATA V. ANGUSTISSIMA	CEL							2	9.0	213
MELOSIRA ITALICA	CEL	3	17.2	331					5.2	123
MELOSIRA ITALICA ?	CEL				2	11.8	185			
MELOSIRA ITALICA V. TENUISSIMA	CEL	1	39.5	761						
MELOSIRA VARIANS	CEL			X						
NAVICULA #1	CEL			X			X		0.9	22
NAVICULA #2	CEL									X
NAVICULA #3	CEL						X			
NAVICULA #4	CEL								0.5	11

LAKE NAME: MOUNT ISLAND LAKE CONTINUED
STORET NUMBER: 3711

TAXA	FORM	04 02 73 S	04 02 73 %C	04 02 73 ALGAL UNITS PER ML	07 10 73 S	07 10 73 %C	07 10 73 ALGAL UNITS PER ML	09 19 73 S	09 19 73 %C	09 19 73 ALGAL UNITS PER ML
NAVICULA NOTHA	CEL						X			X
NAVICULA PUPULA ?	CEL						X			X
NITZSCHIA	CEL									X
NITZSCHIA #1	CEL			X					0.5	11
NITZSCHIA #2	CEL			X						
OOCYSTIS	CEL					3.9	62			
OPEPHORA MARTYI	CEL									X
OSCILLATORIA	FIL		0.6	12						
PEDIASTRUM DUPLEX										
V. ROTUNDATUM	COL									X
PENNATE DIATOM	CEL					9.4	148		0.5	11
PERIDINIUM ? #1	CEL				4	3.9	62			
PERIDINIUM #2	CEL					2.2	34			
PERIDINIUM CINCTUM	CEL								1.4	33
PERIDINIUM INCONSPICUUM ?	CEL								0.9	22
PERIDINIUM WISCONSINENSE	CEL					2.7	43		3.3	77
RAPHIDIOPSIS	FIL									X
RAPHIDIOPSIS CURVATA	FIL							3	11.3	267
RHIZOSOLENIA ERIENSIS	CEL					0.8	12			
SCENEDESMUS	COL					0.6	10			
SCENEDESMUS #3	COL						X			
SCENEDESMUS ABUNDANS	COL								1.4	33
SCENEDESMUS BIJUGA	COL						X			
SCENEDESMUS DENTICULATUS	COL									X
SCENEDESMUS DIMORPHUS	COL									X
SCENEDESMUS INTERMEDIUS	COL								0.5	11
SCENEDESMUS QUADRICAUDA	COL					0.8	12			
SCENEDESMUS QUADRICAUDA ?	COL									X
SCENEDESMUS SPP.	COL								1.9	45
STAURASTRUM CUSPIDATUM ?										
V. DIVERGENS	CEL									X
STAURASTRUM CUSPIDATUM										
V. DIVERGENS	CEL						X			

LAKE NAME: MOUNT ISLAND LAKE CONTINUED
STORET NUMBER: 3711

TAXA	FORM	04 02 73 S	04 02 73 %C	04 02 73 ALGAL UNITS PER ML	07 10 73 S	07 10 73 %C	07 10 73 ALGAL UNITS PER ML	09 19 73 S	09 19 73 %C	09 19 73 ALGAL UNITS PER ML
STAURASTRUM PARADOXUM V. PARVUM	CEL								1.4	33
STAURASTRUM TETRACERUM	CEL									X
STEPHANODISCUS	CEL		0.6	12						
SURIRELLA	CEL						X			
SYNEDRA	CEL						X		1.4	33
SYNEDRA #1	CEL			X		3.6	56		0.9	22
SYNEDRA #2	CEL									X
SYNEDRA RUMPENS V. MENEGHINIANA	CEL					0.6	10			
SYNEDRA ULNA V. ?	CEL			X						
TABELLARIA FENESTRATA	CEL								0.5	11
TETRADESMUS	COL						X			
TETRAEDRON LOBULATUM	CEL									X
TETRAEDRON MINIMUM	CEL					1.2	19			
TRACHELOMONAS	CEL		0.6	12						
TREUBARIA	CEL									X
TOTAL				1926			1571			2361

LAKE NAME: NORMAN LAKE
STORET NUMBER: 3713

NYGAARD TROPHIC STATE INDICES

DATE	03 29 73	07 11 73	09 19 73
MYXOPHYCEAN	01/0 E	2.00 E	07/0 E
CHLOROPHYCEAN	03/0 E	4.00 E	06/0 E
EUGLENOPHYTE	0.25 E	0/18 ?	0.15 ?
DIATOM	1.50 E	0.70 E	1.67 E
COMPOUND	11/0 E	8.33 E	20/0 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	03 29 73	07 11 73	09 19 73
GENUS	04	06	08
SPECIES	00	00	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE		03 29 73	07 11 73	09 19 73
AVERAGE DIVERSITY	H	1.98	3.02	2.97
NUMBER OF TAXA	S	18.00	46.00	27.00
NUMBER OF SAMPLES COMPOSITED	M	5.00	5.00	5.00
MAXIMUM DIVERSITY	MAXH	4.17	5.52	4.75
TOTAL DIVERSITY	D	4698.54	7707.04	6462.72
TOTAL NUMBER OF INDIVIDUALS/ML	N	2373.00	2552.00	2176.00
EVENESS COMPONENT	J	0.47	0.55	0.63
MEAN NUMBER OF INDIVIDUALS/TAXA	L	131.83	55.48	80.59
NUMBER/ML OF MOST ABUNDANT TAXON	K	1047.00	1268.00	854.00

LAKE NAME: NORMAN LAKE
STORET NUMBER: 3713

CONTINUED

TAXA	FORM	03 29 73 S	03 29 73 %C	03 29 73 ALGAL UNITS PER ML	07 11 73 S	07 11 73 %C	07 11 73 ALGAL UNITS PER ML	09 19 73 S	09 19 73 %C	09 19 73 ALGAL UNITS PER ML
ANABAENA	FIL						X			X
ANABAENA WISCONSINENSE	FIL					2.4	60	4	5.7	125
ANKISTRODESMUS ?	CEL		0.6	15		0.6	15			
APHANOTHECE CLATHRATA	COL					0.6	15			
ASTERICNELLA FORMOSA	CEL			X		0.6	15			
CERATIUM HIRUNDINELLA	CEL						X			
CHLOROPHYTAN COLONY	COL						X			
CLOSTERIUM	CEL						X			
COELASTRUM RETICULATUM	COL					0.6	15			X
COELASTRUM SPHAERICUM ?	COL					0.6	15			
COSMARIUM	CEL					0.6	15			
CRUCIGENIA TETRAPEDIA	COL					0.6	15			
CYANOPHYTAN COLONY	COL						X			
CYCLOTELLA ?	CEL					3.4	88			
CYCLOTELLA STELLIGERA	CEL		0.6	15	5	4.0	103		3.0	66
CYMBELLA	CEL						X		1.0	21
DACTYLOCOCCOPSIS	CEL							1	39.2	854
DICTYOSPHAERIUM PULCHELLUM	COL						X			
DINOBRYON SERTULARIA	CEL			X						
DINOFLAGELLATE	CEL						X			
EUGLENA	CEL								1.0	21
FLAGELLATES	CEL	1	44.1	1047	1	49.7	1268	2	20.1	438
GOMPHONEMA	CEL						X			
KIRCHNERIELLA CONTORTA	CEL					0.6	15			
LYNGBYA LIMNETICA	FIL					0.6	15		3.0	66
MALLOMONAS	CEL			X		1.1	29			
MELOSIRA DISTANS	CEL	4	6.7	160	2	9.8	250		1.9	42
MELOSIRA GRANULATA										
V. ANGUSTISSIMA	CEL						X			X
MELOSIRA ITALICA	CEL	3	6.7	160			X			X
MELOSIRA ITALICA										
V. TENUISSIMA	CEL	2	36.2	858	4	6.3	162		1.0	21

LAKE NAME: NORMAN LAKE
STORET NUMBER: 3713

CONTINUED

TAXA	FORM	03 29 73 S	03 29 73 %C	03 29 73 ALGAL UNITS PER ML	07 11 73 S	07 11 73 %C	07 11 73 ALGAL UNITS PER ML	09 19 73 S	09 19 73 %C	09 19 73 ALGAL UNITS PER ML
MELOSIRA VARIANS	CEL			X						
MERISMOPEDIA TENUISSIMA	COL								1.0	21
MICROCYSTIS AERUGINOSA	COL									X
NAVICULA	CEL		2.4	58						
NAVICULA ? #2	CEL						X			
NAVICULA #1	CEL					1.1	29			
NITZSCHIA	CEL						X			
OSCILLATORIA LIMNETICA	FIL			X		0.6	15		1.0	21
PANDORINA MORUM	COL						X		1.0	21
PEDIASTRUM BIRADIATUM	COL						X			
PEDIASTRUM BIRADIATUM V. LONGECORNUTUM	COL								1.0	21
PEDIASTRUM DUPLEX V. RETICULATUM	COL									X
PENNATE DIATOM #1	CEL					1.7	44			
PENNATE DIATOM #2	CEL					4.6	118			
PERIDINIUM	CEL					0.6	15		4.8	104
PERIDINIUM WISCONSINENSE	CEL				3	4.0	103	3	3.8	83
PHACUS ACUMINATUS	CEL									X
RHIZOSOLENIA	CEL					0.6	15			
SCENEDESMUS	COL					1.7	44			
SCENEDESMUS BIJUGA	COL								1.0	21
SCENEDESMUS DENTICULATUS	COL								1.9	42
SCENEDESMUS INTERMEDIUS	COL					0.6	15			
SCENEDESMUS INTERMEDIUS V. BICAUDATUS	COL		0.6	15						
SCENEDESMUS QUADRICAUDA	COL					0.6	15			
SELENASTRUM GRACILE ?	CEL						X			
STAURASTRUM TETRACERUM	CEL						X			
STEPHANODISCUS	CEL			X						
SYNEDRA	CEL	5	0.6	15		1.7	44			
SYNEDRA #1	CEL							5	8.6	188

LAKE NAME: NORMAN LAKE
STORET NUMBER: 3713

CONTINUED

TAXA	FORM	03 29 73 S	03 29 73 %C	03 29 73 ALGAL UNITS PER ML	07 11 73 S	07 11 73 %C	07 11 73 ALGAL UNITS PER ML	09 19 73 S	09 19 73 %C	09 19 73 ALGAL UNITS PER ML
SYNEDRA DELICATISSIMA V. ANGUSTISSIMA	CEL			X						X
SYNEDRA RUMPENS	CEL						X			
TETRAEDRON	CEL						X			
TETRAEDRON TRIGONUM V. GRACILE	CEL									X
TRACHELOMONAS	CEL		0.6	15						
TREUBARIA	CEL		0.6	15						
TOTAL				2373			2552			2176

LAKE NAME: RHODHISS LAKE
STORET NUMBER: 3715

NYGAARD TROPHIC STATE INDICES

DATE	03 30 73	07 06 73	09 24 73
MYXOPHYCEAN	0/0 O	03/0 E	9.00 E
CHLOROPHYCEAN	01/0 E	04/0 E	15.0 E
EUGLENOPHYTE	0/01 ?	0/07 ?	0.12 ?
DIATOM	0.44 E	0.33 E	0.27 ?
COMPOUND	05/0 E	11/0 E	31.0 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	03 30 73	07 06 73	09 24 73
GENUS	01	05	15
SPECIES	00	00	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE		03 30 73	07 06 73	09 24 73
AVERAGE DIVERSITY	H	2.62	2.92	3.24
NUMBER OF TAXA	S	17.00	24.00	54.00
NUMBER OF SAMPLES COMPOSITED	M	3.00	3.00	3.00
MAXIMUM DIVERSITY	MAXH	4.09	4.58	5.75
TOTAL DIVERSITY	D	2279.40	858.48	8262.00
TOTAL NUMBER OF INDIVIDUALS/ML	N	870.00	294.00	2550.00
EVENESS COMPONENT	J	0.64	0.64	0.56
MEAN NUMBER OF INDIVIDUALS/TAXA	L	51.18	12.25	47.22
NUMBER/ML OF MOST ABUNDANT TAXON	K	370.00	85.00	1120.00

LAKE NAME: RHODHISS LAKE CONTINUED
STORET NUMBER: 3715

TAXA	FORM	03 30 73 S	03 30 73 %C	03 30 73 ALGAL UNITS PER ML	07 06 73 S	07 06 73 %C	07 06 73 ALGAL UNITS PER ML	09 24 73 S	09 24 73 %C	09 24 73 ALGAL UNITS PER ML
ACHNANTHES LANCEOLATA V. DUBIA	CEL			X						
ANABAENA	FIL				4	5.8	17		3.8	96
ANABAENOPSIS PHILIPPINENSIS	FIL								2.9	73
ANKISTRODESMUS	CEL					2.7	8			
APHANIZOMENON	FIL								2.2	55
APHANIZOMENON FLOS-AQUAE	FIL				1	8.5	25			
ASTERIONELLA	CEL								0.8	20
ASTERIONELLA FORMOSA	CEL	5	5.7	50		2.7	8			
CENTRIC DIATOM	CEL				5	11.6	34			
CERATIUM HIRUNDINELLA F. BRACHYCERAS	CEL									X
CHLAMYDOMONAS	CEL								1.1	27
CHLORELLA	CEL								1.9	49
CLOSTERIUM	CEL								0.4	10
COELASTRUM	COL									X
COELASTRUM MICROPORUM	COL						X			
COELASTRUM RETICULATUM	COL						X			
CRYPTOMONAS	CEL								1.2	30
CRYPTOMONAS EROSA	CEL	3	6.9	60						X
CYANOPHYTAN COCCOID CELLED COLONY	CEL								0.4	10
CYCLOTELLA	CEL		1.1	10					2.2	55
CYCLOTELLA STELLIGERA	CEL									X
CYMBELLA	CEL					2.7	8			X
CYMBELLA TUMIDA	CEL						X			
DACTYLOCOCCOPSIS	CEL								2.3	58
EUGLENA	CEL									X
FLAGELLATE	CEL							5	4.3	110
FLAGELLATES	CEL	4	14.9	130	2	23.1	68			
FRANCEIA	CEL									X
GLENODINIUM	CEL								0.3	8
GOMPHONEMA	CEL						X			

LAKE NAME: RHODHISS LAKE CONTINUED
STORET NUMBER: 3715

TAXA	FORM	03 30 73 S	03 30 73 %C	03 30 73 ALGAL UNITS PER ML	07 06 73 S	07 06 73 %C	07 06 73 ALGAL UNITS PER ML	09 24 73 S	09 24 73 %C	09 24 73 ALGAL UNITS PER ML
LYNGBYA	FIL							1	43.9	1120
MELOSIRA #1	CEL						X			
MELOSIRA #2	CEL						X			
MELOSIRA DISTANS	CEL	2	14.9	130						X
MELOSIRA GRANULATA V. ANGUSTISSIMA	CEL						X		1.7	43
MELOSIRA ITALICA V. TENUISSIMA	CEL	1	42.5	370						
MERISMOPEDIA TENUISSIMA	COL							4	4.9	124
MICROCYSTIS INCERTA	COL								0.4	10
NAVICULA	CEL								3.8	96
NAVICULA #1	CEL			X						X
NAVICULA #2	CEL						X			X
NAVICULA VIRIDULA V. LINEARIS	CEL						X			
NAVICULA ZANONI	CEL						X			X
NITZSCHIA	CEL			X		8.5	25			X
NITZSCHIA ? #1	CEL					2.7	8			
NITZSCHIA ACICULARIS	CEL								1.5	39
OSCILLATORIA	FIL				3	28.9	85			
OSCILLATORIA LIMNETICA	FIL							2	12.5	320
PANDORINA MORUM	COL			X						X
PEDIASTRUM DUPLEX V. RETICULATUM	COL								0.4	10
PEDIASTRUM TETRAS V. TETRAODON	COL									X
PENNATE DIATOM	CEL					2.7	8			
PENNATE DIATOMS	CEL		2.3	20						
PHACUS ACUMINATUS	CEL									X
SCENEDESMUS #1	COL									X
SCENEDESMUS ABUNDANS V. LONGICAUDA	COL								0.3	8

LAKE NAME: RHODHISS LAKE CONTINUED
STORET NUMBER: 3715

TAXA	FORM	03 30 73 S	03 30 73 %C	03 30 73 ALGAL UNITS PER ML	07 06 73 S	07 06 73 %C	07 06 73 ALGAL UNITS PER ML	09 24 73 S	09 24 73 %C	09 24 73 ALGAL UNITS PER ML
SCENEDESMUS DENTICULATUS	COL								0.3	8
SCENEDESMUS DIMORPHUS	COL									X
SCENEDESMUS INTERMEDIUS	COL								0.8	20
SCENEDESMUS QUADRICAUDA	COL						X		1.5	39
SCENEDESMUS SERRATUS	COL									X
SCHROEDERIA SETIGERA	CEL									X
SELENASTRUM ?	CEL		4.6	40						
STAURONEIS	CEL									X
STEPHANODISCUS	CEL		3.4	30						
SURIRELLA #1	CEL								0.3	8
SURIRELLA #2	CEL			X						X
SYNEDRA #1	CEL			X						
SYNEDRA #2	CEL		2.3	20						
SYNEDRA #3	CEL						X			
SYNEDRA #4	CEL									X
SYNEDRA ACTINASTROIDES	CEL							3	4.1	104
SYNEDRA ULNA										
V. ?	CEL									X
TABELLARIA	CEL						X			
TABELLARIA FENESTRATA	CEL		1.1	10						X
TETRAEDRON	CEL									X
TETRAEDRON MINIMUM										
V. SCROBICULATUM	CEL									X
TRACHELOMONAS HISPIDA	CEL									X
TOTAL				870			294			2550

LAKE NAME: LAKE SANTEELAH
STORET NUMBER: 3716

NYGAARD TROPHIC STATE INDICES

DATE	06 03 73	08 22 73	10 26 73
MYXOPHYCEAN	1.50 E	4.00 E	0.40 ?
CHLOROPHYCEAN	2.00 E	1.00 E	1.40 E
EUGLENOPHYTE	0/07 ?	0/05 ?	0/09 ?
DIATOM	0/03 ?	0/04 ?	0/04 ?
COMPOUND	3.50 E	5.00 E	1.80 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	06 03 73	08 22 73	10 26 73
GENUS	01	00	00
SPECIES	00	00	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE		06 03 73	08 22 73	10 26 73
AVERAGE DIVERSITY	H	2.79	2.18	1.98
NUMBER OF TAXA	S	20.00	15.00	26.00
NUMBER OF SAMPLES COMPOSITED	M	5.00	5.00	5.00
MAXIMUM DIVERSITY	MAXH	4.32	3.91	4.70
TOTAL DIVERSITY	D	4062.24	2491.74	4696.56
TOTAL NUMBER OF INDIVIDUALS/ML	N	1456.00	1143.00	2372.00
EVENESS COMPONENT	J	0.65	0.56	0.42
MEAN NUMBER OF INDIVIDUALS/TAXA	L	72.80	76.20	91.23
NUMBER/ML OF MOST ABUNDANT TAXON	K	348.00	460.00	1587.00

LAKE NAME: LAKE SANTEELAH CONTINUED
STORET NUMBER: 3716

TAXA	FORM	06 03 73 S	06 03 73 %C	06 03 73 ALGAL UNITS PER ML	08 22 73 S	08 22 73 %C	08 22 73 ALGAL UNITS PER ML	10 26 73 S	10 26 73 %C	10 26 73 ALGAL UNITS PER ML
ANABAENA	FIL				3	5.5	63			
ANKISTRODESMUS FALCATUS	CEL					1.4	16			
ASTERICNELLA FORMOSA	CEL				1	40.2	460			
ASTERICNELLA FORMOSA V. GRACILLIMA	CEL							1	66.9	1587
BOTRYOCOCCUS	COL									X
CERATIUM HIRUNDINELLA F. FURCOIDES	CEL									X
CHLAMYDOMONAS	CEL			X						
CHLORELLA	CEL			X						
CHLOROPHYTAN COCCOID CELL	COL	5	9.8	143						
CLOSTERIUM ?	CEL									X
COELOSPHAERIUM	COL			X						
COSMARIUM #1	CEL			X			X		0.8	19
COSMARIUM #2	CEL								0.8	19
CRYPTOMONAS EROSA	CEL			X			X	5	2.4	56
CYANOPHYTAN FILAMENT #1	FIL				4	4.2	48			
DICTYOSPHAERIUM	COL		1.4	21						
DINOBRYON BAVARICUM	CEL						X		1.6	37
DINOBRYON SERTULARIA	CEL			X						
ELAKATOTHRIX ?	CEL		4.3	62					0.8	19
FLAGELLATE	CEL	3	23.9	348						
FLAGELLATE #1	CEL					4.2	48			
FLAGELLATES	CEL							3	7.9	187
FRUSTULIA	CEL									X
GLENODINIUM ARMATUM	CEL						X			
GYMNODINIUM AERUGINOSUM	CEL	1	21.1	307				4	2.4	56
GYMNODINIUM AERUGINOSUM ?	CEL			X						
KIRCHNERIELLA ?	CEL									X
LYNGBYA	FIL					2.8	32		0.8	19
MALLOMONAS	CEL								1.6	37
MALLOMONAS ACAROIDES	CEL	2	12.6	184			X			

LAKE NAME: LAKE SANTEELAH
STORET NUMBER: 3716

CONTINUED

TAXA	FORM	06 03 73 S	06 03 73 %C	06 03 73 ALGAL UNITS PER ML	08 22 73 S	08 22 73 %C	08 22 73 ALGAL UNITS PER ML	10 26 73 S	10 26 73 %C	10 26 73 ALGAL UNITS PER ML
MERISMOPEDIA TENUISSIMA	COL					1.4	16		2.4	56
MICROCYSTIS	COL		4.3	02						
NITZSCHIA LORENZIANA	CEL						X			
OSCILLATORIA	FIL			X						
PEDIASTRUM TETRAS V. TETRADON	COL								0.8	19
PENNATE DIATOM	CEL		1.4	21						
PERIDINIUM	CEL									X
PERIDINIUM INCONSPICUUM	CEL									X
SCENEDESMUS	COL			X						
SCENEDESMUS BIJUGA	COL								1.6	37
SCENEDESMUS DENTICULATUS	COL									X
STAURASTRUM #1	CEL			X						
STAURASTRUM #2	CEL									X
STAURASTRUM #3	CEL									X
SYNEDRA	CEL		1.4	21	5	4.2	48			X
TABELLARIA FENESTRATA	CEL	4	19.7	287	2	36.0	412	2	8.6	205
TETRAEDRON CAUDATUM	CEL								0.8	19
TOTAL				1456			1143			2372

LAKE NAME: TILLERY LAKE
STORET NUMBER: 3717

NYGAARD TROPHIC STATE INDICES

DATE	03 22 73	07 07 73	09 20 73
MYXOPHYCEAN	02/0 E	1.60 E	06/0 E
CHLOROPHYCEAN	02/0 E	3.80 E	07/0 E
EUGLENOPHYTE	0.50 E	0.07 ?	0.15 ?
DIATOM	0.50 E	0.67 E	0.20 ?
COMPOUND	11/0 E	7.00 E	16/0 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	03 22 73	07 07 73	09 20 73
GENUS	00	16	12
SPECIES	00	04	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE		03 22 73	07 07 73	09 20 73
AVERAGE DIVERSITY	H	2.52	3.04	0.85
NUMBER OF TAXA	S	23.00	61.00	24.00
NUMBER OF SAMPLES COMPOSITED	M	5.00	5.00	5.00
MAXIMUM DIVERSITY	MAXH	4.52	5.93	4.58
TOTAL DIVERSITY	D	655.20	20887.84	11627.15
TOTAL NUMBER OF INDIVIDUALS/ML	N	260.00	6871.00	13679.00
EVENESS COMPONENT	J	0.56	0.51	0.19
MEAN NUMBER OF INDIVIDUALS/TAXA	L	11.30	112.64	569.96
NUMBER/ML OF MOST ABUNDANT TAXON	K	115.00	3040.00	12078.00

LAKE NAME: TILLERY LAKE
STORET NUMBER: 3717

CONTINUED

TAXA	FORM	03 22 73 S	03 22 73 %C	03 22 73 ALGAL UNITS PER ML	07 07 73 S	07 07 73 %C	07 07 73 ALGAL UNITS PER ML	09 20 73 S	09 20 73 %C	09 20 73 ALGAL UNITS PER ML
ACHNANTHES COARCTATA	CEL							3	0.3	39
ACHNANTHES MICROCEPHALA	CEL					2.2	152			
ANABAENA	FIL					0.1	6			
ANKISTRODESMUS FALCATUS	CEL	4	7.3	19		0.1	6			
ARTHRODESMUS	CEL					0.2	11			
ASTERIONELLA FORMOSA	CEL			X						
CERATIUM HIRUNDINELLA F. BRACHYCERAS	CEL						X			
CHLOROPHYTAN COCCOID CELL #1	CEL						X			
CLOSTERIUM	CEL					0.2	14			
COCCOID CELL	CEL				4	8.8	602			
COELASTRUM CAMBRICUM	COL						X			
COSMARIUM	CEL						X			
COSMARIUM #2	CEL					0.4	28			
CRUCIGENIA APICULATA	COL					0.1	6			
CRYPTOMONAS	CEL								0.6	78
CRYPTOMONAS EROSA	CEL	2	3.8	10		0.2	11			
CYANOPHYTAN FILAMENT	FIL	3	44.2	115			X			
CYCLOTELLA	CEL			X						
CYCLOTELLA KUTZINGIANA	CEL						X			
CYCLOTELLA MENEGHINIANA	CEL			X						
CYCLOTELLA STELLIGERA	CEL			X		0.6	41			
CYMBELLA	CEL			X			X			
DACTYLOCOCCOPSIS IRREGULARIS	CEL						X			
DINOBRYON	CEL					0.1	6			
DINOFLAGELLATE CYST	CEL						X			
EUGLENA	CEL					0.2	14			
EUGLENA ACUS	CEL									X
EUGLENA CHLAMYDOPHORA ?	CEL			X						
FLAGELLATE #1	CEL		3.8	10		2.0	139	5	2.3	313
GLENODINIUM	CEL					0.3	23			
GLENODINIUM EDAX	CEL								0.3	39

LAKE NAME: TILLERY LAKE CONTINUED
STORET NUMBER: 3717

TAXA	FORM	03 22 73 S	03 22 73 %C	03 22 73 ALGAL UNITS PER ML	07 07 73 S	07 07 73 %C	07 07 73 ALGAL UNITS PER ML	09 20 73 S	09 20 73 %C	09 20 73 ALGAL UNITS PER ML
COLENKINIA RADIATA	CEL					0.2	17			
GYMNODINIUM	CEL						X			
KIRCHNERIELLA CONTORTA ?	CEL									X
LYNGBYA	FIL						X			X
LYNGBYA LIMNETICA ?	FIL		14.6	38						
MALLOMONAS ACAROIDES	CEL						X			
MELOSIRA DISTANS	CEL			X		0.6	41			
MELOSIRA GRANULATA	CEL			X		3.4	237			X
MELOSIRA GRANULATA V. ANGUSTISSIMA F. SPIRALIS	CEL						X			
MELOSIRA VARIANS	CEL					0.3	23			
MERISMOPEDIA	COL								0.3	39
MERISMOPEDIA TENUISSIMA	COL					1.6	108			
MICROCYSTIS	COL								0.9	117
MICROCYSTIS INCERTA	COL				5	6.8	470			
NAVICULA #1	CEL									X
NAVICULA #2	CEL			X						
NAVICULA #3	CEL		3.8	10						
NAVICULA MURALIS ?	CEL			X						
NAVICULA MUTICA	CEL			X						
NAVICULA ZANONI	CEL			X						
NITZSCHIA #1	CEL			X						X
NITZSCHIA #2	CEL						X			
NITZSCHIA HOLSATICA	CEL					1.8	124			
OSCILLATORIA	FIL								0.3	39
OSCILLATORIA GEMINATA	FIL							2	4.6	625
OSCILLATORIA LIMNETICA	FIL				2	12.9	883			
PANDORINA MORUM	COL						X			
PEDIASTRUM	COL		3.8	10						
PEDIASTRUM BIRADIATUM	COL						X			X
PEDIASTRUM DUPLEX	COL					0.4	25			
PEDIASTRUM DUPLEX V. CLATHRATUM	COL						X			

LAKE NAME: TILLERY LAKE
STORET NUMBER: 3717

CONTINUED

TAXA	FORM	03 22 73 S	03 22 73 %C	03 22 73 ALGAL UNITS PER ML	07 07 73 S	07 07 73 %C	07 07 73 ALGAL UNITS PER ML	09 20 73 S	09 20 73 %C	09 20 73 ALGAL UNITS PER ML
PEDIASTRUM DUPLEX V. GRACILIMUM	COL									X
PEDIASTRUM TETRAS	COL						X			
PENNATE DIATOM	CEL			X		0.7	45			
PERIDINIUM INCONSPICUUM	CEL					0.4	28			
RAPHIDIOPSIS CURVATA	FIL							1	88.3	12078
RAPHIDIOPSIS CURVATA ?	FIL				1	44.2	3040			
SCENEDESMUS #1	COL									X
SCENEDESMUS #2	COL								0.6	78
SCENEDESMUS ARMATUS	COL					0.1	6			
SCENEDESMUS BICAUDATUS	COL					0.6	41			
SCENEDESMUS BIJUGA	COL					0.4	28		0.3	39
SCENEDESMUS DIMORPHUS	COL					0.2	14			X
SCENEDESMUS PROTUBERANS	COL						X			
SCENEDESMUS QUADRICAUDA	COL					1.6	112			
SCENEDESMUS QUADRICAUDA V. LONGISPINA F. ASYMMETRICUS	COL						X			
SELENASTRUM WESTII	COL						X			
STAURASTRUM	CEL						X			
SYNEDRA #1	CEL				3	7.4	508	4	1.1	156
SYNEDRA #2	CEL						X			
SYNEDRA RUMPENS	CEL	1	14.6	38			X			
TABELLARIA ?	CEL									X
TABELLARIA FENESTRATA	CEL					0.1	6			
TETRAEDRON GRACILE	CEL						X			
TETRAEDRON MINIMUM	CEL					0.4	28			
TETRASTRUM STAUROGENIAEFORME	COL						X			
TRACHELOMONAS PULCHELLA	CEL	5	3.8	10		0.4	28			
TRACHELOMONAS URCEOLATA	CEL								0.3	39
TOTAL				260			6871			13679

LAKE NAME: WATERVILLE LAKE
STORET NUMBER: 3718

NYGAARD TROPHIC STATE INDICES

DATE	03 24 73	07 05 73	09 20 73
MYXOPHYCEAN	02/0 E	1.00 E	2.00 E
CHLOROPHYCEAN	0/0 O	13.0 E	4.00 E
EUGLENOPHYTE	0.50 E	0.07 ?	0.33 E
DIATOM	0.12 ?	0.75 E	0.43 E
COMPOUND	04/0 E	18.0 E	11.0 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	03 24 73	07 05 73	09 20 73
GENUS	05	10	00
SPECIES	00	04	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE		03 24 73	07 05 73	09 20 73
AVERAGE DIVERSITY	H	0.78	3.79	3.60
NUMBER OF TAXA	S	12.00	29.00	25.00
NUMBER OF SAMPLES COMPOSITED	M	2.00	2.00	2.00
MAXIMUM DIVERSITY	MAXH	3.58	4.86	4.64
TOTAL DIVERSITY	D	428.22	28731.99	1764.00
TOTAL NUMBER OF INDIVIDUALS/ML	N	549.00	7581.00	490.00
EVENESS COMPONENT	J	0.22	0.78	0.78
MEAN NUMBER OF INDIVIDUALS/TAXA	L	45.75	261.41	19.60
NUMBER/ML OF MOST ABUNDANT TAXON	K	422.00	1107.00	102.00

LAKE NAME: WATERVILLE LAKE CONTINUED
STORET NUMBER: 3718

TAXA	FORM	03 24 73 S	03 24 73 %C	03 24 73 ALGAL UNITS PER ML	07 05 73 S	07 05 73 %C	07 05 73 ALGAL UNITS PER ML	09 20 73 S	09 20 73 %C	09 20 73 ALGAL UNITS PER ML
ASTERIONELLA FORMOSA	CEL									X
CERATIUM HIRUNDINELLA	CEL								2.7	13
CERATIUM HIRUNDINELLA F. FURCOIDES	CEL						X			
CHLORELLA	CEL					5.1	383			
COELASTRUM MICROPORUM	COL				3	9.0	682			
CRUCIGENIA	COL					1.1	85			
CRYPTOMONAS OVATA	CEL						X			
CYANOPHYTAN COCCOID CELLED COLONY	CEL					4.2	319			
CYANOPHYTAN FILAMENT	FIL							3	15.7	77
CYANOPHYTAN FILAMENT #1	FIL	2	23.1	127						
CYCLOTELLA	CEL				2	12.1	916			
CYCLOTELLA GLOMERATA	CEL						X			
CYMBELLA	CEL					0.8	64			X
CYMBELLA AFFINIS	CEL			X						
DACTYLOCOCCOPSIS	CEL								5.3	26
DINOBRYON	CEL									X
DINOBRYON BAVARICUM	CEL									X
DINOBRYON SERTULARIA	CEL								2.7	13
DINOFLAGELLATE	CEL							1	13.1	64
EUGLENA	CEL					0.6	43			
EUGLENA GRACILIS	CEL			X						
FLAGELLATES	CEL							2	20.8	102
FRAGILARIA ARCUS	CEL			X						
GLOEOCYSTIS	COL					0.6	43			
GLOEOCYSTIS GIGAS ?	COL						X			
GOLENKINIA	CEL					6.5	490			
GOLENKINIA RADIATA	CEL						X			
GOMPHONEMA ANGUSTATUM	CEL			X						
GONIUM	COL						X			
KIRCHNERIELLA OBESA	CEL					2.8	212			
MALLOMONAS	CEL					1.1	85			

LAKE NAME: WATERVILLE LAKE CONTINUED
STORET NUMBER: 3718

TAXA	FORM	03 24 73 S	03 24 73 %C	03 24 73 ALGAL UNITS PER ML	07 05 73 S	07 05 73 %C	07 05 73 ALGAL UNITS PER ML	09 20 73 S	09 20 73 %C	09 20 73 ALGAL UNITS PER ML
MELOSIRA GRANULATA	CEL				1	14.6	1107			
MELOSIRA GRANULATA V. ANGUSTISSIMA	CEL								5.3	26
MELOSIRA ITALICA ? V. TENUISSIMA	CEL									X
MICRACTINIUM	COL					5.3	405			
MICRACTINIUM PUSILLUM	COL								2.7	13
NAVICULA	CEL									X
NAVICULA #1	CEL			X						
NAVICULA #2	CEL			X						
NAVICULA ANGUSTA	CEL							4	5.3	26
NITZSCHIA	CEL			X					5.3	26
OSCILLATORIA	FIL	1	76.9	422						
PEDIASTRUM DUPLEX V. ?	COL									X
PENNATE DIATOM	CEL								2.7	13
PENNATE DIATOM #1	CEL			X		0.3	21			
PENNATE DIATOM #2	CEL					3.7	277			
POLYEDRIOPSIS	CEL					0.6	43			
SCENEDESMUS #1	COL								2.7	13
SCENEDESMUS INTERMEDIUS V. BICAUDATUS	COL								5.3	26
SCENEDESMUS QUADRICAUDA	COL				4	11.8	894			
SCENEDESMUS QUADRICAUDA V. LONGISPINA F. ASYMMETRICUS	COL					2.2	170			
SELENASTRUM	CEL				5	11.2	852			
STAURASTRUM	CEL									X
STAURASTRUM PARADOXUM ?	CEL						X			
STEPHANODISCUS	CEL								2.7	13
SYNEDRA	CEL					0.6	43			
SYNEDRA ULNA V. ?	CEL								2.7	13

LAKE NAME: WATERVILLE LAKE CONTINUED
STORET NUMBER: 3718

TAXA	FORM	03 24 73 S	03 24 73 %C	03 24 73 ALGAL UNITS PER ML	07 05 73 S	07 05 73 %C	07 05 73 ALGAL UNITS PER ML	09 20 73 S	09 20 73 %C	09 20 73 ALGAL UNITS PER ML
TABELLARIA FLOCCULOSA	CEL			X						
TERPSINOE	CEL			X						
TETRAEDRON MINIMUM	CEL					0.3	21			
TETRASTRUM	COL					5.6	426			
TRACHELOMONAS #1	CEL							5	5.3	26
TRACHELOMONAS #2	CEL									X
TOTAL				549			7581			490

LAKE NAME: LAKE WACCAMAW
STORET NUMBER: 3719

NYGAARD TROPHIC STATE INDICES

DATE	03 22 73	07 05 73	09 20 73
MYXOPHYCEAN	0.67 E	5.00 E	1.00 E
CHLOROPHYCEAN	1.00 E	3.50 E	1.00 E
EUGLENOPHYTE	0/05 ?	0/17 ?	0.12 ?
DIATOM	0.50 E	1.00 E	3.00 E
COMPOUND	2.67 E	9.00 E	3.00 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	03 22 73	07 05 73	09 20 73
GENUS	03	04	01
SPECIES	02	02	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE		03 22 73	07 05 73	09 20 73
AVERAGE DIVERSITY	H	1.79	2.97	2.72
NUMBER OF TAXA	S	21.00	31.00	22.00
NUMBER OF SAMPLES COMPOSITED	M	2.00	2.00	2.00
MAXIMUM DIVERSITY	MAXH	4.39	4.95	4.46
TOTAL DIVERSITY	D	3431.43	7775.46	2053.60
TOTAL NUMBER OF INDIVIDUALS/ML	N	1917.00	2618.00	755.00
EVENESS COMPONENT	J	0.41	0.60	0.61
MEAN NUMBER OF INDIVIDUALS/TAXA	L	91.29	84.45	34.32
NUMBER/ML OF MOST ABUNDANT TAXON	K	1015.00	927.00	233.00

LAKE NAME: LAKE WACCAMAW
STORET NUMBER: 3719

CONTINUED

TAXA	FORM	03 22 73 S	03 22 73 %C	03 22 73 ALGAL UNITS PER ML	07 05 73 S	07 05 73 %C	07 05 73 ALGAL UNITS PER ML	09 20 73 S	09 20 73 %C	09 20 73 ALGAL UNITS PER ML
APHANIZOMENON	FIL					0.8	20			
APHANOCAPSA	CEL				1	35.4	927			
APHANOTHECE	CEL						X			
BINUCLEARIA ?	FIL						X			
CENTRIC DIATOM	CEL			X						
CERATIUM HIRUNDINELLA	CEL									X
CHLAMYDOMONAS	CEL					1.5	40			
CHLORELLA VULGARIS	CEL				4	11.5	302			
CHROOCOCCUS	COL					0.8	20			
CHROOCOCCUS LIMNETICUS	COL							5	4.8	36
COELASTRUM RETICULATUM	COL						X			X
COSMARIUM	CEL			X						
COSMARIUM #1	CEL								9.5	72
COSMARIUM #2	CEL									X
COSMARIUM #3	CEL									X
CRUCIGENIA TETRAPEDIA	COL			X		3.9	101			
CRYPTOMONAS EROSA	CEL	4	2.3	44						
CRYPTOMONAS OVATA	CEL				5	1.5	40			
CYMBELLA #1	CEL			X						
DESMIDIUM	CEL			X						
DINOBRYON BAVARICUM	CEL		2.3	44		0.8	20			
DINOFLAGELLATE	CEL							3	11.9	90
ELAKATOTHRIX	COL						X			
EUGLENA	CEL									X
FLAGELLATE #1	CEL		1.5	29		3.9	101			
FLAGELLATE #2	CEL						X			
FLAGELLATES	CEL							2	26.2	198
GEMINELLA ?	FIL						X			
GLENODINIUM	CEL	5	0.8	15						
GOLENKINIA RADIATA	CEL						X			
GOMPHOSPHAERIA LACUSTRIS	COL						X	1	30.9	233
KIRCHNERIELLA	CEL					3.1	81			

LAKE NAME: LAKE WACCAMAW
STORET NUMBER: 3719

CONTINUED

TAXA	FORM	03 22 73 S	03 22 73 %C	03 22 73 ALGAL UNITS PER ML	07 05 73 S	07 05 73 %C	07 05 73 ALGAL UNITS PER ML	09 20 73 S	09 20 73 %C	09 20 73 ALGAL UNITS PER ML
LYNGBYA	FIL		1.5	29					2.4	18
LYNGBYA LIMNETICA	FIL				3	10.0	262			
MELOSIRA	CEL						X			X
MELOSIRA DISTANS	CEL							4	7.2	54
MELOSIRA ITALICA	CEL	1	52.9	1015						
MELOSIRA VARIANS	CEL	2	33.3	638						
MERISMOPEDIA	COL					1.5	40			
MERISMOPEDIA TENUISSIMA	COL								2.4	18
MICROCYSTIS	COL						X			
MICROCYSTIS INCERTA	COL		0.8	15	2	20.0	524			
MICROSPORA	CEL						X			
NITZSCHIA #1	CEL			X						
OOCYSTIS	CEL					2.3	60			X
OPHIOCYTIUM CAPITATUM	CEL									X
OPHIOCYTIUM CAPITATUM V. LONGISPINUM ?	CEL						X			
OSCILLATORIA	FIL					1.5	40			
PEDIASTRUM OBTUSUM	COL			X						
PENNATE DIATOM	CEL									X
PERIDINIUM WISCONSINENSE	CEL								2.4	18
SCENEDESMUS	COL									X
SCENEDESMUS BIJUGA	COL		0.8	15						
STAURASTRUM #1	CEL			X			X		2.4	18
STAURASTRUM DEJECTUM	CEL						X			
STEPHANODISCUS	CEL									X
SURIRELLA #1	CEL			X						
SURIRELLA #2	CEL			X						
SURIRELLA ELLIPTICA V. HIBERNICA F. SPIRALIS	CEL			X						
SYNEDRA	CEL	3	3.8	73		0.8	20			
TETRAEDRON REGULARE V. INCUS F. MAJOR	CEL									X

LAKE NAME: LAKE WACCAMAW
STORET NUMBER: 3719

CONTINUED

TAXA	FORM	03 22 73 S	03 22 73 %C	03 22 73 ALGAL UNITS PER ML	07 05 73 S	07 05 73 %C	07 05 73 ALGAL UNITS PER ML	09 20 73 S	09 20 73 %C	09 20 73 ALGAL UNITS PER ML
TRIBONEMA	CEL					0.8	20			
TOTAL				1917			2618			755

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TECHNICAL REPORT DATA
(Please read Instructions on the reverse before completing)

1. REPORT NO. EPA-600/3-78-051	2.	3. RECIPIENT'S ACCESSION NO.
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15. SUPPLEMENTARY NOTES

16. ABSTRACT

This is a data report presenting the species and abundance of phytoplankton in the 16 lakes sampled by the National Eutrophication Survey in the State of North Carolina. Results from the calculation of several water quality indices are also included (Nygaard's Trophic State Index, Palmer's Organic Index, and species diversity and abundance indices).

17. KEY WORDS AND DOCUMENT ANALYSIS

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