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Distribution of Phytoplankton in South Dakota Lakes

**Working
Paper 702**



DISTRIBUTION OF PHYTOPLANKTON IN SOUTH DAKOTA LAKES

by

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FOREWORD

The National Eutrophication Survey was initiated in 1972 in response to an Administration commitment to investigate the nationwide threat of accelerated eutrophication to freshwater lakes and reservoirs. The Survey was designed to develop, in conjunction with State environmental agencies, information on nutrient sources, concentrations, and impact on selected freshwater lakes as a basis for formulating comprehensive and coordinated national, regional, and State management practices relating to point source discharge reduction and nonpoint source pollution abatement in lake watershed.

The Survey collected physical, chemical, and biological data from 815 lakes and reservoirs throughout the contiguous United States. To date, the Survey has yielded more than two million data points. In-depth analyses are being made to advance the rationale and data base for refinement of nutrient water quality criteria for the Nation's freshwater lakes.

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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 1974, the Survey sampled 179 lakes in 10 States. Over 700 algal species and varieties were identified and enumerated from the 573 water samples examined.

This report presents the species and abundance of phytoplankton in the 31 lakes sampled in the State of South Dakota (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 SOUTH DAKOTA

STORET No.	Lake Name	County
4601	Lake Albert	Kingsbury, Hamlin
4602	Alvin Lake	Lincoln
4603	Angostura Reservoir	Fall River
4604	Brant Lake	Lake
4605	Lake Bryon	Beadle
4606	Clear Lake	Marshall
4607	Clear Lake	Minnehaha
4608	Cochrane	Deuel
4609	Cottonwood Lake	Spink
4610	Deerfield Reservoir	Pennington
4611	Enemy Swim Lake	Day
4612	Lake Herman	Lake

(Continued)

TABLE 1. LAKES SAMPLED IN THE STATE OF SOUTH DAKOTA (Continued)

STORET No.	Lake Name	County
4613	John Lake	Hamlin
4614	Lake Kampeska	Codington
4615	Madison Lake	Lake
4616	Lake Mitchell	Davison
4617	Lake Norden	Hamlin
4618	Oakwood Lake East	Brookings
4619	Oakwood Lake West	Brookings
4620	Pactola Reservoir	Pennington
4621	Pickere1 Lake	Day
4622	Lake Poinsett	Hamlin, Brookings
4623	Lake Red Iron South	Marshall
4624	Richmond Lake	Brown
4625	Roy Lake	Marshall
4626	Sand Lake	Brown
4627	Sheridan Lake	Pennington
4628	Stockade Lake	Custer
4629	East Vermillion Lake	McCook
4630	Wall Lake	Minnehaha
4631	Waubay Lake North	Day

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 ring of clear Karo[®] corn syrup with phenol (a few crystals of phenol were added to each 100 ml of syrup) was placed on a glass slide. A drop of superconcentrate from the bottom of the test tube was placed in the ring. This solution was 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

Project phycologists performed internal quality control intercomparisons regularly on 7 percent of the species identification and counts. 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

A phytoplankton species list for the State is presented in Appendix A. Appendix B summarizes all of the phytoplankton data collected from the State by the Survey. The latter is organized by lake, and includes 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 Appendix B. 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

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

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

TABLE 3. ALGAL GENUS POLLUTION INDEX (Palmer 1969)

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

TABLE 4. ALGAL SPECIES POLLUTION INDEX (Palmer 1969)

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

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.

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 i th taxon in the sample, which is calculated from n_i/N ; n_i is the number of individuals per milliliter of the i th 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 the 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 $\log_2 S$ (Pielou 1966), while the minimum diversity (MinH), was estimated from the formula:

$$\text{MinH} = -\frac{S-1}{N} \log_2 \frac{1}{N} - \left[\frac{N - (S-1)}{N} \right] \log_2 \left[\frac{N - (S-1)}{N} \right]$$

given by Zand (1976). The total diversity (D) was calculated from HN (Pielou 1966). Also given in Appendix B 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).

The evenness component of diversity (J) was estimated from H/MaxH (Pielou 1966). Relative evenness (RJ) was calculated from the formula:

$$RJ = \frac{H - \text{MinH}}{\text{MaxH} - \text{MinH}}$$

given by Zand (1976). Zand suggests that RJ be used as a substitute for both J and the redundancy expression given by Wilhm and Dorris (1968). As pointed out by Zand, the redundancy expression given by Wilhm and Dorris does not properly express what it is intended to show, i.e., the position of H in the range between MaxH and MinH. RJ may range from 0 to 1; being 1 for the most even samples and 0 for the least even samples.

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 taxa. Since MaxH equals $\log S$, the expression in sits is equal to $\log_5 S$, 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 Appendix B, 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 that 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 A

PHYTOPLANKTON SPECIES FOR THE STATE OF SOUTH DAKOTA

Achnanthes inflata
Actinastrum gracilimum
Actinastrum hantzschia
Amphora ovalis
 v. *affinis*
Anabaena circinalis
Anabaena flos-aquae
Anabaena oscillarioides
Anabaena planctonica
Anabaena subcylindrica
Anabaenopsis circularis
Anabaenopsis elenkini
Anabaenopsis raciborskii
Anabaenopsis seriata
Ankistrodesmus falcatus
Ankistrodesmus falcatus
 v. *acicularis*
Ankistrodesmus falcatus
 v. *mirabilis*
Aphanizomenon flos-aquae
Aphanizomenon gracile
Aphanocapsa delicatissima
Aphanocapsa elachista
 v. *conferta*
Aphanocapsa elachista
 v. *planctonica*
Aphanothece nidulans
Aphanothece nidulans
 v. *endophytica*
Aphanothece pulverulenta ?
Arthrospira jenneri
Asterionella formosa
Asterionella formosa
 v. *gracillima*
Binuclearia sp.
Botryococcus branuii
Caloneis ? lewisii
Caloneis amphisbaena
Carteria sp.
Ceratium hirundinella
Ceratium hirundinella
 f. *austriacum*
Ceratium hirundinella
 f. *brachyceras*
Ceratium hirundinella
 f. *furcoides*
Ceratium hirundinella
 f. *scotticum*
Chaetoceros elmorei

Characium sp.
Chlamydomonas globosa
Chroococcus dispersus
Chroococcus limneticus
Chroomonas acuta
Chroomonas reflexa
Closteriopsis sp.
Closterium sp.
Cocconeis placentula
Cocconeis placentula
 v. *lineata*
Coelastrum cambricum
Coelastrum cambricum
 v. *intermedium*
Coelastrum microporum
Coelastrum reticulatum
Coelosphaerium kuetzingianum
Coelosphaerium naegelianum
Coelosphaerium pallidum
Coscinodiscus rothii
 v. *subsalsa*
Cosmarium clepsydra
 v. *nanum*
Crucigenia apiculata
Crucigenia quadrata
Crucigenia rectangularis
Crucigenia tetrapedia
Cryptomonas erosa
Cryptomonas erosa
 v. *reflexa*
Cryptomonas marssonii
Cryptomonas ovata
Cryptomonas reflexa
Cyclotella meneghiniana
Cyclotella michiganiana
Cymatopleura elliptica
Cymatopleura solea
Cymatopleura solea
 v. *regula*
Cymbella cymbiformis
Cymbella mexicana
Cymbella minuta
Cymbella minuta
 v. *pseudogracilis*
Cymbella triangulum
Cymbella ventricosa
Dactylococcopsis irregularis
Dichotomococcus sp.
Dictyosphaerium pulchellum
Dinobryon divergens

Dinobryon pediforme
Dinobryon sertularia
Dinobryon sertularia
 v. *protuberans*
Dinobryon sociale
Diplopsalis acuta
Elakatothrix gelatinosa
Entomoneis alata
Entomoneis ornata
Entomoneis paludosa
Epithemia sorex
Epithemia turgida
Eudorina elegans
Euglena acus
Euglena charkowiensis ?
Euglena ehrenbergii
Euglena gracilis
Euglena oxyuris
Euglena oxyuris
 v. *minor*
Euglena tripteris
Eunotia valida
Fragilaria bicapitata
Fragilaria brevistriata
 v. *inflata*
Fragilaria capucina
Fragilaria capucina
 v. *mesolepta*
Fragilaria construens
Fragilaria crotonensis
Franceia ovalis
Franceia tuberculata
Glenodinium gymmodinium
Glenodinium gymmodinium
 v. *biscutelliforme*
Glenodinium oculatum
Gloeocapsa aeruginosa
Gloeocystis sp.
Gloeotrichia echinulata
Gomphonema angustatum
Gomphonema olivaceum
Gomphonema parvulum
Gomphosphaeria aponina
Gonium sp.
Gymmodinium albulum
Gymmodinium ordinatum
Gyrosigma wormleyi
Hantzschia amphioxys
Kirchneriella contorta
Kirchneriella lunaris

Kirchneriella lunaris
 v. *irregularis*
Kirchneriella subsolitaria
Lagerheimia wratislaviensis
Lepocinclis fusiformis
Lyngbya birgei
Lyngbya contorta
Lyngbya lagerheimii
Lyngbya subtilis
Mallomonas acaroides
Melosira distans
Melosira granulata
Melosira granulata
 v. *angustissima*
Melosira italica
Melosira varians
Merismopedia glauca
Merismopedia minima
Merismopedia tenuissima
Mesostigma viridis
Micractinium pusillum
Microcystis aeruginosa
Microcystis incerta
Microcystis marginata
Mougeotia sp.
Navicula capitata
Navicula cuspidata
Navicula gastrum
Navicula pupula
 v. *elliptica*
Navicula pygmaea
Navicula reinhardtii
Neidium sp.
Nitzschia acicularis
Nitzschia amphibia
Nitzschia commutata
Nitzschia dissipata
Nitzschia holsatica
Nitzschia hungarica ?
Nitzschia longissima
 v. *reversa*
Nitzschia palea
Nitzschia sigmoidea
Nitzschia tryblionella
Nitzschia vermicularis
Nodularia sp.
Nostoc sp.
Oocystis borgei
Oocystis citriformis
Oscillatoria agardhii

Oscillatoria angustissima
Oscillatoria limnetica
Paradoxia multiseta
Pediastrum boryanum
Pediastrum duplex
Pediastrum duplex
 v. *clathratum*
Pediastrum duplex
 v. *reticulatum*
Pediastrum kawraiskyi
Pediastrum simplex
Pediastrum simplex
 v. *duodenarium*
Pediastrum tetras
 v. *tetraodon*
Peridinium borgeri
Peridinium cinctum
Peridinium umbonatum
Peridinium willei
Phacus acuminatus
Phacus acuminatus
 v. *drezepolskii*
Phacus caudatus
Phacus helikoides
Phacus longicauda
Phacus megalopsis
Phacus pleuronectes
Phacus pseudonordstedtii
Phacus tortus
Phormidium mucicola
Pinnularia microstauron
Pleurosigma delicatulum
Pteromonas angulosa
Raphidiopsis curvata
Rhoicosphenia curvata
Rhopalodia gibba
Scenedesmus abundans
Scenedesmus acuminatus
Scenedesmus arcuatus
Scenedesmus arcuatus
 v. *capitatus*
Scenedesmus arcuatus
 v. *platydisca*
Scenedesmus balatonicus
Scenedesmus bernardii
Scenedesmus bicaudatus
Scenedesmus bijuga
Scenedesmus bijuga
 v. *alternans*
Scenedesmus bijuga
 v. *flexuosus*

Scenedesmus dimorphus
Scenedesmus intermedius
Scenedesmus intermedius
 v. *balatonicus*
Scenedesmus intermedius
 v. *bicaudatus*
Scenedesmus opoliensis
Scenedesmus protuberans
Scenedesmus quadricauda
Scenedesmus quadricauda
 v. *parvus*
Scenedesmus raciborskii
 f. *granulatus*
Schroederia judayi
Schroederia setigera
Selenastrum sp.
Skeletonema potamos
Spermatozoopsis exultans
Sphaerocystis schroeteri
Spirogyra sp.
Spirulina sp.
Staurastrum astraea
 v. *minutula*
Staurastrum tetracerum
Stauroneis anceps
Stauroneis anceps
 v. *gracilis*
Stauroneis salina
Stephanodiscus astraea
Stephanodiscus astraea
 v. *minutula*
Stephanodiscus niagarae
Stipitococcus sp.
Surirella angusta
Surirella brightwellii ?
Surirella linearis
Surirella ovata
Surirella peisonis
Surirella spiralis
Synedra acus
Synedra cyclopum
Synedra cyclopum
 v. *robustum*
Synedra delicatissima
 v. *angustissima*
Synedra rumpens
Synedra ulna
Synura uvella
Tabellaria fenestrata
Tetraedron constrictum
Tetraedron gracile ?

Tetraedron hastatum ?
Tetraedron limneticum
Tetraedron minimum
Tetraedron minimum
 v. *scrobiculatum*
Tetraedron muticum
Tetraedron planctonicum
Tetraedron trigonum
Tetraedron trigonum
 v. *gracile*
Tetraedron trigonum
 v. *papilliferum*

Tetraedron victoriae
Tetrastrum elegans
Tetrastrum glabrum
Tetrastrum heteracanthum
Tetrastrum staurogeniaeforme
Trachelomonas intermedia
Trachelomonas volvocina
Treubaria setigerum
Treubaria triappendiculata
Ulothrix ? sp.

APPENDIX B. 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, MICROCYSTIS 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: LAKE ALBERT
 STOKET NUMBER: 4601

NYGAARD TROPHIC STATE INDICES

DATE	04 23 74	07 11 74	09 20 74
MYXOPHYCEAN	6.00 E	3.00 E	2.33 E
CHLOROPHYCEAN	13.0 E	4.33 E	6.33 E
EUGLENOPHYTE	0.21 E	0.22 ?	0.26 ?
DIATOM	0.44 E	0.75 E	0.50 E
COMPOUND	27.0 E	8.33 E	10.0 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	04 23 74	07 11 74	09 20 74
GENUS	19	12	14
SPECIES	04	00	07

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE	04 23 74	07 11 74	09 20 74
AVERAGE DIVERSITY H	0.80	2.06	1.91
NUMBER OF TAXA S	41.00	37.00	43.00
NUMBER OF SAMPLES COMPOSITED M	3.00	3.00	3.00
MAXIMUM DIVERSITY MAXH	5.36	5.21	5.43
MINIMUM DIVERSITY MINH	0.00	0.02	0.02
TOTAL DIVERSITY D	148396.00	51697.76	87596.42
TOTAL NUMBER OF INDIVIDUALS/ML N	185495.00	25096.00	45862.00
EVENESS COMPONENT J	0.15	0.40	0.35
RELATIVE EVENESS HJ	0.15	0.40	0.35
MEAN NUMBER OF INDIVIDUALS/TAXA L	4524.27	678.27	1066.56
NUMBER/ML OF MOST ABUNDANT TAXON K	166067.00	16351.00	22711.00

TAXA	FORM	ALGAL UNITS PER ML			ALGAL UNITS PER ML			ALGAL UNITS PER ML		
		IS	ZC	PER ML	IS	ZC	PER ML	IS	ZC	PER ML
ACTINASTRUM	CEL						X			
ACTINASTRUM GRACILIRUM	CEL			X						X
ANABAENA	FIL				1.21		297			
ANABAENA PLANCTONICA	FIL									X
ANKISTRUDESPLUS FALCATUS	CEL			X						
ANKISTRUDESPLUS FALCATUS V. ACICULARIS	CEL							0.81		366
APHANIZOUMENON FLGS-AQUAE	FIL				1165.21		16351	1158.21		26711
BINUCLEARIA	FIL							1.11		488
EDRYCOCYCUS BRAUNII	COL				0.21		42			
CERATIUM HIRUNDINELLA F. FURCIDES	CEL									X
CHLOROCOCCALEAN COLONY #9	COL							0.51		244
CHROCOCCUS	COL						X			
CHROCOCCUS ACUTA	CEL	1.61		2978		0.21	42			
CLUSTERIOPSIS	CEL			X				0.31		122
CLUSTERIUM #1	CEL					0.51	127			
CLOSTERIUM #2	CEL									X
COELASTRUM CAMBICUM	COL					0.21	42			
COELASTRUM MICROPORUM	COL			X				0.51		244
COELUSPHAERIUM HAEGELIANUM	COL		0.21	425		1.51	382	151	1.11	488
CRUCIGENIA	COL					0.51	127			
CRUCIGENIA QUADRATA	COL		0.11	142						
CRUCIGENIA TETRAPEDIA	COL									X
CRYPTOMONAS	CEL						X			
CRYPTOMONAS ERSEA	CEL		0.41	759						
CYCLOTELLA	CEL	1189.51		1661.67						
CYCLOTELLA MENECHINIANA	CEL						X			
CYCLOTELLA MICHIGANIANA	CEL							0.51		244
CYMATOPLLEUPA SULEA	CEL			X			X			X
CYMBELLA	CEL						X			
CYMBELLA TRIANGULUM	CEL			X						X
DACTYLOCOCCOPSIS IRREGULARIS	CEL	141	4.01	7374						
DICTYOSPHAERIUM PULCHELLUM	COL									X
DIPLOPSALIS ACUTA	CEL					0.31	85			
ELAKATODINIA GELATINOSA	COL							0.31		122
ENTONOMEIS	CEL			X						
EUGLENA	CEL			X						
EUGLENA GRACILIS	CEL			X						
GLENODINIUM GYMNODINIUM	CEL						X			
GOMPHONEMA OLIVACEUM	CEL			X						
GYMNODINIUM ALBULUM	CEL		0.11	142						
GYROSIGNA	CEL									X
KIRCHNERIELLA CONGRATA	COL		0.31	567						
LYNGBYA	FIL						X			
MELOSIRA GRANULATA	CEL	121	1.11	1985	131	10.51	2633	12126.61		12197
MELOSIRA GRANULATA V. ANGUSTISSIMA	CEL		0.21	284				1.41		654
MICROCYSTIS AERUGINOSA	COL			X		0.71	170			X
MICROCYSTIS INCERTA	COL		0.51	851		0.31	85		0.81	366
NAVICULA CUSPIDATA	CEL			X						X
NITZSCHIA	CEL		0.11	142						
NITZSCHIA #1	CEL									X
NITZSCHIA #2	CEL									X
ODOCYSTIS	COL			X				151	3.71	1728
ODOCYSTIS BORGEI	COL					3.91	977			
OSCILLATORIA	FIL	151	0.91	1702	121	6.31	1571		0.51	244
OSCILLATORIA LJMNETICA	FIL									X
PEDIASSTRUM BORYANUM	COL			X			X			X
PEDIASSTRUM DUPLEX	COL						X			
PEDIASSTRUM DUPLEX V. CLATHRATUM	COL			X	151	2.51	515			
PEDIASSTRUM KAWRAISKYI	CEL						X			X
PHACUS CAUDATUS	CEL			X						
PHACUS REGALOPSIS	CEL		0.11	142						
PHORMIDIUM RUCICOLA	COL					0.21	42			
PLEUROSIGNA	CEL									X
RAPHIDICOPSIS	FIL			X						
RHO PALUDIA GIBBA	CEL			X						
SCENEDESMUS ACUMINATUS	COL		0.21	425			X		0.31	122
SCENEDESMUS BALATONICUS	COL					0.71	170			X
SCENEDESMUS BIJUGA	COL			X						X
SCENEDESMUS DIMORPHUS	COL									X
SCENEDESMUS UPOLIENSIS	COL						X			X
SCENEDESMUS GUADALCAUDA	COL		0.31	567					1.31	610
SCENEDESMUS SPP.	COL					1.21	297			
SCIRODIERIA SETIGERA	CEL			X		0.31	85		0.31	122
STAUASTRUM #1	CEL			X		0.21	42			X
STAUASTRUM #2	CEL									X
STAUASTRUM TETRACERUM	CEL						X			
STEPHANODISCUS	CEL			X	141	4.11	1019	141	1.31	610
SURIJELLA	CEL		0.11	142			X			
SURIJELLA #9	CEL			X			X			X
SYNEDRA ACUS	CEL		0.51	851						
TETRAEDRUM MASTATUR ?	CEL									X

TOTAL

185495

25096

45862

LAKE NAME: ALVIN LAKE
 STORE NUMBER: 4602

NYGAARD TROPHIC STATE INDICES

DATE	04 23 74	07 11 74	09 20 74
MYXOPHYCEAN	0/0 D	3.00 E	1.00 E
CHLOROPHYCEAN	01/0 E	4.00 E	1.00 E
EUGLENOPHYTE	0/01 ?	0.14 ?	0/02 ?
DIATOM	1.00 E	1.00 E	0.33 E
COMPOUND	02/0 E	11.0 E	3.00 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	04 23 74	07 11 74	09 20 74
GENUS	00	00	00
SPECIES	00	00	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE	04 23 74	07 11 74	09 20 74
AVERAGE DIVERSITY H	0.00	1.71	1.40
NUMBER OF TAXA S	8.00	17.00	10.00
NUMBER OF SAMPLES COMPOSITED M	2.00	2.00	2.00
MAXIMUM DIVERSITY MAXH	3.00	4.09	3.32
MINIMUM DIVERSITY MINH	0.34	0.52	0.06
TOTAL DIVERSITY D	0.00	509.58	2714.60
TOTAL NUMBER OF INDIVIDUALS/ML N	182.00	298.00	1939.00
EVENESS COMPONENT J	0.00	0.42	0.42
RELATIVE EVENESS HJ	-0.12	0.34	0.42
MEAN NUMBER OF INDIVIDUALS/TAXA L	22.75	17.53	193.90
NUMBER/ML OF MOST ABUNDANT TAXON K	182.00	183.00	1108.00

LAKE NAME: ALVIN LAKE
 STURET NUMBER: 4602

CONTINUED

TAXA	FORM	04 23 74				07 11 74				09 20 74			
		ALGAL		ALGAL		ALGAL		ALGAL					
		IS	2C	IS	2C	IS	2C	IS	2C				
APHANIZOUMENON FLUS-AQUAE	FIL			131	7.71	23		11197.21	1108				
CENTRIC DIATOM	CEL			12115.41		46							
CHLOREOCOCCALEAN CULUMY	CEL					X							
CHROOCYTHUS ACUTA	CEL		11100.1	182		183		12132.11	623				
CLUSTERIUM #1	CEL								X				
CLUSTERIUM #2	CEL					X							
CRUCIGENIA TETRAPELIA	CEL			X									
CRYPTOMONAS EROSA	CEL					X		131	8.91	173			
CRYPTOMONAS MARSSUMII	CEL			X									
CYST	CEL									X			
DINOBRYON DIVERGENS	CEL			X									
EUGLENA	CEL							X					
GYROSTOMA	CEL							X					
HELOSIRA	CEL							X				X	
HELOSIRA GRANULATA	CEL			X									
MICROCYSTIS AERUGINOSA	CEL							X					
NITZSCHIA #1	CEL											X	
NITZSCHIA #2	CEL											X	
NITZSCHIA #3	CEL							X				X	
UOCCYSTIS	CEL							X					
OSCILLATORIA	FIL							X					
SCENEDESMUS ACUMINATUS	CEL							X					
SCHAERERIA SETIGERA	CEL				151	7.71	23	141	1.01	35			
STEPHANOUISCUS	CEL			X									
STEPHANOUISCUS ASTRAEA	CEL							X					
SURIPELLA #9	CEL			X									
SURIPELLA ANGUSTA	CEL			X									
SYNEURA RUPPENS	CEL				141	7.71	23						
TOTAL				182		298				1439			

LAKE NAME: ANGOSTURA RES.
 STORE NUMBER: 4603

NYGAARD TROPHIC STATE INDICES

	DATE	04 24 74	07 15 74	09 11 74
MYXOPHYCEAN		0/0 0	2.00 E	0/03 0
CHLOROPHYCEAN		03/0 E	3.00 E	1.67 E
EUGLENDOPHYTE		0.33 E	0/05 ?	1.00 E
DIATOM		0/06 ?	0.17 ?	0/06 ?
COMPOUND		04/0 E	6.00 E	3.33 E

PALMER'S ORGANIC POLLUTION INDICES

	DATE	04 24 74	07 15 74	09 11 74
GENUS		04	03	00
SPECIES		03	00	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

	DATE	04 24 74	07 15 74	09 11 74
AVERAGE DIVERSITY	H	1.54	2.49	1.99
NUMBER OF TAXA	S	15.00	20.00	27.00
NUMBER OF SAMPLES COMPOSITED	M	4.00	4.00	4.00
MAXIMUM DIVERSITY	MAXH	3.91	4.32	4.75
MINIMUM DIVERSITY	MINH	0.10	0.18	0.42
TOTAL DIVERSITY	D	2772.00	3067.68	1345.24
TOTAL NUMBER OF INDIVIDUALS/ML	N	1600.00	1232.00	676.00
EVENESS COMPONENT	J	0.39	0.58	0.42
RELATIVE EVENESS	RJ	0.38	0.56	0.37
MEAN NUMBER OF INDIVIDUALS/TAXA	L	120.00	61.60	25.04
NUMBER/ML OF MOST ABUNDANT TAXON	K	1167.00	493.00	276.00

LARE NAME: ANGSTUMA RES.
 STORE NUMBER: 4605

CONTINUED

05 24 74

07 15 74

09 11 74

TAXA	FORM	ALGAL UNITS				ALGAL UNITS				ALGAL UNITS			
		IS	ZC	PER ML	ML	IS	ZC	PER ML	ML	IS	ZC	PER ML	ML
ANNISTRODESMS FALCATUS	CEL			X									
ANNISTRODESMS FALCATUS	CEL												
V. ACICULARIS	CEL	131	7.41	233									
ASTERIONELLA TURBOSA	CEL	141	3.71	67									X
CARTERIA	CEL				11125.01			308					
CEPATIUM MIRUNDINELLA	CEL							X					X
CHROOUMNAS ACUTA	CEL	12164.81		1167	12140.01			493	12136.41				246
CLOSTERIUM #1	CEL												X
CLOSTERIUM #2	CEL												X
COELASTRUM MICROPORUM	COL												X
COSMARIUM #1	CEL							X					X
CAUCIGENIA TETRAPEDIA	COL												X
CRYPTOUMNAS EROSA	CEL	151	1.81	33		2.51		31	1140.81				276
CRYPTOUMNAS MARSSONII	CEL		1.81	33									
CYMBELLA	CEL							X					
DINGEKTON DIVERGENS	CEL				151	5.01		62	151	9.01			61
ENTOMONEIS	CEL							X					
ENTOMONEIS ALATA	CEL			X									
EUGLENA	CEL			X									
EUGLENA ACUS	CEL												X
EUGLENA LUTORIS	CEL												X
EUGLENA TRIPTERIS	CEL												X
GLENODINIUM	CEL			X				X					
GLENODINIUM OCULATUM	CEL								141	4.61			31
GYNODINIUM ALBULUM	CEL									4.61			31
GYNOSIGMA	CEL			131	7.51			92					
GYNOSIGMA NURNLEYI	CEL												X
HERISPEDIA MINIMA	COL					7.01		92					
HOOGMOEDIA	FIL												X
NAVICULA #1	CEL												X
NAVICULA #2	CEL			X									
NITZSCHIA #1	CEL			X									
NITZSCHIA #2	CEL			X									
NITZSCHIA #3	CEL			X									
NITZSCHIA #4	CEL												X
NITZSCHIA ACICULARIS	CEL					4.51		31					
NITZSCHIA LONGISSIMA	CEL												
V. REVERSA	CEL				141	7.51		92					X
NOCTISTIS	CEL							X					X
OSCILLATORIA	FIL							X					
PEZIZASTRUM DUPLEX	CEL												
V. RETICULATUM	COL												X
PERIGINIUM UMBONATUM	CEL												X
PHAGUS CAUDATUS	CEL								131	4.61			31
PHAGUS HELIODES	CEL												X
SCENEDESMS BIJUGA	COL					2.51		31					
SCENEDESMS DIMORPHUS	COL			X									
SPHAEROCYSTIS	COL							X					
SPHAEROCYSTIS SCHROETEKI	COL												X
STEPHANODISCUS	CEL							X					
SUMIPELLA	CEL							X					
SURIRELLA ANGUSTA	CEL							X					
SYNEDRA ACUS	CEL	11120.41		367									X
TOTAL					1860			1232					676

LAKE NAME: BRANT LAKE
 STORET NUMBER: 4654

NYGAARD TROPHIC STATE INDICES

DATE	04 23 74	07 11 74	09 20 74
MYXOPHYCEAN	01/0 E	05/0 E	05/0 E
CHLOROPHYCEAN	01/0 E	01/0 E	0/0 U
EUGLENOPHYTE	0/02 ?	0/06 ?	0/05 ?
DIATOM	0.33 E	1.00 E	01/0 E
COMPOUND	03/0 E	07/0 E	06/0 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	04 23 74	07 11 74	09 20 74
GENUS	00	00	05
SPECIES	00	00	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE	04 23 74	07 11 74	09 20 74
AVERAGE DIVERSITY H	0.92	0.37	1.07
NUMBER OF TAXA S	9.00	11.00	7.00
NUMBER OF SAMPLES COMPOSITED M	2.00	2.00	2.00
MAXIMUM DIVERSITY MAXH	3.17	3.46	2.81
MINIMUM DIVERSITY MINH	0.69	0.02	0.04
TOTAL DIVERSITY D	83.72	2674.36	2286.59
TOTAL NUMBER OF INDIVIDUALS/ML N	91.00	7228.00	2137.00
EVENESS COMPONENT J	0.29	0.11	0.38
RELATIVE EVENESS RJ	0.10	0.11	0.38
MEAN NUMBER OF INDIVIDUALS/TAXA L	10.11	657.09	305.29
NUMBER/ML OF MOST ABUNDANT TAXON K	61.00	6848.00	1595.00

LAKE NAME: BRANT LAKE
 STORE NUMBER: 4604

CONTINUED

TAXA	04 23 74				07 11 74				09 20 74				
	FORM	IS		ZC		IS		ZC		IS		ZC	
		PER ML	ALGAL UNITS	PER ML	ALGAL UNITS	PER ML	ALGAL UNITS	PER ML	ALGAL UNITS	PER ML	ALGAL UNITS	PER ML	ALGAL UNITS
APHANIZOENON FLUS-AQUAE	FIL	1	1	1	1194.71	6848	1174.61	1595					
CHLOROPHYTAN COLONY	COL	1	1	1		X	1	1					
CHROOCHONAS ALATA	CEL	12133.01		30	131	3.91	280	13112.71				271	
COELOSPHAERIUM MAEGELIANUM	COL	1	1	1			X	1	1	1			X
CRYPTOCHONAS MARSSONII	CEL	11167.01		61	151	0.31	25						
ENTOMONEIS ALATA	CEL	1	1	1	X	1	1						
FRAGILARIA	CEL	1	1	1	X	1	1						
LYNGBYA	FIL	1	1	1	X	1	1						
MICROCYSTIS AERUGINOSA	COL	1	1	1			X	1	1	1			X
NAVICULA	CEL	1	1	1			X	1	1	1			
NITZSCHIA VERTICULARIS	CEL	1	1	1	X	1	1						
OSCILLATORIA	FIL	1	1	1	141	0.31	25	12112.71				271	
PHORMIDIUM MUCICOLA	FIL	1	1	1			X	1	1	1			X
SCINDESMUS DIMORPHUS	COL	1	1	1	X	1	1						
SCHROEDERIA JUDAYI	CEL	1	1	1		0.31	25						
STEPHANODISCUS NIAGARAE	CEL	1	1	1	X	121	0.31	25					X
SURIRELLA	CEL	1	1	1	X	1	1						
TOTAL					91		7228					2137	

LAKE NAME: LAKE BYRON
 STORE NUMBER: 4665

NYGAARD TROPHIC STATE INDICES

DATE	04 24 74	07 11 74	09 18 74
MYXOPHYCEAN	0570 E	5.00 E	0270 E
CHLOROPHYCEAN	0270 E	5.00 E	0170 E
EUGLENOPHYTE	0.29 E	0.20 ?	0703 ?
DIATOM	0.43 E	1.33 E	070 ?
COMPOUND	1270 E	16.0 E	0370 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	04 24 74	07 11 74	09 18 74
GENUS	00	08	00
SPECIES	00	02	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE	04 24 74	07 11 74	09 18 74
AVERAGE DIVERSITY H	2.40	1.53	0.04
NUMBER OF TAXA S	22.00	20.00	3.00
NUMBER OF SAMPLES COMPOSITED M	2.00	2.00	2.00
MAXIMUM DIVERSITY MAXH	4.46	4.32	1.58
MINIMUM DIVERSITY MINH	0.24	0.02	0.00
TOTAL DIVERSITY D	2424.00	18460.98	5514.24
TOTAL NUMBER OF INDIVIDUALS/ML N	1010.00	12066.00	137856.00
EVENESS COMPONENT J	0.54	0.35	0.03
RELATIVE EVENESS RJ	0.52	0.36	0.03
MEAN NUMBER OF INDIVIDUALS/TAXA L	45.91	603.30	45952.00
NUMBER/ML OF MOST ABUNDANT TAXON K	337.00	6635.00	137293.00

LAKE NAME: LAKE BYRON
 STORE NUMBER: 4605

CONTINUED

04 24 74

07 11 74

09 18 74

TAXA	FORM	ALGAL UNITS PER ML			ALGAL UNITS PER ML			ALGAL UNITS PER ML		
		IS	ZC	PER ML	IS	ZC	PER ML	IS	ZC	PER ML
ANABAENA	FIL	1	1	1	1	0.80	101	121	0.40	563
APHANIZOMENON FLOS-AQUAE	FIL	1	1	1	1	171.60	8635	1199.60	137293	
CENTRIC DIATOMS	CEL	151	9.50	96	1	1	1	1	1	1
CHRUCOMNAS ACUTA	CEL	1	1	1	1	1	1	1	1	1
CLUSTERIUM	CEL	1	1	1	1	0.40	50	1	1	1
CRUCICENTIA QUADRATA	COL	1	1	1	1	2.50	303	1	1	1
CRYPTOMONAS MARSSONII	CEL	121	4.80	48	1	1	1	1	1	1
CYCLOTELLA MENEGHINIANA	CEL	1	1	1	151	0.80	101	1	1	1
CYMATOPLEURA SOLIDA	CEL	1	1	1	1	1	1	1	1	1
DALTYLGOCCUPSIIS	CEL	1	128.60	289	1	1	1	1	1	1
ENTODONEIS ALATA	CEL	131	4.80	48	1	1	1	1	1	1
EUGLENA	CEL	1	1	1	1	1	1	1	1	1
GOMPHONEMA	CEL	1	1	1	1	1	1	1	1	1
MELOSIRA GRANULATA	CEL	1	1	1	121	8.40	1010	1	1	1
MELOSIRA GRANULATA	CEL	1	1	1	1	1	1	1	1	1
V. ANGUSTISSIMA	CEL	1	1	1	131	12.10	1464	1	1	1
MERISNOPELIA MINIMA	COL	1	1	1	1	1	X	1	1	1
MICROCYSTIS AERUGINOSA	COL	1	1	1	1	1	1	1	1	1
MICROCYSTIS INCERTA	COL	1	1	1	1	1	X	1	1	1
NETZSCHIA LONGISSIMA	CEL	1	1	1	1	1	1	1	1	1
V. REVERSA	CEL	1	1	1	1	0.40	50	1	1	1
ODCYSIIS	CEL	1	1	1	1	1.30	151	1	1	1
OSCELLATORIA	FIL	1	1	1	1	1	1	1	1	1
OSCELLATORIA #2	FIL	141	4.80	48	1	1	1	1	1	1
PEDIASTRUM BRYANUM	COL	1	1	1	1	1	X	1	1	1
PENNATE DIATOMS	CEL	111	33.40	337	1	1	1	1	1	1
PHACUS MEGALOPSIS	CEL	1	1	1	1	1	X	1	1	1
PHACUS TURFUS	CEL	1	1	1	1	0.40	50	1	1	1
PHUMIDION MUCICOLA	FIL	1	1	1	1	1	1	1	1	1
PLEURUSIGNA	CEL	1	1	1	1	1	X	1	1	1
SCENEDESMUS BALATONICUS	COL	1	1	1	1	1	X	1	1	1
SCHROEDERIA SETIGERA	CEL	1	114.30	144	1	0.80	101	1	1	X
STEPHANODISCUS	CEL	1	1	1	141	0.40	50	1	1	1
SURIPELLA	CEL	1	1	1	1	1	X	1	1	1
SYNEDEA	CEL	1	1	1	1	1	1	1	1	1
SYNEDEA ULNA	CEL	1	1	1	1	1	1	1	1	1
TOTAL				1710			12066			137856

LAKE NAME: CLEAR LAKE
 STORET NUMBER: 4606

NYGAARD TROPHIC STATE INDICES

DATE	04 29 74	07 10 74	09 18 74
MYXOPHYCEAN	0570 E	3.50 E	2.33 E
CHLOROPHYCEAN	0170 E	2.00 E	1.33 E
EUGLENOPHYTE	0706 ?	0711 ?	0711 ?
DIATOM	0.20 ?	1.00 E	0.33 E
COMPOUND	0870 E	6.50 E	4.33 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	04 29 74	07 10 74	09 18 74
GENUS	03	02	02
SPECIES	00	00	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE	04 29 74	07 10 74	09 18 74
AVERAGE DIVERSITY H	1.83	2.35	1.90
NUMBER OF TAXA S	23.00	21.00	26.00
NUMBER OF SAMPLES COMPOSITED M	2.00	2.00	2.00
MAXIMUM DIVERSITY MAXH	4.52	4.39	4.76
MINIMUM DIVERSITY MINH	0.06	0.08	0.06
TOTAL DIVERSITY D	6824.26	7299.10	10985.80
TOTAL NUMBER OF INDIVIDUALS/PL N	4822.00	3106.00	5782.00
EVENNESS COMPONENT J	0.40	0.54	0.40
RELATIVE EVENNESS RJ	0.40	0.53	0.40
MEAN NUMBER OF INDIVIDUALS/TAXA L	209.65	147.90	222.38
NUMBER/ML OF MOST ABUNDANT TAXON K	2775.00	1343.00	2668.00

LAKE NAME: CLEAR LAKE
 STGRLT NUMBER: 4626

CONTINUED

04 29 74

07 10 74

09 18 74

TAXA	FORM	04 29 74			07 10 74			09 18 74		
		IS	XC	ALGAL UNITS PER ML	IS	XC	ALGAL UNITS PER ML	IS	XC	ALGAL UNITS PER ML
AMABAENA	FIL						X			X
APHANIZOEMON FLOD-AQUAE	FIL				131	2.71	84	11146.11		2668
APHANIZOEMON MIDULANS	COL					2.71	84			
ASTERIGNELLA FORMOSA	CEL	121	6.81	330			X	151	1.01	56
CERATIUM HIRUNDINELLA	CEL						X			X
CHROOCYCLUS LIMNETICUS	COL					1.41	42			
CHROOCYCLUS ACUTA	CEL	11157.51		2775		9.51	294			
CLOSTERIUM	CEL									X
COCCONEIS	CEL									X
CELOSPHAERIUM NAEGELIANUM	COL									X
CELOSPHAERIUM PALLIDUM	COL			X	151	1.41	42			X
COSMARIUM	CEL						X			X
CRYPTOMONAS EROSA	CEL					2.71	84		1.01	56
CYANOPHYTAN COLONY	COL			X						
CYMBELLA	CEL			X						
DACTYLOCOCCOPSIS	CEL		1.41	66						
DINOBYTUM SOCIALE	CEL			X						
DINOFLLAGELLATE	CEL			X						
DIPLOPSALIS ACUTA	CEL						X			
ELAKATOTHRIX GELATINOSA	CEL						X			
EPITHEMIA	CEL			X						X
FLAGELLATE	CEL	15121.91		1.57						
FRAGILARIA	CEL							131	7.71	445
FRAGILARIA CAPUCINA	CEL			X						
FRAGILARIA CRUTONENSIS	CEL	141	5.51	264	12127.01		839			X
GLENODINIUM GYMNODINIUM										
V. BISCUTELLIFORME	CEL									X
GLUCOCYSTIS	COL								1.01	56
GOMPHLENEMA	CEL			X						
GOMPHOSPHAERIA APUNINA	COL			X						X
GYRUSIGMA	CEL			X						
LYNGBYA BIRGEI	FIL						X			
MALLOMONAS	CEL			X						
MELOSIRA GRANULATA	CEL	131	5.51	264	11143.21		1343	12129.81		1723
MICROCYSTIS AERUGINOSA	COL			X						X
MICROCYSTIS INCERTA	COL					2.71	84	14113.51		778
NAVICULA	CEL			X						
NITZSCHIA VERRICULARIS	CEL			X						
OOCYSTIS	CEL				141	6.01	210			X
Oscillatoria	FIL			X						
PEDIASTRUM BORYANUM	COL			X						X
PEDIASTRUM DUPLEX	COL						X			
PEDIASTRUM DUPLEX										
V. RETICULATUM	CEL									X
PEDIASTRUM SIMPLEX										
V. DUODENARIUM	COL						X			X
STAUROSTRUM	CEL						X			X
STEPHANODISCUS NIAGARAE	CEL			X						X
SYNEDRA CYCLOPUM	CEL		1.41	66						
SYNEDRA ULNA	CEL									X
TOTAL				4822			3106			5782

LAKE NAME: CLEAR LAKE
 STORET NUMBER: 4607

NYGAARD TROPHIC STATE INDICES

DATE	04 22 74	07 12 74	09 20 74
MYXOPHYCEAN	4.00 E	11.0 E	10.70 E
CHLOROPHYCEAN	7.00 E	10.0 E	11.70 E
EUGLENOPHYTE	0.09 ?	0.10 ?	0.05 ?
DIATOM	0.21 ?	0.56 E	0.17 ?
COMPOUND	13.5 E	26.0 E	23.70 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	04 22 74	07 12 74	09 20 74
GENUS	19	17	11
SPECIES	04	04	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE	04 22 74	07 12 74	09 20 74
AVERAGE DIVERSITY	H 3.42	3.03	2.37
NUMBER OF TAXA	S 45.00	43.00	33.00
NUMBER OF SAMPLES COMPOSITED	M 1.00	1.00	1.00
MAXIMUM DIVERSITY	MAXH 5.44	5.43	5.04
MINIMUM DIVERSITY	MINH 1.07	0.01	0.00
TOTAL DIVERSITY	D 33847.74	334678.65	278951.37
TOTAL NUMBER OF INDIVIDUALS/ML	N 9897.00	110455.00	117701.00
EVENESS COMPONENT	J 0.62	0.56	0.47
RELATIVE EVENESS	PJ 0.62	0.56	0.48
MEAN NUMBER OF INDIVIDUALS/TAXA	L 214.93	2566.72	3566.70
NUMBER/ML OF MOST ABUNDANT TAXON	R 3077.00	27291.00	52534.00

LAKE NAME: CLEAR LAKE
STORE NUMBER: 4607

CONTINUED

04 22 74

07 12 74

09 20 74

TAXA	FORM	04 22 74		07 12 74		09 20 74	
		IS	XC	IS	XC	IS	XC
ACTINASTRUM HANTZSCHII	COL				0.51	553	
AMPHOEA UVALIS							
V. AFFINIS	CEL			X			
ANABAENA #2	FIL					X	
ANABAENA CIRCINALIS	FIL				124.71	27291	0.31 401
ANKISTRUESEMUS FALCATUS	CEL		3.41	333			X
APHANOTHECE NIJULANS	COL						X
CHLAMYDOMONAS	CEL				0.21	184	
CHROOCHOMAS	CEL					X	
CHROOCHOMAS ACUTA	CEL				0.51	553	0.31 401
CLOSTERIUM #1	CEL			X			
CLOSTERIUM #2	CEL			X			
COCCONEIS PLACENTULA							
V. LINEATA	CEL			X			
COSMARION	CEL					X	
CRYPTOCHOMAS	CEL			X			
CRYPTOCHOMAS EROSA	CEL					X	X
CYCLOTELLA MENECHMINIANA	CEL			X			
CYMATOPLEURA SOLIDA	CEL			X			
CYMBELLA VENTRICOSA	CEL					X	X
LACTYLUCCOCCOPSIS	CEL					X	1.71 2605
DICTYUSPHERIUM	COL				0.31	369	
DICTYUSPHERIUM PULCHELLUM	COL		3.81	83			0.31 401
ELAKATONNIA GELATINOSA	CEL		0.81	83			
EUGLENA	CEL		1.71	166			
EUGLENA ACUS	CEL					X	
FLAGELLATE	CEL		3.41	333			
FLAGELLATE #2	CEL						1.21 1464
FRAGILLARIA	CEL				0.71	736	
GOMPHONEMA PAKYULUP	CEL			X		X	X
HANTZSCHIA AMPHIOXYTS	CEL			X			
KIRCHNERIELLA CONTIGUA	COL						2.81 3008
KIRCHNERIELLA LUMARIS	CEL					X	
KIRCHNERIELLA SPP.	CEL				0.31	4220	
KIRCHNERIELLA SUBSULITARIA	CEL					X	
LYNGBYA #1	FIL		4.21	416		X	
LYNGBYA #2	CEL			X			
LYNGBYA CONTORTA	FIL		3.81	83	1415.91	17518	141 5.81 6817
PALLIDOMONAS	CEL						X
MELOSIRA DISTANS	CEL					X	
MELOSIRA GRANULATA	CEL					X	
MELOSIRA GRANULATA ?	CEL	151	3.41	333			
MELOSIRA ITALICA	CEL					X	
MERISMOPEDIA MINIMA	COL		115.11	1497	15114.41	21390	13144.81 52534
MERISMOPEDIA TENUISSIMA	COL					X	X
MICRACTINIUM PUSILLUM	COL		3.81	83			
MICROCYSTIS AERUGINOSA	COL	1113.41		1231	131 3.21	3504	121 6.11 7218
MICROCYSTIS INCERTA	COL		2.51	250		8.01	8851 151 2.91 3409
NAVICULA CUSPIDATA	CEL			X			
NITZSCHIA #1	CEL		1.71	166			X
NITZSCHIA #2	CEL					X	X
NITZSCHIA ACICULARIS	CEL		0.61	83		X	
NITZSCHIA AMPHIBIA	CEL			X			
NITZSCHIA DISSIPATA	CEL						X
OCCYSTIS	CEL	141	3.41	333		0.81	922
OSCELLATORIA #1	FIL			X			
OSCELLATORIA #2	FIL			X			
OSCELLATORIA AGARDHII	FIL				12111.71	12908	1129.01 34087
PEDIASTRUM BORTANUM	COL			X			X
PEDIASTRUM DUPLEX	COL			X			
PEDIASTRUM DUPLEX							
V. RETICULATUM	COL			X			
PEDIASTRUM KAMRAISKYI	COL					X	X
PENNATE DIATOM	CEL					X	
PHACUS	CEL				0.21	184	
PHACUS REGALOPSIS	CEL			X			X
PHORMIDIUM RUCICOLA	FIL				4.01	4979	2.01 2406
PHOPALUDIA	CEL			X			
SCENEDESMUS ACUMINATUS	COL			X			X
SCENEDESMUS DIMORPHUS	COL				0.21	184	0.31 401
SCENEDESMUS GPOLIENSIS	COL				0.31	369	0.51 602
SCENEDESMUS PROFUBERANS	COL		0.81	83			
SCENEDESMUS QUADRICAUDA	COL				0.31	369	
SCHROEDERIA SETIGERA	CEL			X	0.31	369	2.21 2607
SPHAEROCYSTIS SCHROETERI	COL			X			
STAURONEIS ANCEPS							
V. GRACILIS	CEL			X			
STEPHANODISCUS	CEL					X	
STEPHANODISCUS ASTRAEA							
V. MINUTULA	CEL	12131.11		3077			
SURIPELLA #9	CEL	131	5.91	582		X	X
SURIPELLA ANGUSTA	CEL		0.81	83			
SYNEURA	CEL		1.71	166			
SYNEURA RUPPENS	CEL					X	

LAKE NAME: CLEAR LAKE
 STORE NUMBER: 4607

CONTINUED

TAXA	04 22 74			07 12 74			09 20 74		
	FORM	ALGAL		ALGAL		ALGAL		ALGAL	
		IS	ZC	UNITS PER ML	IS	ZL	UNITS PER ML	IS	ZC
SYNECHA ULNA	CEL	1	1	1	1	2	1	1	1
TETRAEDROM MUTICUM	CEL	1	1	2	1	1	1	1	2
TETRASTRUM GLABRUM	CEL	1	1	1	1	1	1	1	2
TETRASTRUM STAUROGENTIAEFORME	CEL	1	3.41	333	1	1	1	1	1
TOTAL				9897		110495			117701

LAKE NAME: COCHRANE
 STORRE NUMBER: 4608

NYGAARD TROPHIC STATE INDICES

DATE	04 24 74	07 12 74	09 19 74
MYXOPHYCEAN	6.00 E	7.00 E	4.00 E
CHLOROPHYCEAN	4.00 E	5.00 E	1.50 E
EUGLENOPHYTE	0.20 ?	0.08 ?	0.36 E
DIATOM	0.09 ?	0.10 E	0.08 ?
COMPOUND	13.0 E	14.0 E	7.50 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	04 24 74	07 12 74	09 19 74
GENUS	07	01	08
SPECIES	00	00	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE	04 24 74	07 12 74	09 19 74
AVERAGE DIVERSITY H	2.89	1.10	2.53
NUMBER OF TAXA S	29.00	20.00	29.00
NUMBER OF SAMPLES COMPOSITED M	2.00	2.00	2.00
MAXIMUM DIVERSITY MAXH	4.86	4.32	4.86
MINIMUM DIVERSITY MINH	0.20	0.03	0.10
TOTAL DIVERSITY D	4817.63	11473.00	9057.40
TOTAL NUMBER OF INDIVIDUALS/ML N	1667.00	10430.00	3580.00
EVENNESS COMPONENT J	0.59	0.25	0.52
RELATIVE EVENNESS RJ	0.56	0.25	0.52
MEAN NUMBER OF INDIVIDUALS/TAXA L	57.48	521.50	123.45
NUMBER/ML OF MOST ABUNDANT TAXON K	555.00	8734.00	1006.00

LAKE NAME: COCHRANE
 STORET NUMBER: 4608

CONTINUED

TAXA	FORM	04 24 74			07 12 74			09 19 74		
		IS	%	ALGAL UNITS PER ML	IS	%	ALGAL UNITS PER ML	IS	%	ALGAL UNITS PER ML
ACHMANTHES	CEL	1	2.0	43	1		1			
AMPHUKA	CEL	1		X	1		1			
ANKISTRQDESMUS FALCATUS	CEL	1		X	1		1			
APMANOTHECE	COL	1			1		13117.2		617	
APMANOTHECE NIDULANS	COL	1			11183.7		8734			
BOTRYOCOCCUS BRAUNII	COL	1			151 0.8		81			
CENTRIC DIATOM	CEL	12120.5		342	1		1			
CERATIUM HIRUNDINELLA	CEL	1			1		X			
CERATIUM HIRUNDINELLA F. AUSTRIACUM	CEL	1			1		1		X	
CHAETOCOCCUS ELMOREI	CEL	1			1		X			
CHROOCOCCUS DISPERSUS	COL	1	2.0	43	1	0.8	81	1	6.9	247
CHROOHOMAS ACUTA	CEL	1			1	0.4	40	1		
COCCONFIS	CEL	1		X	1		1			
COELASTRUM MICROPORUM	COL	1			1	0.4	40	1		
COELOSPHAERIUM PALLIDUM	COL	151	2.0	43	131	4.7	485	1	3.4	123
COSMARIUM	CEL	1			1		1	1	1.7	62
COSMARIUM CLEPSYDRA	CEL	1			1		1			
V. NANUM	CEL	1		X	1	0.8	81	1		X
CRYPTOCHOMAS EROSA	CEL	1	2.0	43	1		1			X
CYMBELLA	CEL	1		X	1		1			
CYST	CEL	14110.3		171	1		1			
DECTYOSPHAERIUM PULCHELLUM	COL	1			1		X			
DIPLOPSALIS ACUTA	CEL	1			1		X			
ELAKATOTHRIX GELATINOSA	COL	1			1		1	1	1.7	62
ENTOMINEIS PALUDOSA	CEL	1	2.0	43	1		1			
EPITHEMIA	CEL	1			1		1			X
EUGLENA #1	CEL	1		X	1		1			
EUGLENA #2	CEL	1			1		1			X
EUGLENA EHRENBERGII	CEL	1			1		X			X
EUNOTIA	CEL	1			1		1			X
GOMPHONEMA OLIVACEUM	CEL	1			1		1			X
GOMPHOSPHAERIA APOGONA	COL	1			1	0.4	40	1		
KIRCHNERELLA	CEL	1			1		X			
LEPCCINCLIS	CEL	1			1		1			X
LYNGBYA CUMTORTA	FIL	1		X	1	3.1	323	1		X
MERISOPEDIA GLAUCA	COL	1			1	0.4	40	1	1.7	62
MICROCYSTIS AERUGINOSA	COL	1		X	1		X	1	3.4	123
MICROCYSTIS INCERTA	COL	1			1		12146.5		1666	
NAVICULA	CEL	1	2.0	43	1		1			X
NAVICULA CUSPIDATA	CEL	1		X	1		1			
NAVICULA PUPULA	CEL	1			1		1			
V. ELLIPTICA	CEL	1		X	1		1			
NITZSCHIA VERMICULARIS	CEL	1		X	1		1			X
OCCYSTIS	CEL	1		X	1		X			X
OSCELLATORIA	FIL	11133.3		155	1		1	1	1.7	62
USCILLATORIA LIMNETICA	FIL	1	5.1	89	1		1			
PEGIASTRUM BORYANUM	COL	1		X	1		1			X
PERIDINIUM BORGÉI	CEL	1		X	121	3.4	404	1	12.1	432
PERIDINIUM WILLEI	CEL	1			141	0.8	81	141	1.7	62
PHACUS PSEUDOMORSTEOITII	CEL	1		X	1		1			X
PINNULARIA	CEL	1			1		1			X
SCENEDESMUS QUADRICAUDA	COL	1	2.0	43	1		1			
SURIELLA	CEL	1		X	1		1			
SURIELLA #1	CEL	1			1		1			X
SYNEODA ACUS	CEL	13112.8		213	1		1	1	1.7	62
SYNEODA ULMA	CEL	1		X	1		1			
TOTAL				1667			1430			3580

LAKE NAME: COTTONWOOD LAKE
 STORET NUMBER: 4619

NYGAARD TROPIC STATE INDICES

DATE	04 24 74	07 11 74	09 18 74
MYXOPHYCEAN	0470 E	5.00 E	6.00 E
CHLOROPHYCEAN	0370 E	4.00 E	2.00 E
EUGLENOPHYTE	0.43 E	0/09 ?	0/08 ?
DIATOM	0.25 ?	0.80 E	0170 E
COMPOUND	1470 E	13.0 E	9.00 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	04 24 74	07 11 74	09 18 74
GENUS	07	01	01
SPECIES	00	00	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE	04 24 74	07 11 74	09 18 74
AVERAGE DIVERSITY H	2.82	1.55	0.64
NUMBER OF TAXA S	34.00	21.00	12.00
NUMBER OF SAMPLES COMPOSITED M	2.00	2.00	2.00
MAXIMUM DIVERSITY MAXH	5.09	4.39	3.58
MINIMUM DIVERSITY MINH	0.18	0.07	0.01
TOTAL DIVERSITY D	6548.04	5830.50	9263.36
TOTAL NUMBER OF INDIVIDUALS/ML N	2322.00	3887.00	14474.00
EVENNESS COMPONENT J	0.55	0.34	0.16
RELATIVE EVENNESS RJ	0.54	0.34	0.16
MEAN NUMBER OF INDIVIDUALS/TAXA L	68.29	185.10	1206.17
NUMBER/ML OF MOST ABUNDANT TAXON K	721.00	2574.00	13002.00

LAKE NAME: COTTONWOOD LAKE
 STRET NUMBER: 4609

CONTINUED

04 24 74

07 11 74

09 18 74

TAXA	FORM	ALGAL UNITS		ALGAL UNITS		ALGAL UNITS	
		IS	ΣC	IS	ΣC	IS	ΣC
APPHOBA	CEL			X			
ANABAENA	FIL			X			
ANABAENA FLOS-AQUAE	FIL						
ANKISTRODES MUS FALCATUS							
Y. ACICULARIS	CEL			X			
APHANIZOENOMA FLOS-AQUAE	FIL						
CENTRIC DIATOM	CEL						
CHROOCOCCLUS DISPERSUS	COL						
CHROOCOCCLUS DISPERSUS ?	COL						
CHROOCOCCLUS ACUTA	CEL		1.71	40			
CLOSTERIUM	CEL						
COELASTRUM MICROBIUM	COL						
COELOSPHAERIUM HAEGELIANUM	COL						
COSCINODISCUS ROTHII							
Y. SUBSALSA	CEL						
CRUCIGEMIA QUADRATA	COL						
CRYPTOMUNAS	CEL						
CRYPTOMUNAS EROSA	CEL		5.21	120			
CYRATOPLEURA ELLIPTICA	CEL						
CYMBELLA MEXICANA	CEL						
CYMBELLA TRIANGULUM	CEL						
DACTYLOCOCCOPSIS IRREGULARIS	CEL		12131.11	721			
ENTOMONEIS ORNATA	CEL		1.71	40			
EPITHEMIA	CEL						
EUGLENA GRACILIS	CEL		1.71	40			
GUMPHRENSIA ULLIACUM	CEL						
MELUSIRA GRANULATA	FIL						
MELUSIRA GRANULATA							
Y. ANGUSTISSIMA	CEL						
MICRUCYSTIS AERUGINOSA	CEL						
MOUGERTIA	FIL						
NAVICULA	CEL						
NAVICULA CUSPIDATA	CEL						
NITZSCHIA #1	CEL		151 6.91	160			
NITZSCHIA #2	CEL		5.21	120			
NITZSCHIA #3	CEL		1.71	40			
NITZSCHIA #4	CEL						
OOCYSTIS	CEL						
OSCILLATORIA	FIL						
OSCILLATORIA LIMNETICA	FIL		1.71	40			
PEDIASTRUM DUPLEX	COL						
PHACUS PSEUDOGROSTICOIDII	CEL		3.41	80			
PHURIDIUM MUCICOLA	FIL						
PINNULARIA	CEL						
PINNULARIA MICROSTALUM	CEL						
RHODALGIA GIBBA	CEL						
SCENEDESMUS BIJUGA	COL						
SCHROEDERIA SETIGERA	CEL						
STEPHANODISCUS	CEL						
STEPHANODISCUS #1	CEL						
STEPHANODISCUS #2	CEL		11131.11	721			
STEPHANODISCUS NIAGARAE	CEL						
SURIRELLA #9	CEL		3.41	80			
SYNECHA ?	CEL						
SYNECHA ACUS	CEL		131 5.21	120			
TRACHELUMNAS VOLVUCINA	CEL						
ULOTHRIX ?	FIL						
TOTAL				2322		1867	14474

LAKE NAME: DEERFIELD RES.
 STORET NUMBER: 4610

NYGAARD TROPHIC STATE INDICES

DATE	04 25 74	07 15 74	09 11 74
MYXOPHYCEAN	0701 0	0170 E	1.67 E
CHLOROPHYCEAN	2.00 E	0370 E	0.67 ?
EUGLENOPHYTE	0702 ?	0704 ?	0707 ?
DIATOM	0.20 ?	1.00 E	0.25 ?
COMPOUND	3.00 E	0770 E	2.67 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	04 25 74	07 15 74	09 11 74
GENUS	02	00	00
SPECIES	00	00	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE	04 25 74	07 15 74	09 11 74
AVERAGE DIVERSITY H	1.83	2.47	2.44
NUMBER OF TAXA S	18.00	17.00	22.00
NUMBER OF SAMPLES COMPOSITED M	2.00	2.00	2.00
MAXIMUM DIVERSITY MAXH	4.17	4.09	4.46
MINIMUM DIVERSITY MINH	0.06	0.14	0.32
TOTAL DIVERSITY D	7021.71	3292.51	1756.80
TOTAL NUMBER OF INDIVIDUALS/ML N	3837.00	1333.00	720.00
EVENESS COMPONENT J	0.44	0.60	0.55
RELATIVE EVENESS RJ	0.44	0.54	0.52
MEAN NUMBER OF INDIVIDUALS/TAXA L	213.17	78.41	32.73
NUMBER/ML OF MOST ABUNDANT TAXON K	2142.00	521.00	265.00

LAKE NAME: DEERFIELD RES.
STORE NUMBER: 4610

CONTINUED

04 25 74

07 15 74

08 11 74

TAXA	FORM	04 25 74			07 15 74			08 11 74		
		IS	ZC	ALGAL UNITS PER ML	IS	ZC	ALGAL UNITS PER ML	IS	ZC	ALGAL UNITS PER ML
AMABAENA	FIL	1	1		1	1		151	5.31	38
ANKISTRUESMUS FALCATUS	CEL	1	1	X	1	2.21	29	1	1	1
ANKISTRUESMUS FALCATUS V. ACICULAHIS	CEL	1	1	X	1	1		1	1	1
ASTERIONELLA FORMOSA	CEL	151	7.91	288	1	1		11	21.01	151
CENTRIC DIATOMS	CEL	1	1		151	8.71	116	1	1	1
CERATIUM CYST	CEL	1	1		1	1		1	1	X
CERATIUM HIRUNDINELLA	CEL	1	1		1	2.21	29	1	1	1
CERATIUM HIRUNDINELLA F. SCOTTICUM	CEL	1	1		1	1		1	1	1
CHROOCOCCUS	CEL	1	1		1	1	29	1	1	X
CHROONOMAS ACUTA	CEL	121	55.81	2142	11	39.11	521	1	136.81	265
COCCOID CELL	CEL	1	1		1	1		1	1	X
COSMARIUM #1	CEL	1	1		1	1		1	1	X
COSMARIUM #2	CEL	1	1	X	1	1		1	1	X
COSMARIUM #3	CEL	1	1		1	1		1	1	X
CRYPTONOMAS EROSA	CEL	1	5.81	224	1	1	X	1	1	1
CRYPTONOMAS MARSSUMII	CEL	131	6.71	256	1	1	X	1	5.31	38
CRYPTONOMAS REFLEXA	CEL	1	1	X	1	1		1	1	1
CRYPTONOMAS SPP.	CEL	1	1		121	13.11	203	1	1	1
CYCLOTELLA MENEGHINIANA	CEL	1	1		1	1	X	1	1	1
DINOBRYON DIVERGENS	CEL	1	1	X	1	1		1	1	X
EUDORINA ELEGANS	CEL	1	1		1	1		1	1	X
FLAGELLATE	CEL	1	1	X	1	6.51	87	1	1	1
FRAGILARIA CHOTUNENSIS	CEL	1	1	X	131	21.81	290	12	15.81	114
GLENNIDIUM	CEL	1	1	X	1	1		1	1	1
GYMNOIDIUM	CEL	1	1	X	1	1		1	1	1
GYPSISMA	CEL	1	1		1	1	X	1	1	X
LYNGBYA BIRGEI	FIL	1	1		1	1		1	1	X
MELUSINA	CEL	1	1		1	1		1	1	X
MICROCYSTIS INCERTA	CEL	1	1		1	1		1	1	X
NITZSCHIA	CEL	1	1		1	1	X	1	1	1
OCCYSTIS	CEL	1	1		1	2.21	29	1	1	1
OSCILLATORIA	FIL	1	1		1	1		1	5.31	38
PEDIASTRUM BRYANUM	CEL	1	1		1	1		1	1	X
PERIDINIUM WILLEI	CEL	1	1	X	1	1		1	1	1
PHORMIDIUM	FIL	1	1		1	1	X	1	1	1
SCHROEDERIA SETIGERA	CEL	1	1		1	1	X	1	1	X
STEPHANODISCUS	CEL	1	1	X	1	1	X	1	1	1
SYNEDRA ACUS	CEL	11	22.51	863	1	1		1	1	1
SYNEDRA ULNA	CEL	1	1	X	1	1		1	1	1
TABELLARIA FENESTRATA	CEL	1	1.71	64	1	1		13	110.61	76
TOTAL				3837			1333			720

LAKE NAME: ENEMY SWIM LAKE
 STORE NUMBER: 4611

NYGAARD TROPHIC STATE INDICES

	DATE	04 25 74	07 11 74	09 19 74
MYXOPHYCEAN		0570 E	9.00 E	1070 E
CHLOROPHYCEAN		0370 E	8.00 E	0970 E
EUGLENOPHYTE		0.12 ?	0.17 ?	0.19 ?
DIATOM		0.15 ?	0.50 E	0.33 E
COMPOUND		1170 E	19.0 E	2170 E

PALMER'S ORGANIC POLLUTION INDICES

	DATE	04 25 74	07 11 74	09 19 74
GENUS		02	02	02
SPECIES		00	00	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

	DATE	04 25 74	07 11 74	09 19 74
AVERAGE DIVERSITY	H	2.37	2.51	2.51
NUMBER OF TAXA	S	33.00	29.00	30.00
NUMBER OF SAMPLES COMPOSITED	M	1.00	2.00	2.00
MAXIMUM DIVERSITY	MAXH	5.04	4.86	4.91
MINIMUM DIVERSITY	MINH	0.05	0.11	0.09
TOTAL DIVERSITY	D	21481.68	8837.71	11177.03
TOTAL NUMBER OF INDIVIDUALS/ML	N	9064.00	3521.00	4453.00
EVENNESS COMPONENT	J	0.47	0.52	0.51
RELATIVE EVENNESS	RJ	0.47	0.51	0.51
MEAN NUMBER OF INDIVIDUALS/TAXA	L	274.67	121.41	148.43
NUMBER/ML OF MOST ABUNDANT TAXON	K	3573.00	1576.00	1863.00

LAKE NAME: ENEMY SWIM LAKE
 SITE NUMBER: 4611

CONTINUED

04 25 74

07 11 74

09 10 74

TAXA	FORM	ALGAL UNITS				ALGAL UNITS				ALGAL UNITS			
		IS	ZC	PER ML	PER ML	IS	ZC	PER ML	PER ML	IS	ZC	PER ML	PER ML
AMPHORA OVALIS	CEL												
V. AFFINIS	CEL		0.41	33									
ANABAENA PLANCIONICA	FIL					1.31	44					X	
APHANIZOYEMON FLOS-AQUAE	FIL						X	131	4.01			207	
APHANOCAPSA ELACHISTA													
V. CONFERTA	COL					1.31	46					X	
APHANOTHECE PULVERULENTA ?	COL					1144.01	1576	141	8.11			362	
ASTERIONELLA FORMOSA	CEL	121	25.91	2349									
BOTRYCOCOCCUS BRAUNII	COL						X					X	
CERATIUM MIRUNDINELLA	CEL						X		1.21			52	
CHRISOMYX ACUTA	CEL	111	39.41	3573		116.41	649		4.01			207	
COCCONEIS PLACENTULA													
V. LINEATA	CEL			X									
COELOSPHERIUM ?	COL											X	
COELOSPHERIUM PALLIDUM	COL						X	1125.01				1139	
CRUCIGENIA QUADRATA	COL						93					X	
CRYPTOMONAS	CEL			X		1.31	46						
CRYPTOMONAS EROSA													
V. REFLEXA	CEL		2.91	265									
CYMBELLA	CEL			X			X						
CYMBELLA MINUTA													
V. PSEUDOGRACILIS	CEL			X									
CYMBELLA TRIANGULUM	CEL						X						
DACTYLOCOCCOPSIS	CEL		1.11	99									
DICTYOSPHAERIUM PULCHELLUM	CEL			X								X	
UINOBRYON SEPTULAKIA	CEL	151	5.81	529			X		1.21			52	
DIPLOPSALIS ACUTA	CEL						X						
ELANATLIMIX GELATINOSA	CEL			X								X	
EPITHEMIA	CEL			X									
EUGRINA	CUL			X									
FLAGELLATE	CEL	141	11.31	1026									
FRAGILARIA BICAPITATA	CEL											X	
FRAGILARIA CROTONENSIS	CEL	131	10.91	992	121	6.01	232	121	41.81			1863	
GOMPHOSPHERIA APONINA	COL						X					X	
GYMNODINUM ALBULUM	CEL			X								X	
GYROSICHA	CEL											X	
LYNGBYA BIRGEI	FIL						X						
LYNGBYA SUBTILIS	FIL			X			X		1.21			52	
MALLOMONAS	CEL			X									
MELOSIRA GRANULATA	CEL					131	7.91	278	151	2.31		104	
MELOSIRA ITALICA	CEL			X									
MICROCYSTIS ? INCERTA	COL			X									
MICROCYSTIS AERUGINOSA	COL			X			X		1.21			52	
NAVICULA	CEL			X									
NAVICULA GASTRUM	CEL			X									
NAVICULA REINHARDTII	CEL			X									
NITZSCHIA AMPHIBIA	CEL			X									
NITZSCHIA SIGMOIDEA	CEL											X	
NITZSCHIA VERRUCULARIS	CEL						X						
ODCYSTIS	CEL					11.01	417		7.01			311	
PEDIASTRUM BRYANUM	COL					1.31	46					X	
PEDIASTRUM DUPLEX	COL											X	
PEDIASTRUM DUPLEX													
V. CLATHRATUM	COL						X						
PEDIASTRUM SIMPLEX													
V. DUCENARIUM	COL			X								X	
PEPIDINIUM WILLEI	CEL			X									
PHENACIDIA MUCICOLA	COL											X	
SCENELESIMUS BIJUGA	CEL						X						
STAUROSTROM	CEL						X						
STAUROTHECE SALINA	CEL											X	
STEPHANODISCUS NINGAKAE	CEL		1.11	99		1.31	46		1.21			52	
SYNEURA LINEARIS	CEL											X	
SYNEURA CYCLOPUM													
V. ROBUSTUM	CEL		1.11	99									
SYNEURA ULMA	CEL			X									
TETRAEDROM PLANCTONICUM	CEL						X						
TETRAEDROM TRIGONUM													
V. SPACILE	CEL											X	
TETRASTRUM CLABRUM	COL					1.31	46						
TRACHELUMNAS	CEL			X									
TOTAL					9064			3521				4453	

LAKE NAME: LAKE HEMMA
 STORE NUMBER: 4612

NYGAARD TROPHIC STATE INDICES

DATE	04 23 74	07 11 74	09 20 74
MYXOPHYCEAN	7.00 E	4.00 E	7.00 E
CHLOROPHYCEAN	10.00 E	3.00 E	7.00 E
EUGLENOPHYTE	0.53 E	0.07 ?	0.29 E
DIATOM	0.33 E	0.25 ?	0.30 ?
COMPOUND	30.00 E	8.00 E	21.00 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	04 23 74	07 11 74	09 20 74
GENUS	10	01	08
SPECIES	00	00	02

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE	04 23 74	07 11 74	09 20 74
AVERAGE DIVERSITY H	2.33	0.41	3.01
NUMBER OF TAXA S	46.00	14.00	33.00
NUMBER OF SAMPLES COMPOSITED M	2.00	2.00	2.00
MAXIMUM DIVERSITY MAXH	5.52	3.81	5.04
MINIMUM DIVERSITY MINH	0.06	0.01	0.05
TOTAL DIVERSITY D	26366.28	6441.51	31150.49
TOTAL NUMBER OF INDIVIDUALS/ML N	11316.00	15711.00	10349.00
EVENNESS COMPONENT J	0.42	0.11	0.60
RELATIVE EVENNESS RJ	0.42	0.11	0.60
MEAN NUMBER OF INDIVIDUALS/TAXA L	246.00	1122.21	313.61
NUMBER/ML OF MOST ABUNDANT TAXON K	4011.00	14869.00	2974.00

LAKE NAME: LAKE MERRIM
 STATION NUMBER: 4012

CONTINUED

04 23 74

07 11 74

09 20 74

TAXA	FORM	ALGAL UNITS				ALGAL UNITS				ALGAL UNITS			
		IS	ZC	PER ML		IS	ZC	PER ML		IS	ZC	PER ML	
ACTINASTRUM GRACILINUM	CEL			X									
AMPHIFA	CEL	1	0.71	63									X
ANABAENA	FIL		0.21	28				X		0.81			81
ANISTRUDESCHUS FALCATUS													
V. ACICULARIS	CFL												X
ANISTRUDESCHUS FALCATUS													
V. MIRABILIS	CEL			X									
APHANIZOENON FLOS-AQUAE	FIL				1194.61			14869		2.01			204
APHANOCAPSA DELICATISSIMA	COL				151	0.41		67					
CENTRIC DIATOM	CEL	11	35.41	4611									
CHROOCHONAS ACUTA	CEL	131	19.31	2105	121	3.01		471	141	5.11			530
CLOSTRIDIUM ?	CEL							X					
CLOSTRIDIUM #1	CEL			X						0.41			41
COCCONEIS PLACENTULA													
V. LINEATA	CEL			X									X
COELASTRUM MICROPHUM	COL			X									X
COELOSPHEAERIUM GULLINSII ?	COL									2.41			41
CRUCIGENIA QUADRATA	COL			X									
CRYPTOPHYNAS EROSA	CEL		0.71	63									
CYCLotella MENECHINIANA	CEL									1.61			163
CYMATOPELURA SOLIDA	CEL			X									
CYMBELLA	CEL					0.21		34					X
CYMBELLA MEXICANA	CEL			X									
CYMBELLA TRIANGULUM	CEL			X									
DACTYLOCCOCCOPSIS	CEL	121	33.61	3735					151	28.71			2974
ENTOMONEIS GONATA	CEL		0.21	28									
EPITHEMIA	CEL			X									
EPITHEMIA #1	CEL												X
EUGLENA #1	CEL			X									
EUGLENA #2	CEL			X									
EUGLENA #3	CEL									2.41			41
EUGLENA ACUS	CEL			X									X
EUGLENA ORYURIS	CEL			X									
EUGLENA TRIPTERIS	CEL			X									
FRAGILARIA	CEL			X									
GORPHNEMEA	CEL							X					
KIRCHNERIELLA	CEL												X
KIRCHNERIELLA ?	COL									2.31			204
MELOSIRA GRANULATA	CEL	141	2.21	249				X					
MELOSIRA GRANULATA													
V. ANGUSTISSIMA	CEL	151	2.21	249					111	4.71			469
MERISPIRODIA MINIMA	COL		0.71	83					131	27.21			2811
MICROCYSTIS AERUGINOSA	COL			X	131	0.41		67					X
MICROCYSTIS INCERTA	CEL			X						7.11			732
NAVICULA	CEL					0.21		34					X
NAVICULA POPULA													
V. ELLIPTICA	CFL			X									
NITZSCHIA	CEL		1.01	111						1.21			122
ODCYSIIS	CFL		0.51	55				X		5.11			530
OSCILLATORIA	FIL		0.21	28									
OSCILLATORIA CINNETICA	FIL			X									
PEDIASTRUM BRYANUM	COL			X				X					X
PEDIASTRUM DUPLEX													
V. RETICULATUM	COL		3.21	28									
PEDIASTRUM SIMPLEX	COL			X									
PENNATE DIATOM	CEL												X
PHACUS ACUMINATUS ?	CEL			X									
PHACUS ACUMINATUS													
V. JHEZEPOLSKII	CFL		0.21	28									
PHACUS MEGALOPSIS	CEL												X
PHACUS PSEUDONORSTCETII	CEL			X									
PHACUS TORTUS	CEL			X									
PINNULARIA	CEL			X									
SCENEDESCHUS DIMORPHUS	COL		3.51	55									
SCENEDESCHUS INTEMPIDUS	COL			X									
SCHWABERIA SETIGERA	CEL				141	0.91		135		0.41			41
STEPHANODISCUS	CEL		1.51	111									
STEPHANODISCUS ASTRAEA													
V. MINUTULA	CEL								121	10.41			1100
SYRRELLA #9	CEL		0.21	28									
SYNEDRA #1	CEL					0.21		34					X
SYNEDRA #2	CEL									1.41			163
SYNEDRA ACUS	CEL		1.21	138									X
SYNEDRA ULNA	CFL												X
TRACHELOMONAS	CEL									0.81			81
TOTAL					11316			15711					10340

LAKE NAME: JOHN LAKE
 STORET NUMBER: 4613

NYGAARD TROPHIC STATE INDICES

	DATE	04 23 74	07 11 74	09 20 74
MYXOPHYCEAN		1.33 E	3.33 E	2.00 E
CHLOROPHYCEAN		5.33 E	8.33 E	3.83 E
EUGLENOPHYTE		0.10 ?	0.17 ?	0.09 ?
DIATOM		0.40 E	0.67 E	0.42 E
COMPOUND		9.33 E	15.6 E	7.17 E

PALMER'S ORGANIC POLLUTION INDICES

	DATE	04 23 74	07 11 74	09 20 74
GENUS		19	20	25
SPECIES		06	05	06

SPECIES DIVERSITY AND ABUNDANCE INDICES

	DATE	04 23 74	07 11 74	09 20 74
AVERAGE DIVERSITY	H	2.11	4.28	2.74
NUMBER OF TAXA	S	51.00	65.00	67.00
NUMBER OF SAMPLES COMPOSITED	M	1.00	2.00	2.00
MAXIMUM DIVERSITY	MAXH	5.67	6.02	6.07
MINIMUM DIVERSITY	MINH	0.01	0.06	0.02
TOTAL DIVERSITY	D	222942.60	72777.12	202762.74
TOTAL NUMBER OF INDIVIDUALS/ML	N	105660.00	17004.00	74001.00
EVENESS COMPONENT	J	0.37	0.71	0.45
RELATIVE EVENESS	KJ	0.38	0.71	0.45
MEAN NUMBER OF INDIVIDUALS/TAXA	L	2071.76	261.60	1104.49
NUMBER/ML OF MOST ABUNDANT TAXON	K	58307.00	2061.00	44482.00

04 23 74

07 11 74

09 20 74

TAXA	FORM	ALGAL UNITS PER ML		ALGAL UNITS PER ML		ALGAL UNITS PER ML		
		IS	SC	IS	SC	IS	SC	
ACTINASTRUM	COL					0.41	285	
AMABAENA	FIL			1.01	172	0.61	428	
ANABAENOPSIS CIRCULARIS	FIL						X	
ANKISTRUJESMUS FALCATUS	CEL			2.21	343		X	
ANKISTRUJESMUS FALCATUS V. ACICULARIS	CEL	5.91	6276					
APHANIZOENON FLUS-AQUAE	FIL			151	5.11	859		
APHANIZOENON GRACILE	FIL					1.21	855	
APHANOCAPSA DELICATISSIMA	COL					2.11	1568	
APHANOCAPSA ELACHISTA	COL					X		
APHANOCAPSA ELACHISTA V. PLANCTONICA	COL					X		
BINUCLARIA	FIL					5.81	4277	
BOTRYLCOCCUS	COL						X	
CERATIUM MIRUNDINELLA	CEL					X		
CHARACIUM	CEL					X		
CHLOROPHYTUM LUNATE CELL	CEL					0.41	285	
CHROMONAS ACUTA	CEL			5.11	859	3.31	2424	
CLOSTERIUM	CEL					4.61	3422	
CLOSTERIUM #1	CEL			X	2.11	343	X	
CLOSTERIUM #2	CEL			X				
COCONEIS	CEL			X				
COELASTRUM MICROGRUM	COL	0.11	114				X	
COELASTRUM RETICULATUM	COL					X		
COELOSPHAERIUM COLLINSII	COL			X		4.41	3279	
COELOSPHAERIUM COLLINSII ?	COL			1.11	172			
COESMARIUM	CEL						X	
CRUCICELLA APICULATA	COL					X	X	
CRUCICELLA QUADRATA	COL			5.11	859			
CRUCICELLA TETRAPEDIA	COL					X	X	
CRYPTOMONAS LAOSA	CEL			0.51	86			
CRYPTOMONAS LAOSA V. REFLIXA	CEL	0.41	456					
CRYPTOMONAS PARSSONII	CEL					0.21	143	
CYCLOPILLA REMEGMINIANA	CEL	0.41	456	141	6.11	1030	1.01	713
CYMATOPLEURA SOLIDA	CEL			X		X	X	
CYMBELLA MINUTA	CEL			X				
CYMBELLA TRIANGULUM	CEL			X			X	
DACTYLOCOCCOPSIS	CEL			2.51	429	0.61	428	
DICTYOSPHAERIUM PULCHELLUM	COL			X	0.51	86	X	
DIPLOPSALIS ACUTA	CEL						X	
ELAKATOTHRIX GELATINOSA	COL					0.21	143	
ERTUNDONIS ORNATA	CEL			X		X		
EPITHEMIA	CEL					X		
EUGLENA	CEL			X				
EUGLENA CHARNOWIENSIS ?	CEL					0.21	143	
EUGLENA EHRENBURGII	CEL					X		
EUGLENA OXYURIS V. MINOR	CEL			0.51	86			
FLAGELLATES	CEL	19.01	20082					
GLENOCINIUM GYMNOCINIUM V. BISCUTELLIFORME	CEL					X		
GOMPHONEMA	CEL					X		
GYMNOCINIUM UNGUINATUM	CEL			X				
HANTZSCHIA	CEL			X				
KIRCHNERIELLA LUNARIS V. IMPREGULARIS	CEL			X				
LAGERHEIMIA	CEL			0.51	86			
LYNGBYA	FIL			X		0.41	285	
MALLUMONAS ACAROIDES	CEL						X	
MELOSIRA	CEL					X		
MELOSIRA #1	CEL			0.51	86			
MELOSIRA GRANULATA	CEL					0.41	285	
MELOSIRA GRANULATA V. ANGUSTISSIMA	CEL			X		1.51	1141	
MELOSIRA ITALICA	CEL	9.61	10155	12112.11	2061			
MELOSIRA ITALICA ?	CEL					1.71	1283	
MELOSIRA ITALICA ?	CEL			4.51	773	0.81	570	
MELOSIRA MINIMA	CEL					X	X	
MICROCYSTIS AERUGINOSA	COL					7.61	1288	
MICROCYSTIS INCERTA	COL					7.61	1288	
NAVICULA CAPITATA	CEL						X	
NAVICULA CUSPIDATA	CEL	0.61	685			X	X	
NAVICULA REINHARDTII	CEL			X				
NITZSCHIA	CEL			0.51	86		X	
NITZSCHIA #1	CEL	0.11	114			0.21	143	
NITZSCHIA #2	CEL	0.11	114					
NITZSCHIA ACICULARIS	CEL	14159.21	56307					
NITZSCHIA LONGISSIMA	CEL							
NITZSCHIA V. REVENSA	CEL			0.51	86	1.31	998	
OOCYSTIS	COL	0.61	685	1111.01	1975	5.81	570	
OSCILLATORIA	FIL	1.41	1483					
OSCILLATORIA AGARCHII	FIL			X		0.11	44482	
OSCILLATORIA LIMNETICA	FIL					0.41	285	
PEDIASTRUM BORYANUM	COL			X			X	

TAXA	FORM	04 23 74		17 11 74		09 20 74	
		IS	ZC	IS	ZC	IS	ZC
							ALGAL UNITS PER ML
PEDIASTRUM DUPLEX							
V. RETICULATUM	COL			X	4.51	667	0.21 143
PEDIASTRUM TETRAS							
V. TETRAODON	COL					X	0.21 143
PHACUS	CEL					X	X
PHACUS HELIROIDES	CEL					X	
PHACUS MEGALOPSIS	CEL					X	0.21 143
PINNULARIA	CEL			X			
PLEUROSIGMA DELICATULUM	CEL						0.41 428
PHOENICOSPHERIA CURVATA	CEL			X			
SCENEDESMUS	COL			X			
SCENEDESMUS ABUNDANS	COL			X			
SCENEDESMUS ACUMINATUS	COL		0.51	571		86	0.21 143
SCENEDESMUS ARCUATUS	COL						0.41 285
SCENEDESMUS BALATONICUS	COL				5.01	944	0.61 428
SCENEDESMUS BERNARDII	CEL					X	
SCENEDESMUS BICAUDATUS	COL				0.51	86	
SCENEDESMUS BIJUGA							
V. FLEXUOSUS	COL		0.11	114			
SCENEDESMUS DIMORPHUS	COL			X			
SCENEDESMUS INTERMEDIUS	COL			X	1.51	256	
SCENEDESMUS PROTUBERANS	COL					X	0.21 143
SCENEDESMUS QUADRICAUDA	COL			X			0.41 285
SCENEDESMUS SPP.	CEL		0.61	685			
SCHWEDERIA SETIGERA	CEL				3.51	601	
SELENASTRUM	CEL					X	
SELENASTRUM ?	CEL			X			
SPHAEOCYSTIS SCHRUETEKI	COL					X	
STAUASTRUM #1	CEL			X		X	0.21 143
STAUASTRUM #2	CEL					X	
STAUASTRUM TETRACERUM	CEL						0.21 143
STEPHANODISCUS	CEL		4.01	5021			
STEPHANODISCUS ASTRAEA							
V. MINUTULA	CEL				0.51	86	0.21 143
STEPHANODISCUS NIAGARAE	CEL		0.11	114	131	9.11	1546
SURIELLA	CEL					X	0.21 143
SURIELLA #1	CEL						X
SURIELLA ANGUSTA	CEL			X			
SURIELLA BRIGHTWELLII ?	CEL			X			
SYNECHA	CEL				4.11	487	2.71 1996
SYNECHA DELICATISSIMA							
V. ANGUSTISSIMA	CEL						0.21 143
SYNECHA ULNA	CEL			X			
TETRAEDRUM LIMNETICUM	CEL					X	
TETRAEDRUM PIAIUM							
V. SCABRICULATUM	CEL						0.21 143
TETRASTRUM ELEGANS	COL				0.51	86	
TETRASTRUM GLABRUM	COL				1.51	172	
TETRASTRUM STAUROGENTIAEFORME	COL		0.21	220		X	0.41 285
TRACHELIDONAS	CEL			X			
TREUBARIA TRIAPPENDICULATA	CEL						0.21 143
TOTAL					105660	17004	74001

LAKE NAME: LAKE KAMPESKA
 STORET NUMBER: 4614

NYGAARD TROPHIC STATE INDICES

DATE	04 25 74	07 12 74	09 19 74
MYXOPHYCEAN	0170 E	0570 E	0270 E
CHLOROPHYCEAN	070 0	0670 E	0170 E
EUCLEOPHYTE	1.00 E	0711 ?	0703 ?
DIATOM	0.30 ?	0370 E	1.25 E
COMPOUND	0570 E	1470 E	0670 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	04 25 74	07 12 74	09 19 74
GENUS	06	03	00
SPECIES	00	00	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE	04 25 74	07 12 74	09 19 74
AVERAGE DIVERSITY H	2.26	2.51	0.36
NUMBER OF TAXA S	19.00	16.00	14.00
NUMBER OF SAMPLES COMPOSITED M	3.00	3.00	3.00
MAXIMUM DIVERSITY MAXH	4.25	4.00	3.81
MINIMUM DIVERSITY MINH	0.17	0.04	0.03
TOTAL DIVERSITY D	2793.00	12364.26	2593.06
TOTAL NUMBER OF INDIVIDUALS/ML N	1225.00	4926.00	7203.00
EVENNESS COMPONENT J	0.54	0.63	0.09
RELATIVE EVENNESS RJ	0.52	0.63	0.09
MEAN NUMBER OF INDIVIDUALS/TAXA L	64.47	307.88	514.50
NUMBER/ML OF MOST ABUNDANT TAXON K	531.00	2436.00	6830.00

TAXA	FORM	04 25 74		07 12 74		09 19 74	
		IS	ZC	IS	ZC	IS	ZC
				ALCAL	ALCAL	ALCAL	
				UNITS	UNITS	UNITS	
				PER ML	PER ML	PER ML	
APHANIZOENON FLOS-AQUAE	FIL			1149.58	2436	1194.81	6830
APHANIZOENON GRACILE	FIL			X			
CHROOCOCCLUS	COL			1.1	53		
CHLOROMONAS ACUTA	CEL	113.31	163	8.61	924	2.61	187
CHLOROMONAS REFLEXA	CEL						X
CYCCONEIS PLACENTULA	CEL						X
COELASTUM MICROPURUM	COL				X		
CRYPTOMONAS EROSA	CEL			X			
CYCLOTELLA	CEL	1143.31	931	2.21	106		
CYCLOTELLA MENEGHINIANA	CEL						X
CYRATOPLEURA SCLEA	CEL			X			
CYMBELLA	CEL			X			
CYMBELLA TRIANGULUM	CEL						X
DINDOPYUM SEPTULARIA	CEL	12113.31	163				
ELAKATONNIX GELATINOSA	COL			1.1	53		
EPITHEMIA TURGIDA	CEL						X
EUGLENA	CEL			X			
FRAGILARIA	CEL	13113.31	163				X
GLENUGINIUM OCULATUM	CEL			X			
GYROSIGNA	CEL			X			
KIRCHNERIELLA CONTIGUA	CEL			3.21	154		
MELOSIRA GRANULATA	CEL			X			X
MELOSIRA GRANULATA							
V. ANGUSTISSIMA	CEL						X
MERISPIREDIA MINIMA	COL			2.21	106		
MICROCYSTIS AERUGINOSA	COL					0.51	37
MICROCYSTIS INCEPITA	COL			12112.91	635		
NAVICULA	CEL			X			
NITZSCHIA	CEL	151	6.71	82			
NITZSCHIA VERRUCULARIS	CLA			X			
ODOCYSTIS	CEL					X	
PHORRIDIUM	FIL			151	4.31	212	
SCHROEDERIA SETIGERA	CEL			161	9.71	477	161
STEPHANODISCUS	CEL			X	1.11	53	X
STEPHANODISCUS ASTRAEA							
V. MINUTULA	CEL						X
SURIRELLA #9	CEL			X			
SURIRELLA ANGUSTA	CEL			X			
SYNEDRA ACUS	CEL	14110.01	123				
TETRASTRUM GLABRUM	COL				X		
ZGOSPORRE	CEL			4.31	212		
TOTAL				1225	4926	7203	

LAKE NAME: MADISON LAKE
 STORET NUMBER: 4615

NYGAARD TROPHIC STATE INDICES

DATE	04 23 74	07 11 74	09 20 74
MYXOPHYCEAN	0470 E	0170 E	9.00 E
CHLOROPHYCEAN	0870 E	0270 E	13.0 E
EUGLENOPHYTE	0.08 ?	0703 ?	0722 ?
DIATOM	0.27 ?	1.00 E	0.37 E
COMPOUND	1670 E	0470 E	25.0 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	04 23 74	07 11 74	09 20 74
GENUS	13	00	20
SPECIES	03	00	02

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE	04 23 74	07 11 74	09 20 74
AVERAGE DIVERSITY	H 0.91	0.34	2.34
NUMBER OF TAXA	S 33.00	5.00	35.00
NUMBER OF SAMPLES COMPOSITED	M 3.00	3.00	3.00
MAXIMUM DIVERSITY	MAXH 5.04	2.32	5.29
MINIMUM DIVERSITY	MINH 0.01	0.06	0.04
TOTAL DIVERSITY	D 61014.59	261.12	38843.14
TOTAL NUMBER OF INDIVIDUALS/ML	N 67049.00	768.00	10621.00
EVENNESS COMPONENT	J 0.16	0.15	0.44
RELATIVE EVENNESS	KJ 0.18	0.13	0.44
MEAN NUMBER OF INDIVIDUALS/TAXA	L 2031.79	153.60	426.18
NUMBER/ML OF MOST ABUNDANT TAXON	K 58722.00	720.00	10641.00

LAKE NAME: MADISON LAKE
 STURET NUMBER: 4015

CONTINUED

04 23 74

07 11 74

09 20 74

TAXA	FORM	ALGAL UNITS PER ML		ALGAL UNITS PER ML		ALGAL UNITS PER ML			
		IS	ZC	IS	ZC	IS	ZC		
ACTINASTRUM	CEL		0.31	221			4.11	683	
AMPHICRA	CEL			X					
AMABAENA	FIL			X			151	1.21	201
ANNISTROGUESMUS FALCATUS	CEL	141	2.91	1930					
ANNISTROGUESMUS FALCATUS V. ACICULARIS	CEL		0.71	441					
APHANIZOMENON FLOS-AQUAE	FIL				1193.71	720	1164.01	10641	
CHLAMYDOMONAS GLOBOSA	CEL						0.71	120	
CHROMONAS ACUTA	CEL	121	4.21	2812				X	
CLOSTERIUM	CEL						0.21	40	
COELASTRUM MICROPORUM	CUL						0.21	40	
CRYPTOMONAS	CEL		0.41	276					
CRYPTOMONAS LPOSA	CEL						0.71	120	
CYCLotella MENEGHINIANA	CEL			X			3.91	642	
CYMATOPLEURA SOLEA	CEL			X				X	
CYRELLA	CEL			X				X	
DICTYOSPHAERIUM	CEL						0.51	80	
DICTYOSPHAERIUM PULCHELLUM	CEL			X				X	
ENTOMONEIS PALUDOSA	CEL			X					
FLAGELLATE	CEL	1187.61		58722					
FLAGELLATE #2	CEL						1.71	281	
GORPHONEMA	CEL			X			0.21	40	
GYMNOLENIUM ALBULUM	CEL		0.21	110					
KIRCHNERIELLA	CEL		0.91	607					
KIRCHNERIELLA #2	CEL						1.71	281	
KIRCHNERIELLA CONTORTA	CEL						0.71	120	
MELOSIRA GRANULATA V. ANGUSTISSIMA	CEL						1.01	161	
MERISOMPEDIA MINIMA	CEL						1.91	321	
MICROCYSTIS #1	CEL						151	2.41	402
MICROCYSTIS INCERTA	CEL		0.11	55			0.71	120	
NAVICULA	CEL			X				X	
NAVICULA #1	CEL		0.31	221					
NAVICULA CUSPIDATA	CEL			X					
NITZSCHIA #1	CEL						0.21	40	
NITZSCHIA #2	CEL						0.21	40	
NITZSCHIA ACICULARIS	CEL			X					
UOCYSTIS	CEL			X				X	
OSCILLATORIA	FIL		0.11	55			141	3.11	522
OSCILLATORIA LIMNETICA	FIL	131	1.21	772					
PEDIASTRUM	CUL							X	
PEDIASTRUM KAPPAISKYI	CEL						X		
PENNATE DIATOM	CEL			X					
PHACUS	CEL			X					
PHORMIDIUM	FIL						121	7.21	1205
PAPHIGIOPSIS	FIL						1.91	321	
PAPHIGIOPSIS CURVATA	FIL							X	
SCENEDESMUS ACUMINATUS	CEL			X				X	
SCENEDESMUS ARCUATUS V. CAPITATUS	CUL						0.51	80	
SCENEDESMUS RACIBORSKII F. GRANULATUS	CUL							X	
SCENEDESMUS SPP.	CUL						0.71	120	
SCHROEDERIA SETIGERA	CEL			X	121	6.21	48		
SPERMATOZOOPSIS EXULTANS	CEL			X					
STEPHANODISCUS ASTRAEA V. MINUTULA	CEL		0.31	221					
STEPHANODISCUS NIAGARAE	CEL		0.21	165			X	X	
SURIPHELLA	CEL	151		X				X	
SYNEUDA	CEL	151	0.71	441				X	
TETRASTRUM GLABRUM	CUL							X	
TREUDARIA SETIGERUM	CEL							X	
TOTAL				67049			768	16621	

LAKE NAME: LAKE MITCHELL
 STORET NUMBER: 4616

NYGAARD TROPHIC STATE INDICES

DATE	04 23 74	07 11 74	09 18 74
MYXOPHYCEAN	0270 E	0570 E	1000 E
CHLOROPHYCEAN	1070 E	1670 E	2200 E
EUGLENOPHYTE	0.17 ?	0.24 E	0.19 ?
DIATOM	0.33 E	2.00 E	0.67 E
COMFGUND	1570 E	2870 E	4000 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	04 23 74	07 11 74	09 18 74
GENUS	07	14	21
SPECIES	01	00	07

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE	04 23 74	07 11 74	09 18 74
AVERAGE DIVERSITY H	1.61	3.38	4.46
NUMBER OF TAXA S	22.00	36.00	49.00
NUMBER OF SAMPLES COMPOSITED M	2.00	2.00	2.00
MAXIMUM DIVERSITY MAXH	4.46	5.17	5.61
MINIMUM DIVERSITY MINH	0.03	0.15	0.04
TOTAL DIVERSITY D	18677.39	10393.50	88343.68
TOTAL NUMBER OF INDIVIDUALS/ML N	10319.00	3075.00	19808.00
EVENNESS COMPONENT J	0.41	0.65	0.80
RELATIVE EVENNESS RJ	0.41	0.65	0.80
MEAN NUMBER OF INDIVIDUALS/TAXA L	469.05	65.42	404.24
NUMBER/ML OF MOST ABUNDANT TAXON K	5184.00	627.00	2254.00

TAXA	FORM	14 23 74		17 11 74		09 18 74	
		IS	XC	IS	XC	IS	XC
AMABALMA	FIL					X	
ANABAENOPSIS	FIL						X
ANKISTRODESMUS FALCATUS	CEL					3.1	623
APHANIZOMENUM FLOS-ANUAE	FIL					2.4	480
APHANITHECE	COL					0.7	144
CARTERIA	CEL			13116.3		572	
CERATIUM MIRUNDINELLA							
f. BHACHYGERAS	CEL			112.0		63	
CHLAMYDOMONAS	CEL					0.7	144
CHLAMYDOMONAS GLOBOSA	CEL						X
CHROOCOCCUS LIMNETICUS	COL					0.7	144
CHYRIDIUM ACUTA	CEL	1.4	146	4.1	125	6.5	1678
COELASTRUM CAMBRICUM							
v. INTERMEDIUM	COL					X	
COELASTRUM MICROFIDUM	COL	0.5	49				X
COSSARIUM CLEPSTORA							
v. NANUM	CEL					0.7	144
CRUCIGENIA TETRAPEDIA	COL	12125.6	2641	110.2	314	1315.3	1055
CRYPTOMONAS	CEL		X	1510.1	188	2.2	432
CRYPTOMONAS MARSSONII	CEL		X				
CYCLOTELLA	CEL					1.5	288
DACTYLOCOCCOPSIS	CEL	13150.2	5184	116.3	502	12110.9	2158
DICTYOSPHAERIUM	COL					1.0	192
DICTYOSPHAERIUM PULCHELLUM	COL		X				
DIPLOPSALIS ACUTA	CEL					X	
ELAKATITHIX GELATINOSA	CEL					X	
EUGLENA #1	CEL		X				X
EUGLENA #2	CEL			148.0	251		X
EUGLENA #3	CEL					X	
EUGLENA EMRENBENGII	CEL			2.0	63		
EUGLENA SPP.	CEL					1.7	336
FLAGELLATE #2	CEL					3.6	719
FRAGILARIA	CEL		X				
FRANCIA OVALIS	CEL						X
FRANCIA TUBERCULATA	CEL					X	
GYROSIGMA	CEL					0.2	48
HIRMERIAELLA	CEL					X	959
LAGERHEIMIA WRATISLAVIENSIS	CEL					0.5	96
LEPOCINCLIS FUSIFORMIS	CEL					0.2	48
MELOSIRA GRANULATA	CEL		X			X	X
MERISOPEDIA MINIMA	COL					110.2	2014
MERISOPEDIA TENUISSIMA	COL						X
MESOSTIGMA VIRIDIS	CEL		X	2.0	63		
MICROCYSTIS INCERTA	COL	1510.5	49			6.8	1343
NAVICULA	CEL		X				
NITZSCHIA	CEL					0.5	96
NITZSCHIA ACICULARIS	CEL	1118.5	1907				X
NITZSCHIA LONGISSIMA							
v. REVERSA	CEL					X	
NOCTYSIS	CEL		X			4.1	815
OSCELLATURIA	FIL			12120.4	627		
PEDIASTRUM EORYANUM	COL					X	
PEDIASTRUM DUPLEX							
v. CLATHRATUM	COL			2.0	63		
PEDIASTRUM TETRAS							
v. TETRAEDRUM	COL		X			X	
PEPIDIUM	CEL					X	
PHACUS	CEL		X				
PHACUS ACUMINATUS	CEL					X	X
PHACUS LONGICAUDA	CEL					X	
PHACUS MELGALOPSIS	CEL					0.2	48
PHORIDIUM SPP.	FIL					111.4	2254
SCENEDESMUS ABUNDANS	COL	1412.4	245	2.0	63	1.5	288
SCENEDESMUS BIJUGA	COL					0.5	96
SCENEDESMUS BIJUGA							
v. ALTERNANS	COL					0.2	48
SCENEDESMUS DIMORPHUS	COL	0.5	49	2.0	63	0.5	96
SCENEDESMUS INTERMEDIUS	COL					X	
SCENEDESMUS QUADRICAUDA	COL					2.4	480
SCENEDESMUS QUADRICAUDA							
v. PARVUS	COL					1.9	384
SCHROEDERIA SETIGERA	CEL		X			3.4	671
STEPHANODISCUS	CEL			2.0	63		
TETRAEDRUM	CEL					X	
TETRAEDRUM MINIMUM	CEL					0.2	48
TETRAEDRUM MINIMUM							
v. SCROBICULATUM	CEL					X	X
TETRAEDRUM TRIGONUM							
v. PAPILLIFERUM	CEL					3.1	623
TETRASTRUM ELEGANS	COL		X			X	
TETRASTRUM GLABRUM	COL					1.0	192
TETRASTRUM HETERACANTHUM	COL					1.5	288
TETRASTRUM STAUROGENIAEFORME	COL	0.5	49	4.1	125	0.7	144
TRACHELUMNAS INTERMEDIA	CEL					0.5	96
TRICHARIA SETIGERA	CEL					0.5	96
TOTAL			10319		3075		1900

LAKE NAME: LAKE NORDEN
 STORET NUMBER: 4617

NYGAARD TROPHIC STATE INDICES

DATE	04 23 74	07 11 74	09 19 74
MYXOPHYCEAN	2.00 E	2.33 E	2.50 E
CHLOROPHYCEAN	9.00 E	5.33 E	6.00 E
EUGLENOPHYTE	0.18 ?	0.26 E	0.24 E
DIATOM	0.27 ?	0.43 E	0.56 E
COMPOUND	16.0 E	10.6 E	13.0 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	04 23 74	07 11 74	09 19 74
GENUS	13	07	14
SPECIES	03	00	07

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE	04 23 74	07 11 74	09 19 74
AVERAGE DIVERSITY H	1.62	2.51	3.04
NUMBER OF TAXA S	35.00	47.00	40.00
NUMBER OF SAMPLES COMPOSITED M	1.00	1.00	1.00
MAXIMUM DIVERSITY MAXH	5.13	5.55	5.32
MINIMUM DIVERSITY MINH	0.01	0.04	0.04
TOTAL DIVERSITY D	75822.48	48510.77	49892.46
TOTAL NUMBER OF INDIVIDUALS/ML N	46804.00	19327.00	16412.00
EVENESS COMPONENT J	0.32	0.45	0.57
RELATIVE EVENESS RJ	0.32	0.45	0.57
MEAN NUMBER OF INDIVIDUALS/TAXA L	1337.26	411.21	410.30
NUMBER/ML OF MOST ABUNDANT TAXON K	30800.00	10700.00	7307.00

LAKE NAME: LAKE NUGUEN
 STORE NUMBER: 4617

CONTINUED

04 23 74

07 11 74

09 19 74

TAXA	FORM	ALGAL UNITS PER ML		ALGAL UNITS PER ML		ALGAL UNITS PER ML	
		IS	ZC	IS	ZC	IS	ZC
ACHMANTHES	CEL						
ACTINASTRUM	CEL			0.21	41		
ACTINASTRUM GRACILINUM	CEL						X
AMABAENA PLANCTONICA	FIL			0.51	163	0.41	60
AMRISTRIGUESMUS FALCATUS							
V. ACICULARIS	CEL	141	3.31	1524		0.71	120
APHANIZOENON FLOS-AQUAE	FIL			9.31	1798	12.41	2036
BOTRYOCOCCUS SPAUNII	COL				X		
CENTRIC DIATOM	CEL		1.41	672			
CERATIUM HIRUNDINELLA							
F. FURCIDES	CEL				X		
CHLOROPHYTAN COLONY	COL			X			
CHLOROPHYTAN FILAMENT	FIL					121	8.81
CHROOCOCCUS LIMNETICUS	COL			0.21	41		1437
CHROODUMNAS ACUTA	CEL	12165.81		30800	5.91	1144	3.31
CLUSTERIUM #1	CEL				0.21	41	60
CLOSTERIUM #2	CEL				0.21	41	1.51
CLOSTERIUM #3	CEL			X			
COELASTRUM MICROPLAUM	COL				X		
COELOSPHAERIUM	COL				X		
COELOSPHAERIUM KUETZINGIANUM	COL					141	3.61
COELOSPHAERIUM MARGELIANUM	COL						X
COELOSPHAERIUM PALLIUM	COL			X			
CRUCIGENIA	COL						X
CRUCIGENIA QUADRATA	COL			13155.41	1.700		
CRUCIGENIA TETRAPELIA	COL			X	1.81	163	0.41
CRYPTODUMNAS	CEL			X		X	
CRYPTODUMNAS EROSA	CEL		0.91	403			1.51
CRYPTODUMNAS PARSONII	CEL	151	2.71	1259			240
CYCLOSTELLA MICHIGANIANA	CEL					X	
CYCLOSTELLA MICHIGANIANA	CEL						1.11
CYRATOPLEURA ELLIPTICA	CEL						X
CYRATOPLEURA SOLEA	CEL			X			X
CYTBELLA	CEL			X		X	
CYTBELLA TRIANGULUM	CEL			X	121	5.51	1062
CYST	CEL			X			
DACTYLOCOCCOPSIS IRREGULARIS	CEL						4.01
DICTYOSPHAERIUM PULCHELLUM	COL			X		X	
DIPLOPSALIS ACUTA	CEL					X	
ELAKATGTHRIX CELATINGSA	CEL					X	
ENTOMNEIS	CEL					X	
ENTOMNEIS ORNATA	CEL			X			
EPITHEMIA	CEL			X			X
EUGLENA #1	CEL				0.21	41	
EUGLENA #2	CEL			X			
EUGLENA EHRENBERGII	CEL					X	
EUGLENA OXYURIS	CEL						X
EUGLENA TRIPTERIS	CEL					X	
KIRCHNERIELLA	COL				1.51	286	
MELCISIRA GRANULATA	CEL	131	2.61	1210	141	4.71	899
MELCISIRA GRANULATA							
V. ANGUSTISSIMA	CEL					13144.51	07307
MERISPOPODIA MINIMA	COL				0.31	163	
MICROCYSITIS AERUGINOSA	COL					X	
MICROCYSITIS INCERTA	COL			151	5.01	572	
NAVICULA	CEL			X			
NAVICULA CUSPIDATA	CEL			X		X	
NITZSCHIA #1	CEL		0.21	90			
NITZSCHIA #2	CEL						0.71
NITZSCHIA LUNGISSIMA							
V. PLVERSA	CEL					X	1.51
OOCYSITIS	COL			X	7.21	1384	2.21
OSCIILLATORIA	FIL		1.71	807			
PEDIASTRUM BUKYANUM	COL					X	
PEDIASTRUM DUPLEX	COL						X
PEDIASTRUM DUPLEX							
V. ?	COL						X
PEDIASTRUM DUPLEX							
V. CLATHRATUM	COL				1.21	41	
PEDIASTRUM DUPLEX							
V. RETICULATUM	COL			X			
PEDIASTRUM KANRAISKYI	COL			X			
PHACUS	CEL					X	
PHACUS ACUPINATUS	CEL						X
V. GREZEPOLSKII	CEL						X
PHACUS MELICOIDES	CEL						X
PHACUS MEGALOPSIS	CEL					X	
PHACUS PSEUDOMODIESTEDII	CEL						X
PHACUS TORTUS	CEL			X		X	
PINNULARIA	CEL			X			X
SCENEDESMUS ACUMINATUS	COL		0.11	45			X
SCENEDESMUS BALATONICUS	COL				0.41	62	0.41

LAKE NAME: LAKE MUNDEN
 STORE NUMBER: 4617

CONTINUED

TAXA	04 23 74				07 11 74				09 19 74			
	FORM	ALGAL		PER ML	ALGAL		PER ML	ALGAL		PER ML		
		IS	%		IS	%		IS	%			
SCENEDESMUS BIJUGA	COL			X								
SCENEDESMUS OPOLIENSIS	COL					X						
SCENEDESMUS PRUTUBENANS	COL			X								
SCENEDESMUS QUADRICAUDA	COL							0.41		60		
SCHROEDERIA SETIGERA	CEL				1.31	245		1.81		299		
SKELETONEMA PGIAMUS	CEL							0.71		120		
SPHAEROCYSTIS SCHULTERI	CUL				0.21	41						
STAUROSTRUM	CEL					X						
STEPHANODISCUS	CEL		0.51	224		1.91	368		4.01	654		
SURIRELLA	CEL						X					
SURIRELLA #9	CEL			X						X		
SURIRELLA ANGUSTA	CEL			X								
SYNDRA ACUS	CEL		1120.91	9774				151	5.51	898		
TETRASTRUM CONSTRICTUM	CEL						X					
TETRASTRUM GLABRUM	CUL							0.41		60		
TOTAL				468.04		19327			10412			

LAKE NAME: OAKWOOD LAKE EAST
 STORE NUMBER: 4618

NYGAARD TROPHIC STATE INDICES

DATE	04 23 74	07 12 74	09 20 74
MYXOPHYCEAN	4.90 E	7.50 E	1270 E
CHLOROPHYCEAN	7.00 E	7.00 E	0870 E
EUGLENOPHYTE	0.04 ?	0.29 ?	0.05 ?
DIATOM	0.33 E	0.27 ?	0.75 E
COMPOUND	14.0 E	16.5 E	2470 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	04 23 74	07 12 74	09 20 74
GENUS	18	18	12
SPECIES	05	06	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE	04 23 74	07 12 74	09 20 74
AVERAGE DIVERSITY H	4.02	3.58	1.43
NUMBER OF TAXA S	51.00	52.00	29.00
NUMBER OF SAMPLES COMPOSITED M	2.00	2.00	2.00
MAXIMUM DIVERSITY MAXH	5.67	5.70	4.86
MINIMUM DIVERSITY MINH	0.02	0.02	0.00
TOTAL DIVERSITY D	134320.26	149228.72	148033.60
TOTAL NUMBER OF INDIVIDUALS/ML N	33413.00	41684.00	103520.00
EVENESS COMPONENT J	0.71	0.63	0.29
RELATIVE EVENESS RJ	0.71	0.63	0.30
MEAN NUMBER OF INDIVIDUALS/TAXA L	655.12	801.62	3509.66
NUMBER/ML OF MOST ABUNDANT TAXON K	6770.00	8821.00	77640.00

TAXA	FORM	04 23 74		07 12 74		09 20 74	
		IS	%	IS	%	IS	%
ACTINASIRUM	CEL			X		X	
ANABAEHA PLANCUNICA	FIL					X	
ANABAINOPSIS SERIATA	FIL					1175.01	77640
ANKISTRUDESNUM	CEL				0.21	71	
ANKISTRUDESNUM FALCATUS	CEL	151	7.41	2485			
APHANIZUMENON FLUS-AGUAE	FIL		1.11	373		0.91	356
APHANOCAPSA	COL						X
APHANOCAPSA DELICATISSIMA	COL			121	21.21	8821	
APHANOTHECE NIDULANS	COL					141	2.31
APHANOTHECE NIDULANS V. ENDOPHYTICA	COL						X
CANTERIA	CEL		0.91	311			
CHLAMYDOMONAS	CEL			X			
CHROOCUCCUS	COL						X
CHROOCUCCUS LIMNETICUS	COL				6.31	2632	
CHROOMONAS ACUTA	CEL		5.21	1739			
CLUSTERIOPSIS	CEL			X			
COCCONEIS PLACENTULA	CEL			X		X	
COELASTRUM MICROPOKUM	COL			X			
COELOSphaerium COLLINSII	COL		0.41	124	141	2.41	996
COELOSphaerium PALLIDUM	COL						X
CUSNARIUM	CEL			X			
CRYPTOMONAS FROSA	CEL		0.91	311			X
CRYPTOMONAS MARSSUMII	CEL		1.31	435			
CYCLITELLA MENEGBIANNA	CEL		0.41	124		0.31	142
CYMBELLA	CEL		0.71	248			
CYMBELLA #1	CEL					X	
CYMBELLA #2	CEL					X	
CYMBELLA #3	CEL					X	
CYMBELLA SPP.	CEL				0.51	213	
DACTYLOCOCCUPIS	CEL		0.61	186		0.71	285
DICTYOSphaerium PULCHELLUM	COL		0.61	186		0.31	142
ELAKATUHIRIX GELATINOSA	COL					0.31	142
EPITHEMIA	CEL					0.21	71
EUGLENA	CEL		0.21	62			
FLAGELLATE #2	CEL		3.71	1242			
FLAGELLATES	FIL	121	14.51	4845			
FRAGILARIA BREVISTRATA V. INFLATA	CEL			X		X	1.71
FRAGILARIA CAPUCINA V. MESOLEPTA	CEL			X			
FRAGILARIA LUNSTRUMS	CEL		4.61	1553	110.21	4268	
FRAGILARIA CRUTOMENSIS ?	CEL		120.31	6770			
GOMPHINEMA OLIVACEUM	CEL			X		X	
GOMIUM	COL		0.71	248			
GYMNOINIUM ALBULUM	CEL		0.21	62			
KIRCHMERIELLA	CEL		0.41	124		0.31	142
KIRCHMERIELLA CONTURIA	FIL		1.91	621			
LYNGBYA	FIL	141	6.71	2236		X	
LYNGBYA CONIORTA	FIL					X	12110.51
LYNGBYA LAGERHEIMII	FIL				13114.51	6046	
MELUSIRA GRANULATA	CEL		2.01	683		2.61	1067
MELUSIRA GRANULATA V. ANGUSTISSIMA	CEL		0.21	62		3.11	1280
MERISMOPEdia MINIMA	COL	131	11.51	3851	15116.41	6829	
MERISMOPEdia TENUISSIMA	COL		7.21	245			
MICROCYSTIS AERUGINOSA	COL		0.71	248		1.71	711
MICROCYSTIS INCERTA	COL		2.01	683		0.91	356
MICROCYSTIS MANGINATA	COL						X
NAVICULA	CEL			X		X	
NAVICULA REINHARDII	CEL			X		X	
NITZSCHIA #1	CEL						X
NITZSCHIA #2	CEL						X
NITZSCHIA ACICULANIS	CEL			X			
NITZSCHIA AMPHIBIA	CEL			X			
NITZSCHIA MULLSALICA	CEL		1.91	621		2.41	996
NITZSCHIA SPP.	CEL					2.01	2059
NOCYSTIS	CEL		0.41	124		0.71	285
OSCELLATORIA	FIL					0.21	71
OSCELLATORIA #1	FIL						151 1.41
OSCELLATORIA ANGUSTISSIMA	FIL						131 5.71
PEDIASTRUM BURYANUM	COL						X
PEDIASTRUM DUPLEX	COL					X	
PEDIASTRUM DUPLEX V. CLATHRATUM	COL						X
PEDIASTRUM KAWRAISKYI	COL			X			
PINNATE DIATOMS	CEL				3.41	1423	
PHACUS MEGALOPSIS	CEL						X
PHORMIDIUM	FIL		1.71	559			
PHORMIDIUM MUCICULA	FIL				8.41	3486	
PINNULARIA	CEL					X	
RHOICOSPHEMIA CURVATA	CEL						

TAXA	FORM	04 23 74			07 12 74			09 20 74		
		ALGAL UNITS PER ML			ALGAL UNITS PER ML			ALGAL UNITS PER ML		
		IS	ZC		IS	ZC		IS	ZC	
SCENIOLISMUS ABUNDANS	COL			X						
SCENEDESMUS ARCUATUS										
V. PLATYDISCA	COL					X				
SCENEDESMUS BALATINICUS	COL									X
SCENEDESMUS BIJUGA	COL				0.31	142				
V. FLEXUOSUS	COL					X				
SCENEDESMUS DIMORPHUS	COL		0.61	186		0.31	142			X
SCENEDESMUS QUADRICAUDA	COL			X		0.21	71			
SCHRÖDERIA SETIGERA	CEL		2.21	745		0.21	71			
STAUROSTROM	CEL		1.11	373						
STAUROSTROM #2	CEL					X				
STAUROSTROM TETRACERUM	CEL					0.21	71			
STEPHANODISCUS	CEL		0.71	00248		0.91	356			X
SYNEURA	CEL							0.11	147	
SYNEURA ACUS	CEL					X				
TETRALONUM GRACILE ?	CEL					X				
TETRASTRUM GLABRUM	COL			X						
ULONARIA SETIGERUM	CEL									X
TOTAL				33413		41684			103520	

LAKE NAME: OAKWOOD LAKE WEST
 STORE NUMBER: 4619

NYGAARD TROPHIC STATE INDICES

DATE	04 23 74	07 12 74	09 20 74
MYXOPHYCEAN	05/0 E	4.00 E	8.00 E
CHLOROPHYCEAN	01/0 E	2.50 E	5.00 E
EUGLENOPHYTE	0.33 E	0/13 ?	0/13 ?
DIATOM	1.00 E	0.67 E	0.80 E
COMPOUND	14/0 E	8.50 E	17.0 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	04 23 74	07 12 74	09 20 74
GENUS	12	10	07
SPECIES	00	02	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE	04 23 74	07 12 74	09 20 74
AVERAGE DIVERSITY H	0.74	1.75	1.11
NUMBER OF TAXA S	25.00	27.00	23.00
NUMBER OF SAMPLES COMPOSITED M	2.00	2.00	2.00
MAXIMUM DIVERSITY MAXH	4.64	4.75	4.52
MINIMUM DIVERSITY MINH	0.00	0.00	0.00
TOTAL DIVERSITY D	105894.00	322313.25	174668.49
TOTAL NUMBER OF INDIVIDUALS/ML N	143100.00	184179.00	157359.00
EVENNESS COMPONENT J	0.16	0.37	0.25
RELATIVE EVENNESS RJ	0.16	0.37	0.25
MEAN NUMBER OF INDIVIDUALS/TAXA L	5724.00	6821.44	6841.70
NUMBER/ML OF MOST ABUNDANT TAXON K	129424.00	119922.00	121592.00

LAKE NAME: OAKWOOD LAKE WEST
 STCRIT NUMBER: 9019

CONTINUED

TAXA	FORM	04 23 74				07 12 74				09 20 74			
		IS	ZC	PER ML	ALGAL UNITS	IS	ZC	PER ML	ALGAL UNITS	IS	ZC	PER ML	ALGAL UNITS
AMPHISTRODESMUS FALCATUS	CEL												X
APHANIZOENON FLGS-AQUAE	FIL				131	6.21	11379	121	7.91	12485			
APHANIZOENON GRACILE	FIL				111	5.11	119922	111	7.31	121592			
CENTRIC DIATOMS	CEL	151	1.71	2504									
CERATIUM HIRUNCINELLA													
F. FURCUIDES	CEL							X					
CHLOROPHYTIAN CELL	CEL		1.71	2504									
CHROOCOMAS ACUTA	CEL		1.27	1733									
COGSTERIUM	CEL							X					
COGSTERIUM #1	CEL									0.11		112	
COCCONEIS	CEL			X				X					
COELASTRUM MICROPLKUM	COL							X					
COELOSPHERIUM KUETZINGIANUM	COL					0.11	112			0.11		112	
CRYPTOMONAS HANSSCHII	CEL			X									X
CRYPTOMONAS OVATA	CEL	141	0.41	578				X					
CYCLOSTELLA	CEL			X									X
CYCLOSTELLA MENEHINIANA	CEL			X		0.11	112						
CYRBELLA	CEL			X									
CYRBELLA CYMBIFORMIS	CEL							X					
CACTYLUCOCOPSIS IRREGULARIS	CEL		0.81	1156									
EUGLENA	CEL		0.11	193									
FRAGILARIA	CEL												X
GLENODONTIUM OCULATUM	CEL			X									
KIRCHNERIELLA COMIGATA	COL					0.11	112						
LYNGBYA	FIL			X	151	5.61	14375						X
MELUSIRA GRANULATA	CEL			X	121	8.11	14948	141	0.91	1462			
MELUSIRA GRANULATA													
V. ANGUSTISSIMA	CEL		0.71	963				X					X
MELUSIRELLA TENUISSIMA	CEL					0.51	492	151	1.41	2137			
MICROCYSTIS AERUGINOSA	CUL					1.21	446						X
MICROCYSTIS INCERTA	CUL		0.11	193		0.71	1334						X
NAVICULA #1	CFL												X
NAVICULA CUSPIDATA	CEL			X									X
NAVICULA PUPULA													
V. ELLIPTICA	CEL							X					
NEIDIUM	CEL							X					X
NITZSCHIA #2	CEL			X									
NITZSCHIA PALEA	CFL			X				X					
NOCYSTIS	CEL					0.21	335						X
OSCILLATORIA #1	FIL	121	1.31	1926									
OSCILLATORIA LIMNETICA	FIL	11190.41	129424		141	12.41	22757	131	12.41	19459			
PEDIASTRUM DUPLEX	COL							X					X
PEDIASTRUM DUPLEX													
V. ?	COL							X					
PEDIASTRUM DUPLEX													
V. CLATHRATUM	COL												X
PENNATE DIATOMS	CEL	131	1.31	1926									
PHACUS HEGALOPSIS	CEL			X									
SCENEDESMUS ACUMINATUS	COL			X									
SCENEDESMUS QUADRICAUDA	COL												X
STAUROSTHUM	CEL							X					
STEPHANODISCUS	CEL			X									X
STEPHANODISCUS NIAGARAE	CEL							X					
SURIKELLA #9	CEL												X
SYNEDRA ACUS	CEL					0.01	1450						
TOTAL					1431	00		184	179			157	359

LAKE NAME: PACTOLA RES
 STORE NUMBER: 4620

NYGAARD TROPHIC STATE INDICES

	DATE	04 25 74	07 15 74	09 12 74
MYXOPHYCEAN		03/0 E	0/01 U	4.00 E
CHLOROPHYCEAN		02/0 E	0/01 E	5.00 E
EUGLENOPHYTE		0/05 ?	0/0 ?	0.11 ?
DIATOM		0.40 E	0.50 E	0.25 ?
COMPOUND		07/0 E	1.00 U	11.0 E

PALMER'S ORGANIC POLLUTION INDICES

	DATE	04 25 74	07 15 74	09 12 74
GENUS		02	00	01
SPECIES		03	00	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

	DATE	04 25 74	07 15 74	09 12 74
AVERAGE DIVERSITY	H	1.74	1.57	1.45
NUMBER OF TAXA	S	19.00	7.00	22.00
NUMBER OF SAMPLES COMPOSITED	M	3.00	3.00	3.00
MAXIMUM DIVERSITY	MAXH	4.25	2.81	4.46
MINIMUM DIVERSITY	MINH	0.31	0.15	0.30
TOTAL DIVERSITY	D	1097.94	632.71	1107.80
TOTAL NUMBER OF INDIVIDUALS/ML	N	631.00	403.00	764.00
EVENNESS COMPONENT	J	0.41	0.56	0.33
RELATIVE EVENNESS	RJ	0.37	0.54	0.28
MEAN NUMBER OF INDIVIDUALS/TAXA	L	33.21	57.57	34.73
NUMBER/ML OF MOST ABUNDANT TAXON	K	291.00	242.00	547.00

LAKE NAME: PACIOLA RES
STORE NUMBER: 4620

CONTINUED

TAXA	FORM	04 25 74		07 15 74		09 12 74	
		IS	ZC	IS	ZC	IS	ZC
AMPHIOXA ?	CEL						X
ANABATHOPSIS RACIBUMSKII	FIL						X
ANKISTRUCESMUS FALCATUS							
V. ACICULARIS	CEL	13115.4		97			X
ASTIKHIMELLA FIRNOSA	CEL			X	1120.1	81	3.1
CIPATIUM HIRUNDINIFLUA	CEL						X
CIRRODUMAS ALUTA	CEL	12146.1		291	13160.0	242	171.6
COSMARIUM	CEL					X	
CRYPTODUMAS ERUSA	CEL				141 9.9	40	6.4
V. REFLEXA	CEL			X			
CYANOPHYTAN FILAMENT	FIL						X
CYCLOTELLA	CEL						
DINOBRYUM	CEL			X			
DINOBRYUM DIVERGENS	CEL			X		X	
DINOBRYUM PEDIFORME	CEL						X
EUDORINA ELEGANS	COL						X
EUGLENA	CEL						3.1
FRAGILIARIA CRUTONENSIS	CEL	11130.7		194		X	
GLENODINIUM	CEL						X
GLEUCYSTIS	COL			X			
GYMNODINIUM ALBULUM	CEL	141 7.8		49			
GYRUSTICHA WORMLEYI	CEL			X			
MICROCYSTIS AERUGINOSA	COL			X			
MICROCYSTIS INCERTA	COL						112.6
MITZSCHIA	CEL			X			
ODYSSEUS	COL			X			X
OSCILLATORIA	FIL						X
OSCILLATORIA #1	FIL			X			
OSCILLATORIA #2	FIL			X			
PERIDINIUM CINCTUM	CEL			X			
SCENEDES MUS BIJUGA							
V. FLEXUOSUS	COL						X
SCENEDES MUS QUADRICAUDA	COL						X
SCHROEDERIA SEPIGERA	CEL						3.1
STEPHANODISCUS	CEL			X	121 9.9	40	
TABELLARIA FENESTRATA	CEL			X			
TOTAL				631		403	764

LAKE NAME: FICKERAL LAKE
 STRET NUMBER: 4621

NYGAARD TROPHIC STATE INDICES

DATE	04 25 74	07 11 74	09 19 74
MYXOPHYCEAN	02/0 E	3.00 E	07/0 E
CHLOROPHYCEAN	04/0 E	1.67 E	0/0 0
EUGLENDOPHYTE	0/06 ?	0/14 ?	0/07 ?
DIATOM	0.30 ?	0.15 ?	0.20 ?
COMPOUND	09/0 E	5.33 E	09/0 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	04 25 74	07 11 74	09 19 74
GENUS	02	07	03
SPECIES	00	00	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE	04 25 74	07 11 74	09 19 74
AVERAGE DIVERSITY H	1.35	2.54	2.42
NUMBER OF TAXA S	26.00	35.00	27.00
NUMBER OF SAMPLES COMPOSITED M	2.00	2.00	2.00
MAXIMUM DIVERSITY MAXH	4.70	5.13	4.75
MINIMUM DIVERSITY MINH	0.02	0.31	0.06
TOTAL DIVERSITY D	29216.70	3276.60	16005.86
TOTAL NUMBER OF INDIVIDUALS/ML N	21642.00	1290.00	6614.00
EVENESS COMPONENT J	0.29	0.50	0.51
RELATIVE EVENESS RJ	0.29	0.47	0.51
MEAN NUMBER OF INDIVIDUALS/TAXA L	832.36	36.86	244.96
NUMBER/ML OF MOST ABUNDANT TAXA K	15938.00	444.00	3160.00

TAXA	FORM	04 25 74		07 11 74		09 19 74	
		IS	XC	IS	XC	IS	XC
ACTINASTRUM GRACILIMUM	CEL					X	
AMPHORA	CEL					X	
ANABAENA	FIL						1147.81
ANABAENA ?	FIL	0.21	45				
ANABAENA PLANCTONICA	FIL			141	3.11	40	
APIANIZUM NUM	FIL					X	
APIANIZUM NUM FLOS-AQUAE	FIL				3.11	40	
APHANOTHECE	CEL					X	
ASTERIONELLA FORMOSA	CEL	1173.61	15938			X	
CALONEIS ? LEWISII	CEL					X	
CARTERIA	CEL	0.21	45				
CEKATIUM HIRUNDINELLA	CEL						0.61
CEKATIUM HIRUNDINELLA F. FURCULIDES	CEL						
CHLAMYDOMONAS	CEL		X				
CHROMONAS ACUTA	CEL	12116.81	3637	12134.41		444	
CLOSTERIUM	CEL					X	
CUCCINEIS	CEL					X	
COSMARIUM	CEL					X	
CRUCIGENIA QUADRATA ?	CEL	0.81	180				
CRYPTOUMNAS ROSA	CEL				3.11	40	141
CYMATOPELLURA SOLIDA	CEL					X	
CYMBELLA	CEL		X			X	
CYMBELLA #2	CEL						
CYMBELLA SPP.	CEL						0.61
CYMBELLA TRIANGULUM	CEL						
CYMBELLA TRIANGULUM ?	CEL					X	
DICITYOSPHAERIUM	CEL		X				
DINOBRYUM SERTULAKIA V. PULVERANS	CEL	0.41	90				
DINOBRYUM SOCIALE	CEL						0.61
DINOBRYUM STATUSPURE	CEL	0.21	45				
ENTHIMONIS UMNATA	CEL					X	
EPIHEMIA SOPER	CEL		X				
EUMOTIA VALIDA	CEL	151	0.41	90			
FLAGELLATE	FIL						13115.11
FLAGELLATE #2	CEL		X				
FRAGILARIA	CEL	141	4.11	898		X	
FRAGILARIA #2	CEL						
FRAGILARIA CRUICENSIS	CEL		X			X	12117.01
GOMPHONEMA	CEL						
GOMPHONEMA DELVACULUM	CEL	0.21	45			X	
GYMNODINIUM ALBIDUM	CEL	0.21	45				
GYROSIGMA	CEL					X	
LYNGBYA	FIL						
MALLOMONAS	CEL						1.31
MELOSIRA DISTANS	CEL	0.21	45				
MELOSIRA GRANULATA	CEL	0.21	45	1128.11		363	1.91
MERISMIPEDIA GLAUCA	CEL					X	
MERISMIPEDIA MINIMA	CEL						0.61
MICROCYSTIS ALRUGINOSA	CEL					X	0.61
MICROCYSTIS INCLERTA	CEL	131	1.71	359	15112.51	161	151
NAVICULA	CEL				3.11	40	
NAVICULA #1	CEL		X				
NAVICULA #2	CEL		X				
NETZSCHIA	CEL					X	
NUCYSTIS	CEL					X	
OSCILLATORIA	FIL				6.31	81	
PLEDIASTRUM BURKINUM	CEL		X			X	
PERIDINIUM	CEL						
PHORMIDIUM	FIL						5.01
PHORMIDIUM MUCICOLA	FIL					X	
PINNULARIA	CEL						
SCHROEDERIA SETIGERA	CEL	0.41	90	131	6.31	81	
SPHAEROCYSTIS SCHMUEDEMI	CEL					X	
STAUROSTROM	CEL					X	
STAUROMONAS ANCEPS	CEL						
STEPHANODISCUS	CEL	0.21	45			X	1.31
STYEDRA	CEL		X				
TOTAL			21642		1290		6614

LAKE NAME: LAKE PUNSETT
 STORE NUMBER: 4622

NYGAARD TROPHIC STATE INDICES

DATE	04 25 74	07 11 74	09 19 74
MYXOPHYCEAN	0470 E	3.00 E	4.50 E
CHLOROPHYCEAN	0570 E	3.00 E	5.00 E
EUGLENOPHYTE	0709 ?	0712 ?	0.05 ?
DIAIOM	1.33 E	2.00 E	0.67 E
COMPOUND	1370 E	7.00 E	11.0 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	04 25 74	07 11 74	09 19 74
GENUS	04	06	04
SPECIES	00	00	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE	04 25 74	07 11 74	09 19 74
AVERAGE DIVERSITY H	2.29	3.02	2.70
NUMBER OF TAXA S	22.00	22.00	30.00
NUMBER OF SAMPLES COMPOSITED M	3.00	3.00	3.00
MAXIMUM DIVERSITY MAXH	4.46	4.46	4.91
MINIMUM DIVERSITY MINH	0.04	0.05	0.06
TOTAL DIVERSITY D	16870.43	16024.12	12017.10
TOTAL NUMBER OF INDIVIDUALS/ML N	7367.00	5306.00	4673.00
EVENNESS COMPONENT J	0.51	0.68	0.55
RELATIVE EVENNESS RJ	0.51	0.68	0.55
MEAN NUMBER OF INDIVIDUALS/TAXA L	334.86	241.18	155.77
NUMBER/ML OF MOST ABUNDANT TAXON K	3604.00	1388.00	2380.00

TAXA	FORM	04 25 74		07 11 74		09 19 74			
		IS	ZC	IS	ZC	IS	ZC		
		ALGAL UNITS PER ML		ALGAL UNITS PER ML		ALGAL UNITS PER ML			
AMABAINA	FIL			3.71	198	151	2.61	122	
APHANIZOINIUM FLUS-AQUAE	FIL			151	2.81	149	1150.91	2380	
ASTERIDMELLA FUMOSA	CEL							X	
CHLAMYDOMONAS	CFL			0.91	50				
CHROOCOCCUS LIMNETICUS	COL							X	
CHLAMYDOMONAS ACUTA	CEL	12148.91	3604	7.51	397		3.31	153	
CLOSTERIUM	CEL					X			
CLOSTERIUM #1	CEL							X	
CLOSTERIUM #2	CFL						0.71	31	
COELASTHUM MICROPURUM	COL			0.91	50				
COELOSPHAERIUM	COL			X					
COELOSPHAERIUM PALLIDUM	COL							X	
CRYPTOMONAS	CEL			121	9.31	496		1.31	61
CRYPTOMONAS ERUSA	CEL	131	7.71	567		X			
CRYPTOMONAS MARSSUKII	CEL	11119.21	1417	1.91	99				
CYANOPHYTAN FILAMENT	FIL						113.71	641	
CYMBELLA	CEL		0.51	40				X	
DACTYLOCHOCOPSIS	CEL		0.51	40					
DICTYOSPHAERIUM PULCHELLUM	COL					141	3.31	153	
ELAKATIMIRIX GELATINOSA	COL						1.31	61	
EUGLENA	CEL						0.71	31	
FLAGELLATE #2	CEL		4.91	364					
FLAGELLATES	CEL	14111.51	850						
LYNGBYA	FIL						0.71	31	
MALLONUMAS	CEL			X					
MELOSIRA	CEL							X	
MELOSIRA DISTANS	CEL			X					
MELOSIRA GRANULATA	CEL			X		X			
MELOSIRA VARIANS	CEL			X					
MERISMUPLUTA MINIMA	COL				0.91	50			
MICROCYSTIS AERUGINOSA	COL		1.61	121	131	6.51	347	X	
MICROCYSTIS INCEPIA	COL		1.11	81	112.11	644		2.01	92
NAVICULA	CEL					X			
NIZZSCHIA	CFL						1.31	61	
NIZZSCHIA #1	CEL		1.61	121					
NIZZSCHIA #2	CEL			X					
UDCYSIS	CEL			X	1126.21	1388	121	6.51	305
OSCILLATORIA	FIL						0.71	31	
PEDIASTRUM BUKYANUM	COL							X	
PEDIASTRUM DUPLEX									
V. RETICULATUM	COL				0.91	50		X	
PEDIASTRUM KAWKAISKYI	COL			X		X		X	
PHORMIDIUM MUCICOLA	FIL				14124.31	1289			
SCENEDESMUS ABUNDANS	COL			X					
SCENEDESMUS ACUMINATUS	COL							X	
SCENEDESMUS BICAUDATUS	COL					X			
SCENEDESMUS BIJUGA									
V. FLEXUOSUS	COL							X	
SCENEDESMUS OPOLIHESIS	COL			X					
SCHROEDERIA SLIIGERA	CEL				1.91	99		2.01	92
STRAUSIRUM	CEL					X			
STEPHANODISCUS ASTRAEA	CEL	151	2.21	162		X	131	3.31	153
STIPITOCOCCLUS	CER							5.21	244
TETRASTRUM STAUROGENTIAEFORME	COL			X				0.71	31
TOTAL				7367		5306		4673	

LAKE NAME: LAKE RLD IRON SOUTH
 STORET NUMBER: 4623

NYGAARD TROPHIC STATE INDICES

DATE	04 29 74	07 10 74	09 18 74
MYXOPHYCEAN	4.00 E	4.00 E	2.50 E
CHLOROPHYCEAN	9.00 E	4.00 E	2.50 E
EUGLENOPHYTE	0.06 ?	0.08 ?	0.10 ?
DIATOM	0.33 E	0.50 E	0.33 E
COMPOUND	17.0 E	10.0 E	6.50 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	04 29 74	07 10 74	09 18 74
GENUS	04	01	01
SPECIES	00	00	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE	04 29 74	07 10 74	09 18 74
AVERAGE DIVERSITY H	2.64	2.08	1.65
NUMBER OF TAXA S	32.00	21.00	22.00
NUMBER OF SAMPLES COMPOSITED M	2.00	2.00	2.00
MAXIMUM DIVERSITY MAXH	5.00	4.39	4.46
MINIMUM DIVERSITY MINH	0.12	0.14	0.30
TOTAL DIVERSITY D	9057.84	3484.00	1278.75
TOTAL NUMBER OF INDIVIDUALS/ML N	3431.00	1675.00	775.00
EVENESS COMPONENT J	0.53	0.47	0.37
RELATIVE EVENESS RJ	0.52	0.46	0.33
MEAN NUMBER OF INDIVIDUALS/TAXA L	107.22	79.76	35.23
NUMBER/ML OF MOST ABUNDANT TAXON K	1531.00	661.00	506.00

LAKE NAME: LAKE RED IRON SOUTH
 STORE NUMBER: 4623

CONTINUED

04 29 74

07 10 74

09 18 74

TAXA	FORM	ALGAL UNITS		ALGAL UNITS		ALGAL UNITS	
		IS	ZC	IS	ZC	IS	ZC
ACHANTHES INFLATA	CEL					X	
APPHUSA	CEL						X
ANABAENA	FIL			12123.77		397	
ANABAENA SUBCYLINDRICA	FIL					12115.41	119
ANKISTIPODESMS FALCATUS							
V. ACICULAPIS	CEL			X			
APHANIZOEMON FLGS-AQUAE	FIL					131 3.91	30
ASTERIONELLA FORMOSA	CEL		2.71	93		44	
BCTRYUCOCCLUS BRAUNII	COL						X
CERATIUM HIRUNDINELLA	CEL					X	
CHLOROPHYTIUM COLONY	COL					X	
CHROCODONAS ACUTA	CEL		14116.21	557		13126.31	441
CLOSTERIUM	CEL					X	
CUCCONEIS PLACENTULA							
V. ?	CEL						X
CGELOSPHERIUM PALLIDUM	COL			X			
CRYPTOMONAS ERUSA	CEL		12110.81	371		2.61	44
CRYPTOMONAS MARSSOMII	CEL			X			
CRYPTOMONAS REFLEXA	CEL					X	
CYMBELLA #1	CEL			X			
CYMBELLA #2	CEL					X	
DACTYLOCOCCOPSIS IRREGULARIS	CEL		1.31	46			
ELANATONIRIX GELATINOSA	CEL						X
ENTOMONEIS ORNATA	CEL			X			
EUGLENA	CEL						X
FRAGILARIA	CEL			X			
FRAGILARIA CRCTONENSIS	CEL		131 8.11	278			X
GLENOCINIUM OCULATUM	CEL		1.31	46			
GLEODTRICHIA ?	FIL					X	
LYNGBYA	FIL						X
LYNGBYA BIRGEI	FIL					141 3.91	30
HELOSIRA GRANULATA	CEL		11144.61	1531		11139.51	661
HELOSIRA GRANULATA							
V. ANGUSTISSIMA	CEL			X			
HERISSOPEdia MINIMA	COL						3.91
MICROCYSTIS AERUGINOSA	COL		1.31	46		X	
MICROCYSTIS INCEANIA	COL		4.11	139			
MOUGEOTIA	FIL					X	
NAVICULA #1	CEL						X
NAVICULA #2	CEL			X			
NAVICULA CUSPIDATA	CEL			X			
NITZSCHIA	CEL		1.31	46			
NITZSCHIA SIGMOIDEA	CEL			X			
NUSTOC	FIL					X	
OOCYSTIS	CEL		1.31	46			151 7.71
PEDIASTRUM BORYANUM	COL			X		X	
PEDIASTRUM DUPLEX	COL			X			
PEDIASTRUM DUPLEX							
V. CLATHRATUM	COL					X	
PEDIASTRUM KAWRAISKYI	COL			X		X	
PHACUS PLEURONECTES	CEL			X			
SCENEDESMUS	COL			X			
SCENEDESMUS BIJUGA	COL		1.31	46			
SCENEDESMUS BIJUGA							
V. ALTERNANS	COL			X			
SCENEDESMUS QUADRICAUDA	COL			X			
SPHAEROCYSTIS SCHROETERI	COL					X	
STAUROSTRUM	CEL			X			
STEPHANODISCUS ASTRAEA	CEL			X		141 2.61	44
SURIELLA	CEL						X
SYNEDRA ACUS	CEL		151 5.41	186		151 2.61	44
TETRAEDRUM MINIMUM							
V. SCRUBICULATUM	CEL						X
TOTAL				3431		1675	775

LAKE NAME: RICHMOND LAKE
 STURET NUMBER: 4624

NYGAARD TROPHIC STATE INDICES

DATE	04 26 74	07 10 74	09 18 74
MYXOPHYCEAN	01/0 E	03/0 E	03/0 E
CHLOROPHYCEAN	01/0 E	03/0 E	0/0 0
EUGLENOPHYTE	0/02 ?	0/06 ?	0/03 ?
DIATOM	1.00 E	0/0 ?	01/0 E
COMPOUND	03/0 E	06/0 E	04/0 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	04 26 74	07 10 74	09 18 74
GENUS	00	00	05
SPECIES	00	00	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE	04 26 74	07 10 74	09 18 74
AVERAGE DIVERSITY H	1.16	1.15	0.28
NUMBER OF TAXA S	6.00	9.00	5.00
NUMBER OF SAMPLES COMPOSITED M	3.00	3.00	3.00
MAXIMUM DIVERSITY MAXH	2.58	3.17	2.32
MINIMUM DIVERSITY MINH	0.05	0.05	0.01
TOTAL DIVERSITY D	1472.04	2515.05	2213.96
TOTAL NUMBER OF INDIVIDUALS/ML N	1269.00	2187.00	7907.00
EVENESS COMPONENT J	0.45	0.36	0.12
RELATIVE EVENESS RJ	0.44	0.36	0.12
MEAN NUMBER OF INDIVIDUALS/TAXA L	211.50	243.00	1561.40
NUMBER/ML OF MOST ABUNDANT TAXON K	907.00	1618.00	7579.00

LAKE NAME: RICHMOND LAKE
 STORET NUMBER: 4624

CONTINUED

TAXA	FORM	04 26 74			07 10 74			09 18 74		
		ALGAL			ALGAL			ALGAL		
		IS	ZC	PER ML	IS	ZC	PER ML	IS	ZC	PER ML
ANABAENA	FIL	1	1	1	121	2.01	44	1	1	1
APHANIZUMENON FLOUS-AQUAE	FIL	1	1	1	x	11174.01	1618	11195.91	7579	1
CHROOCYTHUS ACUTA	CEL	121	71.51	907	13116.01	350	121	3.01	234	1
CRYPTOMONAS	CEL	1	1	1	1	1	x	1	1	1
CRYPTOMONAS MARSSUMII	CEL	131	3.51	45	1	1	x	1	1	1
FRAGILARIA CRUTONENSIS	CEL	1	1	1	x	1	1	1	1	1
GLOEOTRICHIA ?	FIL	1	1	1	1	1	1	1	1	x
HEMISPHERIA	COL	1	1	1	1	1	x	1	1	1
QUACYSTIS	CEL	1	1	1	1	1	x	1	1	1
OSCILLATORIA	FIL	1	1	1	1	1	131	1.21	94	1
SCHWEDERIA JUDATI	CEL	1	1	1	141	6.01	175	1	1	1
SCHWEDERIA SETIGERA	CEL	141	3.51	45	1	1	x	1	1	1
STEPHANODISCUS ASTRAEA	CEL	111	21.41	272	1	1	1	1	1	x
TOTAL				1269			2187			7907

LAKE NAME: ROY LAKE
 STORET NUMBER: 4625

NYGAARD TROPHIC STATE INDICES

DATE	04 29 74	07 10 74	09 18 74
MYXOPHYCEAN	3.00 E	7.00 E	3.50 E
CHLOROPHYCEAN	5.00 E	6.00 E	2.00 E
EUGLENOPHYTE	0.12 ?	0.13 ?	0.11 ?
DIATOM	0.20 ?	0.67 E	0.67 E
COMPOUND	12.0 E	15.0 E	6.50 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	04 29 74	07 10 74	09 18 74
GENUS	04	02	02
SPECIES	03	00	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE	04 29 74	07 10 74	09 18 74
AVERAGE DIVERSITY	H 2.10	2.31	2.28
NUMBER OF TAXA	S 33.00	25.00	22.00
NUMBER OF SAMPLES COMPOSITED	M 2.00	2.00	2.00
MAXIMUM DIVERSITY	MAXH 5.04	4.64	4.46
MINIMUM DIVERSITY	MINH 0.12	0.07	0.03
TOTAL DIVERSITY	D 7238.70	10706.85	22264.20
TOTAL NUMBER OF INDIVIDUALS/ML	N 3447.00	4635.00	9765.00
EVENNESS COMPONENT	J 0.42	0.50	0.51
RELATIVE EVENNESS	RJ 0.41	0.50	0.51
MEAN NUMBER OF INDIVIDUALS/TAXA	L 104.45	185.40	443.86
NUMBER/ML OF MOST ABUNDANT TAXON	K 1633.00	1837.00	5635.00

LAKE NAME: ROY LAKE
 STOR# NUMBER: 4029

CONTINUED

04 29 74

07 10 74

09 18 74

TAXA	FORM	ALGAL UNITS PER ML		ALGAL UNITS PER ML		ALGAL UNITS PER ML	
		IS	ZC	IS	ZC	IS	ZC
ANABAENA	FIL					2.21	210
ANABAENA FLUS-AQUAE	FIL			131	5.71	262	
ANABAENA PLANCTONICA	FIL			X			
ANAISTROODESPUS FALCATUS V. ACICULARIS	CEL		2.61	91			
APHANIZOMENON FLOS-AQUAE	FIL			X			
APHANOTHECE MIDULANS	COL			1139.61		1637	
ASTERIONELLA FORMOSA	CEL		2.61	91		X	
ASTERIONELLA FORMOSA V. GFACILLIMA	CEL			X			
BOTRYOCOCCUS BRAUNII	COL					X	
CENTRIC DIATOM	CEL	141	7.91	272			
CEPATIUM HIRUNDINELLA	CEL					X	X
CHROOCOCCUS DISPERSUS	COL					151	2.21
CHROOCOCCUS LIMNETICUS	COL					X	
CHROOMONAS ACUTA	CEL	12147.41		1633	5.71	262	7.21
CLOSTERIUM	CEL						X
COCCONEIS	CEL			X			X
COELUSPHERIUM NAEGELIANUM	COL			X	1.91	87	X
COSPARIUM	CEL					X	
CRUCIGENIA RECTANGULARIS	COL					X	
CRYPTOMONAS EROSA	CEL	151	7.91	272	1.91	87	2.21
CRYPTOMONAS MARSSONII	CEL			X		X	
CYMATOPLEURA ELLIPTICA	CEL			X			
CYMATOPLEURA SOLEA	CEL			X			
CYMATOPLEURA SOLEA V. REGULA	CEL						X
CYMBELLA #1	CEL			X			
CYMBELLA #2	CEL			X			
DIPLOPSALIS ACUTA	CEL					X	
ELAKATOTHRIX GELATINOSA	CEL						X
ENTOMONEIS ORNATA	CEL			X			
EPITHEMIA	CEL			X			
EUGLENA GRACILIS	CEL			X			
FRAGILARIA	CEL			X			
FRAGILARIA CROTONENSIS	CEL	131	5.31	181	12126.41	1225	11157.71
GLENODINIUM GYMNODINIUM	CEL					X	
GLENODINIUM OCULATUM	CEL						X
GLOEOCAPSA AERUGINOSA	COL						1.41
GYMNODINIUM ALBULUM	CEL			X			
LYNGBYA BIRGEI	FIL					X	
MELOSIRA GRANULATA	CEL			X	151	5.81	175
MICROCYSTIS AERUGINOSA	COL					X	
MICROCYSTIS INCERTA	COL					13111.51	1120
NAVICULA	CEL			X			
NITZSCHIA #1	CEL			X			
NITZSCHIA SIGMOIDEA	CEL			X			
ODCYSTIS	CEL				14115.11	700	2.21
PEODIASTRUM BRYANUM	COL			X		X	
PEODIASTRUM KANRAISKYI	COL			X		X	
PHORMIDIUM MUCICOLA	FIL					X	X
PINNULARIA	CEL			X		X	
SCENEDESMUS BIJUGA V. FLEXUOSUS	COL						0.41
SCENEDESMUS INTERMEDIUS V. BALATONILUS	COL			X			
SCENEDESMUS QUADRICAUDA	COL			X			
SCHWEDERIA SETIGERA	CEL						0.41
STAUHASTRUM	CEL			X			X
STEPHANODISCUS	CEL					X	1.81
STEPHANODISCUS ASTRAEA	CEL			X			
SYNECHA ACUS	CEL	11126.31		907			
TETRAEDRUM VICTORIAE	CEL					X	
TOTAL				3447		4635	9765

LAKE NAME: SAND LAKE
 STORE NUMBER: 4626

NYGAARD TROPHIC STATE INDICES

DATE	04 26 74	07 10 74	09 18 74
MYXOPHYCEAN	3.00 E	2.00 E	4.33 E
CHLOROPHYCEAN	6.50 E	6.00 E	7.33 E
EUGLENOPHYTE	0.26 E	0.37 E	0.23 E
DIATOM	0.22 ?	0.67 E	0.35 E
COMPOUND	14.0 E	13.0 E	16.3 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	04 26 74	07 10 74	09 18 74
GENUS	21	06	29
SPECIES	07	00	09

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE	04 26 74	07 10 74	09 18 74
AVERAGE DIVERSITY	H 2.83	0.55	4.03
NUMBER OF TAXA	S 53.00	22.00	81.00
NUMBER OF SAMPLES COMPOSITED	M 3.00	3.00	3.00
MAXIMUM DIVERSITY	HAXH 5.73	4.46	6.34
MINIMUM DIVERSITY	MINH 0.03	0.02	0.03
TOTAL DIVERSITY	D 87650.76	10643.05	161578.82
TOTAL NUMBER OF INDIVIDUALS/ML	N 30972.00	19351.00	40094.00
EVENESS COMPONENT	J 0.49	0.12	0.64
RELATIVE EVENESS	RJ 0.50	0.12	0.64
MEAN NUMBER OF INDIVIDUALS/TAXA	L 584.38	879.59	494.99
NUMBER/ML OF MOST ABUNDANT TAXON	K 13131.00	17930.00	7612.00

LAKE NAME: SAND LAKE
 STCRET NUMBER: 4626

CONTINUED

04 26 74

07 10 74

09 18 74

TAXA	FORM	ALGAL UNITS PER ML		ALGAL UNITS PER ML		ALGAL UNITS PER ML	
		IS	XC	IS	XC	IS	XC
ACTINASTRUM GRACILIMUM	CEL			X			
ACTINASTRUM HANTZSCHII	COL					1.31	507
AMPHOMA	CEL						X
ANABAENA	FIL	0.41	124				
ANABAENA OSCILLARIUIGES	FIL					0.41	169
ANABAENOPSIS ELENKINII	FIL					0.21	85
ANKISTRODESMUS	CEL				X		
ANKISTRODESMUS FALCATUS V. ACICULARIS	CEL	131	6.01	1898		0.61	254
ANKISTRODESMUS FALCATUS V. MIRABILIS	CEL		0.41	124		0.21	85
APHANIZOUMENUM FLUS-AQUAE	FIL			1192.71	17930	1119.01	7612
ARTHROSPIRA JEMMENSIS	CEL						X
CALONEIS AMPHISBAENA	CEL						X
CENTRIC DIATOM	CEL				X		
CHLAMYDOMONAS	CEL					0.21	85
CHLAMYDOMONAS ?	CEL				0.41	75	
CHROODMONAS ACUTA	CEL	151	11.61	3592		0.81	150
CHRYSOPHYTAN FILAMENT	FIL						X
CLOSTERIUM #1	CEL			X			X
CLOSTERIUM #2	CEL						X
COCconeis PLACENTULA V. LINEATA	CEL						X
COELASTRUM MICROPORUM	COL					X	X
COELOSPHEREIUM PALLIDUM	COL	0.41	124			1.31	507
COSMARIUM	CEL						X
COSMARIUM #1	CEL			X			
CRUCICORNIA APICULATA	CEL						X
CRUCICORNIA QUADRATA	COL			149	1.51	299	0.21
CRUCICORNIA TETRAPLOIA	COL						X
CRYPTOMONAS	CEL						X
CRYPTOMONAS EROSA	CEL			131	1.51	299	2.31
CRYPTOMONAS REFLEXA	CEL			X			930
CYCLOTELLA MENECHINIANA	CEL					4.41	1776
CYRATOPLEURA ELLIPTICA	CEL			X			
CYRATOPLEURA SOLEA	CEL			X			
CYRATOPLEURA SOLEA	CEL			X			
CYRATOPLEURA SOLEA	CEL			X			
CYST	CEL			X			
DACTYLOCOCCOPSIS	CEL					7.21	2876
DACTYLOCOCCOPSIS IRREGULARIS	CEL	14120.01	6194				
DICHOTOMOCOCCUS	COL					0.61	254
DICTYUSPHEREIUM PULCHELLUM	COL	0.41	124			1.51	592
EMTOMONAS	CEL			X			
EPITHEMIA	CEL						X
EPITHEMIA TURGIDA	CEL			X			
EUGLENA	CEL					X	
EUGLENA #1	CEL						X
EUGLENA #2	CEL						X
EUGLENA #3	CEL						X
EUGLENA ACUS	CEL			X		0.21	85
EUGLENA GRACILIS	CEL			X			
EUGLENA TRIPIERIS	CEL			X			
FRAGILARIA	CEL			X			
GLENODINIUM UCULATUM	CEL	0.41	124			X	
GOMPHONEMA ANGUSTATUM	CEL						X
GOMPHONEMA ALBULUM	CEL					0.21	85
GROSSIGMA	CEL			X			
LEPUCINCLIS	CEL						X
MALLUMONAS ACARDIOES	CEL					0.21	85
MELOSIRA	CEL			X			X
MELOSIRA DISTANS	CEL	0.81	248				
MELOSIRA GRANULATA	CEL			151	0.61	150	
MELOSIRA GRANULATA V. ANGUSTISSIMA	CEL					0.61	254
MERISROPEDIA MINIMA	COL					1.51	592
MICROCYSTIS AERUGINOSA	COL			121	2.31	448	0.21
MICROCYSTIS INCERTA	COL	0.41	124			0.81	338
NAVICULA #1	CEL						X
NAVICULA #2	CEL	0.41	124				
NAVICULA CUSPIDATA	CEL	0.41	124				X
NAVICULA PYGMAEA	CEL						X
NITZSCHIA ? #1	CEL			X			
NITZSCHIA #2	CEL	2.01	619				
NITZSCHIA COMMUTATA	CEL						X
NITZSCHIA HUNGARICA ?	CEL			X			
NITZSCHIA LONGISSIMA V. REVERSA	CEL					1.91	761
NITZSCHIA TRYBLIGNELLA	CEL	0.81	248				
NITZSCHIA VERMICULARIS	CEL			X			
OOCYSTIS	CEL					0.21	85
OSCILLATORIA	FIL	1.61	496				
OSCILLATORIA ?	FIL					131	3.81
							1522

LAKE NAME: SAND LAKE
 STRET NUMBER: 4626

CONTINUED

TAXA	FORM	04 26 74			07 10 74			09 18 74		
		IS	XC	ALGAL UNITS PER ML	IS	XC	ALGAL UNITS PER ML	IS	XC	ALGAL UNITS PER ML
OSCILLATORIA #1	FIL			X				12117.51		7020
OSCILLATORIA LIMNETICA	FIL							1.91		761
PEDIASTRUM BRYANUM	COL			X						
PEDIASTRUM DUPLER										
V. CLATHRATUM	COL			X						
PEDIASTRUM TETRAS										
V. TETRADON	COL									X
PENNATE DIATOM	CEL						X			
PHACUS	CEL									X
PHACUS CAUDATUS	CEL			X						
PHACUS MEGALLOPSIS	CEL									X
PHACUS PLEURONECTIS	CEL						X			
PHORMIDIUM MUCICOLA	COL							0.21		85
PIRNULARIA	CEL									X
PLEUROSTIGMA DELICATULUM	CEL							0.61		254
PTEROMNAS ANGULOSA	CEL									X
RHODOSPHEMIA CURVATA	CEL									X
RHOPALODIA GIBBA	CEL			X						
SCENEDESMUS ABUNDANS	COL							1.11		423
SCENEDESMUS ACUMINATUS	COL		0.41	124				0.41		169
SCENEDESMUS BALATONICUS	COL									X
SCENEDESMUS BIJUGA	COL		0.41	124				1.71		677
SCENEDESMUS DIMORPHUS	COL		1.21	372						
SCENEDESMUS INTERMEDIUS	COL							0.41		169
SCENEDESMUS QUADRILAUDA	COL		1.21	372			X	0.61		254
SCHROEDERIA SETIGERA	CEL									X
SKELETONEMA POTAMOS	CEL							0.41		169
SPERMATOCYSTIS	CEL									X
SPHAEROCYSTIS SCHROETERI	COL						X	0.21		85
SPIROGYRA	FIL						X			
STAUROSTRUM ASTRAEA										
V. MINUTULA	CEL						X			
STEPHANODISCUS	CEL			X						
STEPHANODISCUS ASTRAEA										
V. MINUTULA	CEL	1142.41		13131				14110.51		4229
SURIELLA	CEL									X
SURIELLA #9	CEL		0.81	248						
SURIELLA ANGUSTA	CEL		0.41	124						
SURIELLA OVATA	CEL			X						
SYNECHA #1	CEL							1.11		423
SYNECHA ACUS	CEL	121	5.61	1734			X	0.41		169
SYNECHA ULNA	CEL									X
SYNURA UVELLA	CEL							151	3.81	1522
TETRAEDRUM MINIMUM										
V. SCRUBICULATUM	CEL							0.21		85
TETRAEDRUM MUTICUM	CEL							0.61		254
TETRAEDRUM TRIGONUM	CEL		0.41	124						
TETRASTRUM ELEGANS	COL									X
TETRASTRUM STAUROGEMIAEFORME	COL		0.81	248						X
TRACHELONNAS INTERMEDIA	CEL		0.41	124			X			X
TOTAL				36972			19351			40094

LAKE NAME: SHERIDAN LAKE
 STORET NUMBER: 4627

MYGAARD TROPHIC STATE INDICES

DATE	04 25 74	07 15 74	09 12 74
MYXOPHYCEAN	0370 E	0.83 E	1.67 E
CHLOROPHYCEAN	070 J	0.33 ?	1.33 E
EUGLENOPHYTE	0.33 E	0.07 ?	0.09 ?
DIATOM	0.37 E	1.00 E	1.00 E
COMPCOND	0770 E	1.67 E	3.33 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	04 25 74	07 15 74	09 12 74
GENUS	06	03	01
SPECIES	00	03	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE	04 25 74	07 15 74	09 12 74
AVERAGE DIVERSITY H	3.30	1.55	2.67
NUMBER OF TAXA S	26.00	27.00	20.00
NUMBER OF SAMPLES COMPOSITED M	2.00	2.00	2.00
MAXIMUM DIVERSITY MAXH	4.70	4.75	4.32
MINIMUM DIVERSITY MINH	0.00	0.11	0.13
TOTAL DIVERSITY D	19113.60	4930.55	4765.95
TOTAL NUMBER OF INDIVIDUALS/ML N	5792.00	3181.00	1785.00
EVENNESS COMPONENT J	0.70	0.33	0.62
RELATIVE EVENNESS RJ	0.70	0.32	0.61
MEAN NUMBER OF INDIVIDUALS/TAXA L	222.77	117.81	89.25
NUMBER/ML OF MOST ABUNDANT TAXON K	1230.00	2250.00	632.00

LAKE NAME: SHERIDAN LAKE
 STUREI NUMBER: 4627

CONTINUED

TAXA	FORM	04 25 74				07 15 74				09 12 74			
		IS		2C		IS		2C		IS		2C	
		ALGAL UNITS PER ML		ALGAL UNITS PER ML		ALGAL UNITS PER ML		ALGAL UNITS PER ML		ALGAL UNITS PER ML			
ANABAENA PLANCTONICA	FIL	1	1			121	3.01	116	121	8.31	149		
ANKISTRODESMUS FALCATUS	CEL	1	1			1	2.51	78	1	1			
APHANIZOUMENON FLUO-AQUAE	FIL	1	1			141	1.21	39	1	135.41	632		
APHANOCAPS	CEL	1	1			1	1		1	125.01	446		
ASIERIONELLA FORMOSA	CEL	1	1	4.01	268	1	1	X	1	1			
CENTRIC DIATOM	CEL	1	1			1	1.21	39	1	1			
CERATIUM HIRUNDINELLA	CEL	1	1			1	1	X	1	1		X	
CHLOROPHYTAN COLONY	COL	1	1			1	1	X	1	1			
CHROOPOGONAS ACUTA	CEL	1	1	10.01	626	1	1.21	39	1	6.31	112		
COCCONEIS PLACENTULA	CEL	1	1		X	1	1		1	1			
COELASTRUM MICROPURUM	CEL	1	1			1	1		1	1		X	
COELOSPHERIUM HAEGELIANUM	COL	1	1			1	1	X	1	1		X	
COSMARIUM #1	CEL	1	1			1	1		1	1		X	
COSMARIUM #2	CEL	1	1			1	1		151	2.11	37		
COSMARIUM #3	CEL	1	1			1	1	X	1	1			
COSMARIUM #4	CEL	1	1			1	1	X	1	1			
COSMARIUM #5	CEL	1	1			1	1	X	1	1			
COSMARIUM #6	CEL	1	1			1	1	X	1	1			
COSMARIUM #7	CEL	1	1			1	1	X	1	1			
CRYPTOMONAS EPSA	CEL	1	1		X	1	1	X	1	2.11	37		
CRYPTOMONAS MARSSLEII	CEL	1	1		X	131	9.71	310	1	4.11	74		
CRYPTOMONAS SPP.	CEL	1	1	19.31	1118	1	1		1	1			
CYANOPHYTAN FILARENI	FIL	1	1			1	1		1	8.31	149		
CYCLITELLA	CEL	1	1	1.21	67	1	1		1	1			
CYTBELLA	CEL	1	1		X	1	1	X	1	1			
DACTYLOCOCCLEPSIS	CEL	1	1		X	1	1		1	1			
DINOBRYUM DIVERGENS	CEL	1	1	3.91	224	1	1	X	1	1			
EPIPHYTE	CEL	1	1			1	1	X	1	1			
EUGRINA ELEGANS	CEL	1	1			1	1	X	1	1		X	
FLAGELLATES	CEL	1	1	7.71	447	1	1		1	1			
FRAGILARIA #2	CEL	1	1	3.11	179	1	1		1	1			
FRAGILARIA CRUTONENSIS	CEL	1	1	21.21	1230	1	170.71	2250	1	6.31	112		
GLENODIUM	CEL	1	1	3.41	22	1	1		1	1			
GLEBOCYSTIS	CEL	1	1		X	1	1		1	1		X	
GLEBOGIRICHIA ECHINULATA	FIL	1	1			1	1	X	1	1			
GYPHODINIUM ALBUM	CEL	1	1	0.81	45	1	1		1	1			
HELLSIPA DISTANS	CEL	1	1	1.21	67	1	1		1	1			
HELLSIPA GRANULATA	CEL	1	1			1	1	X	1	1			
HEUSTIGMA VIRIDIS	CEL	1	1	15.51	895	1	1		1	1			
MICROCYSTIS INCERTA	COL	1	1	1.21	67	151	9.71	310	1	1			
NAVICULA	CEL	1	1		X	1	1		1	1			
NETZSCHIA	CEL	1	1	4.01	268	1	1		1	1			
OCCYSTIS #1	CEL	1	1			1	1		1	1		X	
OCCYSTIS #2	CEL	1	1			1	1		1	1		X	
OCCYSTIS #3	CEL	1	1			1	1	X	1	1			
PHORMIDIUM	FIL	1	1		X	1	1		1	1			
SPHAEROCYSTIS SCHROETERI	COL	1	1			1	1		1	1		X	
STAUROSTRUM	CEL	1	1			1	1	X	141	2.11	37		
STEPHANODISCUS	CEL	1	1			1	1	X	1	1		X	
STEPHANODISCUS ASTRAEA													
V. MINUTULA	CEL	151	3.11	179									
STIPITOCOCCUS	CEL	1	1	0.81	45	1	1		1	1			
SYNEDRA ULNA	CEL	1	1	0.81	45	1	1		1	1			
TRACHELONHAS VULVUCINA	CEL	1	1		X	1	1		1	1			
TOTAL					5792			3101			1765		

LAKE NAME: STOCKAGE LAKE
 STORET NUMBER: 4628

NYGAARD TROPHIC STATE INDICES

DATE	04 24 74	07 15 74	09 11 74
MYXOPHYCEAN	0270 E	6.00 E	0470 E
CHLOROPHYCLAN	0170 E	3.00 E	0970 E
EUGLENOPHYTE	0703 ?	0709 ?	0.08 ?
DIATOM	0.53 E	0702 ?	0.67 E
COMPOUND	0470 E	9.00 E	1070 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	04 24 74	07 15 74	09 11 74
GENUS	00	02	05
SPECIES	00	00	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE	04 24 74	07 15 74	09 11 74
AVERAGE DIVERSITY H	1.28	1.99	0.57
NUMBER OF TAXA S	13.00	16.00	23.00
NUMBER OF SAMPLES COMPOSITED M	2.00	2.00	2.00
MAXIMUM DIVERSITY MAXH	3.70	4.00	4.52
MINIMUM DIVERSITY MINH	0.01	0.03	0.02
TOTAL DIVERSITY D	28770.56	13354.89	9149.04
TOTAL NUMBER OF INDIVIDUALS/ML N	22477.00	6711.00	16052.00
EVENESS COMPONENT J	0.35	0.50	0.13
RELATIVE EVENESS RJ	0.35	0.50	0.13
MEAN NUMBER OF INDIVIDUALS/TAXA L	1729.00	419.44	697.91
NUMBER/ML OF MOST ABUNDANT TAXON K	16809.00	3098.00	14916.00

LAKE NAME: STOCKAGE LAKE
STORE NUMBER: 462B

CONTINUED

TAXA	FORM	04 24 74			07 15 74			09 11 74		
		IS	XC	ALGAL	IS	XC	ALGAL	IS	XC	ALGAL
				UNITS PER ML			UNITS PER ML			UNITS PER ML
ANABAENA	FIL	1	1		1	0.41	30	1	0.51	87
APHANIZUMENUM FLUS-AQUAE	FIL	1	1		1	46.21	3098	1	192.91	14916
ASTERIONELLA FORMOSA	CEL	151	0.91	194						
CELL		1	1.61	349						
CENTRIC DIATOM	CEL	121	74.81	16009					0.31	44
CHROOCYTHUS ACUTA	CEL	1	1		1	0.41	61	131	2.71	437
COELASTRUM MICROPORUM	COL	1	1				X			X
CRUCIGENIA TETRAPELIA	COL	1	1						0.31	44
CRYPTOCHONAS EROSA	CEL	1	1		1	0.41	30	1	0.31	44
CRYPTOCHONAS MARSSUMII	CEL	111	1.41	2502	1	0.41	30			X
CRYPTOCHONAS REFLEXA	CEL	131	1.41	311						
CYTYLLOCOCOPSIS	CEL	1	0.21	39						
FLAGELLATE	CEL	141	9.51	2135						
FRAGILARIA	CEL	1	1							X
FRAGILARIA CROTONEENSIS	CEL	1	1		131	5.91	395			
GLOEOCOYSTIS ?	COL	1	1		1	0.41	30			
GYMNODINIUM	CEL	1	1	X						
MELOSIRA GRANULATA	CEL	1	1					121	0.51	87
MERISMOPEDIA MINIMA	COL	1	1				X			X
MERISMOPEDIA TENUISSIMA	COL	1	1				X			X
MICROCYSTIS AERUGINOSA	COL	1	1		121	7.71	516			X
NAVICULA	CEL	1	1				X			
NITZSCHIA	CEL	1	1	X						
NITZSCHIA LONGISSIMA										
V. REVEESA	CEL	1	1							X
NITZSCHIA VERMICULARIS	CEL	1	1	X						
ODCYSTIS	CEL	1	1		1	0.91	61	151	0.81	131
OSILLATORIA	FIL	1	1	X						
PARACELIA MULTISITA	CEL	1	1						0.51	87
PHACUS	CEL	1	1							X
PHOENICIDIVM MUCICOLA	FIL	1	1		141	33.91	2278			
PTERODINUS	CEL	1	0.21	39						
SCENEDESMUS AERUMANS	COL	1	1							X
SCENEDESMUS INTERMEDIUS										
V. BICAUDATUS	COL	1	1					141	0.81	131
SCENEDESMUS QUADRICAUDA	COL	1	1							X
SCHROEDERIA SETIGERA	CEL	1	0.21	39	1	0.41	30	1	0.31	44
STAUROSTRUM	CEL	1	1		151	2.31	152			
SUNIRELLA	CEL	1	1							X
TETRASTROM MINIMUM	CEL	1	1							X
TETRASTROM ELEGANS	COL	1	1							X
TOTAL				22477			6711			16052

LAKE NAME: EAST VERMILLION LAKE
 STORE NUMBER: 4629

NYGAARD TROPHIC STATE INDICES

DATE	04 22 74	07 11 74	09 20 74
MYXOPHYCEAN	0470 E	0270 E	0370 E
CHLOROPHYCEAN	0370 E	070 0	070 0
EUGLENOPHYTE	0707 ?	0702 ?	0703 ?
DIATOM	0.17 ?	0.50 E	0701 ?
COMPOUND	0870 E	0470 E	0370 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	04 22 74	07 11 74	09 20 74
GENUS	05	05	08
SPECIES	00	00	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE	04 22 74	07 11 74	09 20 74
AVERAGE DIVERSITY H	1.80	0.17	0.13
NUMBER OF TAXA S	18.00	8.00	5.00
NUMBER OF SAMPLES COMPOSITED M	2.00	2.00	2.00
MAXIMUM DIVERSITY MAXH	4.17	3.00	2.32
MINIMUM DIVERSITY MINH	0.04	0.01	0.00
TOTAL DIVERSITY U	10107.00	2454.29	5964.40
TOTAL NUMBER OF INDIVIDUALS/ML N	5615.00	14437.00	45880.00
EVENNESS COMPONENT J	0.43	0.06	0.06
RELATIVE EVENNESS RJ	0.43	0.06	0.06
MEAN NUMBER OF INDIVIDUALS/TAXA L	311.94	1804.63	9176.00
NUMBER/ML OF MOST ABUNDANT TAXON K	3134.00	14059.00	45153.00

LAKE NAME: EAST VERMILLION LAKE CONTINUED
 STURET NUMBER: 4629

TAXA	ICFM	04 22 74			07 11 74			09 20 74		
		ALGAL		X	ALGAL		X	ALGAL		X
		IS	SC		UNITS PER ML	IS		SC	UNITS PER ML	
ANABAENA	FIL			X						
APHANTZGRENON FLOS-AQUAE	FIL				1197.48	14059		1198.48	45153	
CHLAMYDOMONAS	CEL		2.61	31						
CHROCODONAS ACUTA	CFL	131	5.51	310						
CHRYSOPHYTAN FLAGELLATE	CEL		1155.81	3134						
COCCHINEIS	CEL						X			
CRYPTOMONAS REFLEXA	CEL	141	2.21	124						X
DACTYLOCOCCOPSIS	CEL		5.51	310						
DICTYOSPHAERIUM PULCHELLUM	COL			X						
FRAGILARIA	CEL						X			
HELOSIRA GRANULATA										
V. ANGUSTISSIMA	CEL						X			
MICROCYSTIS AERUGINOSA	COL									X
NAVICULA #1	CEL						X			
NAVICULA #2	CEL			X						
NAVICULA CUSPIDATA	CEL						X			
NAVICULA GASTRUM	CEL			X						
NITZSCHIA	CEL			X						
NITZSCHIA #1	CEL							131	0.51	242
NITZSCHIA VERNICULARIS	CEL			X						
OSCILLATORIA	FIL				121	2.61	378			
OSCILLATORIA ?	FIL							121	1.11	485
OSCILLATORIA #1	FIL			X						
OSCILLATORIA LIMNETICA	FIL	151	4.41	248						
SCHROEDERIA SETIGERA	CEL			X						
STEPHANODISCUS	CEL						X			
STEPHANODISCUS ASTRAEA										
V. MINUTULA	CEL	121	20.61	1455						
SYRIFILLA	CEL			X						
SYNEDIA ?	CEL			X						
TETRASTRUM STAUROGONIAEFORME	COL			X						
TOTAL				5615		14437			45880	

LAKE NAME: WALL LAKE
 STRET NUMBER: 4630

NYGAARD TROPIC STATE INDICES

DATE	04 22 74	07 11 74	09 20 74
MYXOPHYCEAN	070 D	0370 E	0270 E
CILIOFOPHYCEAN	0370 E	0370 E	070 D
EUGLENOPHYTE	0.33 E	0706 ?	0702 ?
DIATOM	0.50 E	0170 E	0170 E
COMPOUND	0870 F	0770 E	0370 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	04 22 74	07 11 74	09 20 74
GENUS	00	05	05
SPECIES	00	00	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE	04 22 74	07 11 74	09 20 74
AVERAGE DIVERSITY H	1.68	0.59	0.67
NUMBER OF TAXA S	19.00	6.00	3.00
NUMBER OF SAMPLES COMPOSITED M	1.00	1.00	1.00
MAXIMUM DIVERSITY MAXH	4.25	3.00	1.58
MINIMUM DIVERSITY MINH	0.12	0.02	0.00
TOTAL DIVERSITY D	2497.12	2565.32	4559.35
TOTAL NUMBER OF INDIVIDUALS/ML N	1764.00	4348.00	6805.00
EVENNESS COMPONENT J	0.40	0.20	0.42
RELATIVE EVENNESS KJ	0.38	0.20	0.43
MEAN NUMBER OF INDIVIDUALS/TAXA L	93.00	543.50	2268.33
NUMBER/ML OF MOST ABUNDANT TAXON K	951.00	3724.00	2614.00

LAKE NAME: VALL LAKE
 STORE NUMBER: 4630

CONTINUED

TAXA	FORM	04 22 74			07 11 74			09 20 74		
		ALGAL UNITS PER ML			ALGAL UNITS PER ML			ALGAL UNITS PER ML		
		IS	ZC	PER ML	IS	ZC	PER ML	IS	ZC	PER ML
AMNISTRUCUS FALCATUS	CEL	15	1.7	30						
APHANIZOENON FLUS-AMUAE	FIL				1105.6	3724	1102.5	5614		
APHANOCAPSA	COL					X				
CENTRIC DIATOMS	CFL	1153.3		951						
CHRUDOMIAS ACUTA	CEL	14	5.0	89						
CRYPTOMINAS	CFL			X						
CYCLotella MENEHMIANA	CEL			X						
FLAGELLAE	CEL	12131.7		565		X				
FRAGILARIA	CEL	131	6.7	119						
GOMPHIEMA	CEL			X						
NAVICULA	CFL			X						
MITZSCHIA	CEL			X						
USCILLATORIA ?	FIL				12114.6	624	12117.5	1191		
PEDIASTRUM BRYANUM	COL					X				
PEDIASTRUM DUPLEX										
V. ?	CUL					X				
PHACUS MEGALOPSIS	CEL			X						
PINNULARIA	CEL			X						
SCHROEDERIA SETIGERA	CEL			X						
SPHAEROCYSTIS SCHAUETERI	COL					X				
STEPHANODISLUS ASTRATA										
V. MINUTULA	CEL			X						
STEPHANODISLUS NIAGARAE	CEL			X		X			X	
SURIRELLA	CEL			X						
SURIRELLA #9	CEL			X						
SYNEDRA ACUS	CEL			X						
TETRASTRUM STAUROGENTIAFORME	COL		1.7	30						
TOTAL				1784		4348		6805		

LAKE NAME: SAUBAY LAKE NORTH
 STRET NUMBER: 4631

NYGAARD TROPHIC STATE INDICES

DATE	04 25 74	07 11 74	09 19 74
MYXOPHYCEAN	0470 E	0770 E	0570 E
CHLOROPHYCEAN	0370 E	0370 E	0370 E
EUGLENOPHYTE	0.29 E	0.20 ?	0708 ?
DIATOM	0.25 ?	0.50 E	0.50 E
COMPOUND	1270 E	1470 E	0970 E

PALMER'S ORGANIC POLLUTION INDICES

DATE	04 25 74	07 11 74	09 19 74
GENUS	00	05	00
SPECIES	00	00	00

SPECIES DIVERSITY AND ABUNDANCE INDICES

DATE	04 25 74	07 11 74	09 19 74
AVERAGE DIVERSITY H	4.86	1.91	1.20
NUMBER OF TAXA S	24.00	20.00	13.00
NUMBER OF SAMPLES COMPOSITED M	3.00	3.00	3.00
MAXIMUM DIVERSITY MAXH	4.86	4.32	3.70
MINIMUM DIVERSITY MINH	0.12	0.02	0.03
TOTAL DIVERSITY D	0.00	37993.72	7192.80
TOTAL NUMBER OF INDIVIDUALS/ML N	0.00	19892.00	5994.00
EVENNESS COMPONENT J	1.00	0.44	0.32
RELATIVE EVENNESS KJ	0.38	0.44	0.32
MEAN NUMBER OF INDIVIDUALS/TAXA L	0.00	994.60	461.00
NUMBER/ML OF MOST ABUNDANT TAXON K	0.01	11360.00	461.00

TAXA	06 25 74			07 11 74			08 19 74		
	FORM	ALGAL		IS	ALGAL		IS	ALGAL	
		IS	XC		UNITS PER ML	UNITS PER ML		UNITS PER ML	
ANABAENA	FIL			151	0.01	155			
APHANIZOOMEIUM FLUS-AGUAE	FIL			1157.11	11360	1128.11		1684	
APHANOCAPSA DELICATISSIMA	CEL								
CHAETOCYBUS LIMOREI	CEL			1311.51	2288	141	0.01	56	
CHLORELLA	CEL			X					
CHLORELLA DISPERSUS	CEL			121	7.21	1435			
CHLORELLA ACUTA	CEL			X	1.01	194			
CHLORELLA PALLIDUM	CEL								X
CRYPTOMONAS	CEL			X					
CYCLotella	CEL			X					
CYMBELLA	CEL			X			X		
DALYLLIACOPSIS	CEL			X					
ENTOMONAS ALATA	CEL			X					
ENTOMONAS UPHATA	CEL				0.21	39			
EUGLENA	CEL			X					
EUGLENA #1	CEL					X			
EUGLENA #2	CEL					X			
FLAGELLATE	CEL							0.41	25
FLAGELLATE	CEL			X					
GEMMULYSIS ?	CEL							12167.01	4061
GONIPHONIA ULTRACUM	CEL			X					
KALLENKIELLA	CEL			X					
MALLOMONAS	CEL			X					
MELONIA DISTANS	CEL			X					
MERISPOPIA MINIMA	CEL				0.61	116			
MERISPOPIA TENUISSIMA	CEL							0.41	25
MICROCYSTIS	CEL			X					
MICROCYSTIS INCERTA	CEL						X		
NOGICITA	FIL			X					
NAVICULA	CEL			X	0.21	39			
NETZSCHIA	CEL			X	0.41	78	151	0.41	25
NETZSCHIA ALICULARIS	CEL			X					
NOGICITA	FIL						131	1.21	74
NOGICITA	CEL				0.61	116		0.41	25
NOGICITA CILIPITIFORMIS	CEL			X					
PEDIASTRUM GUYANUM	CEL			X	0.21	39			
PEDIASTRUM DUPLEX	CEL								X
PHACUS PSEUDONORDSKILDII	CEL			X					
PHORMIDIUM	FIL			X					
PHORMIDIUM MUCICOLA	FIL				14119.51	3877			
RHIZOSIPHONIA CURVATA	CEL			X					
SCHINDLERIA SETIGERA	CEL				0.21	39		0.41	25
SPHONDIUM	FIL				0.21	39			
STEPHANODISCUS	CEL			X	0.41	78			
SURIELLA	CEL								X
SURIELLA UVATA	CEL			X					
SURIELLA PEISONIS	CEL			X			X		
SURIELLA SPIRALIS	CEL			X					
SURIELLA SPP.	CEL			X					
SYNDRA	CEL			X					
TOTAL				0		19842		5994	