CATALOG DOCUMENTATION
National Surface Water Survey:Summer Zooplankton Survey
SUSZOOP (Eastern Lake Survey-Phase II)

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1. DATA SET IDENTIFICATION

1.1 Title of Catalog Document
SUSZOOPM

1.2 Authors of the Catalog Entry
U.S. EPA NHEERL Western Ecology Division
Corvallis, OR

1.3 Catalog Revision Date
March 1998

1.4 Data Set Name
suszoop

1.5 Task Group
National Acid Precipitation Assessment Program(NAPAP)- Aquatic Effects Research Program

1.6 Data Set Identification Code
156

1.7 Version
001

1.8 Requested Acknowledgment
This research was funded as apart of the National Acid Precipitation Assessment Program (NAPAP) by the U.S. Environmental Protection Agency (EPA). If you publish these data or use them for analyses in publications, EPA requires a standard statement for work it has supported:

"Although the data described in this article have been funded wholly or in part by the U.S. Environmental Protection Agency, it has not been subjected to Agency review, and therefore does not necessarily reflect the views of the Agency and no official endorsement of the conclusions should be inferred."

2. INVESTIGATOR INFORMATION

2.1 Principal Investigator
Dixon Landers
U.S. Environmental Protection Agency
NHEERL Western Ecology Division
200 S.W. 35th Street
Corvallis, OR 97333

2.2 Investigation Participant - Sample Collection
John Baker, Coordinator

3. DATA SET ABSTRACT

3.1 Abstract of the Data Set
The Eastern Lake Survey-Phase II (ELS-II), conducted in the spring, summer and fall of 1986. The focus of ELS-II was on the northeastern United States. ELS-II involved the resampling of a subset of lakes in the northeastern United States sampled in ELS-I to determining chemical variability and biological status. Other information was collected as part of ELS-II activities in addition to the data in the three seasonal ELS-II data sets. These include zooplankton species abundance, chlorophyll concentrations, and bathymetry.

3.2 Keywords for the Data Set
zooplankton, abundance, species diversity

4. OBJECTIVES AND INTRODUCTION

4.1 Program Objective
The primary objectives of ELS-II were (1) to assess the sampling error associated with the ELS-I fall index sample, (2) to estimate the number of lakes with low acid neutralizing capacity (ANC) (i.e. potentially susceptible) that are not acidic in the fall but that are acidic in other seasons, and (3) to establish seasonal water chemistry characteristics among lakes. In addition to the three seasonal data sets, ancillary ELS-II data sets include zooplankton species abundance, chlorophyll concentrations, and bathymetry.

4.2 Data Set Objective
This data set is part of the National Surface Water Survey (NSWS) and the National Acid Precipitation Assessment Program (NAPAP). The data set contributes to the quantification of the extent, location, and characteristics of sensitive and acidic lakes and streams in the eastern United States sampled during the summer season.

4.3 Data Set Background Discussion

4.4 Summary of Data Set Parameters
Zooplankton species abundance was analyzed at the index location in the deepest part of the lake.

5. DATA ACQUISITION AND PROCESSING METHODS

5.1 Data Acquisition

5.1.1 Sampling Objective
To obtain a sample of lake water for the purposes of zooplankton species abundance.

5.1.2 Sample Collection Methods Summary
Three zooplankton tows were collected from this location using an 80 um -mesh Wisconsin bucket net, pulled vertically from 1 m about the lake bottom to the lake surface at a constant rate.

5.1.3 Sampling Start Date
July 23, 1986

5.1.4 Sampling End Date
August 11, 1986

5.1.5 Platform
net

5.1.6 Sampling Gear
Merrit, G.D., and V.A. Sheppe. 1988. Eastern Lake Survey- Phase II, Field Operations Report. EPA/600/4-89/029. U.S. Environmental Protection Agency, Las Vegas, Nevada.

5.1.7 Manufacturer of Instruments
NA

5.1.8 Key Variables
NA

5.1.9 Sampling Method Calibration
NA

5.1.10 Sample Collection Quality Control
Mitchell-Hall, T.E., A.C. Neale, S.G. Paulsen, and J.E. Pollard. 1989. Eastern Lake Survey- Phase II: Quality Assurance Report. EPA/600/4-85-017. U.S. Environmental Protection Agency, Las Vegas, Nevada.

5.1.11 Sample Collection Method Reference

5.1.12 Sample Collection Method Deviations
NA

5.2 Data Preparation and Sample Processing

5.2.1 Sample Processing Objective

5.2.2 Sample Processing Methods Summary
Samples were preserved in a jar with buffered, sugar formalin and analyzed at the Academy of Natural Sciences of Philadelphia. Each jar was first examined for taxonomic composition to generate a comprehensive species list for each lake. Total abundance was determined on the entire jar if overall densities were less than 300 individuals. Otherwise, the counts were made from subsamples from the jar using a funnel splitter.

The resolution of codes for the zooplankton species can be found in Tessier and Horwitz, 1991.

5.2.3 Sample Processing Method Calibration

5.2.4 Sample Processing Quality Control

5.2.5 Sample Processing Method Reference
Tessier, A.J., and R.J. Horwitz. 1991. Analysis and interpretation of zooplankton species collected during Phase II of the Eastern Lake Survey. EPA-600/R-92/012, U.S. Environmental Protection Agency, Washington, D.C.

6. DATA MANIPULATIONS

6.1 Name of New or Modified Values
None.

6.2 Data Manipulation Description

7. DATA DESCRIPTION

7.1 Description of Parameters

Parameter Name	Format	Parameter Label
JARID	2	SAMPLE IDENTIFICATION NUMBER (1,2 OR 3 FOR FIRST DIGIT IDENTIFIES THE TOW NUMBER; 0 OR 1 FOR SECOND DIGIT IDENTIFIES THE SAMPLE REPLICATE NUMBER)
LAKE_ID	$8	LAKE IDENTIFICATION NUMBER
RD1000	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1001	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1002	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1003	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1004	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1005	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1006	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1007	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1008	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1009	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1010	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1011	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1030	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1031	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1040	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1041	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1050	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1051	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1060	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1070	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1101	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1102	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1103	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1104	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1105	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1110	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1400	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1401	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1402	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1403	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1404	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1405	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1406	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1407	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1500	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1501	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1510	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1511	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1512	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1800	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1809	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1900	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1901	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1902	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1903	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1904	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1910	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1911	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1912	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1921	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1922	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1923	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD1924	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)

7.1 Description of Parameters, continued

Parameter Name	Format	Parameter Label
RD2100	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD2101	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD2102	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD2200	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD2300	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD2301	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD2310	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD2311	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD3100	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD3101	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD3300	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD4100	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD5101	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD5102	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD5110	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD5201	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD5301	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD5310	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD5311	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD5312	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD5501	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD5502	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD5509	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD5510	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD5511	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD5512	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD5513	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD5519	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD5520	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD5530	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD5540	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD5550	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD5560	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD5600	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD5701	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD5702	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD5703	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD5704	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD5705	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD5706	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD5707	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD5708	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD5709	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD5710	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD5801	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD5802	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD5803	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD5804	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD5805	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD5809	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD6300	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD6301	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD6309	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD6401	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD6402	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD6411	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD6412	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD6421	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD6422	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD6423	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)

7.1 Description of Parameters, continued

Parameter Name	Format	Parameter Label
RD6429	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD6431	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD6500	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD7100	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD7101	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD7110	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD7111	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD7112	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD7121	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD7122	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD7123	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD7124	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD7129	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD7131	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD7141	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD7142	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD7143	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD7144	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD7160	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD7200	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD7500	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD8000	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD9100	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD9101	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD9102	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD9199	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD9200	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD9201	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)
RD9300	6.2	ABUNDANCE OF SPECIES XXXX (#/m of tow)

7.1.6 Precision to which values are reported

7.1.7 Minimum Value in Data Set

Name	Min
JARID	10
RD1000	0
RD1001	0
RD1002	0
RD1003	0
RD1004	0
RD1005	0
RD1006	0
RD1007	0
RD1008	0
RD1009	0
RD1010	0
RD1011	0
RD1030	0
RD1031	0
RD1040	0
RD1041	0
RD1050	0
RD1051	0
RD1060	0
RD1070	0
RD1101	0
RD1102	0

7.1.7 Minimum Value in Data Set, continued

Name	Min
RD1103	0
RD1104	0
RD1105	0
RD1110	0
RD1400	0
RD1401	0
RD1402	0
RD1403	0
RD1404	0
RD1405	0
RD1406	0
RD1407	0
RD1500	0
RD1501	0
RD1510	0
RD1511	0
RD1512	0
RD1800	0
RD1809	0
RD1900	0
RD1901	0
RD1902	0
RD1903	0
RD1904	0
RD1910	0
RD1911	0
RD1912	0
RD1921	0
RD1922	0
RD1923	0
RD1924	0
RD2100	0
RD2101	0
RD2102	0
RD2200	0
RD2300	0
RD2301	0
RD2310	0
RD2311	0
RD3100	0
RD3101	0
RD3300	0
RD4100	0
RD5101	0
RD5102	0
RD5110	0
RD5201	0
RD5301	0
RD5310	0
RD5311	0
RD5312	0
RD5501	0
RD5502	0
RD5509	0
RD5510	0
RD5511	0
RD5512	0
RD5513	0
RD5519	0
RD5520	0
RD5530	0

7.1.7 Minimum Value in Data Set, continued

Name	Min
RD5540	0
RD5550	0
RD5560	0
RD5600	0
RD5701	0
RD5702	0
RD5703	0
RD5704	0
RD5705	0
RD5706	0
RD5707	0
RD5708	0
RD5709	0
RD5710	0
RD5801	0
RD5802	0
RD5803	0
RD5804	0
RD5805	0
RD5809	0
RD6300	0
RD6301	0
RD6309	0
RD6401	0
RD6402	0
RD6411	0
RD6412	0
RD6421	0
RD6422	0
RD6423	0
RD6429	0
RD6431	0
RD6500	0
RD7100	0
RD7101	0
RD7110	0
RD7111	0
RD7112	0
RD7121	0
RD7122	0
RD7123	0
RD7124	0
RD7129	0
RD7131	0
RD7141	0
RD7142	0
RD7143	0
RD7144	0
RD7160	0
RD7200	0
RD7500	0
RD8000	2.94
RD9100	0
RD9101	0
RD9102	0
RD9199	0
RD9200	0
RD9201	0
RD9300	0

7.1.7 Maximum Value in Data Set

Name	Max
JARID	31
RD1000	11.43
RD1001	3733.33
RD1002	3733.33
RD1003	4785.71
RD1004	1750
RD1005	29.63
RD1006	27.83
RD1007	0.5
RD1008	76
RD1009	3.08
RD1010	3700
RD1011	1632
RD1030	1.86
RD1031	4.08
RD1040	0.01
RD1041	0.01
RD1050	128
RD1051	50
RD1060	4
RD1070	1.93
RD1101	55.42
RD1102	7.34
RD1103	66.67
RD1104	6.4
RD1105	2.67
RD1110	25
RD1400	840
RD1401	957.6
RD1402	29.41
RD1403	0.01
RD1404	1.13
RD1405	4.71
RD1406	0.01
RD1407	8.42
RD1500	34.29
RD1501	71.11
RD1510	55.56
RD1511	1.11
RD1512	66.67
RD1800	560
RD1809	7.14
RD1900	1333.33
RD1901	733.33
RD1902	232.56
RD1903	532
RD1904	8.66
RD1910	427.14
RD1911	93.02
RD1912	15.48
RD1921	95.38
RD1922	3.43
RD1923	133.33
RD1924	8.3
RD2100	9.93
RD2101	216.45
RD2102	51.43
RD2200	3823.75
RD2300	9942.86
RD2301	217.08
RD2310	354.67

RD2311	2533.33
RD3100	16
RD3101	32.35
RD3300	4.71
RD4100	4.21
RD5101	704.01
RD5102	2.68
RD5110	16.84
RD5201	338.82
RD5301	2282.67
RD5310	316.24
RD5311	221.18
RD5312	173.71
RD5501	91.76
RD5502	44
RD5509	4.71
RD5510	0.01
RD5511	2
RD5512	1.78
RD5513	5.82
RD5519	4.71
RD5520	12.8
RD5530	0.01
RD5540	0.01
RD5550	0.01
RD5560	0.01
RD5600	10.91
RD5701	537.14
RD5702	36
RD5703	16.66
RD5704	149.34
RD5705	37.64
RD5706	180
RD5707	34.28
RD5708	58.66
RD5709	52
RD5710	36.06
RD5801	4.44
RD5802	37.33
RD5803	42
RD5804	491.43
RD5805	197.34
RD5809	0.01
RD6300	23.65
RD6301	22.4
RD6309	2.33
RD6401	20.36
RD6402	127.78
RD6411	894.36
RD6412	14.86
RD6421	68.83
RD6422	363.08
RD6423	213.34
RD6429	88.12
RD6431	53.34
RD6500	13.33
RD7100	4
RD7101	621.17
RD7110	11.94
RD7111	384
RD7112	704
RD7121	57.16
RD7122	1.18

```
7.1.7 Maximum Value in Data Set, continued
RD7123   17.4
RD7124   44
RD7129   107.64
RD7131   32.95
RD7141   4.8
RD7142   6.41
RD7143   12.63
RD7144   6.4
RD7160   8
RD7200   266.67
RD7500   1.86
RD8000   2026.67
RD9100   118.71
RD9101   16.84
RD9102   11.57
RD9199   5.6
RD9200   8
RD9201   2.67
RD9300   27.42

7.2 Data Record Example

7.2.1 Column Names for Example Records
JARID LAKE_ID RD1000 RD1001 RD1002 RD1003 RD1004 RD1005 RD1006 RD1007 RD1008
RD1009 RD1010 RD1011 RD1030 RD1031 RD1040 RD1041 RD1050 RD1051 RD1060 RD1070
RD1101 RD1102 RD1103 RD1104 RD1105 RD1110 RD1400 RD1401 RD1402 RD1403 RD1404
RD1405 RD1406 RD1407 RD1500 RD1501 RD1510 RD1511 RD1512 RD1800 RD1809 RD1900
RD1901 RD1902 RD1903 RD1904 RD1910 RD1911 RD1912 RD1921 RD1922 RD1923 RD1924
RD2100 RD2101 RD2102 RD2200 RD2300 RD2301 RD2310 RD2311 RD3100 RD3101 RD3300
RD4100 RD5101 RD5102 RD5110 RD5201 RD5301 RD5310 RD5311 RD5312 RD5501 RD5502
RD5509 RD5510 RD5511 RD5512 RD5513 RD5519 RD5520 RD5530 RD5540 RD5550 RD5560
RD5600 RD5701 RD5702 RD5703 RD5704 RD5705 RD5706 RD5707 RD5708 RD5709 RD5710
RD5801 RD5802 RD5803 RD5804 RD5805 RD5809 RD6300 RD6301 RD6309 RD6401 RD6402
RD6411 RD6412 RD6421 RD6422 RD6423 RD6429 RD6431 RD6500 RD7100 RD7101 RD7110
RD7111 RD7112 RD7121 RD7122 RD7123 RD7124 RD7129 RD7131 RD7141 RD7142 RD7143
RD7144 RD7160 RD7200 RD7500 RD8000 RD9100 RD9101 RD9102 RD9199 RD9200 RD9201
RD9300

7.2.2 Example Data Records

10,"1A1-003",0,0,0,610.53,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,21.05,0,
0,0,0,0,0,0,0,0,0,0,0,0,0,31.58,0,0,0,0,10.53,0,0,21.05,0,0,0,0,0,0,0,0,0,0,0,
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8.74,0,0.21,0,0,0,0,0

20,"1A1-003",0,0,0,600,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,10.53,0,0,0,
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0,0.21,0,0,0,0,0

8.   GEOGRAPHIC AND SPATIAL INFORMATION

8.1  Minimum Longitude
-73.3208 decimal degrees
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8.2 Maximum Longitude
-67.2667 decimal degrees

8.3 Minimum Latitude
41.0042 decimal degrees

8.4 Maximum Latitude
46.9339 decimal degrees

8.5 Name of Area or Region
Connecticut, Maine, New York, Pennsylvania, Rhode Island, Massachusetts, and New Hampshire

9. QUALITY CONTROL / QUALITY ASSURANCE

9.1 Data Quality Objectives

9.2 Quality Assurance Procedures

9.3 Unassessed Errors
NA

10. DATA ACCESS

10.1 Data Access Procedures

10.2 Data Access Restrictions

10.3 Data Access Contact Persons

10.4 Data Set Format

10.5 Information Concerning Anonymous FTP

10.6 Information Concerning Gopher and WWW

10.7 EMAP CD-ROM Containing the Data

11. REFERENCES

Brakke, D.F., D.H. Landers, and J.M. Eilers. 1988. Chemical and physical characteristics of lakes in the northeastern U.S. Environ. Sci. Technol. 22:155-163.

Kanciruk, P., J.M. Eilers, R.A. McCord, D.H. Landers, D.F. Brakke, and R.A. Linthurst, 1986. Characteristics of Lakes in the Eastern United States. Volume III: Data Compendium of Site Characteristics and Chemical Variables. EPA-600/4-86-007C, U.S. Environmental Protection Agency, Washington, D.C.

Landers, D.H., W.S. Overton, R.A. Linthurst, and D.F. Brakke. 1988. EPA's Eastern Lake Survey: Regional estimates of lake chemistry. Environ. Sci. Technol. 22:128-135.

Landers, D.H., J.M. Eilers, D.F. Brakke, and P.E. Kellar. 1987. Characteristics of acidic lakes in the eastern United States. Verh. Int. Verein. Limnol. 23:152-162.

Linthurst, R.A., and W.S. Overton. 1985. Response to ASA Coordinating Committee's comment on Project 3B: National Surface Water Survey, National Lake Survey, Phase I Research Plan. J. Amer. Stat. Assoc. 39:260-274.

Linthurst, R.A., D.H. Landers, J.M. Eilers, D.F. Brakke, W.S. Overton, E.P. Meier, and R.E. Crowe, 1986. Characteristics of Lakes in the Eastern United States. Volume I: Population Descriptions and Physico-Chemical Relationships. EPA-600/4-86-007A, U.S. Environmental Protection Agency, Washington, D.C.

Linthurst, R.A., D.H. Landers, J.M Eilers, P.E. Kellar, D.F. Brakke, W.S. Overton, R. Crowe, E.P. Meier, P. Kanciruk, and D.S. Jefferies. 1986. Regional chemical characteristics of lakes in North America- II: Eastern United States. Water, Air, Soil Pollut. 31:123-129.

Overton, W.S., P. Kanciruk, L.A. Hook, J.M. Eilers, D.H. Landers, D.J. Blick, Jr., D.F. Brakke, R.A. Linthurst, and M.S. DeHaan, 1986. Characteristics of Lakes in the Eastern United States. Volume II: Lakes Sampled and Descriptive Statistics for Physical and Chemical Variables. EPA-600/4-86-007B, U.S. Environmental Protection Agency, Washington, D.C.

Tessier, A.J., and R.J. Horwitz. 1991. Analysis and interpretation of zooplankton species collected during Phase II of the Eastern Lake Survey. EPA-600/R-92/012, U.S. Environmental Protection Agency, Washington, D.C.

12. TABLE OF ACRONYMS

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