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# CATALOG DOCUMENTATION
# EMAP SURFACE WATERS PROGRAM LEVEL DATABASE
# 1991-1994 NORTHEAST LAKES DATA
# LAKE BREEDING BIRD METRIC DATA

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## 1. DATA SET IDENTIFICATION

### 1.1 Title of Catalog Document
EMAP Surface Waters Lake Database
1991-1994 Northeast Lakes
Lake Breeding Bird Metric Data Summarized by Lake

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

### 1.3 Catalog Revision Date
November 1996

### 1.4 Data Set Name
BRDMET

### 1.5 Task Group
Surface Waters

### 1.6 Data Set Identification Code
0102

### 1.7 Version
001

### 1.8 Requested Acknowledgment
These data were produced as part of the U.S. EPA's Environmental Monitoring and Assessment Program (EMAP). If you publish these data or use them for analyses in publications, EPA requires a standard statement for work it has supported:

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"Although the data described in this article have been funded wholly or in part by the U.S. Environmental Protection Agency through its EMAP Surface Waters Program, 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

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### 2.2 Investigation Participant - Sample Collection

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Harvard University
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SUNY Syracuse College of Environmental Sciences and Forestry
Queens University
University of Maine
U.S. Fish and Wildlife Service
U.S. Environmental Protection Agency
Office of Research and Development
Regions 1 and 2

## 3. DATA SET ABSTRACT

The primary function of the lake breeding bird metric data set is to document the breeding bird species identified visually or auditorially at each lake and the summarization of the count data into measures of bird assemblage trophic and breeding structure.

### 3.2 Keywords for the Data Set

Breeding birds, avian species, riparian breeding birds, riparian habitat, trophic guild, breeding guild.

## 4. OBJECTIVES AND INTRODUCTION

### 4.1 Program Objective

The Environmental Monitoring and Assessment Program (EMAP) was designed to periodically estimate the status and trends of the Nation's ecological resources on a regional basis. EMAP provides a strategy to identify and bound the extent, magnitude and location of environmental degradation and improvement on a regional scale based on a probability-based statistical survey design.

### 4.2 Data Set Objective

This data set is part of a demonstration project to evaluate approaches to monitoring lakes in EMAP. The data set contains the results of surveys of breeding birds found in the riparian zones of lakes in the Northeast at each lake during the spring breeding season.

### 4.3 Data Set Background Discussion

Riparian breeding birds are a key component of the lake ecosystem. Their use of the riparian zone for breeding is an indication of quality of lake riparian habitat.

### 4.4 Summary of Data Set Parameters

Bird Assemblage metric parameters include proportions and mean numbers of individuals and species in different foraging, dietary, neotropical, and tolerance guilds.

## 5. DATA ACQUISITION AND PROCESSING METHODS

### 5.1 Data Acquisition

#### 5.1.1 Sampling Objective

The objective of the breeding bird survey was to identify the use of the riparian zone of lakes by birds during the spring breeding season.

#### 5.1.2 Sample Collection Methods Summary

Breeding birds were identified at specified stops around the lake perimeter. These stops were accessed by boat. Visual and auditory identifications were made at each stop and habitat type identified. Data from stops were tabulated individually and then for the lake as a whole.

#### 5.1.3 Sampling Start Date

May 1991

#### 5.1.4 Sampling End Date

June 1995

#### 5.1.5 Platform

Sampling was conducted from small boats.

#### 5.1.6 Sampling Gear

Visual and auditory identification was made by the observer. Binoculars were used as part of the sampling gear for visual observations.

#### 5.1.7 Manufacturer of Instruments

NA

#### 5.1.8 Key Variables

Start and stop time of the survey were recorded. Vegetation type and weather were also recorded for each stop.

#### 5.1.9 Sampling Method Calibration

NA

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5.1.10 Sample Collection Quality Control
See Baker et al. 1997.

5.1.11 Sample Collection Method Reference

Baker, J.R., G.D. Merritt, and D.W. Sutton (eds.). 1997. Environmental Monitoring and Assessment Program - Surface Waters: Field Operations Manual for Lakes.

Chaloud, D.J. and D.V. Peck. 1994. Environmental Monitoring and Assessment Program - Surface Waters: Integrated Quality Assurance Project Plan for the Surface Waters Resource Group.

5.1.12 Sample Collection Method Deviations
NA

5.2 Data Preparation and Sample Processing

5.2.1 Sample Processing Objective
See Baker et al. (1997) and Chaloud and Peck (1994).

5.2.2 Sample Processing Methods Summary
See Baker et al. (1997) and Chaloud and Peck (1994).

5.2.3 Sample Processing Method Calibration
See Baker et al. (1997) and Chaloud and Peck (1994).

5.2.4 Sample Processing Quality Control
See Baker et al. (1997) and Chaloud and Peck (1994).

5.2.5 Sample Processing Method Reference
See Baker et al. (1997) and Chaloud and Peck (1994).

## 6. DATA MANIPULATIONS

6.1 Name of New or Modified Values
None.

6.2 Data Manipulation Description
See Chaloud and Peck (1994).

## 7. DATA DESCRIPTION

7.1 Description of Parameters

| Parameter Name | Data Type | Len | Format | Parameter Label |
|---|---|---|---|---|
| DATE_COL | Num | 5 | MMDDYY | DATE OF CENSUS |
| DIDTAI | Num | 8 | | Mean ind./stop,DIET GLD,AQUATIC INVERTS |
| DIDTBI | Num | 8 | | Mean ind./stop,DIET GLD,BIRDS |
| DIDTCA | Num | 8 | | Mean ind./stop,DIET GLD,CARRION |

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7.1 Description of Parameters, continued

| | | | |
|---|---|---|---|
| DIDTFI | Num | 8 | Mean ind./stop,DIET GLD,FISH |
| DIDTFR | Num | 8 | Mean ind./stop,DIET GLD,FRUIT |
| DIDTGR | Num | 8 | Mean ind./stop,DIET GLD,GREENS |
| DIDTIN | Num | 8 | Mean ind./stop,DIET GLD,INSECTS |
| DIDTNE | Num | 8 | Mean ind./stop,DIET GLD,NECTAR |
| DIDTOM | Num | 8 | Mean ind./stop,DIET GLD,OMNIVORE |
| DIDTSE | Num | 8 | Mean ind./stop,DIET GLD,SEEDS |
| DIDTSM | Num | 8 | Mean ind./stop,DIET GLD,SMALL MAMMALS |
| DIFDAF | Num | 8 | Mean ind./stop,FORG GLD,AERIAL FORAGER |
| DIFDAP | Num | 8 | Mean ind./stop,FORG GLD,AERIAL PURSUIT |
| DIFDBG | Num | 8 | Mean ind./stop,FORG GLD,BARK GLEANER |
| DIFDDA | Num | 8 | Mean ind./stop,FORG GLD,DABBLES |
| DIFDFG | Num | 8 | Mean ind./stop,FORG GLD,FOLIAGE GLEANER |
| DIFDGG | Num | 8 | Mean ind./stop,FORG GLD,GROUND GLEANER |
| DIFDHA | Num | 8 | Mean ind./stop,FORG GLD,HAWK |
| DIFDHD | Num | 8 | Mean ind./stop,FORG GLD,HIGH DIVES |
| DIFDHG | Num | 8 | Mean ind./stop,FORG GLD,HOVER AND GLEAN |
| DIFDHI | Num | 8 | Mean ind./stop,FORG GLD,HIGH PATROL |
| DIFDHP | Num | 8 | Mean ind./stop,FORG GLD,HOVER AND POUNCE |
| DIFDLP | Num | 8 | Mean ind./stop,FORG GLD,LOW PATROL |
| DIFDPR | Num | 8 | Mean ind./stop,FORG GLD,PROBE |
| DIFDSD | Num | 8 | Mean ind./stop,FORG GLD,SURFACE DIVES |
| DIFDSS | Num | 8 | Mean ind./stop,FORG GLD,STALK AND STRIKE |
| DIFDSU | Num | 8 | Mean ind./stop,FORG GLD,SURFACE DIPS |
| DIFDSW | Num | 8 | Mean ind./stop,FORG GLD,SWOOPS |
| DINENE | Num | 8 | Mean ind./stop,Neotr.GLD,Neotr MGRNTS |
| DINERE | Num | 8 | Mean ind./stop,Neotr. GLD,RESIDENTS |
| DITOIN | Num | 8 | Mean ind./stop,TOLER. GLD,INTOLERANTS |
| DITOTO | Num | 8 | Mean ind./stop,TOLER. GLD,TOLERANTS |
| FSDTAI | Num | 8 | %Stops pres.,DIET GLD,AQUAT INVERTS |
| FSDTBI | Num | 8 | %Stops pres.,DIET GLD,BIRDS |
| FSDTCA | Num | 8 | %Stops pres.,DIET GLD,CARRION |
| FSDTFI | Num | 8 | %Stops pres.,DIET GLD,FISH |
| FSDTFR | Num | 8 | %Stops pres.,DIET GLD,FRUIT |
| FSDTGR | Num | 8 | %Stops pres.,DIET GLD,GREENS |
| FSDTIN | Num | 8 | %Stops pres.,DIET GLD,INSECTS |
| FSDTNE | Num | 8 | %Stops pres.,DIET GLD,NECTAR |
| FSDTOM | Num | 8 | %Stops pres.,DIET GLD,OMNIVORE |
| FSDTSE | Num | 8 | %Stops pres.,DIET GLD,SEEDS |
| FSDTSM | Num | 8 | %Stops pres.,DIET GLD,SMALL MAMMALS |
| FSFDAF | Num | 8 | %Stops pres.,FORG GLD,AERIAL FORAGER |
| FSFDAP | Num | 8 | %Stops pres.,FORG GLD,AERIAL PURSUIT |
| FSFDBG | Num | 8 | %Stops pres.,FORG GLD,BARK GLEANER |
| FSFDDA | Num | 8 | %Stops pres.,FORG GLD,DABBLES |
| FSFDFG | Num | 8 | %Stops pres.,FORG GLD,FOLIAGE GLEANER |
| FSFDGG | Num | 8 | %Stops pres.,FORG GLD,GROUND GLEANER |
| FSFDHA | Num | 8 | %Stops pres.,FORG GLD,HAWK |
| FSFDHD | Num | 8 | %Stops pres.,FORG GLD,HIGH DIVES |
| FSFDHG | Num | 8 | %Stops pres.,FORG GLD,HOVER AND GLEAN |
| FSFDHI | Num | 8 | %Stops pres.,FORG GLD,HIGH PATROL |
| FSFDHP | Num | 8 | %Stops pres.,FORG GLD,HOVER AND POUNCE |
| FSFDLP | Num | 8 | %Stops pres.,FORG GLD,LOW PATROL |

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7.1 Description of Parameters, continued

| | | | |
|---|---|---|---|
| FSFDPR | Num | 8 | %Stops pres.,FORG GLD,PROBE |
| FSFDSD | Num | 8 | %Stops pres.,FORG GLD,SURFACE DIVES |
| FSFDSS | Num | 8 | %Stops pres.,FORG GLD,STALK AND STRIKE |
| FSFDSU | Num | 8 | %Stops pres.,FORG GLD,SURFACE DIPS |
| FSFDSW | Num | 8 | %Stops pres.,FORG GLD,SWOOPS |
| FSNENE | Num | 8 | %Stops pres.,Neotr. GLD,Neotr. MGRNTS |
| FSNERE | Num | 8 | %Stops pres.,Neotr. GLD,RESIDENTS |
| FSTOIN | Num | 8 | %Stops pres.,TOLER. GLD,INTOLERANTS |
| FSTOTO | Num | 8 | %Stops pres.,TOLER. GLD,TOLERANTS |
| LAKENAME | Char | 30 | Lake Name |
| LAKE_ID | Char | 6 | Lkae Identification Code |
| LAT_DD | Num | 8 | Lake Latitude (decimal degrees) |
| LON_DD | Num | 8 | Lake Longitude (-decimal degrees) |
| ORNITH | Char | 3 | INITIALS OF ORNITHOLOGIST |
| PIDTAI | Num | 8 | % Tot. ind.,DIET GLD,AQUATIC INVERTS |
| PIDTBI | Num | 8 | % Tot. ind.,DIET GLD,BIRDS |
| PIDTCA | Num | 8 | % Tot. ind.,DIET GLD,CARRION |
| PIDTFI | Num | 8 | % Tot. ind.,DIET GLD,FISH |
| PIDTFR | Num | 8 | % Tot. ind.,DIET GLD,FRUIT |
| PIDTGR | Num | 8 | % Tot. ind.,DIET GLD,GREENS |
| PIDTIN | Num | 8 | % Tot. ind.,DIET GLD,INSECTS |
| PIDTNE | Num | 8 | % Tot. ind.,DIET GLD,NECTAR |
| PIDTOM | Num | 8 | % Tot. ind.,DIET GLD,OMNIVORE |
| PIDTSE | Num | 8 | % Tot. ind.,DIET GLD,SEEDS |
| PIDTSM | Num | 8 | % Tot. ind.,DIET GLD,SMALL MAMMALS |
| PIFDAF | Num | 8 | % Tot. ind.,FORG GLD,AERIAL FORAGER |
| PIFDAP | Num | 8 | % Tot. ind.,FORG GLD,AERIAL PURSUIT |
| PIFDBG | Num | 8 | % Tot. ind.,FORG GLD,BARK GLEANER |
| PIFDDA | Num | 8 | % Tot. ind.,FORG GLD,DABBLES |
| PIFDFG | Num | 8 | % Tot. ind.,FORG GLD,FOLIAGE GLEANER |
| PIFDGG | Num | 8 | % Tot. ind.,FORG GLD,GROUND GLEANER |
| PIFDHA | Num | 8 | % Tot. ind.,FORG GLD,HAWK |
| PIFDHD | Num | 8 | % Tot. ind.,FORG GLD,HIGH DIVES |
| PIFDHG | Num | 8 | % Tot. ind.,FORG GLD,HOVER AND GLEAN |
| PIFDHI | Num | 8 | % Tot. ind.,FORG GLD,HIGH PATROL |
| PIFDHP | Num | 8 | % Tot. ind.,FORG GLD,HOVER AND POUNCE |
| PIFDLP | Num | 8 | % Tot. ind.,FORG GLD,LOW PATROL |
| PIFDPR | Num | 8 | % Tot. ind.,FORG GLD,PROBE |
| PIFDSD | Num | 8 | % Tot. ind.,FORG GLD,SURFACE DIVES |
| PIFDSS | Num | 8 | % Tot. ind.,FORG GLD,STALK AND STRIKE |
| PIFDSU | Num | 8 | % Tot. ind.,FORG GLD,SURFACE DIPS |
| PIFDSW | Num | 8 | % Tot. ind.,FORG GLD,SWOOPS |
| PINENE | Num | 8 | % Tot. ind.,Neotr. GLD,Neotr. MGRNTS |
| PINERE | Num | 8 | % Tot. ind.,Neotr. GLD,RESIDENTS |
| PITOIN | Num | 8 | % Tot. ind.,TOLER. GLD,INTOLERANTS |
| PITOTO | Num | 8 | % Tot. ind.,TOLER. GLD,TOLERANTS |
| PSDTAI | Num | 8 | %Tot. spec.,DIET GLD,AQUATIC INVERTS |
| PSDTBI | Num | 8 | %Tot. spec.,DIET GLD,BIRDS |
| PSDTCA | Num | 8 | %Tot. spec.,DIET GLD,CARRION |
| PSDTFI | Num | 8 | %Tot. spec.,DIET GLD,FISH |
| PSDTFR | Num | 8 | %Tot. spec.,DIET GLD,FRUIT |
| PSDTGR | Num | 8 | %Tot. spec.,DIET GLD,GREENS |

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7.1 Description of Parameters, continued

| | | | |
|---|---|---|---|
| PSDTIN | Num | 8 | %Tot. spec.,DIET GLD,INSECTS |
| PSDTNE | Num | 8 | %Tot. spec.,DIET GLD,NECTAR |
| PSDTOM | Num | 8 | %Tot. spec.,DIET GLD,OMNIVORE |
| PSDTSE | Num | 8 | %Tot. spec.,DIET GLD,SEEDS |
| PSDTSM | Num | 8 | %Tot. spec.,DIET GLD,SMALL MAMMALS |
| PSFDAF | Num | 8 | %Tot. spec.,FORG GLD,AERIAL FORAGER |
| PSFDAP | Num | 8 | %Tot. spec.,FORG GLD,AERIAL PURSUIT |
| PSFDBG | Num | 8 | %Tot. spec.,FORG GLD,BARK GLEANER |
| PSFDDA | Num | 8 | %Tot. spec.,FORG GLD,DABBLES |
| PSFDFG | Num | 8 | %Tot. spec.,FORG GLD,FOLIAGE GLEANER |
| PSFDGG | Num | 8 | %Tot. spec.,FORG GLD,GROUND GLEANER |
| PSFDHA | Num | 8 | %Tot. spec.,FORG GLD,HAWK |
| PSFDHD | Num | 8 | %Tot. spec.,FORG GLD,HIGH DIVES |
| PSFDHG | Num | 8 | %Tot. spec.,FORG GLD,HOVER AND GLEAN |
| PSFDHI | Num | 8 | %Tot. spec.,FORG GLD,HIGH PATROL |
| PSFDHP | Num | 8 | %Tot. spec.,FORG GLD,HOVER AND POUNCE |
| PSFDLP | Num | 8 | %Tot. spec.,FORG GLD,LOW PATROL |
| PSFDPR | Num | 8 | %Tot. spec.,FORG GLD,PROBE |
| PSFDSD | Num | 8 | %Tot. spec.,FORG GLD,SURFACE DIVES |
| PSFDSS | Num | 8 | %Tot. spec.,FORG GLD,STALK AND STRIKE |
| PSFDSU | Num | 8 | %Tot. spec.,FORG GLD,SURFACE DIPS |
| PSFDSW | Num | 8 | %Tot. spec.,FORG GLD,SWOOPS |
| PSNENE | Num | 8 | %Tot. spec.,Neotr. GLD,Neotr. MGRNTS |
| PSNERE | Num | 8 | %Tot. spec.,Neotr. GLD, RESIDENTS |
| PSTOIN | Num | 8 | %Tot. spec.,TOLER. GLD,INTOLERANTS |
| PSTOTO | Num | 8 | %Tot. spec.,TOLER. GLD,TOLERANTS |
| RICH | Num | 8 | TOTAL POOL OF SPECIES ON LAKE |
| SAMPLED | Char | 20 | Site sampling status |
| SIND | Num | 8 | Average Number of Individuals per Stop |
| SRICH | Num | 8 | Average Number of Species per Stop |
| STOPS | Num | 8 | Stops Censused on the Lake |
| VISIT_NO | Num | 8 | Visit number within year |
| YEAR | Num | 8 | Sample year |

7.1.1 Precision to Which Values are Reported

7.1.2 Minimum Value in Data Set by Parameter

| Name | Min |
|---|---|
| DIDTAI | 0 |
| DIDTBI | 0 |
| DIDTCA | 0 |
| DIDTFI | 0 |
| DIDTFR | 0 |
| DIDTGR | 0 |
| DIDTIN | 1.53 |

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7.1.2 Minimum Value in Data Set by Parameter, continued

| | |
|---|---|
| DIDTNE | 0 |
| DIDTOM | 0 |
| DIDTSE | 0 |
| DIDTSM | 0 |
| DIFDAF | 0 |
| DIFDAP | 0 |
| DIFDBG | 0 |
| DIFDDA | 0 |
| DIFDFG | 0.33 |
| DIFDGG | 0.33 |
| DIFDHA | 0 |
| DIFDHD | 0 |
| DIFDHG | 0 |
| DIFDHI | 0 |
| DIFDHP | 0 |
| DIFDLP | 0 |
| DIFDPR | 0 |
| DIFDSD | 0 |
| DIFDSS | 0 |
| DIFDSU | 0 |
| DIFDSW | 0 |
| DINENE | 0.62 |
| DINERE | 0 |
| DITOIN | 1.83 |
| DITOTO | 0 |
| FSDTAI | 0 |
| FSDTBI | 0 |
| FSDTCA | 0 |
| FSDTFI | 0 |
| FSDTFR | 0 |
| FSDTGR | 0 |
| FSDTIN | 0.65 |
| FSDTNE | 0 |
| FSDTOM | 0 |
| FSDTSE | 0 |
| FSDTSM | 0 |
| FSFDAF | 0 |
| FSFDAP | 0 |
| FSFDBG | 0 |
| FSFDDA | 0 |
| FSFDFG | 0.27 |
| FSFDGG | 0.25 |
| FSFDHA | 0 |
| FSFDHD | 0 |
| FSFDHG | 0 |
| FSFDHI | 0 |
| FSFDHP | 0 |
| FSFDLP | 0 |
| FSFDPR | 0 |
| FSFDSD | 0 |
| FSFDSS | 0 |
| FSFDSU | 0 |

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7.1.2 Minimum Value in Data Set by Parameter, continued

| | |
|---|---|
| FSFDSW | 0 |
| FSNENE | 0.29 |
| FSNERE | 0 |
| FSTOIN | 0.5 |
| FSTOTO | 0 |
| LAT_DD | 39.2262 |
| LON_DD | -67.30111 |
| PIDTAI | 0 |
| PIDTBI | 0 |
| PIDTCA | 0 |
| PIDTFI | 0 |
| PIDTFR | 0 |
| PIDTGR | 0 |
| PIDTIN | 0.23 |
| PIDTNE | 0 |
| PIDTOM | 0 |
| PIDTSE | 0 |
| PIDTSM | 0 |
| PIFDAF | 0 |
| PIFDAP | 0 |
| PIFDBG | 0 |
| PIFDDA | 0 |
| PIFDFG | 0.02 |
| PIFDGG | 0.06 |
| PIFDHA | 0 |
| PIFDHD | 0 |
| PIFDHG | 0 |
| PIFDHI | 0 |
| PIFDHP | 0 |
| PIFDLP | 0 |
| PIFDPR | 0 |
| PIFDSD | 0 |
| PIFDSS | 0 |
| PIFDSU | 0 |
| PIFDSW | 0 |
| PINENE | 0.04 |
| PINERE | 0 |
| PITOIN | 0.19 |
| PITOTO | 0 |
| PSDTAI | 0 |
| PSDTBI | 0 |
| PSDTCA | 0 |
| PSDTFI | 0 |
| PSDTFR | 0 |
| PSDTGR | 0 |
| PSDTIN | 0.52 |
| PSDTNE | 0 |
| PSDTOM | 0 |
| PSDTSE | 0 |
| PSDTSM | 0 |
| PSFDAF | 0 |
| PSFDAP | 0 |

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7.1.2 Minimum Value in Data Set by Parameter, continued

| | |
|---|---|
| PSFDBG | 0 |
| PSFDDA | 0 |
| PSFDFG | 0.07 |
| PSFDGG | 0.14 |
| PSFDHA | 0 |
| PSFDHD | 0 |
| PSFDHG | 0 |
| PSFDHI | 0 |
| PSFDHP | 0 |
| PSFDLP | 0 |
| PSFDPR | 0 |
| PSFDSD | 0 |
| PSFDSS | 0 |
| PSFDSU | 0 |
| PSFDSW | 0 |
| PSNENE | 0.16 |
| PSNERE | 0 |
| PSTOIN | 0.43 |
| PSTOTO | 0 |
| RICH | 7 |
| SIND | 2.11 |
| SRICH | 1.78 |
| STOPS | 2 |
| VISIT_NO | 1 |
| YEAR | 1991 |

7.1.3 Maximum Value in Data Set by Parameter

| Name | Max |
|---|---|
| DIDTAI | 3 |
| DIDTBI | 0.17 |
| DIDTCA | 0.42 |
| DIDTFI | 1.75 |
| DIDTFR | 6.5 |
| DIDTGR | 9.44 |
| DIDTIN | 22.5 |
| DIDTNE | 0.25 |
| DIDTOM | 11.5 |
| DIDTSE | 8 |
| DIDTSM | 0.43 |
| DIFDAF | 10.33 |
| DIFDAP | 0.17 |
| DIFDBG | 1.67 |
| DIFDDA | 4.12 |
| DIFDFG | 7.67 |
| DIFDGG | 27.5 |
| DIFDHA | 2.18 |
| DIFDHD | 0.33 |
| DIFDHG | 2.33 |
| DIFDHI | 0.25 |
| DIFDHP | 0.42 |
| DIFDLP | 0.12 |

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7.1.3 Maximum Value in Data Set by Parameter, continued

| | |
|---|---|
| DIFDPR | 1.17 |
| DIFDSD | 1.5 |
| DIFDSS | 0.78 |
| DIFDSU | 9.44 |
| DIFDSW | 0.43 |
| DINENE | 17 |
| DINERE | 28.25 |
| DITOIN | 20.25 |
| DITOTO | 20.88 |
| FSDTAI | 0.71 |
| FSDTBI | 0.17 |
| FSDTCA | 0.29 |
| FSDTFI | 0.67 |
| FSDTFR | 0.8 |
| FSDTGR | 0.5 |
| FSDTIN | 1 |
| FSDTNE | 0.25 |
| FSDTOM | 1 |
| FSDTSE | 1 |
| FSDTSM | 0.29 |
| FSFDAF | 1 |
| FSFDAP | 0.17 |
| FSFDBG | 0.73 |
| FSFDDA | 0.67 |
| FSFDFG | 1 |
| FSFDGG | 1 |
| FSFDHA | 1 |
| FSFDHD | 0.33 |
| FSFDHG | 1 |
| FSFDHI | 0.25 |
| FSFDHP | 0.29 |
| FSFDLP | 0.12 |
| FSFDPR | 0.5 |
| FSFDSD | 0.5 |
| FSFDSS | 0.67 |
| FSFDSU | 0.5 |
| FSFDSW | 0.29 |
| FSNENE | 1 |
| FSNERE | 1 |
| FSTOIN | 1 |
| FSTOTO | 1 |
| LAT_DD | 47.2125 |
| LON_DD | -78.8519 |
| PIDTAI | 0.23 |
| PIDTBI | 0.01 |
| PIDTCA | 0.08 |
| PIDTFI | 0.16 |
| PIDTFR | 0.59 |
| PIDTGR | 0.51 |
| PIDTIN | 1 |
| PIDTNE | 0.04 |
| PIDTOM | 0.38 |

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7.1.3 Maximum Value in Data Set by Parameter, continued

| | |
|---|---|
| PIDTSE | 0.39 |
| PIDTSM | 0.03 |
| PIFDAF | 0.48 |
| PIFDAP | 0.01 |
| PIFDBG | 0.17 |
| PIFDDA | 0.24 |
| PIFDFG | 0.7 |
| PIFDGG | 0.79 |
| PIFDHA | 0.22 |
| PIFDHD | 0.06 |
| PIFDHG | 0.4 |
| PIFDHI | 0.02 |
| PIFDHP | 0.08 |
| PIFDLP | 0.03 |
| PIFDPR | 0.14 |
| PIFDSD | 0.14 |
| PIFDSS | 0.05 |
| PIFDSU | 0.51 |
| PIFDSW | 0.02 |
| PINENE | 1 |
| PINERE | 0.96 |
| PITOIN | 1 |
| PITOTO | 0.81 |
| PSDTAI | 0.11 |
| PSDTBI | 0.03 |
| PSDTCA | 0.05 |
| PSDTFI | 0.17 |
| PSDTFR | 0.08 |
| PSDTGR | 0.11 |
| PSDTIN | 1 |
| PSDTNE | 0.07 |
| PSDTOM | 0.22 |
| PSDTSE | 0.24 |
| PSDTSM | 0.05 |
| PSFDAF | 0.22 |
| PSFDAP | 0.03 |
| PSFDBG | 0.22 |
| PSFDDA | 0.08 |
| PSFDFG | 0.56 |
| PSFDGG | 0.7 |
| PSFDHA | 0.19 |
| PSFDHD | 0.06 |
| PSFDHG | 0.27 |
| PSFDHI | 0.05 |
| PSFDHP | 0.05 |
| PSFDLP | 0.05 |
| PSFDPR | 0.05 |
| PSFDSD | 0.14 |
| PSFDSS | 0.07 |
| PSFDSU | 0.11 |
| PSFDSW | 0.04 |
| PSNENE | 1 |

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### 7.1.3 Maximum Value in Data Set by Parameter, continued

| | |
|---|---|
| PSNERE | 0.84 |
| PSTOIN | 1 |
| PSTOTO | 0.57 |
| RICH | 54 |
| SIND | 34.75 |
| SRICH | 11 |
| STOPS | 24 |
| VISIT_NO | 2 |
| YEAR | 1995 |

## 7.2 Data Record Example

### 7.2.1 Column Names for Example Records

```
DATE_COL,DIDTAI,DIDTBI,DIDTCA,DIDTFI,DIDTFR,DIDTGR,DIDTIN,DIDTNE,DIDTOM,
DIDTSE,DIDTSM,DIFDAF,DIFDAP,DIFDBG,DIFDDA,DIFDFG,DIFDGG,DIFDHA,DIFDHD,DIFDHG,
DIFDHI,DIFDHP,DIFDLP,DIFDPR,DIFDSD,DIFDSS,DIFDSU,DIFDSW,DINENE,DINERE,DITOIN,
DITOTO,FSDTAI,FSDTBI,FSDTCA,FSDTFI,FSDTFR,FSDTGR,FSDTIN,FSDTNE,FSDTOM,FSDTSE,
FSDTSM,FSFDAF,FSFDAP,FSFDBG,FSFDDA,FSFDFG,FSFDGG,FSFDHA,FSFDHD,FSFDHG,FSFDHI,
FSFDHP,FSFDLP,FSFDPR,FSFDSD,FSFDSS,FSFDSU,FSFDSW,FSNENE,FSNERE,FSTOIN,FSTOTO,
LAKENAME,LAKE_ID,LAT_DD,LON_DD,ORNITH,PIDTAI,PIDTBI,PIDTCA,PIDTFI,PIDTFR,
PIDTGR,PIDTIN,PIDTNE,PIDTOM,PIDTSE,PIDTSM,PIFDAF,PIFDAP,PIFDBG,PIFDDA,PIFDFG,
PIFDGG,PIFDHA,PIFDHD,PIFDHG,PIFDHI,PIFDHP,PIFDLP,PIFDPR,PIFDSD,PIFDSS,PIFDSU,
PIFDSW,PINENE,PINERE,PITOIN,PITOTO,PSDTAI,PSDTBI,PSDTCA,PSDTFI,PSDTFR,PSDTGR,
PSDTIN,PSDTNE,PSDTOM,PSDTSE,PSDTSM,PSFDAF,PSFDAP,PSFDBG,PSFDDA,PSFDFG,PSFDGG,
PSFDHA,PSFDHD,PSFDHG,PSFDHI,PSFDHP,PSFDLP,PSFDPR,PSFDSD,PSFDSS,PSFDSU,PSFDSW,
PSNENE,PSNERE,PSTOIN,PSTOTO,RICH,SAMPLED,SIND,SRICH,STOPS,VISIT_NO,YEAR,
```

### 7.2.2 Example Data Records

```
06/27/91,0,0,0,0.04,0.75,0,6.79,0,1.92,0.62,0,1.46,0,0.12,0.25,1.5,5.62,
0.21,0,0.83,0,0,0,0.08,0.04,0,0,0,2.33,7.79,5.83,4.29,0,0,0,0.04,0.25,0,
0.96,0,0.58,0.29,0,0.54,0,0.12,0.04,0.71,0.96,0.21,0,0.42,0,0,0,0.08,0.04,
0,0,0,0.75,0.96,0.92,0.96,"JOES","VT008L",44.41667,72.225,"AKM",0,0,0,0,
0.07,0,0.67,0,0.19,0.06,0,0.14,0,0.01,0.02,0.15,0.56,0.02,0,0.08,0,0,0,
0.01,0,0,0,0,0.23,0.77,0.58,0.42,0,0,0,0.03,0.03,0,0.77,0,0.08,0.1,0,0.05,
0,0.05,0.03,0.23,0.44,0.05,0,0.1,0,0,0,0.03,0.03,0,0,0,0.36,0.64,0.69,0.31,
39,"Yes",10.12,5.96,24,2,1991

06/09/91,0,0,0,0,0,0,7.36,0,0.45,0.09,0,1.27,0,0.36,0,1,3.36,0.45,0,1.45,0,
0,0,0,0,0,0,0,3.82,4.09,5.91,2,0,0,0,0,0,0,1,0,0.18,0.09,0,0.36,0,0.18,0,
0.55,1,0.36,0,0.82,0,0,0,0,0,0,0,0,1,0.73,1,0.64,"ABANAKI","VT009L",
45.83333,72.23472,"AKM",0,0,0,0,0,0,0.93,0,0.06,0.01,0,0.16,0,0.05,0,0.13,
0.43,0.06,0,0.18,0,0,0,0,0,0,0,0,0.48,0.52,0.75,0.25,0,0,0,0,0,0,0.92,0,
0.04,0.04,0,0.12,0,0.08,0,0.27,0.31,0.12,0,0.12,0,0,0,0,0,0,0,0,0.5,0.5,
0.77,0.23,26,"Yes",7.91,5.36,11,1,1991
```

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7.2.2 Example Data Records, continued

06/23/91,0.27,0,0,0,0.45,0,5.55,0,0.45,0.18,0,0.36,0,0.45,0.27,1.45,2.64,
0.55,0,1.18,0,0,0,0,0,0,0,0,3.09,3.82,5.82,1.09,0.09,0,0,0,0.27,0,1,0,0.18,
0.09,0,0.18,0,0.27,0.09,0.64,0.82,0.55,0,0.73,0,0,0,0,0,0,0,0,1,0.91,1,
0.55,"ABANAKI","VT009L",45.83333,72.23472,"AKM",0.04,0,0,0,0.07,0,0.8,0,
0.07,0.03,0,0.05,0,0.07,0.04,0.21,0.38,0.08,0,0.17,0,0,0,0,0,0,0,0,0.45,
0.55,0.84,0.16,0.03,0,0,0,0.03,0,0.84,0,0.03,0.06,0,0.06,0,0.12,0.03,0.25,
0.31,0.12,0,0.09,0,0,0,0,0,0,0,0,0.41,0.59,0.81,0.19,32,"Yes",6.91,5.18,11,
2,1991

## 8. GEOGRAPHIC AND SPATIAL INFORMATION

### 8.1 Minimum Longitude
-78 Degrees 51 Minutes 6.84 Seconds West (- 78.8519 Decimal Degrees )

### 8.2 Maximum Longitude
-67 Degrees 18 Minutes 4.00 Seconds West (-67.30111 Decimal Degrees )

### 8.3 Minimum Latitude
39 Degrees 13 Minutes 34.32 Seconds North ( 39.2262 Decimal Degrees )

### 8.4 Maximum Latitude
47 Degrees 12 Minutes 45.00 Seconds North ( 47.2125 Decimal Degrees )

### 8.5 Name of Area or Region
Northeast: EPA Regions I and II which includes Connecticut, Massachusetts, Maine, New Hampshire, New Jersey, New York, Vermont, Rhode Island

## 9. QUALITY CONTROL / QUALITY ASSURANCE

### 9.1 Data Quality Objectives
See Chaloud and Peck (1994)

### 9.2 Quality Assurance Procedures
See Chaloud and Peck (1994)

### 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

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## 10.6 Information Concerning Gopher and WWW

## 10.7 EMAP CD-ROM Containing the Data

# 11. REFERENCES

Baker, J.R., G.D. Merritt, and D.W. Sutton (eds.). 1997. Environmental Monitoring and Assessment Program - Surface Waters: Field Operations Manual for Lakes. EPA/620/R-97/001. U.S. Environmental Protection Agency. Office of Research and Development. Washington, D.C.

Chaloud, D.J. and D.V. Peck. 1994. Environmental Monitoring and Assessment Program - Surface Waters: Integrated Quality Assurance Project Plan for the Surface Waters Resource Group. U.S. Environmental Protection Agency. Office of Research and Development.

# 12. TABLE OF ACRONYMS

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