CATALOG DOCUMENTATION
EMAP SURFACE WATERS PROGRAM LEVEL DATABASE
1993-1996 MID-ATLANTIC STREAMS DATA

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1. DATA SET IDENTIFICATION

1.1 Title of Catalog Document
EMAP Surface Waters

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

1.3 Catalog Revision Date
March 1999

1.4 Data Set Name
BENCNT

1.5 Task Group
Surface Waters

1.6 Data Set Identification Code
00120

1.7 Version
002

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 publication, 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 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

Dr. John Stoddard
U.S. Environmental Protection Agency
NHEERL Western Ecology Division
200 S.W. 35th Street
Corvallis, OR 97333

2.2 Investigation Participant - Sample Collection

Oregon State University
State of Virginia
State of West Virginia
State of Maryland
State of Pennsylvania
University of Maine
U.S. Fish and Wildlife Service
U.S. Environmental Protection Agency
Office of Research and Development
Region III

3. DATA SET ABSTRACT

3.1 Abstract of the Data Set

The primary function of the stream benthos data are to provide a snapshot of the benthos assemblage present in the stream at the time of sampling. The benthos community represents an integral component of stream biological integrity.

3.2 Keywords for the Data Set

Benthos assemblage, benthos community, benthos species identification

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 streams in EMAP. The data set contains the results of multi-habitat sample of the benthos assemblage taken during spring low-flow.

4.3 Data Set Background Discussion

The benthos community within a stream is an integral component of stream biological integrity. This data set contains a list of species and counts of numbers of individuals of each species collected at each stream sampled.

4.4 Summary of Data Set Parameters

Composite benthic macroinvertebrate parameters include taxonomic name of invertebrates identified in the sample to lowest taxonomic level possible, primary and secondary trophic group function codes, quantity identified in sample, and the Pollution Tolerance Value for the identified taxa.

5. DATA ACQUISITION AND PROCESSING METHODS

5.1 Data Acquisition

5.1.1 Sampling Objective

To obtain a sample of the benthos assemblage within a stream during a two month sampling window from April through mid-June.

5.1.2 Sample Collection Methods Summary

The assemblage was sampled using a modified kicknet with 595 micron mesh distributed in multiple habitats throughout the stream.

5.1.3 Sampling Start Date

April 1993

5.1.4 Sampling End Date

September 1996

5.1.5 Platform

NA

5.1.6 Sampling Gear

Modified kicknet with 595 micron mesh

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

See Lazorchak, et al. 1998.

5.1.11 Sample Collection Method Reference
Chaloud, D.J. and D.V. Peck. 1994. Environmental Monitoring and Assessment Program: Integrated Quality Assurance Project Plan for the Surface Waters Resource Group, 1994 Activities. EPA 600/X-91/080, Rev. 2.00. U.S. Environmental Protection Agency, Las Vegas Nevada.

Lazorchak, J.M., Klemm, D.J., and Peck D.V. (editors). 1998. Environmental Monitoring and Assessment Program- Surface Waters: Field Operations and Methods for Measuring the Ecological Condition of Wadeable Streams. EPA/620/R-94/004F. U.S. Environmental Protection Agency, Washington, D.C.

5.1.12 Sample Collection Method Deviations
NA

5.2 Data Preparation and Sample Design

5.2.1 Sample Processing Objective
See Lazorchak, et al. (1998) and Chaloud and Peck (1994).

5.2.2 Sample Processing Methods Summary
See Lazorchak, et al. (1998) and Chaloud and Peck (1994).

5.2.3 Sample Processing Method Calibration
See Lazorchak, et al. (1998) and Chaloud and Peck (1994).

5.2.4 Sample Processing Quality Control
See Lazorchak, et al. (1998) and Chaloud and Peck (1994).

5.2.5 Sample Processing Method Reference
See Lazorchak, et al. (1998) 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 SAS Name	Data Type	Len	Format	Parameter Label
ABUND	Num	8		Number of Individuals Counted
CLASS	Char	30	$CHAR	Class
DATE_COL	Num	8	MMDDYY	Date stream visited
DISTINCT	Char	1		Distinct Taxa within Sample (Y/N)
FAMILY	Char	30	$CHAR	Family
FLOWTYPE	Char	1		Stream Habitat P)ool,R)iffle,C)omposite
FXN	Char	2	$CHAR	Functional Feeding Group
GENUS	Char	50	$CHAR	Genus
LAT_DD	Num	8		Sample Site Latitude (decimal degrees)
LON_DD	Num	8		Sample Site Longitude (decimal degrees)
ORDER	Char	30	$CHAR	Order
PHYLUM	Char	30	$CHAR	Phylum
PTV	Num	8		Pollutant Tolerance Value
SAMPLED	Char	30		Site Sampled Code
SAMP_ID	Num	8		Sample Tracking Number (barcode)
SPECIES	Char	30		Species Name
STRMNAME	Char	40		Stream Name from 7.5 map
STRM_ID	Char	8		EMAP Stream Identifer
SUBFAM	Char	30	$CHAR	Subfamily
TAXANAME	Char	50	$CHAR	Lab Taxa Name
TRIBE	Char	30	$CHAR	Tribe
VISIT_NO	Num	8		Sample Visit Number
YEAR	Num	8		Year sampled

7.1.6 Precision to which values are reported

7.1.7 Minimum Value in Data Set

Name	Min
ABUND	1
DATE_COL	04/26/1993
LAT_DD	36.5535
LON_DD	-83.24443889
PTV	0.5
SAMP_ID	202001
VISIT_NO	1
YEAR	1993

7.1.7 Maximum Value in Data Set

Name	Max
ABUND	335
DATE_COL	09/15/1996
LAT_DD	42.355663889
LON_DD	-74.2589
PTV	10
SAMP_ID	999918
VISIT_NO	9
YEAR	1996

7.2 Data Record Example

7.2.1 Column Names for Example Records

```
"ABUND","CLASS","DATE_COL","DISTINCT","FAMILY","FLOWTYPE","FXN","GENUS",
"LAT_DD","LON_DD","ORDER","PHYLUM","PTV","SAMPLED","SAMP_ID","SPECIES",
"STRMNAME","STRM_ID","SUBFAM","TAXANAME","TRIBE","VISIT_NO","YEAR"
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7.2.2 Example Data Records

```
1,"HIRUDINEA",05/17/1994,"Y","GLOSSIPHONIIDAE","P","PA","NA",38.52530,
-75.63110,"RHYNCHOBDELLIDA","ANNELIDA",6.00,"Yes",211538,"NA",
"TUSOCKY BR","DE750S"," ","GLOSSIPHONIIDAE"," ",1,1994

1,"OLIGOCHAETA",05/17/1994,"Y","LUMBRICULIDAE","P","SC","LUMBRICULUS",
38.52530,-75.63110,"LUMBRICULIDA","ANNELIDA",7.80,"Yes",211538,"NA",
"TUSOCKY BR","DE750S"," ","LUMBRICULUS SP."," ",1,1994

1,"OLIGOCHAETA",05/17/1994,"Y","NAIDIDAE","P","SC","PRISTINELLA",38.52530,
-75.63110,"TUBIFICIDA","ANNELIDA",10.00,"Yes",211538,"NA","TUSOCKY BR","DE750S",
" ","PRISTINELLA SP."," ",1,1994

6,"OLIGOCHAETA",05/17/1994,"Y","TUBIFICIDAE","P","SC","NA",38.52530,-75.63110,
"TUBIFICIDA","ANNELIDA",8.00,"Yes",211538,"NA","TUSOCKY BR","DE750S",
" ","TUBIFICIDAE W/O CAPILLIFORM CHAETAE"," ",1,1994

1,"CRUSTACEA",05/17/1994,"Y","CRANGONYCTIDAE","P","OM","SYNURELLA",38.52530,
-75.63110,"AMPHIPODA","ARTHROPODA",4.00,"Yes",211538,"CHAMBERLAINI",
"TUSOCKY BR","DE750S"," ","SYNURELLA CHAMBERLAINI"," ",1,1994
```

8. GEOGRAPHIC AND SPATIAL INFORMATION

8.1 Minimum Longitude

-83 Degrees 14 Minutes 39 Seconds West (-83.24444 Decimal Degrees)

8.2 Maximum Longitude

-74 Degrees 15 Minutes 32 Seconds West (-74.25890 Decimal Degrees)

8.3 Minimum Latitude
36 Degrees 33 Minutes 12 Seconds North (36.55350 Decimal Degrees)

8.4 Maximum Latitude
42 Degrees 21 Minutes 20 Seconds North (42.35566 Decimal Degrees)

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

10.6 Information Concerning WWW

10.7 EMAP CD-ROM Containing the Data

11. REFERENCES

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. Washington, D.C.

Lazorchak, J.M., Klemm, D.J., and Peck D.V. (editors). 1998. Environmental Monitoring and Assessment Program- Surface Waters: Field Operations and Methods for Measuring theEcological Condition of Wadeable Streams. EPA/620/R-94/004F. U.S. Environmental Protection Agency, Washington, D.C.

12. TABLE OF ACRONYMS

13. PERSONNEL INFORMATION

Project Manager
Dr. John Stoddard
U.S. Environmental Protection Agency
NHEERL Western Ecology Division
200 S.W. 35th Street
Corvallis, OR 97333
541-754-4441
541-754-4716(FAX)
stoddard@mail.cor.epa.gov

Quality Assurance Officer
Dave Peck
U.S. Environmental Protection Agency
NHEERL Western Ecology Division
200 S.W. 35th Street
Corvallis, OR 97333
541-754-4426
541-754-4716(FAX)
davep@mail.cor.epa.gov

Information Management, EMAP-Surface Waters
Marlys Cappaert
OAO c/o U.S. Environmental Protection Agency
NHEERL Western Ecology Division
200 S.W. 35th Street
Corvallis, OR 97333
541-754-4467
541-754-4716(FAX)
cappaert@mail.cor.epa.gov