CATALOG DOCUMENTATION
EMAP SURFACE WATERS PROGRAM LEVEL DATABASE
1997-1998 Mid-Atlantic Integrated Assessment Program
Stream Benthic Counts Data

TABLE OF CONTENTS

1. DATA SET IDENTIFICATION

1.1 Title of Catalog Document
1997-1998 Mid-Atlantic Integrated Assessment Program
Stream Benthic Counts Data

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

1.3 Catalog Revision Date
August 2000

1.4 Data Set Name
BENTCNT

1.5 Task Group
Surface Waters

1.6 Data Set Identification Code
131

1.7 Version
001

1.8 Requested Acknowledgement
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:

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 Participants - Sample Collection
Oregon State University
State of West Virginia
State of Maryland
University of Maryland
U.S. Environmental Protection Agency
     Office of Research and Development
     Region III

3. DATA SET ABSTRACT

3.1 Abstract of the Data Set
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.

3.2 Keywords for the Data Set
Benthos assemblage, benthos community, benthos species identification

4. OBJECTIVES AND INTRODUCTION

4.1 Program Objective
In 1997 and 1998 the Ecological Monitoring and Assessment Program (EMAP) Surface Waters Program became a collaborator in the Mid-Atlantic Integrated Assessment (MAIA) project, which is attempting to produce an assessment of the condition of surface water and estuarine resources. The MAIA project represents a follow-up to the MAHA study, with an expanded geographic scope (southern New York to northern North Carolina, with more sites located in the Piedmont and Coastal Plain regions) and a different index period (July-September).

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.

4.3 Data Set Background Discussion
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.

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, quantity identified in sample, functional feeding group codes, 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.

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
May 1997

5.1.4 Sampling End Date
September 1998

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
COM_IM	Char	80		IM Personnel Comment
COM_LAB	Char	50	$CHAR	Lab Personnel Comment
DATE_COL	Num	8	MMDDYY	Date Stream Visited
DISTINCT	Char	1		Distinct Taxa within Sample (Y/N)
FAMILY	Char	30	$CHAR	Family
FLOWTYPE	Char	20	$CHAR	Pool/Riffle/Shore/Midchannel/Drift/Ponar
FXN	Char	2	$CHAR	Functional Feeding Group
GENUS	Char	50	$CHAR	Genus
LAT_DD	Num	8		X-Site Latitude (decimal degrees)
LON_DD	Num	8		X-Site Longitude (decimal degrees)
ORDER	Char	30	$CHAR	Order

7.1 Description of Parameters, continued

Name	Type	Len	Format	Description
PHYLUM	Char	30	$CHAR	Phylum
PROJECT	Char	8	$CHAR	Unwadeable (U3) or Wadeable (W3) Streams
PTV	Num	8		Pollutant Tolerance Value
SAMPLED	Char	30		Site Sampled Code
SAMP_ID	Num	8		Sample Tracking Number (Barcode)
STRM_ID	Char	10	$CHAR	Stream ID
SUBFAM	Char	30	$CHAR	Subfamily
TAXANAME	Char	50	$CHAR	Lab Taxa Name
TRIBE	Char	30	$CHAR	Tribe
VISIT_NO	Num	8		Visit Number
YEAR	Num	8		Sample Year

7.1.6 Precision to which values are reported

7.1.7 Minimum Value in Data Set

Name	Min
ABUND	0
DATE_COL	05/20/1997
LAT_DD	35.182938
LON_DD	-83.555659
PTV	0.7
SAMP_ID	96
VISIT_NO	0
YEAR	1997

7.1.7 Maximum Value in Data Set

Name	Max
ABUND	262
DATE_COL	09/30/1998
LAT_DD	42.600349
LON_DD	-74.662034
PTV	10
SAMP_ID	999999
VISIT_NO	3
YEAR	1998

7.2.1 Column Names for Example Records

"ABUND","CLASS","COM_IM","COM_LAB","DATE_COL","DISTINCT","FAMILY","FLOWTYPE",
"FXN","GENUS","LAT_DD","LON_DD","ORDER","PHYLUM","PROJECT","PTV","SAMPLED",
"SAMP_ID","STRM_ID","SUBFAM","TAXANAME","TRIBE","VISIT_NO","YEAR"

7.2.2   Example Data Records

1,"CRUSTACEA","","",09/08/1997,"Y","ASELLIDAE","POOL","OM","CAECIDOTEA",
38.247943,-81.886602,"ISOPODA","ARTHROPODA","W3-1997",6.70,"Yes",233107,
"MAIA97-001","","Caecidotea sp.'," ",1,1997

7.2.2   Example Data Records, continued

```
2,"INSECTA"," "," ",09/08/1997,"Y","CERATOPOGONIDAE","POOL","PR","CERATOPOGON",
38.247943,-81.886602,"DIPTERA","ARTHROPODA","W3-1997",6.30,"Yes",233107,
"MAIA97-001"," ","Ceratopogon sp."," ",1,1997

1,"INSECTA"," ","",09/08/1997,"Y","TABANIDAE","POOL","PR","CHRYSOPS",38.247943,
-81.886602,"DIPTERA","ARTHROPODA","W3-1997",6.00,"Yes",233107,"MAIA97-001",
"","Chrysops sp."," ",1,1997
```

8.   GEOGRAPHIC AND SPATIAL INFORMATION

8.1 Minimum Longitude
-83 Degrees 33 Minutes 20 Seconds West (-83.555659 Decimal Degrees)

8.2 Maximum Longitude
-74 Degrees 39 Minutes 43 Seconds West (-74.662034 Decimal Degrees)

8.3 Minimum Latitude
35 Degrees 10 Minutes 58 Seconds North (35.182938 Decimal Degrees)

8.4 Maximum Latitude
42 Degrees 36 Minutes 1 Seconds North (42.600349 Decimal Degrees)

8.5 Name of Area or Region
Mid Atlantic: EPA Region III which includes Delaware, Maryland, New York, Virginia, and West Virginia

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: 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.

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.john@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)
peck.david@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.marlys@epa.gov