

US EPA ARCHIVE DOCUMENT

CATALOG DOCUMENTATION
EMAP SURFACE WATERS PROGRAM LEVEL DATABASE
1997-1998 Mid-Atlantic Integrated Assessment Program
Site Information and Design Data

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1. DATA SET IDENTIFICATION

1.1 Title of Catalog Document

1997-1998 Mid-Atlantic Integrated Assessment Program
Site Information and Design 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

SITEINFO

1.5 Task Group

Surface Waters

1.6 Data Set Identification Code

143

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:

"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 Participants - Sample Collection

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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 data set contains the statistical weighting factors which allow the data to be summarized into statements about the status of Streams in the Mid-Atlantic region.

3.2 Keywords for the Data Set

weighting factors, probability design, statistical analysis, regional estimates.

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 statistical weighting factors which allow the data to be summarized into statements about the status of Streams in the Mid-Atlantic region.

4.3 Data Set Background Discussion

The primary function of the stream design data are to provide the ability for researchers to calculate population estimates using data collected under the EMAP probability-based statistical survey design.

Data on the streams for site selection were summarized from digital and paper sources. Streams were classified as target or non-target; target streams were categorized by their Strahler order. Sample weights for each sampled stream were determined using the sample sizes for each Strahler order and the total length of streams within each order in the region. Locations along streams were chosen randomly, using the nesting attribute of the EMAP hierarchical address to spread the sample spatially across the region. Information on each sampled stream site was collected using information taken from maps, digital sources, and visits to the site.

4.4 Summary of Data Set Parameters

Information on each stream sampled, such as the stream name, geographic location of the sample site, Strahler order, county and state are stored in this data set. The weighting factors for each stream site are also stored in this data set. The weighting factors are to be used when computing regional estimates for the entire data set over the two year period. Further details on the methods which should be used when processing these data can be obtained from the Information Management contact, below.

5. DATA ACQUISITION AND PROCESSING METHODS

5.1 Data Acquisition

5.1.1 Sampling Objective

To allow scientists to summarize indicator data for the defined population of streams in the Mid-Atlantic region during the sample period.

5.1.2 Sample Collection Methods Summary

Not Applicable

5.1.3 Sampling Start Date

1997

5.1.4 Sampling End Date

1998

5.1.5 Platform

NA

5.1.6 Sampling Gear

NA

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
BARB_ID	Num	8		Unique Within HUC Site Identifier Number
COM_X97	Char	60		1997 X-Site Classification Comments
COM_X98	Char	60		1998 X-Site Classification Comments
COUNTY	Char	23	\$	X-Site County Location
DATE_CO1	Num	8	MMDDYY	
DIST	Num	8		Offset Distance to X-Site on Segment (m)
ECOREGL3	Char	13	\$	X-Site Level 3 '99 Omernik Ecoregion ID
ECOREGL4	Char	13	\$	X-Site Level 4 '99 Omernik Ecoregion ID
ECO_MAHA	Char	8		ECOREG Var. Equivalent for MAHA Design
FLOWST97	Char	16		X-Site Flow/Protocol Status in 1997
FLOWST98	Char	16		X-Site Flow/Protocol Status in 1998
HIER_ID	Char	18		EMAP Hexal ID
HUC	Char	12		Hydrologic Unit Code
LAT_DD	Num	8		X-Site Latitude (decimal degrees)
LENGTH	Num	8		RF3 Segment Length (m)
LON_DD	Num	8		X-Site Longitude (decimal degrees)
MAP75	Char	30	\$	X-Site 7.5 Topo Map Name
MAP100	Char	38	\$	X-Site 100,000 Topo Map Name
MILE	Num	8		RF3 Stream Mile ID
ORDER	Num	8		RF3 Strahler Order
RCH_TYP	Char	1		RF3 Reach Type Code
REVSIT97	Char	8		1997 Within Year Seasonal/Index Revisit
REVSIT98	Char	8		1998 Within Year Seasonal/Index Revisit
RF3_ID	Char	19	\$	RF3 Stream Segment ID (HUC,SEGM,MILE)
SEGM	Char	12		RF3 Segment ID
SITECL97	Char	16		X-Site Classification in 1997
SITECL98	Char	16		X-Site Classification in 1998
STATE	Char	2	\$	X-site State Location
STRMNAME	Char	50		Stream Name from 7.5 Map
STRM_ID	Char	10	\$CHAR	EMAP Stream ID
T2MULT	Num	8		Tier 2 Multiplier (expansion factor)
VISIT97	Char	3		1997 Annual Visit Site (Y, N, N/A)
VISIT98	Char	3		1998 Annual Visit Site (Y, N, N/A)
WGT_97	Num	8		1997 MAIA Sample Expansion Factor(km)
WGT_98	Num	8		1998 MAIA Sample Expansion Factor (km)
WGT_1X94	Num	8		1X Grid Weight (km) for 1994 Prob. Sites
YEARORIG	Num	8		First Year Site was Sampled

7.1.6 Precision to which values are reported

7.1.7 Minimum Value in Data Set

Name	Min
BARB_ID	6
DATE_COL	.
DIST	2.6035883029
LAT_DD	34.927688
LENGTH	29.11476
LON_DD	-83.555659
LON_DD	74.662034
MILE	0
ORDER	1
T2MULT	1
WGT_1X94	1134.018
WGT_97	0
WGT_98	0
YEARORIG	1994

7.1.7 Maximum Value in Data Set

Name	Max
BARB_ID	7184
DATE_COL	.
DIST	2459.1402894
LAT_DD	42.857925
LENGTH	3297.419
LON_DD	-74.662034
MILE	42.44
ORDER	8
T2MULT	48
WGT_1X94	1944.031
WGT_97	3022.755
WGT_98	8558.765
YEARORIG	1998

7.2.1 Column Names for Example Records

"BARB_ID", "COM_X97", "COM_X98", "COUNTY", "DATE_COL", "DIST", "ECOREGL3", "ECOREGL4", "ECO_MAHA", "FLOWST97", "FLOWST98", "HIER_ID", "HUC", "LAT_DD", "LENGTH", "LON_DD", "MAP100", "MAP75", "MILE", "ORDER", "RCH_TYP", "REVSIT97", "REVSIT98", "RF3_ID", "SEGM", "SITECL97", "SITECL98", "STATE", "STRMNAME", "STRM_ID", "T2MULT", "VISIT97", "VISIT98", "WGT_1X94", "WGT_97", "WGT_98", "YEARORIG"

7.2.2 Example Data Records

743, " ", " ", "LINCOLN", ., 234.89268633, "70", "70b", "APP-PLAT", "INTERUPT", "N/A", "1611311.74730000", "5070102", 38.247943, 1965.32304, -81.886602, "CHARLESTON", "GRIFFITHSVILLE", 1.53, 1, "S", "NO", "N/A", "5070102 133 1.53", "133", "TARGET", "N/A", "WV", "LAUREL FORK", "MAIA97-001", 1, "Y", "N", ., 3022.755, ., 1997

7.2.2 Example Data Records, continued

419, " ", " ", "MASON", ., 234.74696885, "70", "70b", "APP-PLAT", "WADEABLE", "N/A",
"1611310.70727500", "5090101", 38.550017, 547.32495, -82.144807, "IRONTON",
"GLENWOOD", 6.43, 3, "R", "NO", "N/A", "5090101 9 6.43", "9", "TARGET",
"N/A", "WV", "GUYAN CREEK", "MAIA97-002", 5, "Y", "N", ., 604.551, ., 1997

2779, " ", " ", "WIRT", ., 411.47858405, "70", "70a", "APP-PLAT", "BOATABLE", "N/A",
"1611100.75727100", "5030203", 39.067885, 505.53008, -81.388766, "PARKERSBURG",
"ELIZABETH", 0.61, 6, "W", "NO", "N/A", "5030203 12 0.61", "12", "TARGET", "N/A",
"WV", "LITTLE KANAWHA RIVER", "MAIA97-003", 3, "Y", "N", ., 1007.585, ., 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

34 Degrees 55 Minutes 39 Seconds North (34.927688 Decimal Degrees)

8.4 Maximum Latitude

42 Degrees 51 Minutes 28 Seconds North (42.857925 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.

Diaz-Ramos, S., D.L. Stevens, Jr., and A.R. Olsen. 1996. EMAP Statistical Methods Manual. U.S. Environmental Protection Agency. Office of Research and Development. EPA/620/R-96/002.

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

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