CATALOG DOCUMENTATION
MAIA-ESTUARIES SUMMARY DATABASE
1997 and 1998 STATIONS
SAMPLING EVENT DATA: “EVENTS”

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1. DATASET IDENTIFICATION

1.1 Title of Catalog document
MAIA-Estuaries Summary Database
1997 and 1998 Stations
Sampling Event Data

1.2 Authors of the Catalog entry
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1.3 Catalog revision date
April 30, 2000

1.4 Dataset name
EVENTS

1.5 Task Group
MAIA Estuaries

1.6 Dataset identification code
002

1.7 Version
001

1.8 Request for Acknowledgment
EMAP requests that all individuals who download EMAP data acknowledge the source of these data in any reports, papers, or presentations. If you publish these data, please include a statement similar to: "Some or all of the data described in this article were produced by the U. S. Environmental Protection Agency through its Environmental Monitoring and Assessment Program (EMAP)”.

2. INVESTIGATOR INFORMATION (for full addresses see Section 13)

2.1 Principal Investigators
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2.3 Sample Processing Investigators
Not applicable

3. DATASET ABSTRACT

3.1 Abstract of the Dataset
The EVENTS data file reports information regarding the *actual* sampling events in the 1997 and 1998 MAIA-Estuaries field seasons. The information provided includes the sampling date, latitude, longitude, water depth, the MAIA partner responsible for the sampling event, and the partners' original event identifier codes. All records reflect values measured at the time of sampling. One record is presented per sampling event.

3.2 Keywords for the Dataset
Latitude, longitude, depth, date, partner, event identifier

4. OBJECTIVES AND INTRODUCTION

4.1 Program Objective
The main objectives of the MAIA-Estuaries program are: (1) to evaluate the ecological condition of the Mid-Atlantic estuaries by measuring key properties of the water, sediment, and the community of organisms; (2) to focus attention on small estuaries in order to develop better monitoring approaches for these critical systems; and (3) to develop partnerships among federal and state environmental organizations.

The Environmental Monitoring and Assessment Program (EMAP) is an EPA research and monitoring program designed to provide unbiased assessments of the condition of selected resources over a wide region. A key feature of the program is a probabilistic sampling strategy that randomly selects sampling sites and assigns weighting factors based on area to all measured results. EMAP's strategy was adopted by the Mid-Atlantic Integrated Assessment (MAIA) program, which was designed to assess the conditions of the estuaries, forests, streams and lakes, and agricultural lands in the eight-state Mid-Atlantic region. This file contains data measured in MAIA estuaries during the Summers of 1997 and 1998. Samples were collected for water and sediment analyses primarily in 1997, with a few additional sites sampled in 1998. Fish samples were collected only in 1998. Several estuaries were designated as intensive sites and were sampled in greater detail (see STATIONS file).

The partners in MAIA-Estuaries program are: (1) The U.S. Environmental Protection Agency (USEPA), including both the Atlantic Ecology Division (AED) and the Gulf Ecology Division (GED);

(2) National Park Service (NPS) under their project "Maryland Coastal Bays Monitoring"; (3) National Oceanographic and Atmospheric Administration (NOAA) which conducted sampling both in the Delaware Bay (DB) under their "National Status and Trends Program" and in the Carolinian Province (CP); and (4) The Chesapeake Bay Program (CBP), which is a consortium of federal, state, and local governments and nongovernmental organizations. Each partner was responsible for collecting, processing, and reviewing data. The USEPA Atlantic Ecology Division was responsible for final assembly and review of all data. Laboratories contracted to process samples are specified by the parameter LABCODE included in all data files (Section 4.4). Details regarding use of partner and LABCODE information are presented in the EVENTS metadata file.

4.2 Dataset Objective

To report latitude, longitude and water depth measured at the time of sampling, as well as the MAIA partner responsible for sampling activity and the partners' original event identification code.

4.3 Dataset Background Discussion

The EVENTS data file contains the actual sampling date, latitude, longitude, and MAIA partners responsible for the sampling event. These entries may differ slightly from the that initially planned by the MAIA managers and reported in the STATIONS data file. The codes identifying the MAIA partner and their original event id codes will probably be most useful to the partners themselves.

4.4 Summary of Dataset Parameters

*STATION	Station name
*EVNTDATE	Event date
EVENT_ID	Partners' original event identifier
DEPTH	Water depth at the station (m), measured upon arrival
PARTNER	MAIA-partner responsible for the sampling event. Possible codes:
AED	USEPA, Atlantic Ecology Division
GED	USEPA, Gulf Ecology Division
NPS	National Park Service
DC	District of Columbia
CP	NOAA EMAP Carolinian Province
DB	NOAA EMAP Delaware Bay
ODU	Chesapeake Bay Program Full Sediment Monitoring by ODU
VERSAR	Chesapeake Bay Program Full Sediment Monitoring by Versar Corp.
BNT-ODU	Chesapeake Bay Program Benthic Monitoring by ODU
BNT-VERSAR	Chesapeake Bay Program Benthic Monitoring by Versar Corp.
WTR-MD/DNR	Chesapeake Bay Program Water Monitoring by MD DNR
WTR-VA/ODU	Chesapeake Bay Program Water Monitoring by ODU
WTR-VA/SWC	Chesapeake Bay Program Water Monitoring by VA SWC
EVNT_LAT	The actual latitude of the station, referenced to the datum "NAD83"
EVNT_LNG	The actual longitude of the station, referenced to the datum "NAD83"
YEAR	Year of sampling: 1997 or 1998

* denotes parameters that should be used as key fields when merging data files

5. DATA ACQUISITION AND PROCESSING METHODS

5.1 Data Acquisition / Field Sampling

The sample collection methods used by USEPA field crews are described here. Significant variations by other MAIA partners are noted in Section 5.1.12. Details regarding MAIA partners are reported in the EVENTS data file.

5.1.1 Sampling Objective

Record the date, location, water depth, and MAIA partner responsible for the sampling event; recorded at the time of sampling.

5.1.2 Sample Collection: Methods Summary

A Differential GPS or a Loran system was used to establish station latitude and longitude. Station depth was measured with an electronic depth finder. These measurements were performed at the beginning of a sampling event.

5.1.3 Beginning Sampling Dates

8 July 1997
13 July 1998

5.1.4 Ending Sampling Dates

8 October 1997
8 October 1998

5.1.5 Sampling Platform

Samples were collected from gasoline or diesel powered boats 18 to 133 feet in length.

5.1.6 Sampling Equipment

The navigation system consists of two components: a Northstar Loran receiver and a Leica MX400 Differential GPS receiver.

5.1.7 Manufacturer of Sampling Equipment

LORAN: Northstar
GPS: Raytheon

5.1.8 Key Variables

Not applicable

5.1.9 Sampling Collection: Calibration

Not applicable

5.1.10 Sample Collection: Quality Control

The station latitude and longitude values were referenced to the datum “NAD83". If it were not possible to sample within 0.05 nautical mile of the planned location (*e.g.*, due to inadequate depth, safety concerns), the sampling site was relocated at random to the nearest acceptable location or was classified as ‘not sampled’. Recorded and nominal latitudes and longitude values were compared at the conclusion of the field season.

5.1.11 Sample Collection: References

Strobel, C.J. 1998. Environmental Monitoring and Assessment Program - Mid-Atlantic Integrated Assessment. Estuaries Component, Field Operations and Safety Manual. USEPA, Office of Research and Development, NHEERL-AED, Narragansett, RI. July, 1998.

Kokkinakis, S.A., J.L. Hyland, and A. Robertson. 1994. Carolinian Demonstration Project - 1994 Field Operations Manual. Joint National Status and Trends/Environmental Monitoring and Assessment Program. NOAA/NOS/ORCA, Silver Spring, MD.

5.1.12 Sample Collection: Alternate Methods

Water depths were not measured at stations designated with a PARTNER code = DC, WTR-VA/ODU, and WTR-VA/SWC. The depths were estimated from log entries and are probably within one meter of the true water depth.

5.2 Data Preparation and Sample Processing
No analytical processing was involved with the EVENTS parameters

6. DATA ANALYSIS AND MANIPULATIONS

6.1 Name of New or Modified Values
Not applicable

6.2 Description of Data Manipulation
Not applicable

7. DATA DESCRIPTION

7.1 Description of Parameters

7.1.1 Components of the Dataset

NAME	TYPE	LENGTH	LABEL
STATION	Char	10	Station name
EVNTDATE	Num	8	Event date
EVENT_ID	Char	20	Sampling event identifier
DEPTH	Num	8	Water depth (m)
PARTNER	Char	10	Sample collection crew identifier
EVNT_LAT	Num	8	Latitude of sampling event
EVNT_LNG	Num	8	Longitude of sampling event
YEAR	Num	4	Year of sampling

7.1.2 Precision of Reported Values
EVNT_LAT and EVNT_LNG are reported to 0.0001 decimal degree units, which is equivalent to about 0.006 nautical mile (about 60 meters). DEPTH is reported to 0.1 meter, except for sampling events designated with a SOURCE code of DC, WTR-VA/ODU, and WTR-VA/SWC, which are known only to integer values (see Section 5.1.12).

7.1.3 Minimum Value in Dataset

EVNTDATE	07/07/97
DEPTH	0.1
EVNT_LAT	34.8702
EVNT_LNG	-77.4339

7.1.4 Maximum Value in Dataset

EVNTDATE	10/08/98
DEPTH	34.0
EVNT_LAT	40.1470
EVNT_LNG	-74.7230

7.2 Data Record Example

7.2.1 Column Names for Example Records

STATION EVNTDATE EVENT_ID DEPTH PARTNER EVNT_LAT EVNT_LNG YEAR

7.2.2 Example Data Records

STATION	EVNTDATE	EVENT_ID	DEPTH	PARTNER	EVNT_LAT	EVNT_LNG	YEAR
MA97-0001	08/25/97	4212	1.6	NPS	38.3270	-75.1037	1997
MA97-0003	08/26/97	4181	1.3	NPS	38.2387	-75.2091	1997
MA97-0004	08/26/97	4182	1.0	NPS	38.2530	-75.1918	1997
MA97-0005	08/27/97	4185	0.8	NPS	38.1457	-75.2861	1997
MA97-0006	08/27/97	4184	1.9	NPS	38.1048	-75.2323	1997

8. GEOGRAPHIC AND SPATIAL INFORMATION

8.1 Minimum Longitude (Westernmost)
-77.4339 decimal degrees

8.2 Maximum Longitude (Easternmost)
-74.7230 decimal degrees

8.3 Minimum Latitude (Southernmost)
34.8702 decimal degrees

8.4 Maximum Latitude (Northernmost)
40.1470 decimal degrees

8.5 Name of Region
MAIA estuary region, consisting of Delaware Bay, Chesapeake Bay, the Delmarva coastal bays, Albemarle-Pamlico Sound, and contiguous estuaries

9. QUALITY CONTROL AND QUALITY ASSURANCE

9.1 Measurement Quality Objectives
Provide accurate information regarding the location of sampling events

9.2 Data Quality Assurance Procedures
All measurements were performed in the field. See Section 5.1.10 for sampling QA/QC procedures.

9.3 Actual Measurement Quality
Not applicable

10. DATA ACCESS

10.1 Data Access Procedures
Data may be downloaded from the web

10.2 Data Access Restrictions
None

10.3 Data Access Contact Persons
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10.4 Dataset Format
ASCII (CSV) and SAS Export files

10.5 Information Concerning Anonymous FTP
Not available

10.6 Information Concerning WWW
See Section 10.1 for WWW access

10.7 EMAP CD-ROM Containing the Dataset
Data not available on CD-ROM

11. REFERENCES

Holland, A.F., ed. 1990. Near Coastal Program Plan for 1990: Estuaries. EPA 600/4-90/033. U.S. EPA, Office of Research and Development, NHEERL-AED, Narragansett, RI. November 1990.

Kokkinakis, S.A., Hyland, J.L., and Robertson, A. 1994. Carolinian Demonstration Project - 1994 Field Operations Manual. Joint National Status and Trends/Environmental Monitoring and Assessment Program. NOAA/NOS/ORCA, Silver Spring, MD.

Strobel, C.J. 1998. Environmental Monitoring and Assessment Program - Mid-Atlantic Integrated Assessment. Estuaries Component, Field Operations and Safety Manual. U.S. EPA, Office of Research and Development, NHEERL-AED, Narragansett, RI.

Valente, R. and Strobel, C.J. 1993. Environmental Monitoring and Assessment Program- Estuaries: 1993 Virginian Province Quality Assurance Project Plan. U.S. EPA, NHEERL-AED, Narragansett, RI. May 1993.

12. TABLE OF ACRONYMS

AED	Atlantic Ecology Division
BNT	Benthic Monitoring Program
CP	Carolinian Province
CBP	Chesapeake Bay Program
DB	Delaware Bay
EMAP	Environmental Monitoring and Assessment Program
EPA	U.S. Environmental Protection Agency
GED	Gulf Ecology Division
GPS	Global Positioning System
MAIA	Mid-Atlantic Integrated Assessment
MD/DNR	Maryland Department of Natural Resources
NHEERL	National Health and Environmental Effects Research Laboratory
NOAA	National Oceanic and Atmospheric Administration
NOS	National Ocean Service
NPS	National Park Service
ODU	Old Dominion University

12. TABLE OF ACRONYMS, continued

ORCA	Office of Ocean Resources Conservation and Assessment
ORD	Office of Research and Development
QA/QC	Quality Assurance/Quality Control
USEPA	United States Environmental Protection Agency
VER	Versar, Inc.
WTR	Water Monitoring Program
WWW	World Wide Web

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