

US EPA ARCHIVE DOCUMENT

CATALOG DOCUMENTATION
EMAP-ESTUARIES PROGRAM LEVEL DATABASE
1993 DELAWARE AND MARYLAND COASTAL BAYS
STATION LOCATION AND VISIT DATA

TABLE OF CONTENTS

1. DATA SET IDENTIFICATION
2. INVESTIGATOR INFORMATION
3. DATA SET ABSTRACT
4. OBJECTIVES AND INTRODUCTION
5. DATA ACQUISITION AND PROCESSING METHODS
6. DATA MANIPULATIONS
7. DATA DESCRIPTION
8. GEOGRAPHIC AND SPATIAL INFORMATION
9. QUALITY CONTROL/QUALITY ASSURANCE
10. DATA ACCESS
11. REFERENCES
12. TABLE OF ACRONYMS
13. PERSONNEL INFORMATION

1. DATA SET IDENTIFICATION

1.1 Title of Catalog document

Coastal Bays Database
1993 Delaware and Maryland Bays
Station Location and Visit Data by Site

1.2 Author of the Catalog entry

Melissa Hughes, OAO Corporation

1.3 Catalog revision date

18 December 1996

1.4 Data set name

STATION

1.5 Task Group

Mid-Atlantic Integration and Assessment (MAIA)

1.6 Data set identification code

200

1.7 Version

001

1.8 Requested Acknowledgment

If you plan to publish these data in any way, 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-Estuaries Program, it has not been subjected to Agency review, and therefore does not necessarily reflect the views of the Agency and no official endorsement should be inferred."

2. INVESTIGATOR INFORMATION

2.1 Principal Investigator

Dr. Frederick W. Kutz
U.S. Environmental Protection Agency - Region III

2.2. Investigation Participant-Sample Collection

Janis Chaillou
Versar, Inc.

3. DATA SET ABSTRACT

3.1 Abstract of the Data Set

The STATION data set contains geographic and site visit information related to stations in the Delaware and Maryland Coastal Bays sampling region. Stations were selected using a stratified random design. The assigned stratum is given, as well as the geographic coordinates of a site. Some sites were visited more than once; date, visit number and time on and off station were recorded.

3.2 Keywords for the Data Set

sampling sites, latitude, longitude, geographic coordinates

4. OBJECTIVES AND INTRODUCTION

4.1 Program Objective

The objective of the Coastal Bays Joint Assessment was to assess the ecological condition of the Delaware and Maryland coastal bays, compare the current ecological condition of the bays with their historical condition and to evaluate indicators and sampling design elements that can be used to direct future monitoring activities in the system.

4.2 Data Set Objective

The STATIONS data set provides geographical and visit information on the sites sampled in the Delaware and Maryland Coastal Bays.

4.3 Data Set Background Discussion

The Coastal Bays Joint Assessment was based on methods used in the EMAP-Estuaries program. A probability-based sampling design ensured an unbiased estimation of condition and that all areas within the system were potentially subject to sampling. The probability based sampling design also allowed calculation of confidence intervals around estimates of condition.

4.4 Summary of Data Set Parameters

STATIONS data set values were based on the geographic location of the station and the time and date of a visit.

5. DATA ACQUISITION AND PROCESSING METHODS

5.1 Data Acquisition

5.1.1 Sampling Objective

Locate sampling sites using a Global Positioning System (GPS).

5.1.2 Sample Collection Methods Summary

SAMPLING DESIGN

Two hundred sites were sampled, 25 in each of 4 sampling strata (upper Indian River, Trappe Creek/Newport Bay, St. Marin River and dead-end canals) and 50 in 2 other sampling strata (all remaining areas within Maryland's coastal bays and all remaining areas within Delaware's coastal bays). Sites (except dead-end canals) were selected by: 1) enhancing the EMAP hexagonal grid (Overton, et al., 1990) and randomly selecting the appropriate number of grid cells for each stratum; then 2) selecting a random site from within each cell. A list frame of the dead-end canals was developed and 25 canals were randomly selected. A site was randomly selected from within each canal.

5.1.3 Sampling Start Date

12 July 1993

5.1.4 Sampling End Date

30 September 1993

5.1.5 Platform

Sampling was conducted from 7 m (21 ft) Privateer equipped with an electric winch with a 12-foot boom.

5.1.6 Sampling Gear

Global Positioning System (GPS)

5.1.7 Manufacturer of Sampling Equipment

NA

5.1.8 Key Variables

Date and time were recorded at the site visit.

The latitude and longitude of the station location were determined at the time of sampling. According to EPA Locational Policy: 1. Latitude is always presented before longitude; 2. Latitude and longitude are recorded as decimal degrees. The specific method, Loran or GPS, of determining the latitude and longitude is also recorded.

5.1.9 Collection Method Calibration

NA

5.1.10 Sample Collection Quality Control

Sampling sites were located using a GPS receiver. Dead reckoning was used to locate sites when signal interference or equipment malfunction prevented reliable performance of the GPS receiver. Obvious landmarks, channel markers and other fixed structures were noted to identify the site location whenever dead reckoning was used.

5.1.11 Sample Collection Method Reference

NA

5.2 Data Preparation and Sample Processing

Not applicable

6. DATA MANIPULATIONS

Most values in the Stations data set were assigned, based on geographic location.

6.1 Name of new or modified values

NA

6.2 Data Manipulation Description

NA

6.3 Data Manipulation Examples

Not applicable.

7. DATA DESCRIPTION

7.1 Description of Parameters

#	Parameter SAS Name	Data Type	Len	Format	Parameter Label
1	SITE	Num	8	3.	Site Number
2	SITETYPE	Num	8	2.	Site Type (1=Random,
3	VISITNUM	Num	8	2.	Visit Number
4	EVNTDATE	Num	8	MMDDYY8.	Date when Sample Collected
5	EVNTNUM	Num	8	5.	Event Number
6	STRATDES	Num	8	2.	Original Design Stratum 0=Non-Random)
7	STRATPOS	Num	8	2.	Analytical Stratum
8	STA_LAT	Num	8	7.4	Station Latitude
9	STA_LNG	Num	8	7.4	Station Longitude
10	TIME_ON	Num	8	TIME8.	Time on Station
11	TIME_OFF	Num	8	TIME8.	Time off Station

7.1.6 Precision to which values are reported

The precision is indicated by the attribute format reported under 7.1

7.1.7 Minimum value in data set

VISITNUM 1
 STRATDES 1
 STRATPOS 1
 STA_LAT 38.020
 STA_LNG -75.365

7.1.8 Maximum value in Data Set

VISITNUM 4
 STRATDES 6
 STRATPOS 14
 STA_LAT 38.701
 STA_LNG -75.057

7.2 Data Record Example

7.2.1 Column Names for Example Records

7.2.2 Example Data Records

	S	V	E	S	S	S	S	T	S	T	T	T
	I	I	V	E	T	T	T	A	A	T	T	T
	T	S	N	V	R	R	R	A	A	M	M	M
	E	I	T	T	A	A	A	A	A	E	E	E
	T	T	D	T	T	T	T	L	L	E	L	L
0	I	Y	A	N	D	P	P	A	A	O	O	O
B	T	P	T	U	U	E	O	A	N	O	N	F
S	E	E	E	M	M	S	S	T	G	N	N	F
1	101	1	1	08/10/93	1091	1	1	38.5880	-75.2497	9:23:00	9:58:00	
2	102	1	1	08/10/93	1092	1	1	38.5857	-75.2733	10:17:00	10:53:00	
3	105	1	1	07/15/93	2016	1	1	38.5837	-75.2353	9:58:00	10:35:00	
4	106	1	1	08/17/93	1117	1	1	38.5933	-75.1572	14:05:00	14:30:00	
5	107	1	1	08/04/93	1080	1	1	38.5933	-75.1700	16:34:00	17:00:00	

8. GEOGRAPHIC AND SPATIAL INFORMATION

8.1 Minimum Longitude

-75 Degrees 17 Minutes 4.80 Decimal Seconds

8.2 Maximum Longitude

-75 Degrees 04 Minutes 18.60 Decimal Seconds

8.3 Minimum Latitude

33 Degrees 49 Minutes 54.60 Decimal Seconds

8.4 Maximum Latitude

38 Degrees 38 Minutes 33.00 Decimal Seconds

8.5 Name of area or region

Delaware and Maryland Coastal Bays

Stations were located in coastal bays along the East Coast of the United States in the States of Delaware and Maryland. Four major subsystems included Rehobeth Bay, Indian River Bay, Assawoman Bay and Chincoteague Bay. Areas of interest included Indian River, St. Martin River, Trappe Creek and artificial lagoons.

9. QUALITY CONTROL AND QUALITY ASSURANCE

9.1 Data Quality Objectives

NA

9.2 Data Quality Assurance Procedures

NA

10. DATA ACCESS

10.1 Data Access Procedures

Data can be downloaded from the WWW server.

10.2 Data Access Restrictions

Data can only be accessed from the WWW server.

10.3 Data Access Contact Persons

Dr. Frederick W. Kutz
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10.4 Data Set Format

Data can be transmitted in a variety of formats derived from SAS data sets.

10.5 Information Concerning Anonymous FTP

Data cannot be accessed via ftp.

10.6 Information Concerning Gopher and WWW

Data can be downloaded from the WWW servers.

10.7 EMAP CD-ROM Containing the Data Set

Data are not available on CD-ROM

11. REFERENCES

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12. TABLE OF ACRONYMS

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