CATALOG DOCUMENTATION
REGIONAL EMAP DATABASE
1993-1994 NEW YORK/NEW JERSEY HARBOR SYSTEM
VERTICAL PROFILE SURFACE AND BOTTOM DATA

TABLE OF CONTENTS

1. DATA SET IDENTIFICATION

1.1 Title of Catalog document

Regional EMAP Database
1993-1994 New York/New Jersey Harbor System
Vertical Profile Surface and Bottom Data

1.2 Author of the Catalog entry

Melissa Hughes, OAO Corporation

1.3 Catalog revision date

2 January 1997

1.4 Data set name

CTD DATA

1.5 Task Group

Regional Environmental Monitoring and Assessment Program

1.6 Data set identification code

221

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

Ms. Darvene A. Adams
U.S. Environmental Protection Agency - Region II

2.2. Investigation Participant

Mr. Joel S. O'Connor
U.S. Environmental Protection Agency - Region II

3. DATA SET ABSTRACT

3.1 Abstract of the Data Set

The VERTICAL PROFILE SURFACE AND BOTTOM data set provides summary data from a vertical profile taken at a site. Surface and bottom data for temperature, pH, salinity and dissolved oxygen were are reported, as well as the bottom depth. Ambient measurements of dissolved oxygen, temperature and salinity were also taken at the surface and compared to the CTD measurements.

3.2 Keywords for the Data Set

temperature, salinity, dissolved oxygen, pH, surface data, bottom data

4. OBJECTIVES AND INTRODUCTION

4.1 Program Objective

The project was designed to support resource management decisions related to pollution control and remediation throughout the New York/New Jersey (NY/NJ) Harbor and Bight Apex and to assist the New York-New Jersey Harbor Estuary Program (HEP) in developing a contaminant monitoring strategy to be included in the Comprehensive Conservation and Management Plan (CCMP) for the NY/NJ Harbor system.

4.2 Data Set Objective

To provide accurate physical data for the surface and bottom waters in the NY/NJ harbor region.

4.3 Data Set Background Discussion

The New York/New Jersey Harbor System Sediment Assessment was based on methods used in the EMAP-Estuaries program. Measurements of physical characteristics provide basic information about the environmental setting of a sample site. Knowledge of the physical context in which biological and chemical data are collected is important for interpreting results accurately because physical characteristics of the environment determine the distribution and species composition of estuarine communities, particularly assemblages of benthic macroinvertebrates.

4.4 Summary of Data Set Parameters

Surface, bottom and ambient values were recorded at the time of the visit.

5. DATA ACQUISITION AND PROCESSING METHODS

5.1 Data Acquisition

5.1.1 Sampling Objective

To collect high-quality vertical water column profiles to characterize the physical conditions at a sampling site.

5.1.2 Sample Collection Methods Summary

A SeaBird SBE "Sealogger" CTD unit was used to obtain a vertical profile of depth, dissolved oxygen, pH, temperature and salinity at each station. Measurements were made from within a meter of the water surface to approximately a meter a meter above the sediment/water interface. Dissolved oxygen, temperature and salinity at the surface were measured using a Winkler titration, NBS thermometer and a refractometer, respectively and compared with the CTD results.

5.1.3 Sampling Start Date

July 1993
July 1994

5.1.4 Sampling End Date

September 1993
September 1994

5.1.5 Platform

Sampling was conducted from two USEPA vessels, the R/V CLEAN WATERS and OSV PETER W. ANDERSON.

5.1.6 Sampling Gear

SeaBird model SBE 25 "Sealogger" CTD
NBS thermometer
Refractometer

5.1.7 Manufacturer of Sampling Equipment

Sea-Bird Electronics, Inc.

5.1.8 Key Variables

This data set contains surface, bottom and ambient values measured at the time of sampling.

5.1.9 Collection Method Calibration

NA

5.1.10 Sample Collection Quality Control

NA

5.1.11 Sample Collection Method Reference

Reifsteck, D.M., C.J. Strobel and D.J. Keith. 1993. Environmental Monitoring and Assessment Program - Near Coastal Component: 1993 Virginian Province Field Operations and Safety Manual. U.S. EPA NHEERL-AED. Narragansett, RI.

5.2 Data Preparation and Sample Processing

Not applicable

6. DATA MANIPULATIONS

NA

6.1 Name of new or modified values

NA

6.2 Data Manipulation Description

NA

6.3 Data Manipulation Examples

NA

7. DATA DESCRIPTION

7.1 Description of Parameters

#	Parameter SAS Name	Type	Data Len	Format	Parameter Label
1	STATION	Char	10	$10.	Station Identifier
2	EVNTDATE	Num	8	DATE7.	Date
3	SL_SAL	Num	8	5.2	Surface Salinity (ppt)
4	SLAMBSAL	Num	8	2.	Ambient Surface Salinity (ppt)
5	SL_TEMP	Num	8	5.2	Surface Temp (C)
6	SLAMBTMP	Num	8	4.1	Ambient Surface Temp (C)
7	SL_OXY	Num	8	5.2	Surface DO (mg/L)
8	SLAMBOXY	Num	8	3.1	Ambient Surface DO (mg/L)
9	SL_PH	Num	8	5.2	Surface pH
10	BL_METER	Num	8	6.3	Bottom depth (m)
11	BL_OXY	Num	8	5.2	Bottom DO (mg/L)
12	BL_SAL	Num	8	5.2	Bottom Salinity (ppt)
13	BL_PH	Num	8	5.2	Bottom pH
14	BL_TEMP	Num	8	5.2	Bottom Temp (C)

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

SL_SAL	1.30
SLAMBSAL	10
SL_TEMP	15.25
SLAMBTMP	14.8
SL_OXY	2.50
SLAMBOXY	1.3
SL_PH	7.07
BL_METER	1.149
BL_OXY	0.33
BL_SAL	1.30
BL_PH	7.06
BL_TEMP	4.50

7.1.8 Maximum value in Data Set

SL_SAL	34.20
SLAMBSAL	31
SL_TEMP	28.20
SLAMBTMP	28.5
SL_OXY	12.00
SLAMBOXY	13.5

7.1.8 Maximum value in Data Set, continued

SL_PH	9.35
BL_METER	41.120
BL_OXY	11.90
BL_SAL	36.20
BL_PH	10.44
BL_TEMP	27.80

7.2 Data Record Example

7.2.1 Column Names for Example Records

STATION EVNTDATE SL_SAL SLAMBSAL SL_TEMP SLAMBTMP SL_OXY SLAMBOXY SL_PH BL_METER BL_OXY BL_SAL BL_PH BL_TEMP

7.2.2 Example Data Records

OBS	STATION	EVNTDATE	SL_SAL	SLAMBSAL	SL_TEMP	SLAMBTMP	SL_OXY	SLAMBOXY
1	BA002	030CT93	31.14	30	16.27	15.8	7.30	7.5
2	BA005	030CT93	31.07	30	16.38	16.0	7.60	7.5
3	BA007	040CT93	30.48	30	16.56	15.8	7.79	7.7
4	BA010	040CT93	30.41	29	15.25	14.8	7.10	6.8
5	BA012	040CT93	31.07	28	17.37	18.1	7.93	8.3

OBS	SL_PH	BL_METER	BL_OXY	BL_SAL	BL_PH	BL_TEMP
1	8.68	11.840	5.74	31.83	8.52	13.48
2	8.69	21.010	6.87	32.05	8.59	11.86
3	8.69	26.050	7.09	32.35	8.60	9.64
4	8.59	18.350	6.07	31.98	8.53	11.84
5	8.82	26.290	7.44	32.18	8.63	10.94

8. GEOGRAPHIC AND SPATIAL INFORMATION

8.1 Minimum Longitude

-74 Degrees 16 Minutes 17.76 Decimal Seconds

8.2 Maximum Longitude

-73 Degrees 21 Minutes 0.72 Decimal Seconds

8.3 Minimum Latitude

40 Degrees 10 Minutes 35.00 Decimal Seconds

8.4 Maximum Latitude

41 Degrees 4 Minutes 53.22 Decimal Seconds

8.5 Name of area or region

New York/New Jersey Harbor System

Six sub-basins were sampled in the New York/New Jersey Harbor, including: Upper Harbor, Newark Bay,

Lower Harbor (includes Raritan and Sandy Hook Bays), Jamaica Bay, western Long Island Sound and the New York Bight Apex. For purposes of this study, the region includes the lower portions of the Hudson, Passaic, Harlem, Hackensack and Raritan Rivers, upstream to a near-bottom salinity of 15 ppt, the East River to Long Island Sound and Lower Harbor to the Atlantic Ocean. The New York Bight Apex is defined as the area of ocean bounded on the northwest by the transect from Sandy Hook, NJ to Rockaway Point, NY, the east by 73 deg 30' W longitude and the south by 40 deg. 10'N latitude. The eastern boundary of the western Long Island Sound sub-basin is 73 deg 24' W longitude (from Eaton's Neck Point, NY to Norwalk, CT).

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

Ms. Darvene A. Adams
U.S. EPA Region II

10.4 Data Set Format

NA

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

Adams, D.A. and M. Hunt. 1993. Quality Assurance Project Plan for Environmental Monitoring Projects, "Sediment Quality of the NY/NJ Harbor." U.S. Environmental Protection Agency-Region 2. Edison, NJ.

Adams, D.A., J.S. O'Connor and S.B. Weisberg. 1996. Sediment Quality of the NY/NJ Harbor System. Draft Final Report. U.S. Environmental Protection Agency-Region 2. Edison, NJ. October 1996.

Reifsteck, D.M., C.J. Strobel and D.J. Keith. 1993. Environmental Monitoring and Assessment Program - Near Coastal Component: 1993 Virginian Province Field Operations and Safety Manual. U.S. EPA NHEERL-AED. Narragansett, RI.

12. TABLE OF ACRONYMS

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