

US EPA ARCHIVE DOCUMENT

CATALOG DOCUMENTATION
NATIONAL COASTAL ASSESSMENT DATABASE
NORTHEAST REGION 2000-2006
STATION LOCATION AND VISIT INFORMATION

TABLE OF CONTENTS

1. DATASET IDENTIFICATION
2. INVESTIGATOR INFORMATION
3. DATASET 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 AND QUALITY ASSURANCE
10. DATA ACCESS AND DISTRIBUTION
11. REFERENCES
12. TABLE OF ACRONYMS
13. PERSONNEL INFORMATION

1. DATASET IDENTIFICATION

1.1 Title of Catalog document

National Coastal Assessment Database
Northeast Region 2000-2006
Station Location and Sampling Visit Information

1.2 Authors of the Catalog entry

John Kiddon, U.S. EPA NHEERL-AED
Harry Buffum, Computer Sciences Corp.

1.3 Catalog revision date

June 2010

1.4 Dataset names

Station Location and Sampling Visit Information

1.5 Task Group

National Coastal Assessment-Northeast

1.6 Dataset identification codes

001, 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

2.1 Principal Investigators

Walter Galloway, U.S. EPA NHEERL-AED
Donald Cobb, U.S. EPA NHEERL-AED

John Kiddon, U.S. EPA NHEERL-AED
Steve Hale, U.S. EPA NHEERL-AED
Charlie Strobel, U.S. EPA NHEERL-AED
Hal Walker, U.S. EPA NHEERL-AED

2.2 Sample Collection Investigators

Donald Cobb, U.S. EPA NHEERL-AED

2.3 Sample Processing Investigators

John Macauley, U.S. EPA NHEERL-GED

3. DATASET ABSTRACT

3.1 Abstract of the Dataset

The Station Location and Sampling Visit data sets report information regarding stations sampled during 2000-06 in the National Coastal Assessment in the Northeast Region. Each record reports the planned location of the station (latitude and longitude); various descriptions of the jurisdiction of the station location (name of state, stratum, and estuary containing the station); identification of the cooperative responsible for sampling; and the area represented by the station (used as weighting factors during analysis). The water column depth at the time of sampling is reported, as well as the number of visits to a station.

3.2 Keywords for the Dataset

Latitude, longitude, estuary name, state, project, stratum, area, depth

4. OBJECTIVES AND INTRODUCTION

4.1 Program Objective

The National Coastal Assessment (NCA) is a national monitoring and assessment program with the primary goal of providing a consistent evaluation of the estuarine condition in U.S. estuaries. It is an initiative of the Environmental Monitoring and Assessment Program (EMAP), and is a partnership of several federal and state environmental agencies, including: EPA's Regions, Office of Research and Development, and Office of Water; state environmental protection agencies in the 24 marine coastal states and Puerto Rico; and the United States Geological Survey (USGS) and the National Oceanic and Atmospheric Agency (NOAA). The NCA program was initiated in 2000 and completed in 2006.

Stations were randomly selected using EMAP's probabilistic sampling framework and were sampled once during a summer index period (June to October). A consistent suite of indicators was used to measure conditions in the water, sediment, and in benthic and fish communities. The measured data may be used by the states to meet their reporting requirements under the Clean Water Act, Section 305(b). The data were also used to generate a series of national reports characterizing the condition of the Nation's estuaries <http://www.epa.gov/nccr/>.

4.2 Dataset Objective

To report information about station locations, visits and weighting factors used during data analysis.

4.3 Dataset Background Discussion

The station locations presented in this data set are the planned latitude and longitude values designated by program designers. The actual latitudes and longitudes may differ slightly from the planned values.

State-cooperative agencies were responsible for the administration of the NCA program in the Northeast. Generally, the jurisdiction of the cooperatives reflect state boundaries; however, in several incidences, a state-cooperative sampled stations in a neighboring state's waters (see table below). Station Ids reflect the station's location, rather than the cooperative's identity. All stations located within a state's boundaries are identified by State.

State	Coooperative	Organizations sampling
ME	Maine	Casco Bay Project/U of Southern Maine
ME-LOB	Maine Lobster Collection	Casco Bay Project/U of Southern Maine
NH	New Hampshire	Jackson Estuarine Lab/UNH
MA	Massachusetts	MA Coastal Zone Mgt. U. of Massachusetts/Boston, Dartmouth
MA-FSH	Massachusetts Fish	Mass. Marine Fisheries (2000 only)
RI	Rhode Island	Roger Williams University (in 2000) University of Rhode Island
RI-FSH	Rhode Island Fish Survey	Roger Williams University (2000 only)
CT	Connecticut	Connecticut DEP
CT-FSH	Connecticut Fish Survey	Connecticut DEP
NY	New York	MSRC, Stonybrook University Suffolk County Dep. Health Services NYC DEP Town of Hempstead
NJ-DB	New Jersey-Delaware Bay	New Jersey Marine Sciences Consortium
NJ-C	New Jersey Coast	New Jersey Marine Sciences Consortium
DE	Delaware Inland Bays	Delaware DNR
DB	Delaware Bay	
DI	Delaware Inland Bays Delaware Atlantic Coast	
MD	Maryland	
VA	Virginia	

The seven-year NCA program in the Northeast is divided into three phases. The Northeast (Maine through Delaware) was assessed completely in each Phase. The Table below lists the number of stations sampled in the Northeast, organized by Phase, Year, and State (ST_COOP). Note the following regarding Phase and ST_COOP. Phase 1 was conducted in 2000-2001, when each ST_COOP followed a two-year sampling design in which half of each stratum (described below) was uniformly sampled each year. Phase 2 comprised years 2002-2004 (2002-2005 for ST_COOP = NH), when each stratum was again completely sampled, and Phase 3 pertains to 2005-2006 (2006 only for ST_COOP = NH), when each stratum was once again uniformly sampled over a two-year period. Analyzing data by Phase provides the most accurate picture of regional condition, particularly when applying station weights in the analysis (discussed below). Note the change in ST_COOP name for a few coops in Phase 3; essentially, NJ-C = NJ, NJ-DB = DB, and DE = DI. Only Phase 3 data for MD and VA are contained in this database; contact John Macauley (Section 13) for information regarding earlier data for these states. The -LOB and -FSH coops pertain to non-probabilistic sites where lobster, fish, and limited physical and chemical data were collected.

Number of stations in Northeast NCA by Phase, Year, and ST_COOP

Count of stations	Phase year							
	I		II				III	
ST_COOP	'00	'01	'02	'03	'04	'05	'05	'06
ME	29	52	29	32	35		25	25
NH	41	41	43	52	41	42		31
MA	38	52		19	21		23	25
RI	35	35		18	18		25	25
CT	29	39	13	10	20		15	34
NY	30	36	53	26	28		28	25
NJ-C	30	40	30	23	36			
NJ							16	46
NJ-DB	37	37	37	34	38			
DB							22	28
DE	18	21	20	19	20			
DI							25	25
MD							24	25
VA							50	50
ME-LOB			29	14	12			
MA-FSH	28							
RI-FSH	10		14	11	12		12	12
CT-FSH	19	12	28	10	9		11	10

Stations were grouped into strata based on watershed boundaries, state jurisdiction, or physical property such as depth. The strata were generally organized to reflect water body boundaries and may therefore contain stations falling in more than one state. Different strata were generally used in each of the three phases. Every station was assigned a station weight or area equal to the area (km²) represented by the station. For non-probabilistic sites associated with fish surveys and revisits, the area was intentionally left blank.

The station location may be original site, first alternate, or second alternate, designated by -A, -B, or -C, respectively. The user may wish to adjust the magnitude of the weighting factor (area) based on the station suffix. For example, by multiplying the weighting factor by 0.5 or 0.33 if sampling crews had to sample at the first or second alternate location, respectively. Such an adjustment reflects the fact that the station did not represent the entire area originally assigned to the station.

Massachusetts did not participate in the NCA program in 2003. Rhode Island conducted fish trawls only in 2003, and collected physical water parameters in conjunction with the trawls. Connecticut collected all parameters in 2002, but at an abbreviated group of in-shore stations and sampled stations in Long Island Sound in 2003.

4.4 Summary of Dataset Parameters

Station Location and Sampling Visit data set values were based on values assigned to the station and other observations recorded at the visit.

5. DATA ACQUISITION AND PROCESSING METHODS

5.1 Data Acquisition / Field Sampling

Data were not acquired in the field; rather values were assigned by NCA program planners.

5.1.1 Sampling Objective

Record the date, location, water depth, and visit number of sampling events.

5.1.2 Sample Collection: Methods Summary

A Differential GPS or a Loran system was used to measure 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

7 July 2000
25 June 2001
2 May 2002
1 May 2003
16 April 2004
20 June 2005
1 June 2006

5.1.4 Ending Sampling Dates

20 October 2000
31 October 2001
31 October 2002
7 November 2003
4 November 2004
22 November 2005
24 November 2006

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 to an alternate planned location (see Section 4.4). 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. 2000. Coastal 2000-Northeast Component: Field Operations Manual U. S. Environmental Protection Agency, National Health and Environmental Effects Research Laboratory, Atlantic Ecology Division, Narragansett, RI. EPA/620/R-00/002.

5.1.12 Sample Collection: Alternate Methods

Not applicable.

5.2 Data Preparation and Sample Processing

No analytical processing was involved with the Station Location and Sampling Visit data.

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 Data Sets

7.1.1.1 Station Location

Attribute Name	Format	Description
Province	VARCHAR2(4)	Large biogeographic sampling area
Resource Name	VARCHAR2(20)	Program conducting sampling
Data Group	VARCHAR2(4)	Data group conducting sampling
Sampling Year	NUMBER(4.0)	Data collection year
EPA Region	VARCHAR2(2)	EPA region code
State	VARCHAR2(2)	Code for state
Water Body System	VARCHAR2(6)	Large water body of station location
Estuary Name	VARCHAR2(50)	Small water body where station located
Station Name	VARCHAR2(20)	The station identifier
Latitude Decimal Degrees	NUMBER(9.3)	Decimal degrees (datum NAD83)
Longitude Decimal Degrees	NUMBER(9.3)	Decimal degrees (-)(datum NAD83)
Station Statistical Area	NUMBER(9.4)	Station statistical area (sq. km.)
Water Body Strata	VARCHAR2(6)	Design Strata: Depositional area
Sample Collection Code	VARCHAR2(18)	Station class-sampling regime
Local Station Name	VARCHAR2(20)	Local station name

7.1.1.2 Sampling Visit

Attribute Name	Format	Description
Data Group	VARCHAR2(4)	Data group conducting sampling
Sampling Year	NUMBER(4.0)	Year of data collection
Station Name	VARCHAR2(20)	The station identifier
Sampling Collection Date	DATE	Date of sample collection
Visit Number	NUMBER(2.0)	Number of visit to this station
Station Depth	NUMBER(5.1)	Water depth at time of sampling
Depth Units	VARCHAR2(15)	Units of depth

7.1.2 Precision of Reported Values

Latitude and Longitude are reported to 0.0001 decimal degree units.
Statistical Area is reported to three significant digits.

7.1.3 Minimum Value in Dataset

Name	Min
Latitude	36.5637
Longitude	-77.3041
Statistical Area	0.001
Station Depth	0.1

7.1.4 Maximum Value in Dataset

Name	Max
Latitude	45.1848
Longitude	-66.956
Statistical Area	457
Station Depth	99

7.2 Data Record Example

7.2.1 Column Names for Example Records

7.2.1.1 Station Locations

Province,Resource Name,Data Group,Sampling Year,EPA Region,State,
Water Body System,Estuary Name,Station Name,Latitude Decimal Degrees,
Longitude Decimal Degrees,Station Statistical Area,Water Body Strata,
Station Class,Local Station Name

7.2.1.2 Sampling Visits

Data Group,Sampling Year,Station Name,Sampling Collection Date,
Latitude Decimal Degrees,Longitude Decimal Degrees,Visit Number,Station
Depth,Depth Units

7.2.2 Example Data Records

7.2.2.1 Station Locations

Virginian,NCA-NE,National Coastal Assessment Northeast/Connecticut,
2000,1,CT,Long Island Sound,Connecticut Ponds,CT00-0001-A,41.151,
-73.22,1.13,Connecticut Coastal,Base Sampling Site,21A
Virginian,NCA-NE,National Coastal Assessment-Northeast/Connecticut,
2000,1,CT,Long Island Sound,Housatonic River,CT00-0003-A,
41.288,-73.071,3.26,Connecticut Coastal,Base Sampling Site,23A
Virginian,NCA-NE,National Coastal Assessment-Northeast/Connecticut,
2000,1,CT,Long Island Sound,Connecticut River,CT00-0005-A,
41.274,-72.327,0.06,Connecticut Coastal,Base Sampling Site,25A

7.2.2.2 Sampling Visits

National Coastal Assessment-Northeast/Connecticut,2000,CT00-0001-A,
17-AUG-2000,41.151,-73.22,1,1.8,m
National Coastal Assessment-Northeast/Connecticut,2000,CT00-0003-A,
04-AUG-2000,41.288,-73.071,1,8.0,m
National Coastal Assessment-Northeast/Connecticut,2000,CT00-0005-A,
18-SEP-2000,41.274,-72.327,1,1.5,m

8. GEOGRAPHIC AND SPATIAL INFORMATION

8.1 Minimum Longitude (Westernmost)

-77.3041 decimal degrees

8.2 Maximum Longitude (Easternmost)
-66.9562 decimal degrees

8.3 Minimum Latitude (Southernmost)
36.5637 decimal degrees

8.4 Maximum Latitude (Northernmost)
45.1848 decimal degrees

8.5 Name of area or region
The National Coastal Assessment Northeast Region covers the northeastern US coastline from Maine to Virginia.

9. QUALITY CONTROL AND QUALITY ASSURANCE

9.1 Measure Quality Objective
Provide accurate information regarding the location of sampling events

9.2 Data Quality Assurance Procedures
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 can be accessed at: <http://www.epa.gov/emap/nca/html/data/>

10.2 Data Access Restrictions
None

10.3 Data Access Contact Persons
John Kiddon, U.S. EPA NHEERL-AED, Narragansett, RI
401-782-3034, 401-782-3030 (FAX), kiddon.john@epa.gov

Harry Buffum, Data Manager, Raytheon, Narragansett, RI
401-782-3183, 401-782-3030 (FAX), buffum.harry@epa.gov

10.4 Dataset Format
Tab-delimited ASCII files

10.5 Information Concerning Anonymous FTP
Not available

10.6 Information Concerning WWW
Data can be downloaded from the WWW server.

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

11. REFERENCES

Strobel, C.J. 2000. Environmental Monitoring and Assessment Program: Coastal 2000 - Northeast component: field operations manual. Narragansett (RI): U.S. Environmental Protection Agency, National Health and Environmental Effects Research Laboratory, Atlantic Ecology Division. EPA/620/R-00/002. 68 p.

U.S. EPA. 2001. National Coastal Assessment: Field Operations Manual. U.S. Environmental Protection Agency, Office of Research and Development, National Health and Environmental Effects Research Laboratory, Gulf Ecology Division, Gulf Breeze, FL. EPA/620/R-01/003. 72 p.

U.S. EPA. 2001. Environmental Monitoring and Assessment Program (EMAP): National Coastal Assessment Quality Assurance Project Plan 2001-2004. U.S. Environmental Protection Agency, Office of Research and Development, National Health and Environmental Effects Research Laboratory, Gulf Ecology Division, Gulf Breeze, FL. EPA/620/R-01/002. 189 p.

12. TABLE OF ACRONYMS

AED Atlantic Ecology Division
EMAP Environmental Monitoring and Assessment Program
EPA Environmental Protection Agency
NCA National Coastal Assessment
NHEERL National Health and Environmental Effects Research Laboratory
QA/QC Quality Assurance/Quality Control

13. PERSONNEL INFORMATION

Harry Buffum, Database Manager
Raytheon Corporation
27 Tarzwell Drive, Narragansett, RI 02882-1197
401-782-3183, 401-782-3030 (FAX), buffum.harry@epa.gov

Don Cobb, NCA Project Officer
U.S. Environmental Protection Agency, NHEERL-AED
27 Tarzwell Drive, Narragansett, RI 02882-1197
401-782-9616, 401-782-3030 (FAX), cobb.donald@epa.gov

Walter Galloway, NCA Project Officer
U.S. Environmental Protection Agency, NHEERL-AED
27 Tarzwell Drive, Narragansett, RI 02882-1197
401-782-3096, 401-782-3030 (FAX), galloway.walt@epa.gov

Steve Hale, EMAP Information Manager
U.S. Environmental Protection Agency, NHEERL-AED
27 Tarzwell Drive, Narragansett, RI 02882-1197
401-782-3048, 401-782-3030 (FAX), hale.stephen@epa.gov

Melissa Hughes, Data Librarian
Raytheon Corporation
27 Tarzwell Drive, Narragansett, RI 02882-1197
401-782-3184, 401-782-3030 (FAX), hughes.melissa@epa.gov

John Kiddon, NCA Analyst and Northeast QA Manager
U.S. Environmental Protection Agency, NHEERL-AED
27 Tarzwell Drive, Narragansett, RI 02882-1197
401-782-3044, 401-782-3030 (FAX), kiddon.john@epa.gov

John Macauley, NCA QA Officer
U.S. Environmental Protection Agency, NHEERL-GED
1 Sabine Island Dr., Gulf Breeze, FL 32561
850-934-9353, macauley.john@epa.gov

Charlie Strobel, AED Analyst and Project Officer
U.S. Environmental Protection Agency, NHEERL-AED
27 Tarzwell Drive, Narragansett, RI 02882-1197
401-782-3180, 401-782-3030 (FAX), strobel.charles@epa.gov

Kevin Summers, Acting National NCA Program Director
U.S. Environmental Protection Agency, NHEERL-GED
1 Sabine Island Dr., Gulf Breeze, FL 32561
850-934-9244, summers.kevin@epa.gov

Hal Walker, Northeast NCA Program Director and Analyst
U.S. Environmental Protection Agency, NHEERL-AED
27 Tarzwell Drive, Narragansett, RI 02882-1197
401-782-3007, 401-782-3030 (FAX), walker.henry@epa.gov