CATALOG DOCUMENTATION
NATIONAL COASTAL ASSESSMENT- NORTHEAST DATABASE
YEARS 2000-2006
FISH COUNTS DATA; "FISH_CNT"

TABLE OF CONTENTS

1. DATASET IDENTIFICATION

1.1 Title of Catalog document
National Coastal Assessment-Northeast Region Database
Years 2000-2006
Fish Count Data by Species

1.2 Authors of the Catalog entry
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1.3 Catalog revision date
November 2009

1.4 Dataset name
FISH_CNT

1.5 Task Group
National Coastal Assessment-Northeast

1.6 Data Set Identification Code
010

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)

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3. DATASET ABSTRACT

3.1 Abstract of the Dataset

The FISH_CNT data file contains the following information for each species of fish caught in a standard trawl at a station: the station identifier, trawl date, common name of the fish taxa, and the number of fish caught. Scientific (Latin) names for the fish taxa can be found in the FISH_TAX table. The FISH_CNT dataset does not record numbers of crustaceans such as crabs or lobsters that may have been caught in fish trawls. One record is presented per taxa at a station.

3.2 Keywords for the Data Set

Fish abundance per trawl

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 was 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 Data Set Objective

The objective of the FISH_CNT data file is to report and the abundance of fish caught in a trawl, reported by taxa.

4.3 Background Discussion

Refer to Section 4.4 for a list of dataset parameters. Additional information about selected parameters are discussed in this section.

The information collected in the fish surveys are reported in five data files. FTRAWL presents information regarding fish trawls and abundance of unique species per standard trawl. FISH_CNT contains the number of fish per species per standard trawl. FISH_LEN specifies fork length of individual fish and the frequency and location of pathologies observed in a ship-board inspection. CRAB_LOB presents abundance and size data for crustaceans caught in standard trawls. TISSCHEM reports the concentrations of about 75 chemical analytes measured in composites samples of fish, lobsters or crabs collected at a station. The lookup table FISH_TAX lists the common and scientific names of all fish identified in standard trawls.

The parameter F_CLASS is used to identify groups of fish that were processed beyond the standard protocol. Generally, a maximum of 30 individuals of a species are reserved for length measurement and inspection for disease. If a large number of fish are caught in a trawl, some crews created additional groups of that species for measurement, roughly distinguished by size (e.g., F_CLASS = LARGE or SMALL) or age (e.g., F_CLASS = JUVENILE or YOUNG YEAR). There are no firm definitions for the distinctions. This parameter F_CLASS is also used in the FSH_LEN data file to distinguish the distinct groups. The following Table indicates the number of records in this data file by ST_COOP, F_CLASS, and Year.

Number of records in FSH_CNT by ST_COOP, F_CLASS, and Year:

Count of Records		Year							
ST_COOP	F_CLASS	2000	2001	2002	2003	2004	2005	2006	Grand Total
NH		42	30	29	90	68	24	24	307
MA-FSH		290							290
RI		5		80	9		5		99
RI-FSH		72			111	114	116	94	507
CT		39			7	5	7		58
	LARGE					1			1
	SMALL					1			1
CT-FSH		268	174	392	156	117	25	106	1238
NY		21	116	452	177	210	159	137	1272
	LARGE			4		1			5
	SMALL					3			3
NJ-C		126	132	70	55	70			453
	CLASS 1	9	6		2				17
	CLASS 2	11	8		1				20
	CLASS 3	6	2						8
	CLASS 4	1							1
	JUVENILE					1			1
	JUVENILE W				1				1

NJ								24	24
NJ-DB		215	238	187	101	200			941
	CLASS 1	17	3		5				25
	CLASS 2	14	2	3	2				21
	CLASS 3	14	3	3	7				27
	JUVENILE		1			3			4
	YOUNG YEAR		1						1
DB							63	37	100
DE		36	27	46	35	62			206
DI							77	78	155
	JUVENILE A							1	1
	JUVENILE B							1	1
	JUVENILE T							1	1
MD							61	51	112
VA							221	219	440
Grand Total		1186	743	1266	759	856	758	773	6341

NCA planners provide two alternate locations for a station location in the event that the original location cannot be sampled. The parameter STA_ALT indicates whether the station location was the original site, first alternate, or second alternate—STA_ALT = "A", "B", or "C", respectively. Also refer to discussion in the STATIONS metadata file regarding use of this parameter during analysis of the data.

4.4 Summary of Data Set Parameters

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

*STATION	Station identifier
*STAT_ALT	Station location (A, B, or C)
*EVNTDATE	Date of sampling event
*FTRAWLID	Fish Trawl Id Number
FCOMNAME	Fish taxa common name
F_CLASS	Optional group designation
F_COUNT	Number of fish caught in this taxa

5. DATA ACQUISITION AND PROCESSING METHODS

5.1 Data Acquisition / Field Sampling

The sample collection methods used by USEPA trained field crews will be described here. NCA Standard trawls are identified by TRWLTYPE=NCA. Any significant variations by other NCA partners are noted in Section 5.1.12.

5.1.1 Sampling Objective

To collect a representative sample of fish at a station using a standard trawl. Additional nonstandard trawls were conducted when necessary to collect enough fish for chemical analyses.

5.1.2 Sample Collection and Ship-Board Processing: Methods Summary

The EPA standard fish trawl was conducted using a funnel-shaped net that filters fish from the near bottom waters. Fish were herded into the net by ground wire and an overhanging panel. Standard trawls were 10 ± 2 minutes in duration with a towing speed of 2-3 knots through the water against the prevailing current (1-3 knots relative to the bottom). An

auxiliary, nonstandard trawl was performed to collect fish for tissue chemistry samples if an insufficient quantity were obtained in the standard trawl. Fish from the auxiliary trawls were used for chemical analyses only, and were not included in the standardized survey counts used to characterize the fish community structure.

All fish caught in a standard trawl were counted on board ship and immediately identified using the scientific and common names listed in the FTAXON file. Fork lengths (carapace widths for crabs and lobster) in mm were measured on approximately the first 30 individuals of each species found at a station. A visual inspection for obvious signs of pathology was conducted on all fish measured for length. A subset of fish, crabs, or lobster were randomly chosen for chemical analysis. These test organisms were tagged and frozen individually, then combined into groups of 2-10 organisms of same species for later processing as composite samples. Each group was assigned a composite ID (SAMPLEID) and sent to the analytical lab for chemical analysis.

5.1.3 Beginning Sampling Date
2 August 2000

5.1.4 Ending Sampling Date
26 September 2006

5.1.5 Sampling Platform
All program partners collected samples from various gasoline or diesel powered boats, 25 to 27 feet in length.

5.1.6 Sampling Equipment
The trawl net consisted of a funnel-shaped high-rise sampling trawl. The net includes a 16 meter tow line, a chain sweep, 5 cm mesh wings, and a 2.5 cm cod end.

5.1.7 Manufacturer of Sampling Equipment
Not applicable

5.1.8 Key Variables
Not applicable

5.1.9 Sample Collection: Calibration
The sampling gear does not require calibration.

5.1.10 Sample Collection: Quality Control
A trawl was considered void if one or more of the following conditions occurred:

1. Trawl could not be completed because of boat malfunction, vessel traffic, or major disruption of gear
2. Boat speed exceeded the prescribed range
3. The cod-end became untied
4. The net was filled with mud or debris
5. A portion of the catch was lost prior to processing
6. The tow lines became separated
7. The net was torn in a way that significantly altered net efficiency

If a successful trawl could not be performed within 1½ hours, the site was considered unsampleable. Quality assurance audits were performed to verify the identification and measurement techniques of the field crew.

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

Ftrawlid records with "-STRL" were conducted following NCA standards. Ftrawlid records without "-STRL" may or may not have been conducted following NCA standards. More information may be available from the FTRAWL data and metadata files.

5.2 Data Preparation and Sample Processing

All parameters reported in this file were measured aboard ship immediately following the trawl (see Section 5.1).

5.2.1 Sample Processing Objective

Not applicable

5.2.2 Sample Processing: Methods Summary

Not applicable

5.2.3 Sample Processing: Calibration

Not applicable

5.2.4 Sample Processing: Quality Control

Not applicable

5.2.5 Sample Processing: References

Not applicable

5.2.6 Sample Processing: Alternate Methods

Not applicable

6. DATA ANALYSIS AND MANIPULATIONS

6.1 Name of New or Modified Values

Not applicable

6.2 Data Manipulation Description

Not applicable

7. DATA DESCRIPTION

7.1 Description of Parameters

7.1.1 Components of the Data Set

NAME	TYPE	LENGTH	LABEL
STATION	Char	9	Station identifier

STAT_ALT	Char	1	Station location (A, B, or C)
EVNTDATE	Num	8	Date of sampling event
FTRAWLID	Char	14	Fish Trawl Identifier
FCOMNAME	Num	30	Fish taxa common name
F_CLASS	Num	10	Fish size class
F_COUNT	Num	8	Number of fish caught in this taxa

7.1.2 Precision of Reported Values
As displayed in Section 7.1.3 and 7.1.4.

7.1.3 Minimum Value in Data set

Variable	Minimum Value
F_COUNT	0

7.1.4 Maximum Value in Data set

Variable	Maximum Value
F_COUNT	8402

7.2 Data Record Example

station	stat_alt	evntdate	ftrawlid	fcomname	f_class	F_COUNT
CT03-0241	A	9/22/2003		BLUEFISH		343
CT03-0241	A	9/22/2003		BUTTERFISH		1608
CT03-0241	A	9/22/2003		CREVALLE JACK		1

8. GEOGRAPHIC AND SPATIAL INFORMATION

8.1 Minimum Longitude (Westernmost)
-77.304 decimal degrees

8.2 Maximum Longitude (Easternmost)
-66.946 decimal degrees

8.3 Minimum Latitude (Southernmost)
36.564 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 Delaware

9. QUALITY CONTROL AND QUALITY ASSURANCE

9.1 Measurement Quality Objectives

9.2 Data Quality Assurance Procedures

Inspection of the sampling gear for tears or improper assemblage is done at the beginning of every trawl event.

10. DATA ACCESS

10.1 Data Access Procedures

Data can be downloaded from the web
http://www.epa.gov/emap/nca/html/regions/index.html

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

No gopher access, see Section 10.1 for WWW access

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
DE	Delaware
CT	Connecticut
EMAP	Environmental Monitoring and Assessment Program
EPA	Environmental Protection Agency
MA	Massachusetts
ME	Maine
NCA	National Coastal Assessment
NH	New Hampshire
NHEERL	National Health and Environmental Effects Research Laboratory
NJ	New Jersey
NY	New York
NYC	New York City
PA	Pennsylvania
QA/QC	Quality Assurance/Quality Control
RI	Rhode Island
UNH	University of New Hampshire
WWW	World Wide Web

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