

**DRAFT CATALOG DOCUMENTATION**  
**NATIONAL COASTAL ASSESSMENT- NORTHEAST DATABASE**  
**YEAR 2000 STATIONS**  
**FISH TRAWL DATA; "FTRAWL"**

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**1. DATASET IDENTIFICATION**

**1.1 Title of Catalog document**

National Coastal Assessment-Northeast Region Database  
Year 2000 Stations  
Fish Trawl Data by Station

**1.2 Authors of the Catalog entry**

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**1.3 Catalog revision date**

October 2, 2002

**1.4 Dataset name**

FTRAWL

**1.5 Task Group**

National Coastal Assessment-Northeast

**1.6 Data Set Identification Code**

012

**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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### 2.3 Sample Processing Investigators

Not applicable

## 3. DATASET ABSTRACT

### 3.1 Abstract of the Dataset

The FTRAWL data file contains the following information for each standard trawl performed: the type of standard trawl, the number of fish species caught in each trawl, trawl speed and duration, and latitude and longitude of beginning and end points of the trawl.

### 3.2 Keywords for the Data Set

Trawl speed and duration, species abundance per trawl

## 4. OBJECTIVES AND INTRODUCTION

### 4.1 Program Objective

The Coastal 2000 Initiative is a national EMAP effort. In Coastal 2000 we are demonstrating a consistent, integrated, probabilistic monitoring effort that will produce a national assessment of the condition of the U.S. marine estuaries. We partnered with EPA Regions, EPA's Office of Water, state resource/protection agencies in the 24 marine coastal states and Puerto Rico, USGS, and NOAA to conduct the sampling of estuaries during the late summer months of 2000 and 2001. A minimum of 50 sampling locations in each state have been established within EMAP's probabilistic sampling framework. From this we will develop a national report on the condition of the Nations's estuaries, as well as reports on the condition of the estuaries in each of the individual states and Puerto Rico. In 2002 we are beginning our assessment of the condition of the near-shore coastal environments to complement EPA's ongoing efforts to improve beach monitoring.

#### 4.2 Data Set Objective

The objective of the FTRAWL data file is to report the speed, duration and type standard trawl performed, the number of fish species caught per trawl.

#### 4.3 Background Discussion

The information collected in the fish surveys are reported in five data files. FTRAWL includes the number of unique species per standard trawl. FISH\_CNT contains the number of fish per species (by size class) per standard trawl. FISH\_LEN specifies fork length of individual fish and the frequency and location of pathologies observed in a ship-board inspection, and TISSCHEM reports the concentrations of up to 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.

Standard trawls of uniform speed and duration were employed by each state when conducting the fish surveys characterizing the community structure at a site. However different state cooperative agreements used different standard procedures. Therefore fish community measures cannot be easily compared across all states. Additional nonstandard trawls were performed to catch fish for chemical or pathology analyses if sufficient numbers of fish were not available from the standard trawl. Fish from the auxiliary trawls were not included in the standardized counts used to describe community structure.

#### 4.4 Summary of Data Set Parameters

*STATION	Station identifier
*STAT_ALT	Station Location (A,B or C)
*EVNTDATE	Date of sampling event
FTRLTYPE	Standard Trawl Type
	EPA    EMAP Standard trawl
	CT    Connecticut Fish Survey Trawl
	RI    Rhode Island Fish Survey Trawl
	MA    Massachusetts Fish Survey Trawl
	NH    New Hampshire modified Standard
FTRLFLAG	Status of Completed Fish Trawl
FSPEC CNT	Total Fish Species in Trawl (#)
FT_DUR	Duration of Fish Trawl (mmss)
FWTR_SPD	Trawl Speed through Water (knots)
BEG_LAT	Fish Trawl Beginning Latitude (dd)
BEG_LNG	Fish Trawl Beginning Longitude (dd)
END_LAT	Fish Trawl End Latitude (dd)
END_LNG	Fish Trawl End Longitude (dd)
* 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 trained field crews will be described here. EPA Standard trawls are identified by TRWLTYPE=EPA. 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 histopathology analyses. These nonstandard trawls are not included in this data set.

#### 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  $10 \pm 2$  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.

If a standard length trawl could not be completed due to sea conditions or gear failure, it is noted in the FTRLFLAG variable. A blank FTRLFLAG indicates a successfully completed trawl.

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. Further processing of the fish was conducted as described in other fish files.

#### 5.1.3 Beginning Sampling Date

13 July 200

#### 5.1.4 Ending Sampling Date

14 October 2000

#### 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 is 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 (trawls aborted after a minimum of 8 minutes were acceptable if the net was retrieved in a standard manner)
2. Boat speed exceeded the prescribed range
3. The cod-end became untied
4. The trawl continued for more than 12 minutes or less than 8 minutes
5. The net was filled with mud or debris
6. A portion of the catch was lost prior to processing
7. The tow wire, bridle, head rope, foot rope, or up and down lines became separated
8. The net was torn in a way that significantly altered the efficiency of the net

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

Trawl records with the following Trawl Codes did not follow EPA standards.

TRLTYPE	Name	Description
CT	Connecticut Fish Survey Trawl	20 minutes standard
RI	Rhode Island Fish Survey Trawl	20 minutes standard
MA	Massachusetts Fish Survey Trawl	20 minutes standard
NH	New Hampshire modified Standard	4 minutes standard

#### 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	Event Date
FTRLTYPE	Char	7	Fish Trawl Type
FTRLFLAG	Char	20	Status of Completed Fish Trawl
FSPECCNT	Num	4	Total Fish Species in Trawl (#)
FT_DUR	Num	10	Duration of Fish Trawl (mmss)
FWTR_SPD	Num	4	Trawl Speed through Water (knots)
BEG_LAT	Num	8	Fish Trawl Beginning Latitude (dd)
BEG_LNG	Num	8	Fish Trawl Beginning Longitude (dd)
END_LAT	Num	8	Fish Trawl End Latitude (dd)
END_LNG	Num	8	Fish Trawl End Longitude (dd)

##### 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
EVNTDATE	14824
FSPECCNT	0
FWTR_SPD	0.4
BEG_LAT	38.4506
BEG_LNG	-75.6732
END_LAT	38.4532
END_LNG	-75.6778

### 7.1.4 Maximum Value in Data set

Variable	Maximum Value
EVNTDATE	14903
FSPECCNT	23
FWTR_SPD	2.9
BEG_LAT	43.197
BEG_LNG	-70.0952
END_LAT	43.197
END_LNG	-70.0953

### 7.2 Data Record Example

STATION	STAT_ALT	EVNTDATE	FTRLTYPE	FTRLFLAG	FSPECCNT
DE00-0001 A		10/17/00	EPA		3
DE00-0003 A		10/17/00	EPA		4
DE00-0007 A		10/19/00	EPA		6
DE00-0011 B		10/16/00	EPA		0
DE00-0013 A		10/20/00	EPA		4

FT_DUR	FWTR_SPD	BEG_LAT	BEG_LNG	END_LAT	END_LNG
10:50	2	38.4506	-75.0751	38.4532	-75.0806
12:35	2	38.4829	-75.1052	38.4869	-75.102
10:00	2	38.5719	-75.6732	38.5686	-75.6778
10:00	2	38.5501	-75.1055	38.5518	-75.1001
10:00	2	38.5894	-75.6622	38.5938	-75.6598

## 8. GEOGRAPHIC AND SPATIAL INFORMATION

### 8.1 Minimum Longitude (Westernmost) -75.7737 decimal degrees

8.2 Maximum Longitude (Easternmost)

-67.0939 decimal degrees

8.3 Minimum Latitude (Southernmost)

38.4521 decimal degrees

8.4 Maximum Latitude (Northernmost)

44.9456 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 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

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. 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.

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.

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
C	Degrees Celsius
CTD	Conductivity, Temperature, and Depth
DB	Delaware Bay
DO	Dissolved Oxygen
EMAP	Environmental Monitoring and Assessment Program
EPA	U.S. Environmental Protection Agency
GED	Gulf Ecology Division
m	Meter
mg/L	Milligrams per liter
NHEERL	National Health and Environmental Effects Research Laboratory
QA/QC	Quality Assurance/Quality Control
ppt	Parts per thousand
SAV	Submerged Aquatic Vegetation
USEPA	United States Environmental Protection Agency
VER	Versar, Inc.
WWW	World Wide Web

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