

US EPA ARCHIVE DOCUMENT

CATALOG DOCUMENTATION  
EMAP-ESTUARIES PROVINCE LEVEL DATABASE  
CAROLINIAN PROVINCE 1994-1995  
DEMERSAL TRAWL DATA

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1. DATA SET IDENTIFICATION

1.1 Title of Catalog Document

EMAP-Estuaries Province Level Database  
Carolinian Province  
Demersal Trawl Data

1.2 Authors of the Catalog entry

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1.3 Catalog Revision Date

March 18, 1998

1.4 Data Set Name

CP\_DEM\_A.DAT, CP\_DEM\_S.TXT, CP\_DEM\_L.DAT, CP\_DEM\_C.DAT

## 1.5 Task Group

Estuaries

## 1.6 Data set identification codes

14, 15, 16, 17

## 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

J. Hyland (NOAA/NOS/NCCOS/CCMA) - Carolinian Province Manager  
A. Ringwood (SCDNR) - Lead P.I. for SC/GA region team  
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## 3. DATA SET ABSTRACT

### 3.1 Abstract of the Data set

The CP\_DEM\_A.DAT, CP\_DEM\_S.TXT, CP\_DEM\_L.DAT, CP\_DEM\_C.DAT data sets contain demersal trawl data collected at each station in the EMAP Carolinian Province from 1994-1995. Fishes and invertebrates (shrimp, crabs, and squid) were collected at each station with a 4.9-m otter trawl (2.5 cm mesh wings and cod end) towed against the tidal currents. Tow duration was 10 min wherever possible and tow speed was 2-3 knots. Two to four tows were conducted at each station. Fishes and invertebrates captured in the trawls were carefully removed, sorted and identified to the lowest possible taxon (usually to species), enumerated, and measured for length to the nearest mm. In cases where a species was caught in excessive numbers, a minimum subsample of 30 individuals was measured for length.

The CP\_DEM\_A.DAT data set contains unsummarized demersal abundance data by trawl and taxon. This data set is for use as the data source for subsequent demersal trawl analyses and summary calculations (e.g., CP\_DEM\_L.DAT, CP\_DEM\_C.DAT are calculated from the data in CP\_DEM\_A.DAT).

The CP\_DEM\_S.TXT data set contains taxonomic classification information for all demersal taxa observed in trawls throughout the Carolinian Province from 1994-1995. This data set

is essential to resolve actual taxonomy and species names from the 8 digit code (variable COD\_EMAP) used to identify taxa in the CP\_DEM\_A.DAT and CP\_DEM\_L.DAT data sets. Taxonomic information includes: phylum, class, order, family, genus, species, and common name.

The CP\_DEM\_L.DAT data set contains demersal organism length data summarized by station and taxon. Summary results included are: number of lengths measured, mean length, and standard deviation of lengths, by taxon for each station.

The CP\_DEM\_C.DAT data set contains summary metrics used to describe the demersal community at a station. The summary results included are: number of trawls, mean number of demersal taxa (species richness) per trawl, mean demersal abundance per trawl, and Shannon-Weaver Index ( $H'$  diversity) per trawl, for each station.

The following reports are products of these and other data collected during the 1994-1995 Sampling period in the Carolinian Province. These reports may contain additional information and summary statistics that are not contained in this data set catalog or its respective data sets. We therefore recommend referring to them when using these data.

Hyland, J.L., T.J. Herrlinger, T.R. Snoots, A.H. Ringwood, R.F. Van Dolah, C.T. Hackney, G.A. Nelson, J.S. Rosen, and S.A. Kokkinakis. 1996. Environmental quality of estuaries of the Carolinian Province: 1994. Annual statistical summary for the 1994 EMAP-Estuaries Demonstration Project in the Carolinian Province. NOAA Technical Memorandum NOS ORCA 97. NOAA/NOS, Office of Ocean Resources Conservation and Assessment, Silver Spring, MD. 102 p.

Hyland, J.L., L. Balthis, C.T. Hackney, G. McRae, A.H. Ringwood, T.R. Snoots, R.F. Van Dolah, and T.L. Wade. 1998. Environmental quality of estuaries of the Carolinian Province: 1995. Annual statistical summary for the 1995 EMAP-Estuaries Demonstration Project in the Carolinian Province. NOAA Technical Memorandum NOS ORCA 123. NOAA/NOS, Office of Ocean Resources Conservation and Assessment, Silver Spring, MD. 143 p.

See also: McRae and Nelson (1996), Nelson (1995), Ringwood et al.(1995), Ringwood et al. (1997), Wheeler et al.(1995), Wheeler et al. (1996).

### 3.2 Keywords for the Data Set

demersal trawls, demersal community, species composition, mean taxon abundance, mean number of taxa, richness, Shannon-Weaver Index,  $H'$  diversity, pathologies, mean length, EMAP Carolinian Province

## 4. OBJECTIVES AND INTRODUCTION

### 4.1 Program Objective

EMAP has three primary objectives:

1. To estimate the current status, extent, changes, and trends in indicators of the Nation's ecological resources on a regional basis;
2. To monitor indicators of pollutant exposure and habitat condition, and to seek correlative relationships between human-induced stresses and ecological condition that identify possible causes of adverse effects; and
3. To provide periodic statistical summaries and interpretive reports on ecological status and trends to the EPA Administrator and to the public.

### 4.2 Data Set Objective

The CP\_DEM\_A.DAT, CP\_DEM\_S.TXT, CP\_DEM\_L.DAT, and CP\_DEM\_C.DAT data sets report raw and summarized demersal trawl data collected at each station in the EMAP Carolinian Province from 1994-1995. Results include abundances summarized by taxon and trawl, various community measures by station, and mean lengths by taxa and station.

### 4.3 Data Set Background Information

The CP\_DEM\_A.DAT, CP\_DEM\_S.TXT, CP\_DEM\_L.DAT, CP\_DEM\_C.DAT data sets contain demersal trawl data collected at each station in the EMAP Carolinian Province from 1994-1995. Fishes and invertebrates (shrimp, crabs, and squid) were collected at each station with a 4.9-m otter trawl (2.5 cm mesh wings and cod end) towed against the tidal currents. Tow duration was 10 min wherever possible and tow speed was 2-3 knots. Two to four tows were conducted at each station. Fishes and invertebrates captured in the trawls were carefully removed, sorted and identified to the lowest possible taxon (usually to species), enumerated, and measured for length to the nearest mm. In cases where a species was caught in excessive numbers, a minimum subsample of 30 individuals was measured for length.

### 4.4 Summary of Data Set Parameters

The CP\_DEM\_A.DAT data set contains unsummarized demersal abundance data by trawl and taxon. This data set is for use as the data source for subsequent demersal trawl analyses and summary calculations (e.g., CP\_DEM\_L.DAT, CP\_DEM\_C.DAT are calculated from the data in CP\_DEM\_A.DAT).

The CP\_DEM\_S.TXT data set contains taxonomic classification information for all demersal taxa observed in trawls throughout the Carolinian Province from 1994-1995. This data set is essential to resolve actual taxonomy and species names from the 8 digit code (variable COD\_EMAP) used to identify taxa in

the CP\_DEM\_A.DAT and CP\_DEM\_L.DAT data sets. Taxonomic information includes: phylum, class, order, family, genus, species, and common name.

The CP\_DEM\_L.DAT data set contains demersal organism length data summarized by station and taxon. Summary results included are: number of lengths measured, mean length, and standard deviation of lengths, by taxon for each station. In addition, a variable called MEASTYPE stores a code designating what dimensions of the organism were measured and reported as "length".

The CP\_DEM\_C.DAT data set contains summary metrics used to describe the demersal community at a station. The summary results included are: number of trawls, mean number of demersal taxa (species richness) per trawl, mean demersal abundance per trawl, and Shannon-Weaver Index ( $H'$  diversity) per trawl, for each station.

#### 4.5 Year-Specific Information about Data

Demersal trawl data were only collected in the Carolinian Province during the first two (1994 and 1995) of the four sampling years from 1994 to 1997.

### 5. DATA ACQUISITION AND PROCESSING METHODS

#### 5.1 Data Acquisition

##### 5.1.1 Sampling Objective

See section 4.3 (Data Set Background Information)

##### 5.1.2 Sample Collection Method Summary

See section 4.3 (Data Set Background Information)

##### 5.1.3 Beginning Sampling Dates

30 June 1994  
05 July 1995

##### 5.1.4 Ending Sampling Dates

31 August 1994  
14 September 1995

##### 5.1.5 Platform

Samples were collected from various gasoline or diesel powered boats equipped with at least the following equipment: "A" frame boom or davit, winch, LORAN-C or GPS for location, and a depth finder.

##### 5.1.6 Sampling Equipment

4.9-m otter trawl with 2.5 cm mesh wings

#### 5.1.7 Manufacturer of Sampling Equipment

Glavin Trawl Manufacturing Company  
117 Oak Street  
Biloxi, Mississippi 39530

#### 5.1.8 Key Variables

#### 5.1.9 Sample Collection Method Calibration

The sampling gear did not require any calibration. It did however required inspection for tears resulting from underwater obstructions, twisting during deployment, and any material caught in the trawl that may have reduced the trawls effectiveness or resulted in a loss of catch.

#### 5.1.10 Sample Collection Quality Control

Several quality control measures were incorporated. Field technicians were trained to follow Standard Operating Procedures to insure the collection of representative, and high quality samples. To help assure that the biota were identified accurately, all field crews had at least one member on board familiar with the species that were likely to be caught in bottom trawls. In addition, species identifications were validated in the laboratory by examination of voucher specimens collected for each species encountered in the field. Database entries for all trawl measurements were checked against the original field-recorded measurements (field sheets) and any inconsistencies were corrected.

Field site audits were conducted during sampling seasons by the QA Officer to determine compliance with the Quality Assurance Plan and Field Operations Manual.

The following QA codes, stored under the variable QACODE\_T in the CP\_DEM\_A.DAT data set, flag QA issues that resulted in non-standard or unacceptable trawls:

| -----    |   |
|----------|---|
| QACODE_T | Description   |
| -----    |   |
| UA-Trawl | Trawl was unacceptable due to reasons such as: trawl filled with algae, trawl twisted or not properly opened, large object caught in trawl, trawl fouled on bottom. These situations generally resulted in the trawl being aborted well before its planned duration was reached. Due to the problems mentioned above, any observations flagged with the "UA-Trawl" QC code should not be used in data analyses. |



| QACODE_T | Description, continued  |
|----------|---|
| MA-Trawl | Trawl was marginally acceptable because its duration was less than the planned 10 min. As a result, observations flagged with the "MA-Trawl" QC code may not truly represent the demersal community at a station, and may result in underestimation of abundance or diversity for that trawl. Data from trawls flagged with the "MA-Trawl" code should be used with discretion. |

In addition, due to possible data recording errors, the following observations have been identified as potentially underestimating abundance for the given taxa and trawl:

| STA_NAME | TR_REP | COD_EMAP |
|----------|--------|----------|
| CP94007  | 01     | BAIRCHRY |
| CP94007  | 01     | ORTHCHRY |
| CP94007  | 02     | ORTHCHRY |
| CP94012  | 01     | GOBIROBU |
| CP94043  | 02     | LEIOXANT |
| CP94043  | 02     | MICRUNDU |
| CP94043  | 03     | CYNOREGA |
| CP94043  | 03     | LEIOXANT |
| CP94043  | 03     | MICRUNDU |

Note that all values reported in the CP\_DEM\_A.DAT data set that do not have any QACODT\_T codes assigned and are not specifically mentioned above, met all QA/QC guidelines and are acceptable without further qualification.

See: Hyland et al. (1996),  
Hyland et al. (1998),  
Kokkinakis et al. (1994a)

#### 5.1.11 Sample Collection Method References

See: Hyland et al. (1996),  
Hyland et al. (1998),  
Kokkinakis et al. (1994b)

#### 5.1.12 Sample Collection Method Deviations

None

### 5.2 Data Preparation and Sample Processing

#### 5.2.1 Sample Processing Objective

NA

## 5.2.2 Sample Processing Methods Summary

### 5.2.2.1 Field Summary

Fishes and invertebrates (shrimp, crabs, and squid) were collected at each station with a 4.9-m otter trawl 2.5 cm mesh wings and cod end) towed against the tidal currents. Tow duration was 10 min wherever possible and tow speed was 2-3 knots. Two to four tows were conducted at each station. Fishes and invertebrates captured in the trawls were carefully removed, sorted and identified to the lowest possible taxon (usually to species), enumerated, and measured for length to the nearest mm. In cases where a species was caught in excessive numbers, a minimum subsample of 30 individuals was measured for length.

### 5.2.2.2 Laboratory Summary

NA

## 5.2.3 Sample Processing Method Calibration

NA

## 5.2.4 Sample Processing Quality Control

NA

## 5.2.5 Sample Processing Method Reference

NA

## 5.2.6 Sample Processing Method Deviations

NA

# 6. DATA ANALYSIS AND MANIPULATIONS

## 6.1 Name of New or Modified Value

Data set CP\_DEM\_C.DAT

|          |  |
|----------|--|
| D_TAXA   | Mean number of demersal taxa per trawl |
| D_ORGS   | Mean demersal abundance per trawl      |
| D_HPRIME | Mean dem. H prime diversity per trawl  |

Data set CP\_DEM\_L.DAT

|         |                              |
|---------|------------------------------|
| M_LEN   | Mean length (mm)             |
| SD_LEN  | Std. dev. of lengths         |
| MEATYPE | Length measurement type code |

## 6.2 Data Manipulation Description

### Data set CP\_DEM\_A.DAT

In the CP\_DEM\_A.DAT data set, observations occasionally have a missing taxa code (COD\_EMAP = " ") and an abundance of zero (ABUNDANC = 0). These observations are correct, and are used to identify valid demersal trawls that caught no fauna.

### Data set CP\_DEM\_S.TXT

Because several different field crews participated in sample processing, and several years of data are reported in the demersal trawl data sets (CP\_DEM\_A.DAT, CP\_DEM\_S.TXT, CP\_DEM\_C.DAT, CP\_DEM\_L.DAT), the taxa codes (COD\_EMAP) used in these data sets have been continuously scrutinized and standardized with each new addition of data. Inconsistencies in coding and nomenclature were corrected as necessary. Through this process, taxa codes are consistently assigned throughout all of these demersal trawl data sets.

### Data set CP\_DEM\_C.DAT

Note that the CP\_DEM\_A.DAT data set is the data source for the following community measures reported in the CP\_DEM\_C.DAT data set. Prior to any of the following calculations, observations with QACODE\_T = "UA-Trawl" in the CP\_DEM\_A.DAT data set were excluded.

Variable I\_TAXA (Mean number of demersal taxa per trawl) was calculated by counting the number of unique taxa (COD\_EMAP) in each trawl, summing these trawl counts, and then dividing by the number of trawls (N\_TRAWLS) at the station.

Variable I\_ORGS (Mean demersal abundance per trawl) was calculated by finding the total abundance of all taxa in each trawl, summing these trawl abundances, and then dividing by the number of trawls (N\_TRAWLS) at the station.

Variable I\_HPRIME (Mean dem. H prime diversity per trawl) was calculated by first calculating H prime for each trawl as given in Shannon and Weaver (1949), then summing these H prime values for the trawls, and then dividing by the number of trawls (N\_TRAWLS) at the station. H prime diversity (Shannon-Weaver Index) values that we have reported were calculated using base 2 logarithms.

Unsampled stations are identified in this data set by all variables containing missing data with the exception of N\_TRAWLS = 0.

### Data set CP\_DEM\_L.DAT

Variable M\_LEN (Mean length) was calculated by finding the mean length of all individuals of a given taxon captured over all valid trawls at the station. Results are reported by taxon for each station.

Variable SD\_LEN (Std. dev. of lengths) is the standard deviation associated with M\_LEN.

Because of the variable shapes of demersal biota, the mean lengths reported often represent different dimensions depending on the taxon. The following measurement type codes (stored in variable MEASTYPE) are used in the CP\_DEM\_L.DAT data set to designate the type of length reported:

| MEASTYPE | Length Measurement Description            |
|----------|---|
| F        | Fork length (finfish)                     |
| T        | Total length (finfish)                    |
| B        | Standard length (finfish)                 |
| S        | Shell length - rostrum to telson (shrimp) |
| C        | Greatest carapace width (crabs)           |
| D        | Disk width (skates and rays)              |
| M        | Mantle length (squid)                     |

An inconsistency in the recording of finfish lengths exists in the demersal length data set (CP\_DEM\_L.DAT) and must be considered when using these data. During QC checks after field work had been completed, it was discovered that individual field crews used different length measurement methods for the same fish species (e.g., one team measured total length of croaker while the other may have measured fork length). This inconsistency makes between station or between year comparisons of the lengths of some fish species difficult. Although the mean lengths (M\_LEN) reported in the CP\_DEM\_L.DAT data set are correct for a given species and station, the accompanying measurement type code (MEASTYPE) for that observation must always be considered before using the data further (e.g., if comparing the mean length of a taxon between stations, you must be certain that the MEASTYPEs are the same for that taxon for all of the observations being compared, or be willing to accept the reduced accuracy associated with this source of sampling error). Measurement type codes are discussed further in Section 6.2 (Data Manipulation Description) below.

### 6.3 Data Manipulation Examples

NA

## 7. DATA DESCRIPTION

## 7.1 Description of Parameters

Data set CP\_DEM\_A.DAT

| Variable | Type | Format   | Label                                   |
|----------|------|----------|---|
| STA_NAME | Char | 7.       | Carolinian Province Office Station Name |
| TR_REP   | Char | 2.       | Trawl replicate number                  |
| DATE     | Num  | YYMMDD6. | Sample collection date (YYMMDD)         |
| COD_EMAP | Char | 8.       | Carolinian Province Office Taxa Code    |
| ABUNDANC | Num  | 4.       | Abundance of taxon                      |
| QACODE_T | Char | 8.       | Trawl QC code                           |

CP\_DEM\_S.TXT

| Variable | Type | Format | Label                                |
|----------|------|--------|--------------------------------------|
| COD_EMAP | Char | 8.     | Carolinian Province Office Taxa Code |
| PHYLUM   | Char | 10.    | Phylum                               |
| CLASS    | Char | 20.    | Class                                |
| ORDER    | Char | 17.    | Order                                |
| FAMILY   | Char | 15.    | Family                               |
| GENUS    | Char | 14.    | Genus                                |
| SPECIES  | Char | 15.    | Species                              |
| COMMNAME | Char | 24.    | Common Name                          |

CP\_DEM\_L.DAT

| Variable | Type | Format   | Label                                   |
|----------|------|----------|---|
| STA_NAME | Char | 7.       | Carolinian Province Office Station Name |
| DATE     | Num  | YYMMDD6. | Sample collection date (YYMMDD)         |
| COD_EMAP | Char | 8.       | Carolinian Province Office Taxa Code    |
| N_LEN    | Num  | 5.       | Number of lengths                       |
| M_LEN    | Num  | 7.1      | Mean length (mm)                        |
| SD_LEN   | Num  | 7.1      | Std. dev. of lengths                    |
| MEASTYPE | Char | 1.       | Length measurement type code            |

CP\_DEM\_C.DAT

| Variable | Type | Format   | Label                                  |
|----------|------|----------|--|
| STA_NAME | Char | 7.       | CP0 Sampling Station Code              |
| DATE     | Num  | YYMMDD6. | Sample collection date (YYMMDD)        |
| N_TRAWLS | Num  | 1.       | Number of trawls                       |
| D_TAXA   | Num  | 5.2      | Mean number of demersal taxa per trawl |
| D_ORGS   | Num  | 7.2      | Mean demersal abundance per trawl      |
| D_HPRIME | Num  | 5.2      | Mean dem. H prime diversity per trawl  |

Note the conventions used in the Format columns above:

For character (Char) variables, the number given is the maximum width (number of characters) for that variable.

For numeric (Num) variables, the format is given in W.D format, where W = maximum width (number of characters) for the number (including all digits and the decimal point), and D = number of digits to the right of the decimal point.

#### 7.1.6 Precision to which values are reported

All values are accurate to the full precision that they are reported to.

#### 7.1.7 Minimum Value in Data Set

Data set CP\_DEM\_A.DAT

| Variable | Minimum |
|----------|---------|
| ABUNDANC | 0       |

Data set CP\_DEM\_L.DAT

| Variable | Minimum |
|----------|---------|
| N_LEN    | 0       |
| M_LEN    | 0       |
| SD_LEN   | 0       |

Data set CP\_DEM\_C.DAT

| Variable | Minimum |
|----------|---------|
| N_TRAWLS | 0       |
| D_TAXA   | 0       |
| D_ORGS   | 0       |
| D_HPRIME | 0       |

#### 7.1.8 Maximum Value in Data Set

Data set CP\_DEM\_A.DAT

| Variable | Maximum |
|----------|---------|
| ABUNDANC | 850     |

## 7.1.8 Maximum Value in Data Set, continued

Data set CP\_DEM\_L.DAT

| Variable | Maximum |
|----------|---------|
| N_LEN    | 132     |
| M_LEN    | 945.0   |
| SD_LEN   | 262.4   |

Data set CP\_DEM\_C.DAT

| Variable | Maximum |
|----------|---------|
| N_TRAWLS | 3       |
| D_TAXA   | 19.00   |
| D_ORGS   | 636.50  |
| D_HPRIME | 3.16    |

## 7.2 Data Record Example

## 7.2.1 Column Names for Example Records

Data set CP\_DEM\_A.DAT

STA\_NAME;TR\_REP;DATE;COD\_EMAP;ABUNDANC;QACODE\_T

Data set CP\_DEM\_S.TXT

COD\_EMAP;PHYLUM;CLASS;ORDER;FAMILY;GENUS;SPECIES;  
COMMNAME

Data set CP\_DEM\_L.DAT

STA\_NAME;DATE;COD\_EMAP;N\_LEN;M\_LEN;SD\_LEN;MEASTYPE

Data set CP\_DEM\_C.DAT

STA\_NAME;DATE;N\_TRAWLS;D\_TAXA;D\_ORGS;D\_HPRIME

## 7.2.2 Example Data Records

Data set CP\_DEM\_A.DAT

CP94001;01;940815;CALLSAPI;2;  
 CP94001;01;940815;EUCIGULA;13;  
 CP94001;01;940815;EUCIHARE;4;  
 CP94005;02;940802;ARIUFELI;7;UA-Trawl  
 CP94005;02;940802;CALLSAPI;6;UA-Trawl

### 7.2.2 Example Data Records, continued

#### Data set CP\_DEM\_S.TXT

ACHILINE;CHORDATA;OSTEICHTHYES;PLEURONECTIFORMES;  
SOLEIDAE;Achirus;lineatus;lined sole  
ACIPOXYR;CHORDATA;OSTEICHTHYES;ACIPENSERIFORMES;  
ACIPENSERIDAE;Acipenser;oxyrhynchus;  
Atlantic sturgeon  
ALOSAEST;CHORDATA;OSTEICHTHYES;CLUPEIFORMES;  
CLUPEIDAE;Alosa;aestivalis;blueback herring  
ALUTSCH0;CHORDATA;OSTEICHTHYES;TETRAODONTIFORMES;  
BALISTIDAE;Aluterus;schoepfi;  
orange filefish  
ALUTScri;CHORDATA;OSTEICHTHYES;TETRAODONTIFORMES;  
BALISTIDAE;Aluterus;scriptus;  
scrawled filefish

#### Data set CP\_DEM\_L.DAT

CP94001;940815;CALLSAPI;3;90.3;69.7;C  
CP94001;940815;EUCIGULA;21;99.4;13.1;F  
CP94001;940815;EUCIHARE;4;83.0;4.3;F  
CP94001;940815;EUCIXSP;1;42.0;.;F  
CP94001;940815;GYMNMICR;1;875.0;.;D

#### Data set CP\_DEM\_C.DAT

CP94001;940815;2;4.50;16.50;1.50  
CP94002;940815;2;9.00;38.50;2.63  
CP94003;940816;2;6.50;43.00;2.06  
CP94004;940816;2;4.00;17.50;1.31  
CP94005;940802;1;9.00;35.00;2.60

## 8. GEOGRAPHIC AND SPATIAL INFORMATION

### 8.1 Minimum Longitude

-81 Degrees, 43.83 Minutes West Longitude

### 8.2 Maximum Longitude

-75 Degrees, 33.82 Minutes West Longitude

### 8.3 Minimum Latitude

27 Degrees, 12.07 Minutes North Latitude

### 8.4 Maximum Latitude

36 Degrees, 43.43 Minutes North Latitude

### 8.5 Name of area or region

Coastal distribution of sampling is along the southeastern US from Cape Henry, VA, through St. Lucie Inlet, FL. States represented: Virginia, North Carolina, South Carolina, Georgia, and Florida.



## 9. QUALITY CONTROL/QUALITY ASSURANCE

### 9.1 Measurement Quality Objectives

See section 5.1.9 (Sample Collection Method Calibration) and section 5.1.10 (Sample Collection Quality Control) above.

### 9.2 Quality Assurance/Control Methods

See section 5.1.9 (Sample Collection Method Calibration) and section 5.1.10 (Sample Collection Quality Control) above.

### 9.3 Quality Assessment Results

An inconsistency in the recording of finfish lengths exists in the demersal length data set (CP\_DEM\_L.DAT) and must be considered when using these data. During QC checks after field work had been completed, it was discovered that individual field crews used different length measurement methods for the same fish species (e.g., one team measured total length of croaker while the other may have measured fork length). This inconsistency makes between station or between year comparisons of the lengths of some fish species difficult. Although the mean lengths (M\_LEN) reported in the CP\_DEM\_L.DAT data set are correct for a given species and station, the accompanying measurement type code (MEATYPE) for that observation must always be considered before using the data further (e.g., if comparing the mean length of a taxon between stations, you must be certain that the MEATYPEs are the same for that taxon for all of the observations being compared, or be willing to accept the reduced accuracy associated with this source of sampling error). Measurement type codes are discussed further in Section 6.2 (Data Manipulation Description) below.

## 10. DATA ACCESS

### 10.1 Data Access Procedures

Data can be downloaded from the WWW site.

### 10.2 Data Access Restrictions

Data can only be accessed from the WWW site.

### 10.3 Data Access Contact Persons

For programmatic/policy matters, contact:  
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#### 10.4 Data file Format

Delimited ASCII Text

#### 10.5 Information Concerning Anonymous FTP

Not accessible

#### 10.6 Information Concerning Gopher and WWW

Data can be downloaded from the WWW.

#### 10.7 EMAP CD-ROM Containing the Data file

Data not available on CD-ROM.

### 11. REFERENCES

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## 12. TABLE OF ACRONYMS

|                 |   |
|-----------------|---|
| BVA             | Barry A. Vittor & Associates, Inc., Mobile, Alabama   |
| C               | Degrees Celsius                                       |
| cm <sup>2</sup> | Square centimeters                                    |
| CMBAD           | Coastal Monitoring and Bioeffects Assessment Division |
| CU              | Clemson University                                    |
| EMAP            | Environmental Monitoring and Assessment Program       |
| EPA             | U.S. Environmental Protection Agency                  |
| EPA-AED         | EPA-Atlantic Ecology Division                         |
| EPA-GED         | EPA-Gulf Ecology Division                             |
| EPA-RTP         | EPA-Research Triangle Park, NC                        |
| FLDEP           | Florida Dept. of Environmental Protection             |
| FMRI            | Florida Marine Research Institute                     |
| FTP             | File Transfer Protocol                                |
| GIS             | Geographical Information System                       |
| JCWS            | Johnson Controls Word Services                        |
| km <sup>2</sup> | Square kilometers                                     |
| m <sup>2</sup>  | Square meters   |
| mg/L            | Milligrams per liter                                  |
| mS/cm           | MilliSiemens per centimeter (equiv. to milliohms/cm)  |
| MRRI            | Marine Resources Research Institute                   |
| NCNERR          | North Carolina National Estuarine Research Reserve    |
| NCSU            | North Carolina State University, NC                   |
| NA              | Not Applicable  |
| ng/g            | Nanograms per gram                                    |
| NOAA            | National Oceanic and Atmospheric Administration       |
| NOS             | National Ocean Service                                |
| ORCA            | Office of Ocean Resources Conservation and Assessment |
| QA/QC           | Quality Assurance/Quality Control                     |
| ppb             | Parts per billion (equiv. to ng/g)                    |
| ppm             | Parts per million (equiv. to ug/g)                    |
| ppt             | Parts per thousand                                    |
| SAIC            | Science Applications International Corporation        |
| SCDNR           | South Carolina Dept. of Natural Resources             |
| TOC             | Total Organic Carbon                                  |

|           |  |
|-----------|--|
| TAMU/GERG | Texas A&M University, Geochemical and Environmental Research Group |
| TPMC      | Technology Planning and Management Corporation                     |
| ug/g      | Micrograms per gram  |
| um        | Micrometers  |
| UC        | University of Charleston, SC                                       |
| UGA       | University of Georgia, GA  |
| UNC-W     | University of North Carolina - Wilmington, NC                      |
| USGS-GB   | US Geological Survey - Gulf Breeze, FL                             |
| wt.       | Weight   |
| WWW       | World Wide Web -Internet   |

### 13. PERSONNEL INFORMATION

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