SOUTH CAROLINA ENVIRONMENTAL SENSITIVITY INDEX METADATA

October 2000

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FILE DESCRIBES: Digital data for 1996 South Carolina Environmental Sensitivity Index.

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COMMENTS: Information was developed using the U.S. Federal Geographic Data Committee's Content Standards for Digital Geospatial Metadata, June 8, 1994. The numbering scheme matches the Metadata Standard to facilitate referencing definitions of the elements. The items in **bold** are required elements and the others are optional elements. The Spatial Data Transfer Standard (SDTS), ver. 03/92, was referenced to properly identify the geographic entities.

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1.0 IDENTIFICATION INFORMATION

1.1. CITATION

1.1.1. ORIGINATOR:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Coastal Services Center, Charleston, South Carolina; and Charleston Harbor Project, South Carolina Department of Health and Environmental Control, Charleston, South Carolina

1.1.2. PUBLICATION DATE:

200010

1.1.4. TITLE:

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: South Carolina

1.1.5. EDITION:

First

1.1.6. GEOSPATIAL DATA PRESENTATION FORM:

Atlas

1.1.7. SERIES INFORMATION

1.1.7.1. SERIES NAME:

None

1.1.7.2. ISSUE IDENTIFICATION:

South Carolina

1.1.8. PUBLICATION INFORMATION

1.1.8.1. PUBLICATION PLACE:

Seattle, Washington

1.1.8.2. PUBLISHER:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington

1.1.9. OTHER CITATION DETAILS:

Prepared by Research Planning, Inc., Columbia, South Carolina in cooperation with the South Carolina Department of Natural Resources, Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service,

Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Coastal Services Center, Charleston, South Carolina; and Charleston Harbor Project, South Carolina Department of Health and Environmental Control, Charleston, South Carolina

1.1.11. LARGER WORK CITATION:

None

1.2. DESCRIPTION

1.2.1. ABSTRACT:

This data set comprises the Environmental Sensitivity Index (ESI) maps for the shoreline of South Carolina. ESI data characterize coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats; sensitive biological resources; and human-use resources

1.2.2. PURPOSE:

The ESI data were collected, mapped, and digitized to provide environmental data for oil spill planning and response. The Clean Water Act with amendments by the Oil Pollution Act of 1990 requires response plans for immediate and effective protection of sensitive resources

1.3. TIME PERIOD OF CONTENT

1.3.1. TIME PERIOD INFORMATION

1.3.1.3. RANGE OF DATES/TIMES:

The intertidal habitats were mapped during aerial and ground surveys conducted over the period from March to October 1995. The biological and human-use resources data were compiled by regional biologists in 1995. The dates for these data vary and are documented in Section 2.5.1

1.4. STATUS

1.4.1. PROGRESS:

Complete

1.4.2. MAINTENANCE AND UPDATE FREQUENCY:

None planned

1.5. SPATIAL DOMAIN

1.5.1. BOUNDING COORDINATES

1.5.1.1. WEST BOUNDING COORDINATE:
-81.125

1.5.1.2. EAST BOUNDING COORDINATE:
-78.5

1.5.1.3. NORTH BOUNDING COORDINATE:
33.892

1.5.1.4. SOUTH BOUNDING COORDINATE:
32.00

1.6. KEYWORDS

1.6.1. THEME

1.6.1.1. THEME KEYWORD THESAURUS:
None

1.6.1.2. THEME KEYWORD:
Sensitivity maps; ESI; coastal resources; oil spill planning; and coastal zone management

1.6.2. PLACE

1.6.2.1. THESAURUS:
None

1.6.2.2. PLACE KEYWORD:
South Carolina Coastal Zone, Calhoun County, Charleston County, Charleston Harbor, Dorchester County, Georgetown County, Horry County, Jasper County, Murrell's Inlet, Port Royal Sound, St. Helena Sound

1.7. ACCESS CONSTRAINTS:

In the course of this project, the use of several digital databases containing potentially sensitive information required the formulation of data distribution, licensing, or disclaimer agreements. The release of digital data from certain sources as part of the South Carolina ESI database is thus restricted. As part of data agreements with the South Carolina Department of Natural Resources (SCDNR) and the South Carolina Department of Archives and History (SCDAH), the following clauses are included as part of this introductory text.

For the digital data provided by SCDNR, "The SCDNR MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS OF USE FOR A PARTICULAR PURPOSE, EXPRESS OR IMPLIED WITH RESPECT TO THE DATA PROVIDED FOR USE IN THE ESI MAPPING PROCESS. Any user of this data, in hardcopy or digitized format, accepts the same, AS IS, WITH ALL FAULTS, and assumes all responsibility for the use thereof, and further covenants and agrees to hold the SCDNR harmless from and against any damage, loss, or liability arising from any use of this data."

When digital data originating from SCDNR is used, the following shall be included and prominently displayed to alert any person viewing or utilizing this information:

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The following disclaimer applies specifically to threatened and endangered element occurrence data provided by the SCDNR Heritage Trust Program. "The quantity and quality of data collected by the SCDNR Heritage Trust Program is dependent on the research and observations of many individuals and organizations. Not all of this information is the result of comprehensive or site-specific field surveys. Some natural areas in South Carolina have never been thoroughly surveyed. As a result, new locations for plant and animal species are continuously being added to the database. Since data acquisition is a dynamic, on-going process, the SCDNR Heritage Trust Program cannot provide a definitive statement on the presence, absence, or condition of biological elements in any part of South Carolina. Information supplied by the SCDNR Heritage Trust Program summarizes existing data known to the program at the time of the request regarding the biological elements or locations in question. They should never be regarded as final statements on the elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments. The data is provided as one source of information to assist others in the preservation of natural diversity."

For the digital data provided by SCDAH, "SCDAH makes no representations of any kind, included but not limited to the warranties of merchantability or fitness for a particular use, nor are any such warranties to be implied, with respect to the digital data layers furnished hereunder. SCDAH assumes no responsibility to maintain them in any manner or form."

"The quantity and quality of data collected by the SCDAH is dependent on the research and observations of many individuals and organizations. Not all of this information is the result of comprehensive or site-specific field surveys. Some historic resources in South Carolina have never been thoroughly surveyed. As a result, new locations for historic resources are constantly added to the database. Since data acquisition is a dynamic, on-going process, the SCDAH cannot provide a definitive statement on the presence, absence, or condition of historic elements in any part of South Carolina. Information supplied by the SCDAH summarizes existing data known to the program at the time of the request regarding the historic elements or locations in question. They should never be regarded as final statements on the elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments. The data are provided as one source of information to assist others in the preservation of historic resources."

1.8. USE CONSTRAINTS:

DO NOT USE ESI MAPS FOR NAVIGATIONAL PURPOSES.

Besides the above warning, there are no use constraints on these data. Acknowledgment of the publishers and contributing sources listed in 1.11. would be appreciated in products derived from these data

1.11. DATA SET CREDIT:

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Coastal Services Center, Charleston, South Carolina; and Charleston Harbor Project, South Carolina Department of Health and Environmental Control, Charleston, South Carolina

1.13. NATIVE DATA SET ENVIRONMENT:

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO® (version 7.0.3) and ORACLE® RDBMS (version 6.0.36.1.1). The hardware configuration is Hewlett Packard work-stations (models 715/50 and 712/80 with 4 X-terminals) with UNIX operating system (HP-UX Release A.09.01). The following files are included in the data set:

bio_lut.e00	biofile.e00	biores.e00
birds.e00	breed.e00	breed_dt.e00
esi.e00	fish.e00	hydro.e00
index.e00	invert.e00	m_mammal.e00
mgt.e00	nests.e00	reptiles.e00
seasonal.e00	soc_dat.e00	soc_lut.e00
socecon.e00	sources.e00	species.e00
status.e00	t_mammal.e00	

The entire data set is approximately 200 megabytes.

2.0. DATA QUALITY INFORMATION

2.1. ATTRIBUTE ACCURACY

2.1.1. ATTRIBUTE ACCURACY REPORT:

The attribute accuracy is estimated to be "good" given the years of ESI experience, the data input methodology, the quality control review sessions, and the digital logical consistency checks.

2.2. LOGICAL CONSISTENCY REPORT:

The digitization of shoreline types, biological resources, and human-use resources is a complex and highly quality-controlled process. Existing digital shoreline and wetlands data are integrated into a study-wide basemap. In order to facilitate digitizing, the entire study area is split into individual quadrangles using the INDEX data layer. The first layer of information digitized is the ESI shoreline classification. The ESI habitat ranking is compiled onto 1:24,000 USGS topographic quadrangles by a geomorphologist. The hardcopy maps are then digitized and checked, using both on-screen and hardcopy reviews. The edited maps are updated, checked once again for completeness and topological and logical consistency. Any errors in the shoreline classification are updated prior to digitization of the biological and human-use layers. All layers use the shoreline as the geographic reference so that there are no slivers in the geographic coordinates.

The hardcopy biological information is compiled onto 1:24,000 USGS topographic quadrangles by a biological expert using data from regional specialists in the form of maps, tables, charts, written descriptions of wildlife distributions, and personal interviews. Concurrently, digital data sources are imported, projected, checked for quality control, and integrated into the data structure. The hardcopy data are digitized, checked using both digital and on-screen procedures, integrated with existing data, plotted, and sent out for review by the regional specialists. The edited maps are updated, checked once again, and the final product plotted (at approximately 1:50,000 scale). A team of specialists reviews the entire series of maps, checks all data, and makes final edits. The data are then merged to form the study-wide layers. The data merging includes a final quality control check where labels, chains, and polygons are checked for attribute accuracy.

To finalize the data checking process, each coverage is checked using a standardized form by two GIS personnel (a technician and the GIS manager), and each attribute database is checked using several programs that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and ORACLE® to ARC/INFO® consistencies. A final review is made by the GIS manager, where the data are written to tape and the metadata are written.

After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new IDs and RARNUMs or HUNUMs are also generated. The new IDs are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUMs are also modified to include the atlas number, so multiple atlases can be combined and RARNUMs remain unique. RARNUMs are redefined on an element basis, so "resource at risk" groupings will contain only a single element. HUNUMs are also modified to include the atlas number.

ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats. Section 3.0, outlining Spatial Data Organization, refers to the source files in ARC export format only.

2.3. COMPLETENESS REPORT:

Shoreline Habitat Mapping:

The shoreline habitats of South Carolina were characterized as to their sensitivity to oil spills using a shoreline classification system that has been

used by NOAA for all ESI maps nationwide. Prediction of the behavior and persistence of oil on intertidal habitats is based on an understanding of the dynamics of the coastal environments, not just the substrate type and grain size. The vulnerability of a particular habitat is an integration of the following factors:

1) Shoreline type (substrate, grain size, tidal elevation, origin)
2) Exposure to wave and tidal energy
3) Biological productivity and sensitivity
4) Ease of cleanup

All of these factors are used to determine the relative sensitivity of intertidal habitats. Key to the sensitivity ranking is an understanding of the relationships between: physical processes, substrate, shoreline type, product type, fate and effect, and sediment transport patterns. The intensity of energy expended upon a shoreline by wave action, tidal currents, and river currents directly affects the persistence of stranded oil. The need for shoreline cleanup activities is determined, in part, by the slowness of natural processes in removal of oil stranded on the shoreline.

These concepts have been used in the development of the ESI, which ranks shoreline environments as to their relative sensitivity to oil spills, potential biological injury, and ease of cleanup. Generally speaking, areas exposed to high levels of physical energy, such as wave action and tidal currents, and low biological activity rank low on the scale, whereas sheltered areas with associated high biological activity have the highest ranking.

Sensitive Biological Resources:

Regional biologists compiled the biological data. These data denote the key biological resources that are most likely at risk in the event of an oil spill. Six major categories, or ELEMENTS, of biological resources were considered during data compilation: birds, fish, marine mammals, invertebrates, reptiles / amphibians, and terrestrial mammals. The ELEMENTS generally correspond to the coverage or geographic data layer names.

There are six attribute tables, or data tables, BIORES, SEASONAL, SPECIES, SOURCES, STATUS, and BREED, that are used to store the complex biological data (Fig. 1). Each biological coverage (BIRDS, FISH, M_MAMMALS, INVERT, REPTILES, and T_MAMMAL) is linked to the Biological Resources

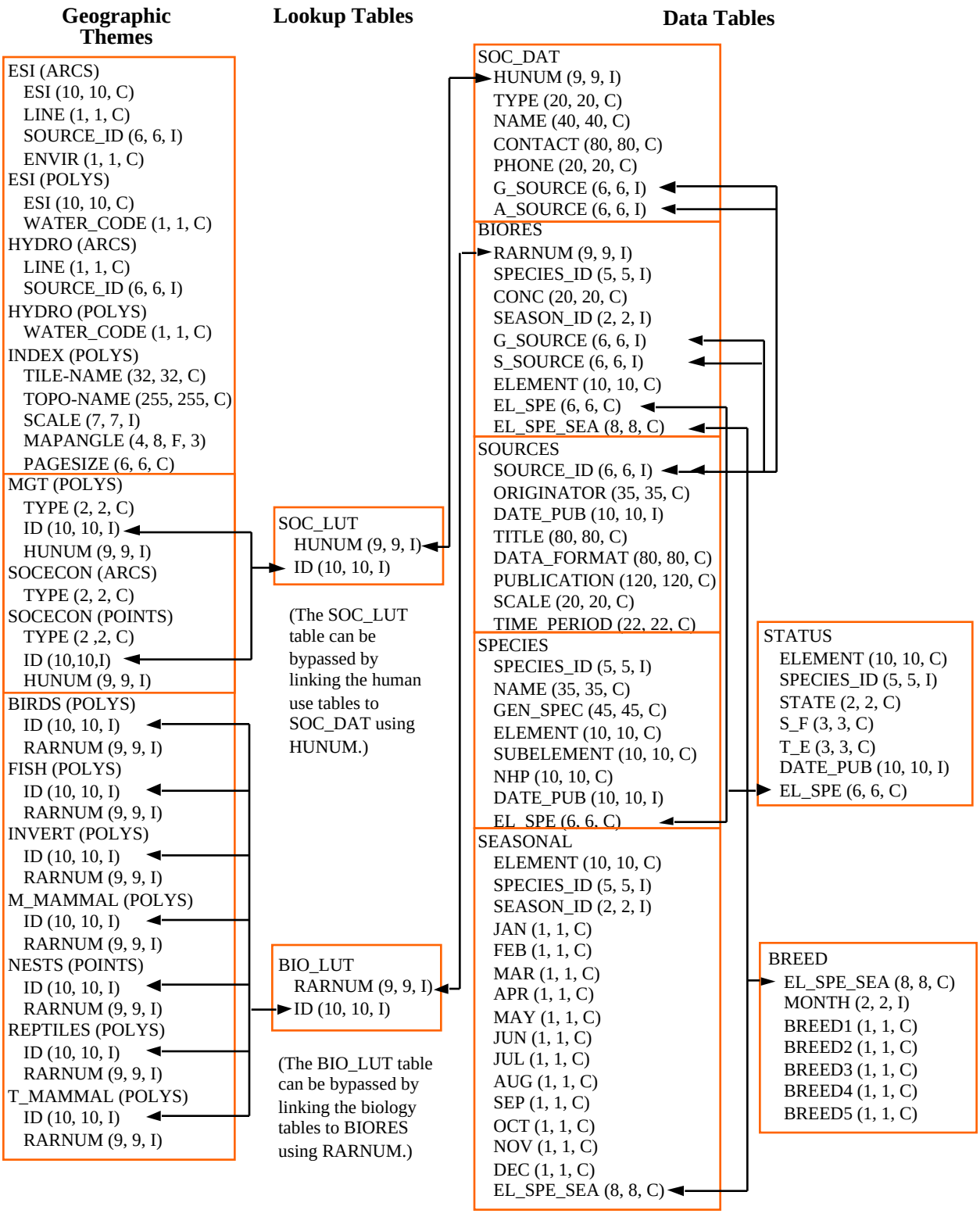

FIGURE 1. Relationship between biology data layers and attribute files.

table (BIORES) using the unique ID and the lookup table BIO_LUT, or it can be linked directly using RARNUM. [The ID is a unique combination of the atlas number (for South Carolina this is 34), an element specific number (birds are layer 1, fish are layer 2, etc.) and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases.]

The items in BIORES include: RARNUM, SPECIES_ID, CONC, SEASON_ID, G_SOURCE, S_SOURCE, ELEMENT, EL_SPE, and EL_SPE_SEA. SPECIES_ID is the numeric identifier of each species and is unique within each ELEMENT. CONC is the concentration of the species and can be descriptive (LOW, MEDIUM, HIGH, etc.) or an actual count of the number of individuals or nests associated with a polygon or point. SEASON_ID contains a numeric identifier for the unique monthly presence and life history characteristics of each species at a given location. There can be one seasonality record per species, or the same species can have different monthly presence or breeding activities at different sites. When this occurs, a new record with a different SEASON_ID is referenced.

G_SOURCE contains the SOURCE_ID for geographic information and S_SOURCE contains the SOURCE_ID for seasonality information. Both items link to the SOURCES data table. EL_SPE is a concatenation of ELEMENT and SPECIES_ID and links to other data tables (primarily the SPECIES table) and EL_SPE-SEA is a concatenation of ELEMENT, SPECIES_ID, and SEASON_ID and links to the SEASONAL and BREED data tables.

The SPECIES data table contains the SPECIES_ID (described above), common name (NAME), scientific name (GEN_SPEC), date the list of Natural Heritage Program (NHP) ranks was published (DATE_PUB), biological element (ELEMENT), biological subelement (SUBELEMENT), and the NHP global conservation status rank. The NHP item was unavailable when the atlas was under production. The item SUBELEMENT refers to the grouping of the species. The SUBELEMENTS, by ELEMENT, included in this atlas are:

ELEMENT	SUBELEMENT
BIRD	diving
	gull_tern
	raptor
	shorebird
	wading
	waterfowl
FISH	anadromous
	special
INVERT	clam
	crab
	oyster
	shrimp
MARINE MAMMAL	dolphin
REPTILE	alligator
	turtle
TERRESTRIAL MAMMAL	mustelid
	rodent

The STATUS data table contains records for each species that is threatened or endangered on state or federal lists. The items include: ELEMENT, SPECIES_ID, STATE (two-letter state abbreviations), S_F (state or federal status), T_E (threatened or endangered status), DATE_PUB (the date the atlas was published when the given state and federal listings were in effect), and EL_SPE.

The SEASONAL data table indicates the presence of a particular species in a particular location by month (JAN-DEC). The BIORES table is linked to the SEASONAL table using the item EL_SPE_SEA (a concatenation of the first letter of the ELEMENT, SPECIES_ID, and SEASON_ID).

The BREED data table contains the life stage or life history data for each unique combination of ELEMENT, SPECIES_ID, and SEASON_ID (or EL_SPE_SEA). It contains up to 12 records corresponding to each month of the year that a species is present in that location. The categories of the items BREED1 through BREED5 for each element are:

ELEMENT	BREED 1	BREED 2	BREED 3	BREED 4	BREED 5
BIRD	nesting	laying	hatching	fledging	
FISH	spawning	outmigration	larvae	juvenile	adult
INVERT	spawning	larvae	mating	juvenile	adult
REPTILE	nesting	hatching	internesting		

NOTE: There are no BREED variables for M_MAMMALS or T_MAMMALS.

However, when the South Carolina atlas was compiled, no adult fish or invertebrates were considered in the data structure.

The SOURCES data table contains metadata for each biological and human-use source listed in the ESI atlas. The items in SOURCES are: SOURCE_ID, ORIGINATOR (author), DATE_PUB (date of publication), TITLE (title of the data set), DATA_FORMAT (digital type, hardcopy maps, etc.), PUBLICATION (additional citation), SCALE (source scale denominator), and TIME_PERIOD (beginning and ending dates of original data collection). The SOURCES data table is linked to all biological and human-use data at the feature-level.

Due to the complexity of the relational database model, the biological data items are post processed into a flat file format. This file is entitled BIOFILE and it may be used in place of the relational files to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN_SPEC, S_F, T_E, NHP, DATE_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G_SOURCE, S_SOURCE and BREED. All of these items are the same as their counterparts in the individual files described above, except the BREED1–BREED5 items. BREED is a newly generated variable used to link to the BREED_DT file, a modified, more compact version of the aforementioned BREED file. BREED1–BREED5 give a text summary of when each life stage occurs within that polygon. The life stages referred to are the same as those listed in the previous table. The link to the BIOFILE may be made through BIO_LUT using ID to link to RARNUM, or it may be linked directly to the RARNUM in each of the biology cover's attribute files. As mentioned, BREED_DT is an auxiliary support file to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to BREED_DT is the BREED item. A second supporting

data file is SOURCES. This is the same as the SOURCES file described above and the link from the flat file is both G_SOURCE and S_SOURCE.

It should be noted that although the flat file eases data query, it is not a normalized database structure, and actual updates performed by the states and other responsible agencies should be done using the relational files.

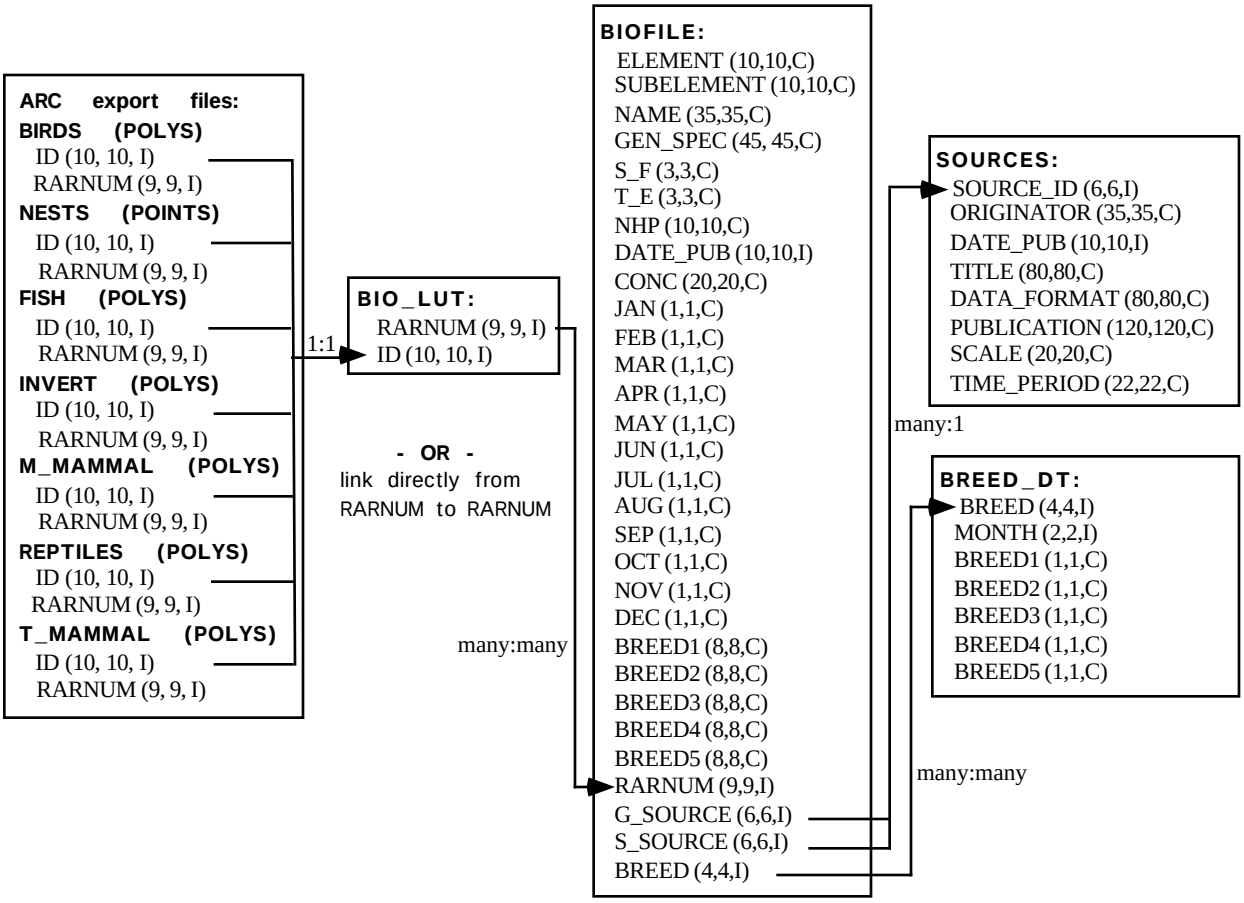

FIGURE 2. Relationship of the BIOFILE to the biological covers and the supplementary BREED_DT and SOURCES data tables.

Human-Use Resources:

Several human-use, or socioeconomic, features are included in ESI atlases. Entity points and complete chains (arcs) are digitized into the data layer SOCECON and managed area polygonal data are stored in the MGT data layer. Both data sets are linked to the data table SOC_DAT using the SOC_LUT lookup table and the items HUNUM and ID. HUNUM is a unique reference

number concatenated with the atlas number (34). ID is a concatenation of atlas number (34), element number (SOCECON = 10 and MGT = 11), and unique record number.

All features are attributed using the item TYPE and identify the type of feature:

Entity Points	
Feature	**TYPE**
Airport	A
Aquaculture	AQ
Beach	B
Boat Ramp	BR
Coast Guard	CG
Historic Site	HS
Marina	M
Marine Sanctuary	MS
Recreational Fishing	RF
Water Intake	WI
Water Quality Station	WQ
Complete Chains	
Feature	**TYPE**
State Border	SB

Polygons	
Feature	**TYPE**
National Park	NP
Regional or State Park	P
Wildlife Refuge	WR

The table SOC_DAT contains the human-use number (HUNUM), feature type (TYPE), name of the facility (NAME), contact person (CONTACT), telephone number (PHONE), geographic source (G_SOURCE), and attribute source (A_SOURCE).

2.4. POSITIONAL ACCURACY

2.4.1. HORIZONTAL POSITIONAL ACCURACY

2.4.1.1. HORIZONTAL POSITIONAL ACCURACY REPORT:

The ESI data use USGS 1:24,000 topographic quadrangles as the base map. It is estimated that the ESI has a minimum mapping unit of 50 feet. The biological data sets are developed primarily using regional experts who estimate concentration areas. Unlike shorelines, which maintain relative spatial stability through time, the biological data by nature migrate across the landscape. Therefore, the 1:24,000

USGS quadrangles are used as a base map in gathering the data but the data have "fuzzy" boundaries that must be understood when utilizing this information.

2.5. LINEAGE

2.5.1. SOURCE INFORMATION:

Coverage or theme name: BIRDS

2.5.1.1. SOURCE CITATION

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denomi-nator	2.5.1.4 Source Time Period
Strange, T. SCDNR, McClellanville, SC	N/A	Waterfowl Concentra-tions for South Carolina	Expert knowledge	Unknown	N/A	1955-1995
Post, W. and S.A. Gauthreaux	1989	Status and Distribution of South Carolina Birds	Hardcopy text	Contributions from the Charleston Museum No. 18, Charleston, SC, 83 pp.	N/A	Historical -1989
Wilkinson, P. and M. Spinks SCDNR, Georgetown, SC	N/A	Seabird and Shorebird Roosts and Nests for the S.C. Coast	Expert knowledge	N/A	N/A	to 1995
Dodd, M. SCDNR	N/A	Wading Bird Feeding Habitats	Expert knowledge	N/A	N/A	1996
Richardson, B. USFWS, Wadmalaw Island, SC	N/A	N/A	Expert knowledge	N/A	N/A	1996

2.5.1. SOURCE INFORMATION:

Coverage or theme name: ESI

2.5.1.1. SOURCE CITATION

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denominator	2.5.1.4 Source Time Period
Research Planning, Inc.	1995	ESI Over-flight Maps	Hardcopy maps	N/A	24000	1995
SCDNR—Marine Resources Division	N/A	NWI	Digital polygons	N/A	24000	Various
SCDNR—Water Resources Division	N/A	NWI	Digital polygons	N/A	24000	1990
SCDNR—Land Resources Division	N/A	NWI	Digital polygons	N/A	24000	Various
University of South Carolina--Baruch Institute	N/A	NWI	Digital polygons	N/A	24000	Various

2.5.1. SOURCE INFORMATION:

Coverage or theme name: FISH

2.5.1.1. SOURCE CITATION

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denominator	2.5.1.4 Source Time Period
Wenner, C. and W. Roumillat SCDNR, Charleston, SC	N/A	Estuarine, Nearshore, and Reef Fish Assemblages for South Carolina, and Fishing Sites	Expert knowledge	N/A	N/A	to 1995

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denominator	2.5.1.4 Source Time Period
Nelson, D.M., E.A. Irlandi, L.R. Settle, M.E. Monaco, and L. Coston-Clements	1991	Distribution and Abundance of Fishes and Invertebrates in Southeast Estuaries	Hardcopy data tables	ELMR Rept. No. 9, NOAA/NOS SEA Division, Silver Spring, MD, 167 pp.	N/A	to 1991
B. McCord SCDNR	N/A	Anadromous Shad and Herring Runs for South Carolina Coastal Rivers	Expert knowledge	N/A	N/A	to 1995
Smith, T., M. Collins, and B. McCord. SCDNR, Charleston, SC	N/A	Occurrences of Atlantic and Shortnose Sturgeons in South Carolina Waters Database (Draft)	Unpublished data tables and expert knowledge	N/A	N/A	Historical -1995
Ulrich, G. SCDNR	N/A	Shark Concentrations for South Carolina	Expert knowledge	N/A	N/A	1996
Settle, J. SCDNR, Charleston, SC	N/A	N/A	Expert knowledge	N/A	N/A	1996

2.5.1. SOURCE INFORMATION:

Coverage or theme name: HYDRO

2.5.1.1. SOURCE CITATION

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denomi-nator	2.5.1.4 Source Time Period
Research Planning, Inc.	1995	ESI Overflight Maps	Hardcopy maps	N/A	24000	1995
SCDNR—Marine Resources Division	N/A	NWI	Digital polygons	N/A	24000	Various
SCDNR—Water Resources Division	N/A	NWI	Digital polygons	N/A	24000	1990
SCDNR—Land Resources Division	N/A	NWI	Digital polygons	N/A	24000	Various
University of South Carolin--Baruch Institute	N/A	NWI	Digital polygons	N/A	24000	Various

2.5.1. SOURCE INFORMATION:

Coverage or theme name: INDEX

2.5.1.1. SOURCE CITATION

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denomi-nator	2.5.1.4 Source Time Period
Research Planning, Inc.	1995	Index for South Carolina ESI maps	Digital complex polygons	Bill Holton, GIS Analyst	24000	1995

2.5.1. SOURCE INFORMATION:

Coverage or theme name: INVERT (formerly SHELLFSH)

2.5.1.1. SOURCE CITATION

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denominator	2.5.1.4 Source Time Period
Anderson, W.D., W.J. Keith, F.H. Mills, M.E. Bailey, and J.L. Steinmeyer	1978	A Survey of South Carolina Hard Clam Resources	Hardcopy maps and text	SC MRC, Tech. Rept. No. 32, Charleston, SC 18 pp.	24000	1973-1977
Nelson, S.M., E.A. Irlandi, L.R. Settle, M.E. Monaco, and L. Coston-Clements	1991	Distribution & Abundance of Fishes & Invertebrates in Southeast Estuaries	Hardcopy data tables	ELMR Rept. No. 9, NOAA/ NOS SEA Division, Silver Spring, MD, 167 pp.	N/A	to 1991
Delancey, L. SCDNR, Charleston, SC	N/A	Juvenile Shrimp and Crab Habitats for South Carolina	Expert knowledge	N/A	N/A	to 1995
Anderson, W. SCDNR, Charleston, SC	N/A	Oyster Habitats in South Carolina	Expert knowledge	N/A	N/A	1996

2.5.1. SOURCE INFORMATION:

Coverage or theme name: MGT

2.5.1.1. SOURCE CITATION

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denominator	2.5.1.4 Source Time Period
Fairey, D.A. and J.B. Berry	1986	South Carolina Public Lands Ownership Inventory, State and Federal Owned Land	Hardcopy maps and text	S.C. Land Resources Conservation Commission, 106 pp.	200000	to 1986

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denomi-nator	2.5.1.4 Source Time Period
Richardson, B. USFWS, Wadmalaw Island, SC	N/A	Boundary Map for ACE Basin NERR	Expert knowledge	N/A	N/A	1996
Porter, D. Baruch Institute of Marine Science	N/A	Boundary Map for North Inlet-Winyah Bay NERR	Digital polygons	N/A	Unknown	Unknown
Elwart, D. South Carolina Department of Parks, Recreation, and Tourism	Various	State Parks	Hardcopy maps	Unknown	Various	Various
USGS	Varies by Map	USGS Topographic Quadrangles	Hardcopy maps	USGS, Washington, D.C.	24000	Varies by Map

2.5.1. SOURCE INFORMATION:

Coverage or theme name: M_MAMMAL

2.5.1.1. SOURCE CITATION

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denomi-nator	2.5.1.4 Source Time Period
Settle, J. SCDNR, Charleston, SC	N/A	N/A	Expert knowledge	N/A	N/A	1996

2.5.1. SOURCE INFORMATION:

Coverage or theme name: NESTS

2.5.1.1. SOURCE CITATION

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denominator	2.5.1.4 Source Time Period
SCDNR, Heritage Trust Program, Columbia, SC	N/A	South Carolina Heritage Trust Database	ARC/INFO point coverage and dBASE files	Heritage Trust Program Data Manager: Kathy Boyle	Unknown	to 1994
Murphy, T. SCDNR, Green Pond, SC	N/A	South Carolina Bald Eagle Nest Database	dBASE files (lat/long)	N/A	Unknown	to 1995
Murphy, T. and P. Wilkinson SCDNR, Green Pond and Georgetown, SC	N/A	South Carolina Colonial Waterbird Nesting Database	dBASE files (lat/long)	N/A	Unknown	1988-1995
Post, W. and S.A. Gauthreaux	1989	Status and Distribution of South Carolina Birds	Hardcopy text	Contributions from the Charleston Museum No. 18, Charleston, SC, 83 pp.	N/A	Historical -1989

2.5.1. SOURCE INFORMATION:

Coverage or theme name: REPTILES

2.5.1.1. SOURCE CITATION

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denominator	2.5.1.4 Source Time Period
Murphy, S. SCDNR, Charleston, SC	N/A	Sea Turtle Nesting Beaches for South Carolina	Expert knowledge	N/A	N/A	1990-1992

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denomi-nator	2.5.1.4 Source Time Period
Rhodes, W. SCDNR, Bonneau, SC	N/A	Alligator Concentration Areas for South Carolina	Expert knowledge	N/A	N/A	1996

2.5.1. SOURCE INFORMATION:

Coverage or theme name: SOCECON

2.5.1.1. SOURCE CITATION

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denomi-nator	2.5.1.4 Source Time Period
Whetstone, J. SC Sea Grant MEP, Georgetown, SC and A. Stokes, SCDNR, Bluffton, SC	N/A	Aquaculture Ponds, Facilities, and Water Intakes for South Carolina	Expert knowledge	N/A	N/A	to 1995
Hackett, J. SCDHEC/OCRM Charleston Harbor Project	N/A	Charleston Harbor Project Water Quality Stations	Hardcopy maps	N/A	85000 approx.	to 1995
Knight, S. SCDHEC, Myrtle Beach, SC	N/A	Water Intake Locations	Hardcopy maps and text	N/A	24000	to 1995
Fanning, W. SCDHEC	N/A	Water Intake Locations	Hardcopy maps	N/A	50000	to 1995
SC Sea Grant Consortium and Clemson University, Dept. of Parks, Recreation, and Tourism Manage-ment	1988	South Carolina Public Beach and Coastal Access Guide	Hardcopy maps and text	SC Dept. of Parks, Recre-ation, and Tourism, SCDHEC Coastal Coun-cil, Charleston, SC, 137 pp.	100000 approx.	1987-1988

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denomi-nator	2.5.1.4 Source Time Period
USGS	Varies by Map	USGS Topo-graphic Quadrangles	Hardcopy maps	USGS, Washington, D.C.	24000	Varies by Map
SCDNR, Marine Resources, Charleston, SC	N/A	Artificial Reefs in South Carolina	ARC/INFO point coverage	Marine Resources Data Manager: Andrew Bury	Unknown	to 1994
Shaw, T. SC Department of Archives and History, Columbia, SC	N/A	Historical Sites in South Carolina	ARC/INFO point coverage	N/A	24000	to 1988
SCDNR, Marine Resources Division, Charleston, SC	N/A	Boat Ramps, Marinas, and Fishing Piers in South Carolina	ARC/INFO point coverages	Marine Resources Data Manager: Andrew Bury	24000	1988
Wenner, C. and W. Roumillat SCDNR, Charleston, SC	N/A	Estuarine, Nearshore, and Reef Fish Assemblages for South Carolina, and Fishing Sites	Expert knowledge	N/A	N/A	to 1995

2.5.1. SOURCE INFORMATION:

Coverage or theme name: T_MAMMAL

2.5.1.1. SOURCE CITATION

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denomi-nator	2.5.1.4 Source Time Period
Baker, O. SCDNR, Columbia, SC	N/A	Small Fur-bearing Mammal Habitats for South Carolina	Expert knowledge	N/A	N/A	to 1995

2.5.1.1.1 Originator	2.5.1.1.2 Publication Date	2.5.1.1.4 Title	2.5.1.1.6 Geospatial Data Presentation Form	2.5.1.1.8 Publication Information	2.5.1.2 Source Scale Denominator	2.5.1.4 Source Time Period
SCDNR, Heritage Trust Program, Columbia, SC	N/A	South Carolina Heritage Trust Database	ARC/INFO point coverage and dBASE files	Heritage Trust Program Data Manager: Kathy Boyle	Unknown	to 1994

2.5.2. PROCESS STEP

2.5.2.1. PROCESS DESCRIPTION:

The digitization of ESI, biological resources, and human-use resources is a complex and highly quality controlled process. In order to facilitate digitizing, the entire study area was split into individual quadrangles using a map index coverage. The first layer of information digitized was the ESI. A digital shoreline was generated from NWI data obtained from multiple sources. These data were aggregated to ESI wetland polygons and an attempt was made to fix major edge-matching problems between quadrangles. However, the editing procedure identified only those wetlands that are tidally and marine influenced. No attempt was made to fix problems in the upland wetlands. Any errors in the shoreline classification were updated prior to digitization of the biological and socioeconomic layers. All data use the shoreline as the geographic reference so that there are no slivers in the geographic layers. The biological information was compiled onto 1:24,000 USGS topographic quadrangles by an in-house biological expert using the data from regional specialists in the form of verbal discussions, maps, tables, charts, and written descriptions of wildlife distributions. The data were digitized, checked using both digital and on-screen procedures, plotted, and sent out for review by the regional specialists. The edited maps were updated on the computer, checked once again, and plotted at final map scale. A team of specialists reviewed the entire series of maps, checked all

data, and made final edits. The data were merged to form the study-wide layers that are described in this document. The data merging included a final quality control check where topological consistency, rules for geography, and database to geography were checked and reported to the GIS manager.

2.5.2.3. PROCESS DATE:
199606

2.5.2.6. PROCESS CONTACT

CONTACT PERSON PRIMARY

2.5.2.6.1.1. CONTACT PERSON:
Jill Petersen

2.5.2.6.1.2. CONTACT ORGANIZATION:
NOAA, Office of Response and Restoration

2.5.2.6.3. CONTACT POSITION:
GIS Manager

2.5.2.6.4. CONTACT ADDRESS

2.5.2.6.4.1. ADDRESS TYPE:
Physical Address

2.5.2.6.4.2. ADDRESS:
7600 Sand Point Way N.E.

2.5.2.6.4.3. CITY:
Seattle

2.5.2.6.4.4. STATE OR PROVINCE:
WA

2.5.2.6.4.5. POSTAL CODE:
98115-6349

2.5.2.6.5. CONTACT VOICE TELEPHONE:
(206) 526-6944

2.5.2.6.7. CONTACT FACSIMILE TELEPHONE:
(206) 526-6329

2.5.2.6.8. CONTACT ELECTRONIC MAIL ADDRESS:
jill_petersen@hazmat.noaa.gov.us

3.0 SPATIAL DATA ORGANIZATION INFORMATION

3.2. DIRECT SPATIAL REFERENCE METHOD:

Vector

3.3. POINT AND VECTOR OBJECT INFORMATION

3.3.1. SDTS TERMS DESCRIPTION:

3.3.1.1. SDTS POINT AND VECTOR OBJECT TYPE, and

3.3.1.2. POINT AND VECTOR OBJECT COUNT:

Theme	Universe Polygon	GT-Polygons	Area Points	Complete Chains	Line Segments	Label Points	Entity Points	Nodes
BIRDS	1	13,563	13,563	25,425	941,612			19,100
ESI	1	10,589	10,589	27,668	860,431			22,147
FISH	1	2,436	2,436	4,442	440,977			3,612
HYDRO	1	5,093	5,093	7,990	407,633	467		7,954
INDEX	1	63	63	140	172			78
INVERT	1	2,404	2,404	3,991	362,894			3,312
MGT	1	12	12	18	5,447			18
M_MAMMAL	1	143	143	275	58,939			256
NESTS							213	
REPTILES	1	107	107	226	64,498			216
SOCECON				3	293		704	44
T_MAMMAL	1	7,481	7,481	10,340	746,260			8,856

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4.0 SPATIAL REFERENCE INFORMATION

4.1. HORIZONTAL COORDINATE SYSTEM DEFINITION

4.1.1. GEOGRAPHIC

4.1.1.1. LATITUDE RESOLUTION:

0.00005

4.1.1.2. LONGITUDE RESOLUTION:

0.00005

4.1.1.3 GEOGRAPHIC COORDINATE UNITS

Decimal Degrees

4.1.4. GEODETIC MODEL

4.1.4.1. HORIZONTAL DATUM NAME:

North American Datum of 1927

4.1.4.2. ELLIPSOID NAME:

Clarke, 1866

4.1.4.3. SEMI-MAJOR AXIS:

6,378,206.4

4.1.4.4. DENOMINATOR OF FLATTENING RATIO:

294.98

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5.0 ENTITY AND ATTRIBUTE INFORMATION

5.1. DETAILED DESCRIPTION: BIO_LUT

Lookup table to link biology coverages to the BIORES data table.

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
Attributes	RARNUM	integer
	ID	integer

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:
RARNUM

5.1.2.2. ATTRIBUTE DEFINITION:
An identifier that links the BIO_LUT table to the BIORES table

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
ID

5.1.2.2. ATTRIBUTE DEFINITION:
An identifier that links the biology coverages to the BIO_LUT table

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

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5.1. DETAILED DESCRIPTION: BIOFILE

The data table BIOFILE is a flat file format that provides all of the biology attributes contained in the relational data tables when used in conjunction with the supplementary tables BREED_DT and SOURCES.

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
Attributes	ELEMENT	character
	SUBELEMENT	character
	NAME	character
	GEN_SPEC	character
	S_F	character
	T_E	character
	NHP	character
	DATE_PUB	integer
	CONC	character
	JAN	character
	FEB	character
	MAR	character
	APR	character
	MAY	character
	JUN	character
	JUL	character
	AUG	character
	SEP	character
	OCT	character
	NOV	character
	DEC	character
	BREED1	character
	BREED2	character
	BREED3	character
	BREED4	character
	BREED5	character
	RARNUM	integer
	G_SOURCE	integer
	S_SOURCE	integer
	BREED	integer

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

ELEMENT

5.1.2.2. ATTRIBUTE DEFINITION:

Major categories of biological data

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
BIRD	Birds
FISH	Fish
INVERT	Invertebrates
M_MAMMAL	Marine Mammals
REPTILE	Reptiles and Amphibians
T_MAMMAL	Terrestrial Mammals

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

SUBELEMENT

5.1.2.2. ATTRIBUTE DEFINITION:

Species subgroup

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

alligator
anadromous
clam
crab
diving
dolphin
gull_tern
mustelid
oyster

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

raptor
rodent
shorebird
shrimp
special
turtle
wading
waterfowl

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

NAME

5.1.2.2. ATTRIBUTE DEFINITION:

Species common name

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

American alligator
American avocet
American coot
American oyster (eastern)
American oystercatcher
American wigeon
Anhinga
Atlantic croaker
Atlantic menhaden
Atlantic sharpnose shark
Atlantic stingray (stingaree)
Atlantic sturgeon
Bald eagle
Beaver
Black drum
Black duck

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Black scoter (common)
Black seabass
Black skimmer
Black-bellied plover
Black-crowned night heron
Black-necked stilt
Blacktip shark
Blue crab
Blue-winged teal
Bluefish
Bottlenose dolphin
Brown pelican
Bufflehead
Canvasback
Cattle egret
Clapper rail
Cobia
Common goldeneye
Common loon
Common merganser
Common tern
Crevalle jack
Double-crested cormorant
Dowitcher
Dunlin
Florida pompano
Gadwall
Gag grouper
Glossy ibis
Great blue heron
Great egret
Greater scaup
Greater yellowlegs
Green-backed heron
Green-winged teal
Grunts
Gulf kingfish
Gull-billed tern
Gulls

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Herring and shad
Hooded merganser
Killdeer
King mackerel
Laughing gull
Least bittern
Least tern
Lesser scaup
Lesser yellowlegs
Little blue heron
Loggerhead sea turtle
Mallard
Marbled godwit
Meadow vole
Mink
Mottled duck
Mummichog
Muskrat
Northern pintail
Northern raccoon
Northern shoveler
Oldsquaw
Osprey
Peep
Penaeid shrimp
Piping plover
Porgies
Purple sandpiper
Quahog spp. (hard clam)
Rays
Red drum
Red knot
Red-breasted merganser
Red-throated loon
Redhead
Ring-necked duck
River otter
Royal tern
Ruddy duck

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Ruddy turnstone
Sandwich tern
Seatrout (weakfish)
Semipalmated plover
Semipalmated sandpiper
Sharks
Sheepshead
Shorebirds
Shortnose sturgeon
Skates
Snappers
Snow goose
Snowy egret
Southern flounder
Southern kingfish (whiting)
Spanish mackerel
Spiny dogfish
Spot
Spotted sandpiper
Spotted seatrout
Striped mullet
Summer flounder
Surf scoter
Swallow-tailed kite
Tarpon
Tautog
Terns
Tricolored heron
Wading birds
White ibis
Willet
Wilsons plover
Wood duck
Wood stork
Yellow-crowned night heron

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

GEN_SPEC

5.1.2.2. ATTRIBUTE DEFINITION:

Species scientific name

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Acipenser brevirostrum
Acipenser oxyrhynchus
Actitis macularia
Aix sponsa
Alligator mississippiensis
Alosa spp.
Anas acuta
Anas americana
Anas clypeata
Anas crecca
Anas discors
Anas fulrigula
Anas platyrhynchos
Anas rubripes
Anas strepera
Anhinga anhinga
Archosargus probatocephalus
Ardea herodias
Arenaria interpres
Aythya affinis
Aythya americana
Aythya collaris
Aythya marila
Aythya valisineria
Brevoortia tyrannus
Bubulcus ibis
Bucephala albeola
Bucephala clangula
Butorides striatus

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Calidris alpina
Calidris canutus
Calidris maritima
Calidris pusilla
Calidris spp.
Callinectes sapidus
Caranx hippos
Carcharhinus limbatus
Caretta caretta
Casmerodius albus
Castor canadensis
Catoptrophorus semipalmatus
Centropristis striata
Charadrius melodus
Charadrius semipalmatus
Charadrius vociferus
Charadrius wilsonia
Chen caerulescens
Clangula hyemalis
Crassostrea virginica
Cynoscion nebulosus
Cynoscion regalis
Dasyatis sabina
Egretta caerulea
Egretta thula
Egretta tricolor
Elanoides forficatus
Eudocimus albus
Fulica americana
Fundulus heteroclitus
Gavia immer
Gavia stellata
Haematopus palliatus
Haliaeetus leucocephalus
Himantopus mexicanus
Ixobrychus exilis
Larus atricilla
Leiostomus xanthurus
Limnodromus spp.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Limosa fedoa
Lophodytes cucullatus
Lutra canadensis
Megalops atlanticus
Melanitta nigra
Melanitta perspicillata
Menticirrhus americanus
Menticirrhus littoralis
Mercenaria spp.
Mergus merganser
Mergus serrator
Micropogonias undulatus
Microtus pennsylvanicus
Mugil cephalus
Mustela vison
Mycteria americana
Mycteroperca microlepis
Nyctanassa violacea
Nycticorax nycticorax
Ondatra zibethicus
Oxyura jamaicensis
Pandion haliaetus
Paralichthys dentatus
Paralichthys lethostigma
Pelecanus occidentalis
Penaeus spp.
Phalacrocorax auritus
Plegadis falcinellus
Pluvialis squatarola
Pogonias cromis
Pomatomus saltatrix
Procyon lotor
Rachycentron canadum
Rallus longirostris
Recurvirostra americana
Rhizoprionodon terraenovae
Rynchops niger
Sciaenops ocellatus
Scomberomorus cavalla

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Scomberomorus maculatus
Squalus acanthias
Sterna antillarum
Sterna hirundo
Sterna maxima
Sterna nilotica
Sterna sandvicensis
Tautoga onitis
Trachinotus carolinus
Tringa flavipes
Tringa melanaleuca
Tursiops truncatus

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

S_F

5.1.2.2. ATTRIBUTE DEFINITION:

State and Federal status

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
S	State listed
S/F	State and Federally listed

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

SCDNR Heritage Trust

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

T_E

5.1.2.2. ATTRIBUTE DEFINITION:

Threatened and endangered status

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
E	Endangered
E/E	Endangered on State and Federal lists
E/T	Endangered on State list, Threatened on Federal list
T	Threatened
T/T	Threatened on State and Federal lists

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

SCDNR Heritage Trust

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

NHP

5.1.2.2. ATTRIBUTE DEFINITION:

This field is blank because no NHP information was gathered when this atlas was published. The field is included here to maintain consistency with the latest ESI data structure.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
	Not supplied with this atlas

5.1.2.1. ATTRIBUTE LABEL:

DATE_PUB

5.1.2.2. ATTRIBUTE DEFINITION:

This field is blank because no NHP information was gathered when this atlas was published. The field is included here to maintain consistency with the latest ESI data structure.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
	Not supplied with this atlas

5.1.2.1. ATTRIBUTE LABEL:

CONC

5.1.2.2. ATTRIBUTE DEFINITION:

Relative concentration or actual count of a species at a specific location. For most biological elements (exceptions follow), values include LOW, MEDIUM, or HIGH. The CONC field is blank if no data are available. Concentration exceptions include the following: (1) For clams in the INVERT data layer, concentrations are based on sampling densities recorded in the field. Clam densities are defined as follows: 1-5 clams / sq. yard = "LOW"; 6-10 clams / sq. yard = "MEDIUM"; 11-15 clams / sq. yard = "HIGH"; and 16+ clams / sq. yard = "VERY HIGH". (2) For the NESTS data layer, CONC contains a value for the number of nests. A blank concentration means the site was not surveyed in 1995. A value of zero indicates an empty nesting site when surveyed in 1995. (3) For alligators in the REPTILES data layer, all concentration estimates are listed as "HIGH". (4) For sea turtle nesting beaches (in REPTILES), concentrations are based on nesting densities recorded during aerial surveys. Nesting densities are defined as follows: <10 nests / km = "LOW"; 10-30 nests / km = "MEDIUM"; 31-50 nests / km = "HIGH"; and >50 nests / km = "VERY HIGH".

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
JAN

5.1.2.2. ATTRIBUTE DEFINITION:
Present in January

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present
	(blank) Not Present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
FEB

5.1.2.2. ATTRIBUTE DEFINITION:
Present in February

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present
	(blank) Not Present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
MAR

5.1.2.2. ATTRIBUTE DEFINITION:
Present in March

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present
	(blank) Not Present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
APR

5.1.2.2. ATTRIBUTE DEFINITION:
Present in April

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present
	(blank) Not Present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:

MAY

5.1.2.2. ATTRIBUTE DEFINITION:

Present in May

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present
	(blank) Not Present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

JUN

5.1.2.2. ATTRIBUTE DEFINITION:

Present in June

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present
	(blank) Not Present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

JUL

5.1.2.2. ATTRIBUTE DEFINITION:

Present in July

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present
	(blank) Not Present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

AUG

5.1.2.2. ATTRIBUTE DEFINITION:

Present in August

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present
	(blank) Not Present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

SEP

5.1.2.2. ATTRIBUTE DEFINITION:

Present in September

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present
	(blank) Not Present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

OCT

5.1.2.2. ATTRIBUTE DEFINITION:

Present in October

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present
	(blank) Not Present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

NOV

5.1.2.2. ATTRIBUTE DEFINITION:

Present in November

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present
	(blank) Not Present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

DEC

5.1.2.2. ATTRIBUTE DEFINITION:

Present in December

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present
	(blank) Not Present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

BREED1

5.1.2.2. ATTRIBUTE DEFINITION:

Species' breeding or life stage textual summary where:
if ELEMENT = BIRD then BREED1 = nesting;
if ELEMENT = FISH then BREED1 = spawning;
if ELEMENT = INVERT then BREED1 = spawning;
if ELEMENT = REPTILE then BREED1 = nesting

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
XXX-XXX	3 character abbreviation of start and end month of breed1 activities
-	Not Occurring
N/A	No breed1 activities for this element

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

BREED2

5.1.2.2. ATTRIBUTE DEFINITION:

Species' breeding or life stage textual summary where:
if ELEMENT = BIRD then BREED2 = laying;
if ELEMENT = FISH then BREED2 = outmigration;
if ELEMENT = INVERT then BREED2 = larvae;
if ELEMENT = REPTILE then BREED2 = hatching

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
XXX-XXX	3 character abbreviation of start and end month of breed2 activities
-	Not Occurring
N/A	No breed2 activities for this element

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

BREED3

5.1.2.2. ATTRIBUTE DEFINITION:

Species' breeding or life stage textual summary where:
if ELEMENT = BIRD then BREED3 = hatching;
if ELEMENT = FISH then BREED3 = larvae;
if ELEMENT = INVERT then BREED3 = mating;
if ELEMENT = REPTILE then BREED3 = internesting

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
XXX-XXX	3 character abbreviation of start and end month of breed3 activities
-	Not Occurring
N/A	No breed3 activities for this element

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

BREED4

5.1.2.2. ATTRIBUTE DEFINITION:

Species' breeding or life stage textual summary where:
if ELEMENT = BIRD then BREED4 = fledging;
if ELEMENT = FISH then BREED4 = juveniles;
if ELEMENT = INVERT then BREED4 = juveniles

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
XXX-XXX	3 character abbreviation of start and end month of breed4 activities
-	Not Occurring
N/A	No breed4 activities for this element

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

BREED5

5.1.2.2. ATTRIBUTE DEFINITION:

Species' breeding or life stage textual summary where:
if ELEMENT = FISH then BREED5 = adults;
if ELEMENT = INVERT then BREED5 = adults;
however, when the South Carolina atlas was compiled, no adult fish or invertebrates were considered in the data structure.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
XXX-XXX	3 character abbreviation of start and end month of breed5 activities
-	Not Occurring
N/A	No breed5 activities for this element

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
RARNUM

5.1.2.2. ATTRIBUTE DEFINITION:
An identifier that links directly back to the biological data layers or to the BIO_LUT lookup table

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
G_SOURCE

5.1.2.2. ATTRIBUTE DEFINITION:
Geographic source identifier that links to the flat file's supplementary data table SOURCES

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
S_SOURCE

5.1.2.2. ATTRIBUTE DEFINITION:
Seasonality source identifier that links to the flat file's supplementary data table SOURCES

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
BREED

5.1.2.2. ATTRIBUTE DEFINITION:
Breed identifier that links to the flat file's supplementary data table BREED_DT that allows searches of breeding activities by month

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1. DETAILED DESCRIPTION: BIORES

The data table BIORES contains the attributes necessary for linking to several spatial data layers and other data tables.

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
Attributes	RARNUM	integer
	SPECIES_ID	integer
	CONC	character
	SEASON_ID	integer
	G_SOURCE	integer
	S_SOURCE	integer
	ELEMENT	character
	EL_SPE	character
	EL_SPE_SEA	character

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

RARNUM

5.1.2.2. ATTRIBUTE DEFINITION:

An identifier that links to the BIO_LUT table and directly back to the biology coverages

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:
SPECIES_ID

5.1.2.2. ATTRIBUTE DEFINITION:
Numeric identifier for each species that is unique within each element and refers to a nationwide ESI species list maintained by NOAA

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
CONC

5.1.2.2. ATTRIBUTE DEFINITION:
Relative concentration or actual count of a species at a specific location. For most biological elements (exceptions follow), values include LOW, MEDIUM, or HIGH. The CONC field is blank if no data are available. Concentration exceptions include the following: (1) For clams in the INVERT data layer, concentrations are based on sampling densities recorded in the field. Clam densities are defined as follows: 1-5 clams/sq. yard = "LOW"; 6-10 clams/sq. yard = "MEDIUM"; 11-15 clams/sq. yard = "HIGH"; and 16+ clams/sq. yard = "VERY HIGH". (2) For the NESTS data layer, CONC contains a value for the number of nests. A blank concentration means the site was not surveyed in 1995. A value of zero indicates an empty nesting site when surveyed in 1995. (3) For alligators in the REPTILES data layer,

all concentration estimates are listed as "HIGH". (4) For sea turtle nesting beaches (in REPTILES), concentrations are based on nesting densities recorded during aerial surveys. Nesting densities are defined as follows: <10 nests/km = "LOW"; 10-30 nests/km = "MEDIUM"; 31-50 nests/km = "HIGH"; and >50 nests/km = "VERY HIGH".

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
SEASON_ID

5.1.2.2. ATTRIBUTE DEFINITION:
A link from the BIORES table to the SEASONAL table

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
G_SOURCE

5.1.2.2. ATTRIBUTE DEFINITION:
Geographic source identifier that links to the SOURCES data table

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
S_SOURCE

5.1.2.2. ATTRIBUTE DEFINITION:
Seasonality source identifier that links to the SOURCES data table

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
ELEMENT

5.1.2.2. ATTRIBUTE DEFINITION:
Major categories of biological data

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
BIRD	Birds
FISH	Fish
INVERT	Invertebrates
M_MAMMAL	Marine Mammals
REPTILE	Reptiles and Amphibians
T_MAMMAL	Terrestrial Mammals

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

EL_SPE

5.1.2.2. ATTRIBUTE DEFINITION:

Concatenation of the first character of the ELEMENT and the SPECIES_ID that provides a link to the SPECIES table.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

EL_SPE_SEA

5.1.2.2. ATTRIBUTE DEFINITION:

Concatenation of the first character of the ELEMENT, the SPECIES_ID, and the SEASON_ID that provides a link to the SEASONAL table.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1. DETAILED DESCRIPTION: BIRDS

The data layer BIRDS contains the polygons with bird species. The following BIRDS species are found in the South Carolina ESI data set:

SPECIES ID	NAME
1	Common loon
3	Red-throated loon
8	Double-crested cormorant
15	Snow goose
16	Mallard
17	Northern pintail
18	Green-winged teal
20	Northern shoveler
21	Canvasback
22	Greater scaup
23	Lesser scaup
24	Common goldeneye
26	Bufflehead
27	Oldsquaw
30	Surf scoter
32	Common merganser
33	Red-breasted merganser
34	American coot
56	Spotted sandpiper
58	Greater yellowlegs
59	Lesser yellowlegs
60	Red knot
63	Dunlin
69	Semipalmated plover
70	Killdeer
71	Black-bellied plover
73	Ruddy turnstone
86	Least tern
89	Snowy egret
94	Tricolored heron
98	Laughing gull
118	Brown pelican
124	Redhead
125	Clapper rail
133	Black skimmer
134	Gull-billed tern
135	Sandwich tern
137	Royal tern
141	American avocet

SPECIES ID	NAME
142	Black-necked stilt
148	Ruddy duck
152	American oystercatcher
153	Piping plover
154	Wilson's plover
155	Willet
156	Semipalmated sandpiper
162	Gadwall
169	American wigeon
178	Least bittern
180	Ring-necked duck
186	Black duck
190	Blue-winged teal
191	Wood duck
197	Black scoter (common)
198	Hooded merganser
210	Marbled godwit
211	Mottled duck
234	Purple sandpiper
286	Dowitcher
290	Peep
1,001	Gulls
1,002	Shorebirds
1,004	Wading birds
1,008	Terns

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
GT-Polygons	ID	integer
	RARNUM	integer

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

ID

5.1.2.2. ATTRIBUTE DEFINITION:

A unique identifier that links to the BIO_LUT table. ID is a concatenation of atlas number (34), element number (1), and record number. ID values of 9999 are holes in polygons and do not contain information

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
NOAA

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
RARNUM

5.1.2.2. ATTRIBUTE DEFINITION:
An identifier that links directly to the BIORES table or the flat format BIOFILE table

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

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5.1. DETAILED DESCRIPTION: BREED

The data table BREED identifies the life stages and abundances, by month, for each species. (There are no breeding activities for M_MAMMAL or T_MAMMAL elements.)

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
Attributes	EL_SPE_SEA	character
	MONTH	integer
	BREED1	character
	BREED2	character
	BREED3	character
	BREED4	character
	BREED5	character

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

EL_SPE_SEA

5.1.2.2. ATTRIBUTE DEFINITION:

Concatenation of the first character of the ELEMENT, the SPECIES_ID, and the SEASON_ID. Links to BIORES and SEASONAL data tables. If a species has any different monthly presence or breeding activity, a new seasonality record is used to accommodate the variable nature of the species across the study area

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

MONTH

5.1.2.2. ATTRIBUTE DEFINITION:

Two-digit integer corresponding to the calendar month. Can have up to 12 records to account for each month of the year

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1	January
2	February
3	March
4	April
5	May
6	June
7	July
8	August
9	September
10	October
11	November
12	December

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

BREED1

5.1.2.2. ATTRIBUTE DEFINITION:

Species' breeding or life stage information where:
if EL_SPE_SEA contains "B" then BREED1 = nesting;
if EL_SPE_SEA contains "F" then BREED1 = spawning;
if EL_SPE_SEA contains "I" then BREED1 = spawning;
if EL_SPE_SEA contains "R" then BREED1 = nesting

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
N	Not occurring
Y	Occurring

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

BREED2

5.1.2.2. ATTRIBUTE DEFINITION:

Species' breeding or life stage information where:
if EL_SPE_SEA contains "B" then BREED2 = laying;
if EL_SPE_SEA contains "F" then BREED2 = outmigration;
if EL_SPE_SEA contains "I" then BREED2 = larvae;
if EL_SPE_SEA contains "R" then BREED2 = hatching

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
N	Not occurring
Y	Occurring

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

BREED3

5.1.2.2. ATTRIBUTE DEFINITION:

Species' breeding or life stage information where:
if EL_SPE_SEA contains "B" then BREED3 = hatching;
if EL_SPE_SEA contains "F" then BREED3 = larvae;
if EL_SPE_SEA contains "I" then BREED3 = mating;
if EL_SPE_SEA contains "R" then BREED3 = internesting

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
N	Not occurring
Y	Occurring

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

BREED4

5.1.2.2. ATTRIBUTE DEFINITION:

Species' breeding or life stage information where:
if EL_SPE_SEA contains "B" then BREED4 = fledging;
if EL_SPE_SEA contains "F" then BREED4 = juveniles;
if EL_SPE_SEA contains "I" then BREED4 = juveniles

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
N	Not occurring
Y	Occurring

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

BREED5

5.1.2.2. ATTRIBUTE DEFINITION:

Species' breeding or life stage information where:
if EL_SPE_SEA contains "F" then BREED5 = adults;
if EL_SPE_SEA contains "I" then BREED5 = adults;
however, when the South Carolina atlas was compiled, no adult fish or invertebrates were considered in the data structure

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
N	Not occurring
Y	Occurring

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

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5.1. DETAILED DESCRIPTION: BREED_DT

The data table BREED _DT is a supplement to the flat format BIOFILE that allows searches to be conducted for life stage activities by month. This is a condensed version of the BREED table where multiple species of the same element may link to the same BREED_DT records. (There are no breeding activities for the M_MAMMAL or T_MAMMAL elements.)

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
Attributes	BREED	integer
	MONTH	integer
	BREED1	character
	BREED2	character
	BREED3	character
	BREED4	character
	BREED5	character

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

BREED

5.1.2.2. ATTRIBUTE DEFINITION:

An integer value that links from the BIOFILE to the BREED_DT table

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

MONTH

5.1.2.2. ATTRIBUTE DEFINITION:

Two-digit integer corresponding to the calendar month. Each month is listed whether any special life activity is occurring or not.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1	January
2	February
3	March
4	April
5	May
6	June
7	July
8	August
9	September
10	October
11	November
12	December

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

BREED1

5.1.2.2. ATTRIBUTE DEFINITION:

Species' breeding or life stage information where:
if EL_SPE_SEA contains "B" then BREED1 = nesting;
if EL_SPE_SEA contains "F" then BREED1 = spawning;
if EL_SPE_SEA contains "I" then BREED1 = spawning;
if EL_SPE_SEA contains "R" then BREED1 = nesting

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
N	Not occurring
Y	Occurring
-	No Breed1 activity for this element

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

BREED2

5.1.2.2. ATTRIBUTE DEFINITION:

Species' breeding or life stage information where:
if EL_SPE_SEA contains "B" then BREED2 = laying;
if EL_SPE_SEA contains "F" then BREED2 = outmigration;
if EL_SPE_SEA contains "I" then BREED2 = larvae;
if EL_SPE_SEA contains "R" then BREED2 = hatching

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
N	Not occurring
Y	Occurring
-	No Breed2 activity for this element

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

BREED3

5.1.2.2. ATTRIBUTE DEFINITION:

Species' breeding or life stage information where:
if EL_SPE_SEA contains "B" then BREED3 = hatching;
if EL_SPE_SEA contains "F" then BREED3 = larvae;
if EL_SPE_SEA contains "I" then BREED3 = mating;
if EL_SPE_SEA contains "R" then BREED3 = internesting

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
N	Not occurring
Y	Occurring
-	No Breed3 activity for this element

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

BREED4

5.1.2.2. ATTRIBUTE DEFINITION:

Species' breeding or life stage information where:
if EL_SPE_SEA contains "B" then BREED4 = fledging;
if EL_SPE_SEA contains "F" then BREED4 = juveniles;
if EL_SPE_SEA contains "I" then BREED4 = juveniles

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
N	Not occurring
Y	Occurring
-	No Breed4 activity for this element

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
BREED5

5.1.2.2. ATTRIBUTE DEFINITION:
Species' breeding or life stage information where:
if EL_SPE_SEA contains "F" then BREED5 = adults;
if EL_SPE_SEA contains "I" then BREED5 = adults;
however, when the South Carolina atlas was compiled, no adult fish or invertebrates were considered in the data structure

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
N	Not occurring
Y	Occurring
-	No Breed5 activity for this element

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

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5.1. DETAILED DESCRIPTION: ESI

The data layer ESI contains arc (Complete Chains) and polygonal (GT-Polygons) features for the ESI shoreline classification and is based on *Environmental Sensitivity Index Guidelines, Version 2.0* (Halls, J., J. Michel, S. Zengel, and J. Dahlin, 1996, Hazardous Materials Response and Assessment Division, NOAA). The ESI classification was performed over the period from March-October 1995.

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
Complete Chain	ESI	character
	LINE	character
	SOURCE_ID	integer
	ENVIR	character
GT-Polygons	ESI	character
	WATER_CODE	character

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

ESI

5.1.2.2. ATTRIBUTE DEFINITION:

The item ESI contains values according to the ESI ranking of the shorelines and polygons. The ESI rankings progress from low to high susceptibility to oil spills. The South Carolina shoreline types are listed below. In many cases, the shorelines are also ranked with multiple codes such as 10/7. The first number is the most landward shoreline type, salt marsh, with exposed tidal flats being the shoreline type closest to the water.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1	Exposed Walls and Other Solid Structures Made of Concrete, Wood, or Metal
1/2A	Exposed Walls and Other Solid Structures Made of Concrete, Wood, or Metal/Exposed Scarps in Clay

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1/3A	Exposed Walls and Other Solid Structures Made of Concrete, Wood, or Metal/Fine-grained Sand Beaches
1/3A/7	Exposed Walls and Other Solid Structures Made of Concrete, Wood, or Metal/Fine-grained Sand Beaches/Exposed Tidal Flats (Sandy)
1/5	Exposed Walls and Other Solid Structures Made of Concrete, Wood, or Metal/Mixed Sand and Gravel (Shell) Beaches
1/6A	Exposed Walls and Other Solid Structures Made of Concrete, Wood, or Metal/Gravel (Shell) Beaches
1/6B	Exposed Walls and Other Solid Structures Made of Concrete, Wood, or Metal/Exposed Riprap Structures
1/6B/3A	Exposed Walls and Other Solid Structures Made of Concrete, Wood, or Metal/Exposed Riprap Structures/Fine-grained Sand Beaches
1/6B/7	Exposed Walls and Other Solid Structures Made of Concrete, Wood, or Metal/Exposed Riprap Structures/Exposed Tidal Flats (Sandy)
1/7	Exposed Walls and Other Solid Structures Made of Concrete, Wood, or Metal/Exposed Tidal Flats (Sandy)
1/10A	Exposed Walls and Other Solid Structures made of Concrete, Wood, or Metal/Salt and Brackish-water Marshes/Salt and Brackish-water Marshes
1/10A/7	Exposed Walls and Other Solid Structures Made of Concrete, Wood, or Metal/Salt and Brackish-water Marshes/Exposed Tidal Flats (Sandy)
1/10B	Exposed Walls and Other Solid Structures Made of Concrete, Wood, or Metal/Freshwater Marshes (Herbaceous Vegetation)
2A	Exposed Scarps in Clay
2A/3A	Exposed Scarps in Clay/Fine-grained Sand Beaches
2A/7	Exposed Scarps in Clay/Exposed Tidal Flats (Sandy)
2A/10A	Exposed Scarps in Clay/Salt and Brackish-water Marshes
2B	Wave-cut Mud Platforms
3A	Fine-grained Sand Beaches
3A/2A	Fine-grained Sand Beaches/Exposed Scarps in Clay
3A/2B	Fine-grained Sand Beaches/Wave-cut Mud Platforms
3A/3B	Fine-grained Sand Beaches/Scarps and Steep Slopes in Sand
3A/6B	Fine-grained Sand Beaches/Exposed Riprap Structures

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
3A / 7	Fine-grained Sand Beaches / Exposed Tidal Flats (Sandy)
3A / 8B	Fine-grained Sand Beaches / Sheltered Scarps in Marsh / Mud
3A / 8B / 7	Fine-grained Sand Beaches / Sheltered Scarps in Marsh / Mud / Exposed Tidal Flats (Sandy)
3A / 9	Fine-grained Sand Beaches / Sheltered Tidal Flats / Oyster Beds (Muddy)
3A / 10A	Fine-grained Sand Beaches / Salt and Brackish-water Marshes
3A / 10A / 6A	Fine-grained Sand Beaches / Salt and Brackish-water Marshes / Gravel (Shell) Beaches
3A / 10A / 7	Fine-grained Sand Beaches / Salt and Brackish-water Marshes / Exposed Tidal Flats (Sandy)
3A / 10A / 8B	Fine-grained Sand Beaches / Salt and Brackish-water Marshes / Sheltered Scarps in Marsh / Mud
3A / 10A / 9	Fine-grained Sand Beaches / Salt and Brackish-water Marshes / Sheltered Tidal Flats / Oyster Beds (Muddy)
3B	Scarps and Steep Slopes in Sand
3B / 3A	Scarps and Steep Slopes in Sand / Fine-grained Sand Beaches
3B / 3A / 7	Scarps and Steep Slopes in Sand / Fine-grained Sand Beaches / Exposed Tidal Flats (Sandy)
3B / 5	Scarps and Steep Slopes in Sand / Mixed Sand and Gravel (Shell) Beaches
3B / 6A	Scarps and Steep Slopes in Sand / Gravel (Shell) Beaches
3B / 6A / 7	Scarps and Steep Slopes in Sand / Gravel (Shell) Beaches / Exposed Tidal Flats (Sandy)
3B / 6B	Scarps and Steep Slopes in Sand / Exposed Riprap Structures
3B / 7	Scarps and Steep Slopes in Sand / Exposed Tidal Flats (Sandy)
3B / 7 / 9	Scarps and Steep Slopes in Sand / Exposed Tidal Flats (Sandy) / Sheltered Tidal Flats / Oyster Beds (Muddy)
3B / 8B	Scarps and Steep Slopes in Sand / Sheltered Scarps in Marsh / Mud
3B / 9	Scarps and Steep Slopes in Sand / Sheltered Tidal Flats / Oyster Beds (Muddy)
3B / 10A	Scarps and Steep Slopes in Sand / Salt and Brackish-water Marshes

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
3B / 10A / 7	Scarps and Steep Slopes in Sand / Salt and Brackish-water Marshes / Exposed Tidal Flats (Sandy)
3B / 10B	Scarps and Steep Slopes in Sand / Freshwater Marshes (Herbaceous Vegetation)
4	Medium- to Coarse-grained Sand Beaches
4 / 7	Medium- to Coarse-grained Sand Beaches / Exposed Tidal Flats (Sandy)
5	Mixed Sand and Gravel (Shell) Beaches
5 / 2B	Mixed Sand and Gravel (Shell) Beaches / Wave-cut Mud Platforms
5 / 2B / 10A	Mixed Sand and Gravel (Shell) Beaches / Wave-cut Mud Platforms / Salt and Brackish-water Marshes
5 / 7	Mixed Sand and Gravel (Shell) Beaches / Exposed Tidal Flats (Sandy)
5 / 9	Mixed Sand and Gravel (Shell) Beaches / Sheltered Tidal Flats / Oyster Beds (Muddy)
5 / 10A	Mixed Sand and Gravel (Shell) Beaches / Salt and Brackish-water Marshes
5 / 10A / 6A	Mixed Sand and Gravel (Shell) Beaches / Salt and Brackish-water Marshes / Gravel (Shell) Beaches
5 / 10A / 7	Mixed Sand and Gravel (Shell) Beaches / Salt and Brackish-water Marshes / Exposed Tidal Flats (Sandy)
6A	Gravel (Shell) Beaches
6A / 7	Gravel (Shell) Beaches / Exposed Tidal Flats (Sandy)
6A / 9	Gravel (Shell) Beaches / Sheltered Tidal Flats / Oyster Beds (Muddy)
6A / 10A	Gravel (Shell) Beaches / Salt and Brackish-water Marshes
6B	Exposed Riprap Structures
6B / 3A	Exposed Riprap Structures / Fine-grained Sand Beaches
6B / 5	Exposed Riprap Structures / Mixed Sand and Gravel (Shell) Beaches
6B / 6A	Exposed Riprap Structures / Gravel (Shell) Beaches
6B / 7	Exposed Riprap Structures / Exposed Tidal Flats (Sandy)
6B / 8B	Exposed Riprap Structures / Sheltered Scarps in Marsh / Mud
6B / 9	Exposed Riprap Structures / Sheltered Tidal Flats / Oyster Beds (Muddy)
6B / 9 / 7	Exposed Riprap Structures / Sheltered Tidal Flats / Oyster Beds (Muddy) / Exposed Tidal Flats (Sandy)

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
6B / 10A	Exposed Riprap Structures / Salt and Brackish-water Marshes
6B / 10A / 7	Exposed Riprap Structures / Salt and Brackish-water Marshes / Exposed Tidal Flats (Sandy)
6B / 10A / 9	Exposed Riprap Structures / Salt and Brackish-water Marshes / Sheltered Tidal Flats / Oyster Beds (Muddy)
7	Exposed Tidal Flats (Sandy)
7 / 2B	Exposed Tidal Flats (Sandy) / Exposed Scarps in Clay
7 / 6B	Exposed Tidal Flats (Sandy) / Exposed Riprap Structures
7 / 9	Exposed Tidal Flats (Sandy) / Sheltered Tidal Flats / Oyster Beds (Muddy)
7 / 10A	Exposed Tidal Flats (Sandy) / Salt and Brackish-water Marshes
8A	Sheltered, Solid Man-made Structures
8A / 2A	Sheltered, Solid Man-made Structures / Exposed Scarps in Clay
8A / 3A	Sheltered, Solid Man-made Structures / Fine-grained Sand Beaches
8A / 3B / 7	Sheltered, Solid Man-made Structures / Scarps and Steep Slopes in Sand
8A / 6A	Sheltered, Solid Man-made Structures / Gravel (Shell) Beaches
8A / 7	Sheltered, Solid Man-made Structures / Exposed Tidal Flats (Sandy)
8A / 8B	Sheltered, Solid Man-made Structures / Sheltered Scarps in Marsh / Mud
8A / 9	Sheltered, Solid Man-made Structures / Sheltered Tidal Flats / Oyster Beds (Muddy)
8A / 10A	Sheltered, Solid Man-made Structures / Salt and Brackish-water Marshes
8A / 10A / 7	Sheltered, Solid Man-made Structures / Salt and Brackish-water Marshes / Exposed Tidal Flats (Sandy)
8A / 10A / 9	Sheltered, Solid Man-made Structures / Salt and Brackish-water Marshes / Sheltered Tidal Flats / Oyster Beds (Muddy)
8B	Sheltered Scarps in Marsh / Mud
8B / 5	Sheltered Scarps in Marsh / Mud / Mixed Sand and Gravel (Shell) Beaches
8B / 6A	Sheltered Scarps in Marsh / Mud / Gravel (Shell) Beaches

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
8B / 7	Sheltered Scarps in Marsh / Mud / Exposed Tidal Flats (Sandy)
8B / 9	Sheltered Scarps in Marsh / Mud / Sheltered Tidal Flats / Oyster Beds (Muddy)
8B / 10A	Sheltered Scarps in Marsh / Mud / Salt and Brackish-water Marshes
8B / 10A / 6A	Sheltered Scarps in Marsh / Mud / Salt and Brackish-water Marshes / Gravel (Shell) Beaches
9	Sheltered Tidal Flats / Oyster Beds (Muddy)
9 / 3A	Sheltered Tidal Flats / Oyster Beds (Muddy) / Fine-grained Sand Beaches
9 / 6A	Sheltered Tidal Flats / Oyster Beds (Muddy) / Gravel (Shell) Beaches
9 / 10A	Sheltered Tidal Flats / Oyster Beds (Muddy) / Salt and Brackish-water Marshes
10A	Salt and Brackish-water Marshes
10A / 3A	Salt and Brackish Water Marshes / Fine-grained Sand Beaches
10A / 3A / 7	Salt and Brackish Water Marshes / Fine-grained Sand Beaches / Exposed Tidal Flats (Sandy)
10A / 3A / 9	Salt and Brackish Water Marshes / Fine-grained Sand Beaches / Sheltered Tidal Flats / Oyster Beds (Muddy)
10A / 4	Salt and Brackish Water Marshes / Medium- to Coarse-grained Sand Beaches
10A / 5	Salt and Brackish Water Marshes / Mixed Sand and Gravel (Shell) Beaches
10A / 5 / 7	Salt and Brackish Water Marshes / Mixed Sand and Gravel (Shell) Beaches / Exposed Tidal Flats (Sandy)
10A / 6A	Salt and Brackish Water Marshes / Gravel (Shell) Beaches
10A / 6A / 10A	Salt and Brackish Water Marshes / Gravel (Shell) Beaches / Salt and Brackish Water Marshes
10A / 6A / 2B	Salt and Brackish Water Marshes / Gravel (Shell) Beaches / Wave-cut Mud Platforms
10A / 6A / 7	Salt and Brackish Water Marshes / Gravel (Shell) Beaches / Exposed Tidal Flats (Sandy)
10A / 6A / 8B	Salt and Brackish Water Marshes / Gravel (Shell) Beaches / Sheltered Scarps in Marsh / Mud
10A / 6A / 9	Salt and Brackish Water Marshes / Gravel (Shell) Beaches / Sheltered Tidal Flats / Oyster Beds (Muddy)

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
10A / 6B	Salt and Brackish Water Marshes / Exposed Riprap Structures
10A / 6B / 7	Salt and Brackish Water Marshes / Exposed Riprap Structures / Exposed Tidal Flats (Sandy)
10A / 7	Salt and Brackish Water Marshes / Exposed Tidal Flats (Sandy)
10A / 8A	Salt and Brackish Water Marshes / Sheltered, Solid Man-made Structures
10A / 8B	Salt and Brackish Water Marshes / Sheltered Scarps in Marsh / Mud
10A / 8B / 7	Salt and Brackish Water Marshes / Sheltered Scarps in Marsh / Mud / Exposed Tidal Flats (Sandy)
10A / 8B / 9	Salt and Brackish Water Marshes / Sheltered Scarps in Marsh / Mud / Sheltered Tidal Flats / Oyster Beds (Muddy)
10A / 9	Salt and Brackish Water Marshes / Sheltered Tidal Flats / Oyster Beds (Muddy)
10A / 9 / 10A	Salt and Brackish Water Marshes / Sheltered Tidal Flats / Oyster Beds (Muddy) / Salt and Brackish Water Marshes
10A / 9 / 6A	Salt and Brackish Water Marshes / Sheltered Tidal Flats / Oyster Beds (Muddy) / Gravel (Shell) Beaches
10A / 9 / 7	Salt and Brackish Water Marshes / Sheltered Tidal Flats / Oyster Beds (Muddy) / Exposed Tidal Flats (Sandy)
10B	Freshwater Marshes (Herbaceous Vegetation)
10B / 6B	Freshwater Marshes (Herbaceous Vegetation) / Exposed Riprap Structures
10B / 7	Freshwater Marshes (Herbaceous Vegetation) / Exposed Tidal Flats (Sandy)
10B / 9	Freshwater Marshes (Herbaceous Vegetation) / Sheltered Tidal Flats / Oyster Beds (Muddy)
10B / 9 / 7	Freshwater Marshes (Herbaceous Vegetation) / Sheltered Tidal Flats / Oyster Beds (Muddy) / Exposed Tidal Flats (Sandy)
10B / 10C	Freshwater Marshes (Herbaceous Vegetation) / Freshwater Swamps (Woody Vegetation)
10C	Freshwater Swamps (Woody Vegetation)
10C / 2A	Freshwater Swamps (Woody Vegetation) / Exposed Scarps in Clay
10C / 7	Freshwater Swamps (Woody Vegetation) / Exposed Tidal Flats (Sandy)

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
10C/9	Freshwater Swamps (Woody Vegetation)/Sheltered Tidal Flats/Oyster Beds (Muddy)
10C/10A	Freshwater Swamps (Woody Vegetation)/Salt and Brackish-water Marshes
10C/10B	Freshwater Swamps (Woody Vegetation)/Freshwater Marshes (Herbaceous Vegetation)
10D	Scrub-shrub wetlands
U	Unranked

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

ordinal

5.1.2.1. ATTRIBUTE LABEL:

LINE

5.1.2.2. ATTRIBUTE DEFINITION:

Type of geographic feature

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
B	Breakwater
F	Flat
H	Hydrography or stream features
I	Index
M	Marsh
P	Pier
S	Shoreline

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

SOURCE_ID

5.1.2.2. ATTRIBUTE DEFINITION:

Data source for the ESI

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1	SCDNR—Marine Resources Division
2	SCDNR—Water Resources Division
3	University of South Carolina's Baruch Institute
4	Overflight
5	Digitize from Topo
6	Aerial Photographs
7	SCDNR—Land Resources Division
8	Index

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

ENVIR

5.1.2.2. ATTRIBUTE DEFINITION:

Regional environment

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
E	Estuarine

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

WATER_CODE

5.1.2.2. ATTRIBUTE DEFINITION:

Specifies a polygon as either water or land

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
W	Water
L	Land

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1. DETAILED DESCRIPTION: FISH

The data layer FISH contains the polygons with fish species. The following FISH species are found in the South Carolina ESI data set:

SPECIES ID	NAME
65	Bluefish
81	Spiny dogfish
95	Mummichog
97	Tautog
101	Shortnose sturgeon
102	Atlantic sturgeon
107	Spotted seatrout
108	Summer flounder
109	Red drum
110	Black seabass
111	Southern flounder
114	Florida pompano
115	Atlantic menhaden
116	Striped mullet
121	Spot
122	Black drum
123	Atlantic croaker
124	Southern kingfish (whiting)
126	King mackerel
127	Spanish mackerel
134	Cobia
137	Sheepshead
138	Seatrout (weakfish)
142	Crevalle jack
143	Tarpon
214	Gulf kingfish
302	Gag grouper
315	Blacktip shark
318	Atlantic sharpnose shark
323	Atlantic stingray (stingaree)
331	Sharks
333	Herring and Shad
1,015	Rays
1,016	Skates
1,017	Grunts
1,018	Porgies
1,019	Snappers

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
GT-Polygons	ID	integer
	RARNUM	integer

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

ID

5.1.2.2. ATTRIBUTE DEFINITION:

A unique identifier that links to the BIO_LUT table. ID is a concatenation of atlas number (34), element number (2), and record number. ID values of 9999 are holes in polygons and do not contain information

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

RARNUM

5.1.2.2. ATTRIBUTE DEFINITION:

An identifier that links directly to the BIORES table or the flat format BIOFILE table

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

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5.1. DETAILED DESCRIPTION: HYDRO

The data layer HYDRO contains polygonal water and land features as well as linear features for rivers / streams that are tidally influenced.

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
GT-Polygons	WATER_CODE	character
Complete Chains	LINE	character
	SOURCE_ID	integer

The LINE, SOURCE_ID, and WATER_CODE attributes are the same as in the ESI coverage. This coverage contains all annotation used in producing the atlas. The annotation features are categorized into three subclasses in order to simplify the mapping and quality control procedures: geog or geographic features, soc or socioeconomic features, and hydro or water features.

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

WATER_CODE

5.1.2.2. ATTRIBUTE DEFINITION:

Specifies a polygon as either water or land

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
W	Water
L	Land

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

LINE

5.1.2.2. ATTRIBUTE DEFINITION:

Type of geographic feature

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.1. ENUMERATED DOMAIN VALUE DEFINITION:
B	Breakwater
F	Flat
I	Index
M	Marsh
P	Pier
S	Shoreline

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

SOURCE_ID

5.1.2.2. ATTRIBUTE DEFINITION:

Data source for the HYDRO

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1	SCDNR—Marine Resources Division
2	SCDNR—Water Resources Division
3	University of South Carolina's Baruch Institute
4	Overflight
5	Digitize from Topo
6	Aerial Photographs
7	SCDNR—Land Resources Division
8	Index

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

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5.1. DETAILED DESCRIPTION: INDEX

The data layer INDEX contains the map boundaries for each quad/map in the data set.

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
GT-Polygons	TILE-NAME	character
	TOPO-NAME	character
	SCALE	integer
	MAPANGLE	fraction
	PAGESIZE	character

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:
TILE-NAME

5.1.2.2. ATTRIBUTE DEFINITION:
The TILE-NAME contains the map number according to the specified layout of the atlas. During the map production process, the value of TILE-NAME is plotted on the map product to order the maps in a coherent manner. The values for each polygon are unique and range from 1 through 63.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
TOPO-NAME

5.1.2.2. ATTRIBUTE DEFINITION:
USGS 1:24,000 topographic map name. Some polygons straddle two or more maps and all map names are included in this attribute. The dates (latest/revised) of the USGS maps are also included in this field.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

ADAMS RUN, SC (1972)
AWENDAW, SC (1992)
BEAUFORT, SC (1979)

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

BENNETTES POINT, SC (1960)
BLUFFTON, SC (1972)
BROOKGREEN, SC (1973)
BUCKSVILLE, SC (1973)
BULL ISLAND, SC (1992)
CAINHOY, SC (1971)
CAPE ROMAIN, SC (1992)
CAPERS INLET, SC (1992)
CHARLESTON, SC (1983)
COOSAWHATCHIE, SC (1988)
CORDESVILLE, SC (1979)
DALE, SC (1988)
EDISTO BEACH, SC (1972)
EDISTO ISLAND, SC (1972)
FENWICK, SC (1960)
FORT MOULTRIE, SC (1979)
FORT PULASKI, GA-SC (1978)
FRIPPS INLET, SC (1979)
FROGMORE, SC (1956)
GEORGETOWN NORTH, SC (1973)
GEORGETOWN SOUTH, SC (1973)
HAND, SC (1984)
HILTON HEAD, SC (1971)
JAMES ISLAND, SC (1979)
JASPER, SC (1979)
JOHNS ISLAND, SC (1979)
KIAWAH ISLAND, SC (1971)
KITTREDGE, SC (1979)
LADSON, SC (1979)
LAUREL BAY, SC (1962)
LEGAREVILLE, SC (1971)
LIMEHOUSE, SC-GA (1980)
LITTLE RIVER, SC (1990); CALABASH, NC-SC (1990)
MAGNOLIA BEACH, SC (1973)
McCLELLANVILLE, SC (1992)
MINIM ISLAND, SC (1973)
MYRTLE BEACH, SC (1984)
NORTH CHARLESTON, SC (1979)
NORTH ISLAND, SC (1973)

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

OCEAN FOREST, SC (1984)
PARRIS ISLAND, SC (1979)
PRITCHARDVILLE, SC (1971)
RAVENEL, SC (1971)
RIDGELAND, SC (1979)
ROCKVILLE, SC (1971)
SANTEE, SC (1973)
SANTEE POINT, SC (1973)
SAVANNAH, GA-SC (1978)
SEWEE BAY, SC (1959)
SHELDON, SC (1988)
SPRING ISLAND, SC (1958)
ST. HELENA SOUND, SC (1979)
ST. PHILLIPS ISLAND, SC (1972)
STALLSVILLE, SC (1979)
SURFSIDE BEACH, SC (1984)
TYBEE ISLAND NORTH, SC (1978)
WADMALAW ISLAND, SC (1971)
WAMPEE, SC (1990)
WAVERLY MILLS, SC (1973); PLANTERSVILLE, SC (1973)
WIGGINS, SC (1988)

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

SCALE

5.1.2.2. ATTRIBUTE DEFINITION:

SCALE contains the value of the denominator of the scale at which the INDEX polygon is plotted in the final map product.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

48,000
52,000

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

54,000
58,000

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

MAPANGLE

5.1.2.2. ATTRIBUTE DEFINITION:

MAPANGLE contains a value (usually negative) to rotate the final map product so that it is situated straight up and down.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

-1.360
-1.290
-1.220
-1.216
-1.147
-1.143
-1.077
-1.073
-1.070
-1.001
-0.998
-0.994
-0.932
-0.929
-0.926
-0.923
-0.857
-0.854
-0.786
-0.783
-0.715
-0.713
-0.647
-0.645

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

-0.583
-0.581
-0.579
-0.577
-0.575
-0.511
-0.509
-0.507
-0.506
-0.443
-0.441
-0.440
-0.438
-0.372
-0.371
-0.369
-0.304
-0.303
-0.302
-0.301
-0.236
-0.235
-0.234
-0.168
-0.167
-0.101
-0.100
-0.034
-0.033
0.00
0.033
0.034

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

PAGESIZE

5.1.2.2. ATTRIBUTE DEFINITION:

PAGESIZE contains the value of the width and height of the map in the final map product.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

11,17

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1. DETAILED DESCRIPTION: INVERT (formerly SHELLFSH)

The data layer INVERT contains the polygons with invertebrate species. The following INVERT species are found in the South Carolina ESI data set:

SPECIES ID	NAME
43	American oyster (eastern)
49	Blue crab
92	Penaeid shrimp
100	Quahog spp. (hard clam)

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
GT-Polygons	ID	integer
	RARNUM	integer

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

ID

5.1.2.2. ATTRIBUTE DEFINITION:

A unique identifier that links to the BIO_LUT table. ID is a concatenation of atlas number (34), element number (7), and record number. ID values of 9999 are holes in polygons and do not contain information

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

RARNUM

5.1.2.2. ATTRIBUTE DEFINITION:

An identifier that links directly to the BIORES table or the flat format BIOFILE table

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1. DETAILED DESCRIPTION: MGT

The data layer MGT contains the managed lands polygons for human-use data.

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
GT-Polygons	TYPE	character
	ID	integer
	HUNUM	integer

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

TYPE

5.1.2.2. ATTRIBUTE DEFINITION:

Identifies polygons with a socioeconomic, or human-use, feature. This attribute allows direct access to the type of feature instead of linking to the more detailed SOC_DAT table.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
NP	National Park
P	Regional or State Park
WR	Wildlife Refuge

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

ID

5.1.2.2. ATTRIBUTE DEFINITION:

A unique identifier that links to the SOC_LUT table. ID is a concatenation of atlas number (34), element number (11), and record number

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
NOAA

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
HUNUM

5.1.2.2. ATTRIBUTE DEFINITION:
An identifier that links directly to the SOC_DAT table.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1. DETAILED DESCRIPTION: M_MAMMAL

The data layer M_MAMMAL contains the polygons with marine mammal species. The following M_MAMMAL species are found in the South Carolina ESI data set:

SPECIES ID	NAME
17	Bottlenose dolphin

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
GT-Polygons	ID	integer
	RARNUM	integer

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

ID

5.1.2.2. ATTRIBUTE DEFINITION:

A unique identifier that links to the BIO_LUT table. ID is a concatenation of atlas number (34), element number (4), and record number. ID values of 9999 are holes in polygons and do not contain information

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

RARNUM

5.1.2.2. ATTRIBUTE DEFINITION:

An identifier that links directly to the BIORES table or the flat format BIOFILE table

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1. DETAILED DESCRIPTION: NESTS

The data layer NESTS contains entity points representing nesting sites. The following NESTS species are found in the South Carolina ESI data set:

SPECIES ID	NAME
8	Double-crested cormorant
45	Common tern
54	Great blue heron
76	Bald eagle
77	Osprey
86	Least tern
87	Little blue heron
88	Great egret
89	Snowy egret
90	Black-crowned night heron
91	Glossy ibis
93	Cattle egret
94	Tricolored heron
97	Green-backed heron
98	Laughing gull
115	White ibis
118	Brown pelican
120	Yellow-crowned night heron
121	Anhinga
132	Wood stork
133	Black skimmer
134	Gull-billed tern
135	Sandwich tern
137	Royal tern
152	American oystercatcher
154	Wilson's plover
155	Willet
280	Swallow-tailed kite
1,004	Wading birds

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
Entity Points	ID	integer
	RARNUM	integer

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

ID

5.1.2.2. ATTRIBUTE DEFINITION:

A unique identifier that links to the BIO_LUT table. ID is a concatenation of atlas number (34), element number (5), and record number

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

RARNUM

5.1.2.2. ATTRIBUTE DEFINITION:

An identifier that links directly to the BIORES table or the flat format BIOFILE table

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1. DETAILED DESCRIPTION: REPTILES

The data layer REPTILES contains the polygons with reptile species. The following REPTILES species are found in the South Carolina ESI data set:

SPECIES ID	NAME
3	American alligator
6	Atlantic loggerhead sea turtle

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
GT-Polygons	ID	integer
	RARNUM	integer

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

ID

5.1.2.2. ATTRIBUTE DEFINITION:

A unique identifier that links to the BIO_LUT table. ID is a concatenation of atlas number (34), element number (6), and record number. ID values of 9999 are holes in polygons and do not contain information

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

RARNUM

5.1.2.2. ATTRIBUTE DEFINITION:

An identifier that links directly to the BIORES table or the flat format BIOFILE table

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1. DETAILED DESCRIPTION: SEASONAL

The data table SEASONAL specifies the month when each species is present.

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
Attributes	ELEMENT	character
	SPECIES_ID	integer
	SEASON_ID	integer
	JAN	character
	FEB	character
	MAR	character
	APR	character
	MAY	character
	JUN	character
	JUL	character
	AUG	character
	SEP	character
	OCT	character
	NOV	character
	DEC	character
	EL_SPE_SEA	character

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

ELEMENT

5.1.2.2. ATTRIBUTE DEFINITION:

Major categories of biological data

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
BIRD	Birds
FISH	Fish
INVERT	Invertebrates
M_MAMMAL	Marine Mammals
REPTILE	Reptiles and Amphibians
T_MAMMAL	Terrestrial Mammals

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
SPECIES_ID

5.1.2.2. ATTRIBUTE DEFINITION:
Numeric identifier for each species that is unique within each element and refers to a nationwide ESI species list maintained by NOAA

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
SEASON_ID

5.1.2.2. ATTRIBUTE DEFINITION:
Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location. There can be one seasonality record per species, or the same species can have different monthly presence or breeding activities at different sites. When this occurs, a new record with a different SEASON_ID is referenced

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
JAN

5.1.2.2. ATTRIBUTE DEFINITION:
Present in January

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present (blank) Not Present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
FEB

5.1.2.2. ATTRIBUTE DEFINITION:
Present in February

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present
	(blank) Not Present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
MAR

5.1.2.2. ATTRIBUTE DEFINITION:
Present in March

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present
	(blank) Not Present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
APR

5.1.2.2. ATTRIBUTE DEFINITION:
Present in April

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present
	(blank) Not Present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
MAY

5.1.2.2. ATTRIBUTE DEFINITION:
Present in May

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present
	(blank) Not Present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
JUN

5.1.2.2. ATTRIBUTE DEFINITION:
Present in June

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present
	(blank) Not Present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
JUL

5.1.2.2. ATTRIBUTE DEFINITION:
Present in July

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present
	(blank) Not Present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
AUG

5.1.2.2. ATTRIBUTE DEFINITION:
Present in August

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present
	(blank) Not Present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
SEP

5.1.2.2. ATTRIBUTE DEFINITION:
Present in September

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present
	(blank) Not Present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
OCT

5.1.2.2. ATTRIBUTE DEFINITION:
Present in October

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present
	(blank) Not Present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
NOV

5.1.2.2. ATTRIBUTE DEFINITION:
Present in November

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present
	(blank) Not Present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
DEC

5.1.2.2. ATTRIBUTE DEFINITION:
Present in December

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present
	(blank) Not Present

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
EL_SPE_SEA

5.1.2.2. ATTRIBUTE DEFINITION:
Concatenation of the first character of the ELEMENT, the SPECIES_ID, and the SEASON_ID that provides a link from the BIORES table to the BREED table

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

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5.1. DETAILED DESCRIPTION: SOC_DAT

The data table SOC_DAT contains the human-use attributes and links to the data layers MGT and SOCECON either directly, using HUNUM, or through the unique ID, using SOC_LUT.

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
Attributes	HUNUM	integer
	TYPE	character
	NAME	character
	CONTACT	character
	PHONE	character
	G_SOURCE	integer
	A_SOURCE	integer

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

HUNUM

5.1.2.2. ATTRIBUTE DEFINITION:

A unique identifier that links to the SOC_LUT lookup table or directly back to the MGT and SOCECON coverages

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique link

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

TYPE

5.1.2.2. ATTRIBUTE DEFINITION:

Identifies the feature type

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
AIRPORT	Airport
AQUACULTURE	Aquaculture
BEACH	Beach
BOAT RAMP	Boat Ramp
COAST GUARD	Coast Guard
HISTORIC SITE	Historic Site
MARINA	Marina
MARINE SANCTUARY	Marine Sanctuary
NATIONAL PARK	National Park
RECREATIONAL FISHING	Recreational Fishing
REGIONAL OR STATE PARK	Park
WATER QUALITY STATION	Water Quality Station
WILDLIFE REFUGE	Wildlife Refuge

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

NAME

5.1.2.2. ATTRIBUTE DEFINITION:

The feature name

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

2ND AVE. FISHING PIER
ACE BASIN NERR
AMOCO CHEMICALS

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

ANNADALE PLANTATION SHRIMP/CRAB PONDS
AQUACULTURE SITE
ARTIFICIAL REEFS
ATLANTIC LITTLENECK CLAM FARM
BAYER PLANT
BEACH
BEACH CITY ROAD
BOAT RAMP
BOLAN HALL PLANTATION (FISH CULTURE)
BRADLEY BEACH PUBLIC ACCESS
BUCKSPORT WATER PLANT
CAPE ROMAIN NATIONAL WILDLIFE REFUGE
CHARLESTON AQUARIUM
CHARLESTON HARBOR PROJECT W. Q. STATION
CHARLESTOWN LANDING
CHERRY GROVE FISHING PIER
CLAM PENS
CLAM/OYSTER OPERATIONS
COAST GUARD STATION
COLIGNEY BEACH
CYPRESS BAY AIRPORT
DIXIE LAND MARICULTURAL FARMS
EDISTO BEACH STATE PARK
EDISTO SHRIMP COMPANY
EDWARD BURTON ROGERS BRIDGE, SR170
ESTERVILLE PLANTATION SHRIMP PONDS
ESTHERVILLE PLANTATION
FIRST STOP BAIT SHOP
FOLLY BEACH COUNTY PARK
FORT MOULTRIE
FORT SUMTER NATIONAL MONUMENT
GEORGETOWN COUNTY AIRPORT
GEORGETOWN COUNTY WATER AND SEWER
GRAND STRAND AIRPORT
HISTORICAL SITE
HOLIDAY INN FISHING PIER
HUNTING ISLAND STATE PARK
HUNTINGTON BEACH STATE PARK
INGLESIDE PLANTATION CRAWFISH POND
ISLAND FRESH SEAFOOD
ISLE OF PALMS PIER
JAVIKA AIRFIELD
JOE WANNAMAKER CLAM FARM
JOHNS ISLAND AIRPORT
KEITHFIELD PLANTATION CRAWFISH POND

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

KINGFISHER PIER
KINLOCH PLANTATION SHRIMP/CRAB PONDS
LANDING STRIP
LIGHTHOUSE SEAFOOD
MARINA
MYRTLE BEACH AIR FORCE BASE
MYRTLE BEACH STATE PARK
MYRTLE BEACH WATER PLANT
NAVAL WEAPONS STATION, NUCLEAR REACTOR
NORTH EDISTO NEARSHORE REEF
NORTH INLET NERR
OAKGROVE PLANTATION (SHRIMP)
OYSTER CULTURE
PALMETTO AQUACULTURE (SHRIMP)
PANGALANGAN SHRIMP FARM
PINCKNEY ISLAND NATIONAL WILDLIFE REFUGE
PONDEROSA SHRIMP FARM
RECREATIONAL FISHING
S.C SEAFOOD FARMS (SHRIMP)
SAND CREEK MARICULTURE (CLAMS)
SAVANNAH NATIONAL WILDLIFE REFUGE
SC DNR HATCHERIES
SC DNR MARINE RESOURCES DIVISION
SCE&G WILLIAMS STATION
SHRIMP FARM
SHRIMP FARMS
SOUTH CAROLINA SEAFOOD (CLAM PENS)
SOUTH EDISTO INSHORE REEF
SOUTHLAND FISHERIES
SPRING ISLAND (SHRIMP)
SPRINGMAID FISHING PIER
SPRINGTEEN PLANTATION SHRIMP PONDS
SURFSIDE FISHING PIER
SWIMMING ROCK FISH AND SHRIMP FARM
TAYLOR CREEK SHRIMP FARM
TYBEE NATIONAL WILDLIFE REFUGE
USC BARUCH INSTITUTE
USCG LORAN STATION
USCG STATION
WADELL MARICULTURE CENTER , SC DNR MRD
WATER QUALITY STATION
WINDSOR PLANTATION CRAWFISH POND

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
CONTACT

5.1.2.2. ATTRIBUTE DEFINITION:
Contact person

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
PHONE

5.1.2.2. ATTRIBUTE DEFINITION:
Telephone number

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
G_SOURCE

5.1.2.2. ATTRIBUTE DEFINITION:
Geographic source identifier that links to the SOURCES data table

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique link

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
A_SOURCE

5.1.2.2. ATTRIBUTE DEFINITION:
Attribute source identifier that links to the SOURCES data table

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique link

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1. DETAILED DESCRIPTION: SOC_LUT

Lookup table to link SOC_DAT to SOCECON and MGT data layers.

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
Attributes	HUNUM	integer
	ID	integer

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:
HUNUM

5.1.2.2. ATTRIBUTE DEFINITION:
A unique identifier that links SOCECON and MGT to the SOC_DAT data table

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
ID

5.1.2.2. ATTRIBUTE DEFINITION:
A unique identifier that links SOC_LUT to the SOCECON and MGT data layers

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

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5.1. DETAILED DESCRIPTION: SOCECON

The data layer SOCECON contains the entity points for the human-use data.

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
Complete Chains	TYPE	character
Entity Points	TYPE	character
	ID	integer
	HUNUM	integer

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

TYPE

5.1.2.2. ATTRIBUTE DEFINITION:

Identifies a line or point with a socioeconomic, or human-use, feature. This attribute allows direct access to the type of feature instead of linking to the more detailed SOC_DAT table.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
A	Airport (Point)
AQ	Aquaculture (Point)
B	Beach (Point)
BR	Boat Ramp (Point)
CG	Coast Guard (Point)
HS	Historic Site (Point)
M	Marina (Point)
MS	Marine Sanctuary (Point)
RF	Recreational Fishing (Point)
SB	State Border (Chain)
WI	Water Intake (Point)
WQ	Water Quality Station (Point)

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

ID

5.1.2.2. ATTRIBUTE DEFINITION:

A unique identifier that links to the SOC_LUT table. ID is a concatenation of atlas number (34), element number (10), and record number.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

HUNUM

5.1.2.2. ATTRIBUTE DEFINITION:

An identifier that links directly to the SOC_DAT table.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1. DETAILED DESCRIPTION: SOURCES

The data table SOURCES contains the primary sources used to create the ESI data set.

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
Attributes	SOURCE_ID	integer
	ORIGINATOR	character
	DATE_PUB	integer
	TITLE	character
	DATA_FORMAT	character
	PUBLICATION	character
	SCALE	character
	TIME_PERIOD	character

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

SOURCE_ID

5.1.2.2. ATTRIBUTE DEFINITION:

Source identifier that links to G_SOURCE, S_SOURCE, and A_SOURCE found in the BIORES, BIOFILE and SOC_DAT tables

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:
ORIGINATOR

5.1.2.2. ATTRIBUTE DEFINITION:
Author of the data set

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
DATE_PUB

5.1.2.2. ATTRIBUTE DEFINITION:
Date of data collection or publication

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	The first two integers are the month and the last four are the year. If month is unknown, only the four-digit year is entered

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
TITLE

5.1.2.2. ATTRIBUTE DEFINITION:
Title of the source data set or document

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Originator who provided data, or RPI for personal interviews with resource experts

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
DATA_FORMAT

5.1.2.2. ATTRIBUTE DEFINITION:
The format of the source data set

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

DBASE files
Digital poly
Expert knowledge
Hardcopy data tables
Hardcopy map
Hardcopy maps, text
Hardcopy text
Point coverage
Unpublished data tables

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
PUBLICATION

5.1.2.2. ATTRIBUTE DEFINITION:
Additional citation information

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
SCALE

5.1.2.2. ATTRIBUTE DEFINITION:
Source scale denominator

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
ordinal

5.1.2.1. ATTRIBUTE LABEL:
TIME_PERIOD

5.1.2.2. ATTRIBUTE DEFINITION:
Date(s) of data collection

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1. DETAILED DESCRIPTION: SPECIES

The data table SPECIES identifies all species used in the ESI data set.

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
Attributes	SPECIES_ID	integer
	NAME	character
	GEN_SPEC	character
	ELEMENT	character
	SUBELEMENT	character
	NHP	character
	DATE_PUB	integer
	EL_SPE	character

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

SPECIES_ID

5.1.2.2. ATTRIBUTE DEFINITION:

Numeric identifier for each species that is unique within each element and refers to a nationwide ESI species list maintained by NOAA

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

NAME

5.1.2.2. ATTRIBUTE DEFINITION:

Species common name

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

American alligator
American avocet
American coot
American oyster (eastern)
American oystercatcher
American wigeon
Anhinga
Atlantic croaker
Atlantic menhaden
Atlantic sharpnose shark
Atlantic stingray (stingaree)
Atlantic sturgeon
Bald eagle
Beaver
Black drum
Black duck
Black scoter (common)
Black seabass
Black skimmer
Black-bellied plover
Black-crowned night heron
Black-necked stilt
Blacktip shark
Blue crab
Blue-winged teal
Bluefish
Bottlenose dolphin
Brown pelican
Bufflehead
Canvasback
Cattle egret

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Clapper rail
Cobia
Common goldeneye
Common loon
Common merganser
Common tern
Crevalle jack
Double-crested cormorant
Dowitcher
Dunlin
Florida pompano
Gadwall
Gag grouper
Glossy ibis
Great blue heron
Great egret
Greater scaup
Greater yellowlegs
Green-backed heron
Green-winged teal
Grunts
Gulf kingfish
Gull-billed tern
Gulls
Herring and shad
Hooded merganser
Killdeer
King mackerel
Laughing gull
Least bittern
Least tern
Lesser scaup
Lesser yellowlegs
Little blue heron
Loggerhead sea turtle
Mallard
Marbled godwit
Meadow vole
Mink

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Mottled duck
Mummichog
Muskrat
Northern pintail
Northern raccoon
Northern shoveler
Oldsquaw
Osprey
Peep
Penaeid shrimp
Piping plover
Porgies
Purple sandpiper
Quahog spp. (hard clam)
Rays
Red drum
Red knot
Red-breasted merganser
Red-throated loon
Redhead
Ring-necked duck
River otter
Royal tern
Ruddy duck
Ruddy turnstone
Sandwich tern
Seatrout (weakfish)
Semipalmated plover
Semipalmated sandpiper
Sharks
Sheepshead
Shorebirds
Shortnose sturgeon
Skates
Snappers
Snow goose
Snowy egret
Southern flounder
Southern kingfish (whiting)

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Spanish mackerel
Spiny dogfish
Spot
Spotted sandpiper
Spotted seatrout
Striped mullet
Summer flounder
Surf scoter
Swallow-tailed kite
Tarpon
Tautog
Terns
Tricolored heron
Wading birds
White ibis
Willet
Wilsons plover
Wood duck
Wood stork
Yellow-crowned night heron

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

GEN_SPEC

5.1.2.2. ATTRIBUTE DEFINITION:

Species scientific name

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Acipenser brevirostrum
Acipenser oxyrhynchus
Actitis macularia
Aix sponsa

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Alligator mississippiensis
Alosa spp.
Anas acuta
Anas americana
Anas clypeata
Anas crecca
Anas discors
Anas fulrigula
Anas platyrhynchos
Anas rubripes
Anas strepera
Anhinga anhinga
Archosargus probatocephalus
Ardea herodias
Arenaria interpres
Aythya affinis
Aythya americana
Aythya collaris
Aythya marila
Aythya valisineria
Brevoortia tyrannus
Bubulcus ibis
Bucephala albeola
Bucephala clangula
Butorides striatus
Calidris alpina
Calidris canutus
Calidris maritima
Calidris pusilla
Calidris spp.
Callinectes sapidus
Caranx hippos
Carcharhinus limbatus
Caretta caretta
Casmerodius albus
Castor canadensis
Catoptrophorus semipalmatus
Centropristis striata
Charadrius melodus

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Charadrius semipalmatus
Charadrius vociferus
Charadrius wilsonia
Chen caerulescens
Clangula hyemalis
Crassostrea virginica
Cynoscion nebulosus
Cynoscion regalis
Dasyatis sabina
Egretta caerulea
Egretta thula
Egretta tricolor
Elanoides forficatus
Eudocimus albus
Fulica americana
Fundulus heteroclitus
Gavia immer
Gavia stellata
Haematopus palliatus
Haliaeetus leucocephalus
Himantopus mexicanus
Ixobrychus exilis
Larus atricilla
Leiostomus xanthurus
Limnodromus spp.
Limosa fedoa
Lophodytes cucullatus
Lutra canadensis
Megalops atlanticus
Melanitta nigra
Melanitta perspicillata
Menticirrhus americanus
Menticirrhus littoralis
Mercenaria spp.
Mergus merganser
Mergus serrator
Micropogonias undulatus
Microtus pennsylvanicus
Mugil cephalus

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Mustela vison
Mycteria americana
Mycteroperca microlepis
Nyctanassa violacea
Nycticorax nycticorax
Ondatra zibethicus
Oxyura jamaicensis
Pandion haliaetus
Paralichthys dentatus
Paralichthys lethostigma
Pelecanus occidentalis
Penaeus spp.
Phalacrocorax auritus
Plegadis falcinellus
Pluvialis squatarola
Pogonias cromis
Pomatomus saltatrix
Procyon lotor
Rachycentron canadum
Rallus longirostris
Recurvirostra americana
Rhizoprionodon terraenovae
Rynchops niger
Sciaenops ocellatus
Scomberomorus cavalla
Scomberomorus maculatus
Squalus acanthias
Sterna antillarum
Sterna hirundo
Sterna maxima
Sterna nilotica
Sterna sandvicensis
Tautoga onitis
Trachinotus carolinus
Tringa flavipes
Tringa melanaleuca
Tursiops truncatus

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
ELEMENT

5.1.2.2. ATTRIBUTE DEFINITION:
Biological element

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
BIRD	Birds
FISH	Fish
INVERT	Invertebrates
M_MAMMAL	Marine Mammals
REPTILE	Reptiles and Amphibians
T_MAMMAL	Terrestrial Mammals

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
SUBELEMENT

5.1.2.2. ATTRIBUTE DEFINITION:
Species subgroup

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

alligator
anadromous
clam
crab
diving

dolphin
gull_tern
mustelid
oyster
raptor
rodent
shorebird
shrimp
special
turtle
wading
waterfowl

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
NHP

5.1.2.2. ATTRIBUTE DEFINITION:
This field is blank because no NHP information was gathered when this atlas was published. The field is included here to maintain consistency with the latest ESI data structure.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
	Not supplied with this atlas

5.1.2.1. ATTRIBUTE LABEL:
DATE_PUB

5.1.2.2. ATTRIBUTE DEFINITION:
This field is blank because no NHP information was gathered when this atlas was published. The field is included here to maintain consistency with the latest ESI data structure.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
	Not supplied with this atlas

5.1.2.1. ATTRIBUTE LABEL:

EL_SPE

5.1.2.2. ATTRIBUTE DEFINITION:

Concatenation of the first character of the ELEMENT and the SPECIES_ID, which provides the link from the BIORES table.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

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5.1. DETAILED DESCRIPTION: STATUS

The data table STATUS identifies the species that are listed as either threatened or endangered on state or federal lists.

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
Attributes	ELEMENT	character
	SPECIES_ID	integer
	STATE	character
	S_F	character
	T_E	character
	DATE_PUB	integer
	EL_SPE	character

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

ELEMENT

5.1.2.2. ATTRIBUTE DEFINITION:

Major categories of biological data

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
BIRD	Birds
FISH	Fish
INVERT	Invertebrates
M_MAMMAL	Marine Mammals
REPTILE	Reptiles and Amphibians
T_MAMMAL	Terrestrial Mammals

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:
SPECIES_ID

5.1.2.2. ATTRIBUTE DEFINITION:
Numeric identifier for each species and is unique within each element and refers to a nationwide ESI species list maintained by NOAA

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:
STATE

5.1.2.2. ATTRIBUTE DEFINITION:
Two-letter state abbreviation

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
SC	South Carolina

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:
Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:
nominal

5.1.2.1. ATTRIBUTE LABEL:

S_F

5.1.2.2. ATTRIBUTE DEFINITION:

State and Federal status

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
S	State listed
S/F	State and Federally listed

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

SCDNR Heritage Trust

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

T_E

5.1.2.2. ATTRIBUTE DEFINITION:

Threatened and endangered status

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
E	Endangered
E/E	Endangered on State and Federal lists
E/T	Endangered on State list, Threatened on Federal list
T	Threatened
T/T	Threatened on State and Federal lists

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

SCDNR Heritage Trust

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

DATE_PUB

5.1.2.2. ATTRIBUTE DEFINITION:

This is the date the atlas was published when the given state and federal listings were in effect. In some of the earlier atlases, no date may be given because this was not a data item at the time of original publication.

5.1.2.1. ATTRIBUTE LABEL:

EL_SPE

5.1.2.2. ATTRIBUTE DEFINITION:

Concatenation of the first character of the ELEMENT and the SPECIES_ID, which provides the link from the BIORES and SPECIES tables

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1. DETAILED DESCRIPTION: T_MAMMAL

The data layer T_MAMMAL contains the polygons with terrestrial mammal species. The following T_MAMMAL species are found in the South Carolina ESI data set:

SPECIES ID	NAME
8	River otter
36	Beaver
37	Muskrat
38	Mink
44	Northern raccoon

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:	
GT-Polygons	ID	integer
	RARNUM	integer

5.1.2. ATTRIBUTES:

5.1.2.1. ATTRIBUTE LABEL:

ID

5.1.2.2. ATTRIBUTE DEFINITION:

A unique identifier that links to the BIO_LUT table. ID is a concatenation of atlas number (34), element number (9), and record number. ID values of 9999 are holes in polygons and do not contain information

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

5.1.2.1. ATTRIBUTE LABEL:

RARNUM

5.1.2.2. ATTRIBUTE DEFINITION:

An identifier that links directly to the BIORES table or the flat format BIOFILE table

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

NOAA

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
1-N	Unique number

5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

NOAA

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

6.0 DISTRIBUTION INFORMATION

6.1. DISTRIBUTOR

6.1.1. CONTACT PERSON PRIMARY

6.1.1.1. CONTACT PERSON:

John Kaperick

6.1.1.2. CONTACT ORGANIZATION:

NOAA, Office of Response and Restoration

6.1.4. CONTACT ADDRESS

6.1.4.1. ADDRESS TYPE:

Physical Address

6.1.4.2. ADDRESS:

7600 Sand Point Way N.E.

6.1.4.3. CITY:

Seattle

6.1.4.4. STATE OR PROVINCE:

WA

6.1.4.5. POSTAL CODE:

98115-6349

6.1.5. CONTACT VOICE TELEPHONE:

(206) 526-6317

6.1.7. CONTACT FACSIMILE TELEPHONE:

(206) 526-6329

6.2. RESOURCE DESCRIPTION:

ESI Atlas for South Carolina

6.3. DISTRIBUTION LIABILITY:

Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer-input peripherals, or when the physical medium is delivered in damaged condition.

6.5. CUSTOM ORDER PROCESS

Contact NOAA for distribution options (see 6.1.1.).

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7.0 METADATA REFERENCE INFORMATION

7.1. METADATA DATE:
200010

7.2. METADATA REVIEW DATE:
200010

7.4. METADATA CONTACT

7.4.1. CONTACT PERSON PRIMARY

7.4.1.1. CONTACT PERSON:
Jill Petersen

7.4.1.2. CONTACT ORGANIZATION:
NOAA, Office of Response and Restoration

7.4.3. CONTACT POSITION:
GIS Manager

7.4.4. CONTACT ADDRESS

7.4.4.1. ADDRESS TYPE:
Physical Address

7.4.4.2. ADDRESS:
7600 Sand Point Way N.E.

7.4.4.3. CITY:
Seattle

7.4.4.4. STATE OR PROVINCE:
Washington

7.4.4.5. POSTAL CODE:
98115-6349

7.4.5. CONTACT VOICE TELEPHONE:
(206) 526-6944

7.4.7. CONTACT FACSIMILE TELEPHONE:
(206) 526-6329

7.4.8. CONTACT ELECTRONIC MAIL ADDRESS:
jill_petersen@hazmat.noaa.gov.us

7.5. METADATA STANDARD NAME:
Content Standards for Digital Geospatial Metadata

7.6. METADATA STANDARD VERSION:
19940608

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