

ALABAMA ENVIRONMENTAL SENSITIVITY INDEX METADATA

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FILE DESCRIBES: Digital data for 1996 Alabama 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 in order 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 and the
State of Alabama

1.1.2. PUBLICATION DATE:

200008

1.1.4. TITLE:

Sensitivity of Coastal Environments and Wildlife to Spilled Oil:
Alabama

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:

Alabama

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

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 Alabama. 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 using a combination of aerial photographs taken between 1985 and 1987, and low-altitude color video surveys taken in 1992 and 1993. 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:

-88.50°

1.5.1.2. EAST BOUNDING COORDINATE:

-87.375°

1.5.1.3. NORTH BOUNDING COORDINATE:

30.875°

1.5.1.4. SOUTH BOUNDING COORDINATE:

30.125°

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:

Alabama Coastal Zone, Mississippi Sound, Mobile Bay,
Mobile River Delta, and Perdido Bay

1.7. ACCESS CONSTRAINTS:

None

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
and the State of Alabama

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 workstations (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	habitats.e00
hydro.e00	index.e00	invert.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 30 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. The first layer of information digitized is the ESI shoreline. Any errors in the shoreline classification are updated prior to digitization of the biological and socioeconomic layers. All layers use the shoreline as the geographic reference so that there are no slivers in the geographic coordinates. The biological data are digitized, checked using both digital and on-screen procedures, 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 also 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 Alabama 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 contributed 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, habitats/rare plants, invertebrates, reptiles/amphibians, and terrestrial mammals.

The ELEMENTS generally correspond to the coverage or geographic data layer names. There are also six attribute, or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, that are used to store the complex biological data (Fig. 1). Each biological coverage is linked to the Biological Resources 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 Alabama this is 31), 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 relative concentration of the species at a specific location. For the biological elements (except HABITATS), values include LOW, MEDIUM, or HIGH. For the HABITATS element, values include CONTINUOUS, DENSE,

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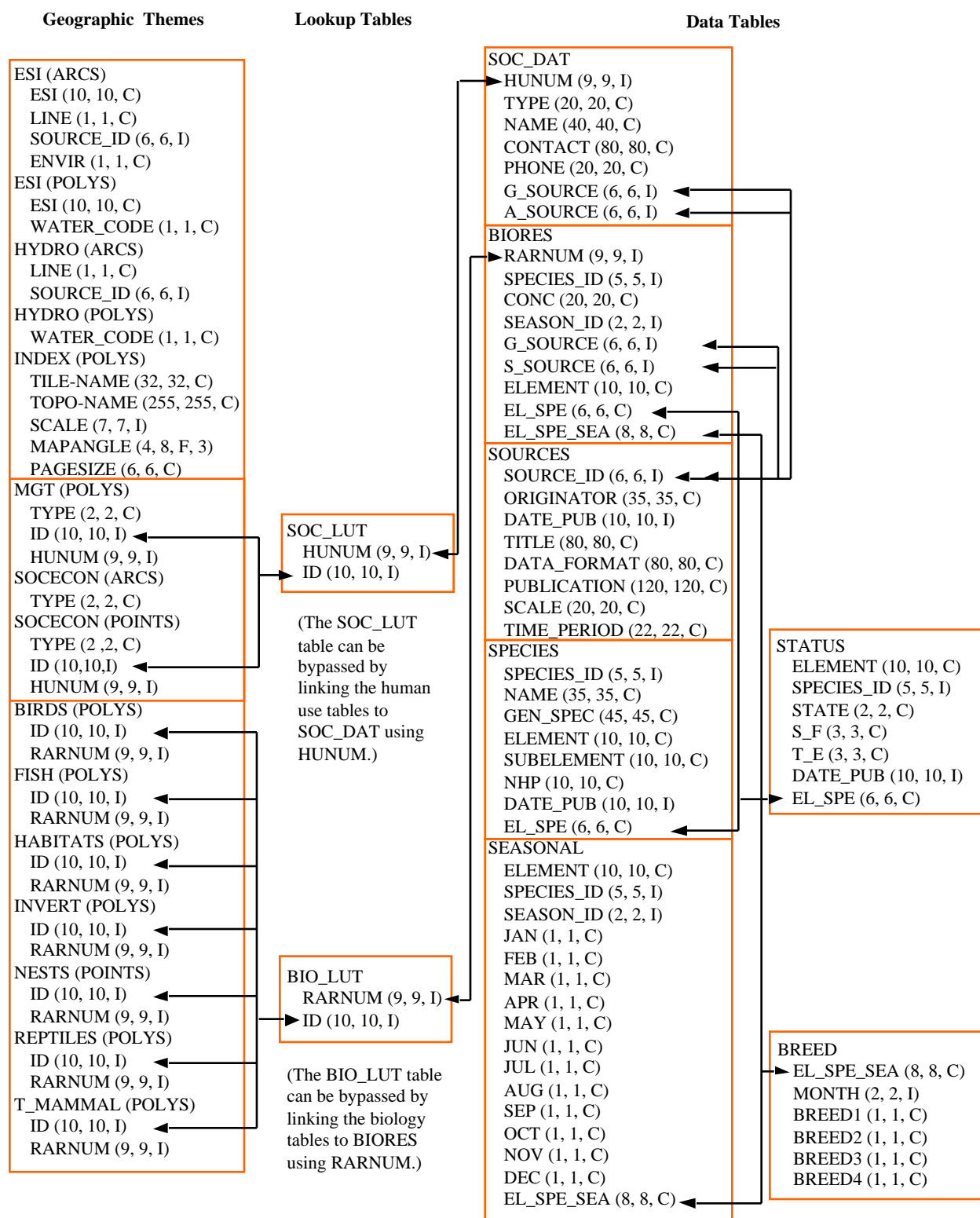


FIGURE 1. Relationships between biology data layers and attribute files.

MODERATE, SPARSE, VERY SPARSE, ABUNDANT, COMMON, SLIGHT, or SCARCE.

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); 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 item SUBELEMENT refers to the grouping of the species:

ELEMENT	SUBELEMENT
BIRD	alcid
	diving
	gull_tern
	pelagic
	raptor
	shorebird
	wading
	waterfowl
FISH	anadromous
	reef
	special
HABITAT	rare plant
	submerged aquatic vegetation (sav)
	shrub
INVERT	bivalve
	crab
	shrimp

ELEMENT	SUBELEMENT
REPTILE	alligator
	snake
	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 BREED4 for each element are:

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

NOTE: There are no BREED variables for HABITATS or T_MAMMAL.

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, 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–BREED4 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–Breed4 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.

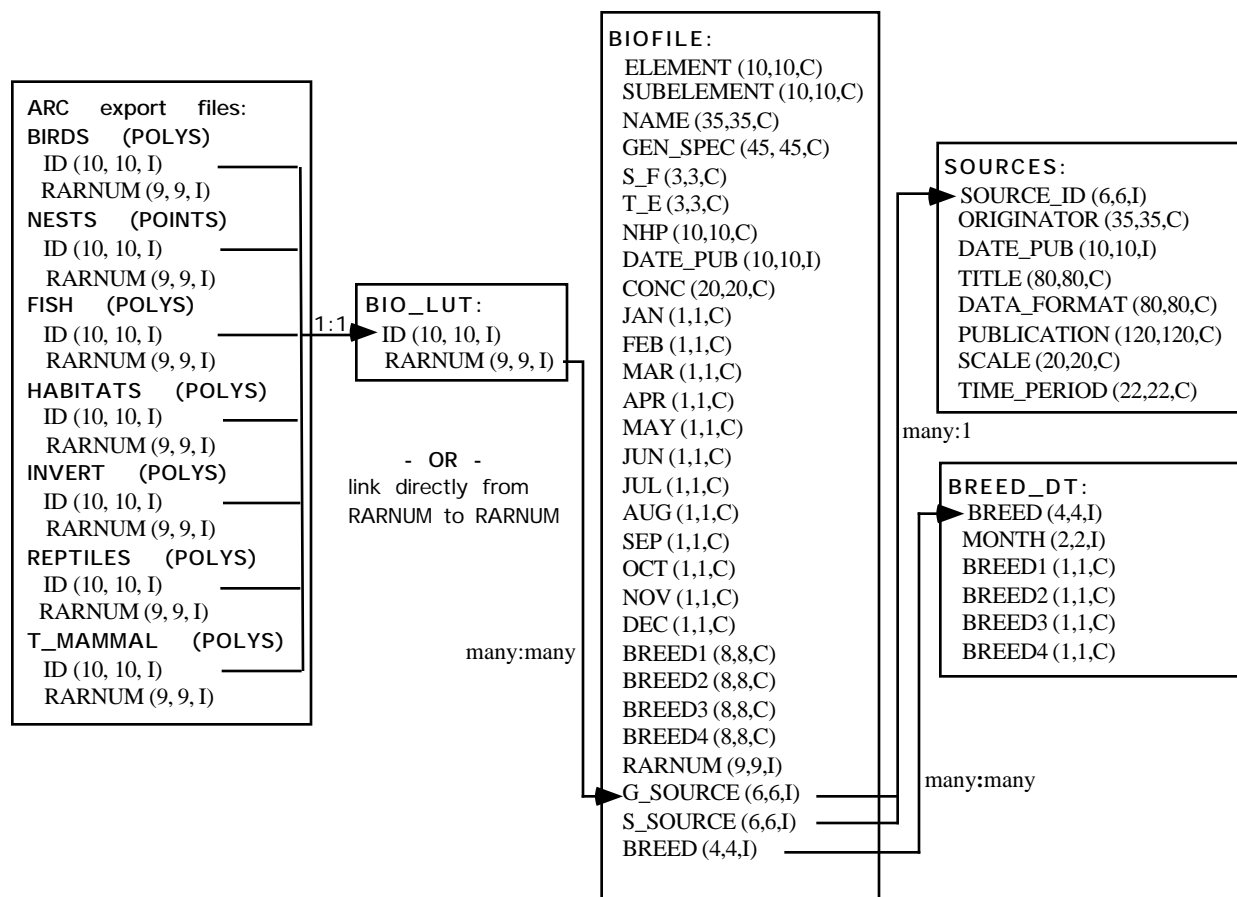


FIGURE 2. Relationship of the BIOFILE to the biological covers and the supplementary BREED_DT and SOURCES data tables.

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 (31). ID is a concatenation of atlas number (31), 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		Polygons	
Feature	TYPE	Feature	TYPE
Airport	A	Regional or State Park	P
Archaeological Site	AS	Wildlife Refuge	WR
Boat Ramp	BR		
Historical Site	HS		
Marina	M		
Water Intake	WI		
Complete Chains			
Feature	TYPE		
State Border	SB		

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 uses 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	2.5.1.1.2	2.5.1.1.4	2.5.1.1.6	2.5.1.1.8	2.5.1.2	2.5.1.4
Originator	Publication Date	Title	Geospatial Data Presentation Form	Publication Information	Source Scale Denominator	Source Time Period
Mark Van Hoose	1995	Bird Resources	Expert knowledge and maps	Alabama Marine Resources Division	24000	Current
John Dindo	1995	Nesting Information on Cat Islands	Expert knowledge and report	Dauphin Island Sea Lab	N/A	1995
Sharon Delchamps	1995	Bird Distribution Information	Maps	U.S. Fish and Wildlife Service	Unknown	1995
C. Dwight Cooley, Alabama Sea Grant Extension Service	1987	Status of Colonial Seabird Resources in Coastal Alabama	Report	Symposium on the Natural Resources of Mobile Bay	N/A	1984-1986
Roger Clay	Various	Colonial Bird Survey	Maps	N/A	24000	Ongoing
James Masek	1994-1995	Waterfowl Surveys	Maps	N/A	Unknown	Ongoing Survey

2.5.1. SOURCE INFORMATION:

Coverage or theme name: ESI

2.5.1.1. SOURCE CITATION

2.5.1.1.1	2.5.1.1.2	2.5.1.1.4	2.5.1.1.6	2.5.1.1.8	2.5.1.2	2.5.1.4
Originator	Publication Date	Title	Geospatial Data Presentation Form	Publication Information	Source Scale Denominator	Source Time Period
U.S. Geological Survey	Various	7.5 minute topographic maps	Maps	U.S. Geological Survey, Reston, VA	24000	Varies
Research Planning, Inc.	N/A	ESI Shorelines	Maps	N/A	24000	1995

2.5.1.1.1	2.5.1.1.2	2.5.1.1.4	2.5.1.1.6	2.5.1.1.8	2.5.1.2	2.5.1.4
Originator	Publication Date	Title	Geospatial Data Presentation Form	Publication Information	Source Scale Denominator	Source Time Period
Geological Survey of Alabama		Shoreline Classification	Digital maps	N/A	24000	1992-1993

2.5.1. SOURCE INFORMATION:

Coverage or theme name: FISH

2.5.1.1. SOURCE CITATION

2.5.1.1.1	2.5.1.1.2	2.5.1.1.4	2.5.1.1.6	2.5.1.1.8	2.5.1.2	2.5.1.4
Originator	Publication Date	Title	Geospatial Data Presentation Form	Publication Information	Source Scale Denominator	Source Time Period
Celeste South	1995	Threatened and Endangered Species	Expert knowledge	U.S. Fish and Wildlife Service	N/A	Current
Mark Van Hoose	1995	Fish Resources	Expert knowledge	AL Marine Resources Division	24000	Current

2.5.1. SOURCE INFORMATION:

Coverage or theme name: HABITATS

2.5.1.1. SOURCE CITATION

2.5.1.1.1	2.5.1.1.2	2.5.1.1.4	2.5.1.1.6	2.5.1.1.8	2.5.1.2	2.5.1.4
Originator	Publication Date	Title	Geospatial Data Presentation Form	Publication Information	Source Scale Denominator	Source Time Period
Judy Stout	Various	Habitat Coverage for Coastal Alabama	Expert knowledge	N/A	N/A	Various
Joe Zolczynski	1995	Digital Plant Coverage of the Upper Mobile Bay	Digital map	N/A	24000	Unknown
Jan Johnson	1995	Threatened and Endangered Species	Digital table	Alabama Natural Heritage	N/A	1975-1995

2.5.1. SOURCE INFORMATION:

Coverage or theme name: HYDRO

2.5.1.1. SOURCE CITATION

2.5.1.1.1	2.5.1.1.2	2.5.1.1.4	2.5.1.1.6	2.5.1.1.8	2.5.1.2	2.5.1.4
Originator	Publication Date	Title	Geospatial Data Presentation Form	Publication Information	Source Scale Denominator	Source Time Period
U.S. Geological Survey	Various	7.5 minute topographic maps	Maps	U.S. Geological Survey, Reston, VA	24000	Varies
Research Planning, Inc.	N/A	ESI Shorelines	Maps	N/A	24000	1995
Geological Survey of Alabama		Shoreline Classification	Digital maps	N/A	24000	1992-1993

2.5.1. SOURCE INFORMATION:

Coverage or theme name: INDEX

2.5.1.1. SOURCE CITATION

2.5.1.1.1	2.5.1.1.2	2.5.1.1.4	2.5.1.1.6	2.5.1.1.8	2.5.1.2	2.5.1.4
Originator	Publication Date	Title	Geospatial Data Presentation Form	Publication Information	Source Scale Denominator	Source Time Period
Research Planning, Inc.	1996	Index for Alabama ESI maps	Digital complex polygons	Bill Holton, GIS Analyst	24000	1996

2.5.1. SOURCE INFORMATION:

Coverage or theme name: INVERT (formerly SHELLFSH)

2.5.1.1. SOURCE CITATION

2.5.1.1.1	2.5.1.1.2	2.5.1.1.4	2.5.1.1.6	2.5.1.1.8	2.5.1.2	2.5.1.4
Originator	Publication Date	Title	Geospatial Data Presentation Form	Publication Information	Source Scale Denominator	Source Time Period
Mark Van Hoose	1995	Shellfish Resources	Expert knowledge and maps	Alabama Marine Resources Division	24000	Current

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
Alabama Marine Resources Lab	1970	A Survey of the Oyster and Oyster Shell Resources of Alabama	Maps	N/A	126720 and 24000	Various
Ala. Dept. of Conservation & Natural Resources	1995	Oyster Reefs	Maps	Alabama Dept. of Conservation and Natural Resources	45257	1995

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
Celeste South	1995	Managed Lands	Expert knowledge	U.S. Fish and Wildlife Service	N/A	Current
John Dindo	1995	Managed Lands	Expert knowledge and maps	Dauphin Island Sea Lab	N/A	1995
Brad Gane	Various	Human-use Information for Coastal Alabama	Maps	N/A	Various	Various
U.S. Geological Survey	Various	Topographic maps		U.S. Geological Survey, Reston, VA	Variuos	Various
Alfred K. Jackson	1996	Meaher State Boundary Map	Maps	Department of Conservation and Natural Resources	24000	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
Jan Johnson	1995	Threatened and Endangered Species	Digital table	Alabama Natural Heritage	24000	1975-1995
Mark Van Hoose	1995	Nesting Resources	Expert knowledge and maps	Alabama Marine Resources Division	24000	Current
John Dindo	1995	Nesting Information on Cat Islands	Expert knowledge and report	Dauphin Island Sea Lab	N/A	1995
Sharon Delchamps	1995	Bird Distribution Information	Maps	U.S. Fish and Wildlife Service	Unknown	1995
C. Dwight Cooley, Alabama Sea Grant Extension Service	1987	Status of Colonial Seabird Resources in Coastal Alabama	Report	Symposium on the Natural Resources of Mobile Bay	N/A	1984-1986
Roger Clay	Various	Colonial Bird Survey	Maps	N/A	24000	Ongoing
James Masek	1994-1995	Waterfowl Surveys	Maps	N/A	Unknown	Ongoing Survey

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
Celeste South	1995	Threatened and Endangered Species	Expert knowledge	U.S. Fish and Wildlife Service	N/A	Current

2.5.1.1.1	2.5.1.1.2	2.5.1.1.4	2.5.1.1.6	2.5.1.1.8	2.5.1.2	2.5.1.4
Originator	Publication Date	Title	Geospatial Data Presentation Form	Publication Information	Source Scale Denominator	Source Time Period
Robby Dailey	1995	Sea Turtle Information	Expert knowledge	Bon Secour NWR	N/A	Current

2.5.1. SOURCE INFORMATION:

Coverage or theme name: SOCECON

2.5.1.1. SOURCE CITATION

2.5.1.1.1	2.5.1.1.2	2.5.1.1.4	2.5.1.1.6	2.5.1.1.8	2.5.1.2	2.5.1.4
Originator	Publication Date	Title	Geospatial Data Presentation Form	Publication Information	Source Scale Denominator	Source Time Period
Celeste South	1995	Human-use Resources	Expert knowledge	U.S. Fish and Wildlife Service	N/A	Current
John Dindo	1995	Human-use Resources	Expert knowledge and report	Dauphin Island Sea Lab	N/A	1995
Judy Stout	Various	Human-use Resources	Expert knowledge	N/A	N/A	Various
Brad Gane	Various	Human-use Information for Coastal Alabama	Maps	N/A	Various	Various
U.S. Geological Survey	Varies		Topographic maps	U.S. Geological Survey, Reston, VA	24000	Varies

2.5.1. SOURCE INFORMATION:

Coverage or theme name: T_MAMMAL

2.5.1.1. SOURCE CITATION

2.5.1.1.1	2.5.1.1.2	2.5.1.1.4	2.5.1.1.6	2.5.1.1.8	2.5.1.2	2.5.1.4
Originator	Publication Date	Title	Geospatial Data Presentation Form	Publication Information	Source Scale Denominator	Source Time Period
Celeste South	1995	Threatened and Endangered Species	Expert knowledge	U.S. Fish and Wildlife Service	N/A	Current

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 is the ESI. Any errors in the shoreline classification are 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 is 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 are digitized, checked using both digital and on-screen procedures, plotted, and sent out for review by the regional specialists. The edited maps are updated on the computer, checked once again, and plotted at final map scale. A team of specialists reviews the entire series of maps, checks all data, and makes final edits. The data are merged to form the study-wide layers that are described in this document. The data merging includes a final quality control check where topological consistency, rules for geography, and database to geography are checked and reported to the GIS manager.

2.5.2.3. PROCESS DATE:

199606

2.5.2.6. PROCESS CONTACT**2.5.2.6.1. 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

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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	156	156	492	65,910			347
ESI	1	324	324	1,840	135,355			1,868
FISH	1	399	399	838	128,670			731
HABITATS	1	434	434	798	66,243			651
HYDRO	1	638	638	1,264	158,646	285		1,272
INDEX	1	26	26	58	73			33
INVERT	1	292	292	590	95,307			525
MGT	1	19	19	22	4,456			22
NESTS							17	
REPTILES	1	8	8	38	7,733			37
SOCECON				3	450		420	6,688
T_MAMMAL	1	5	5	10	1,019			10

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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:	
<u>Attributes</u>	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:**

<u>Attributes</u>		
	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
	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
HABITAT	Habitats and Rare Plants
INVERT	Invertebrates
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:

alcid
 alligator
 anadromous
 bivalve
 crab
 diving
 gull_tern
 mustelid
 pelagic
 raptor
 rare plant

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

reef
rodent
sav
shorebird
shrimp
shrub
snake
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:

Alabama beach mouse
Alabama canebrake pitcher-plant
Alabama red-bellied turtle
American alligator
American avocet
American bittern
American chaffseed
American coot
American eel
American oyster (eastern)
American oystercatcher
American white pelican
American wigeon
Anhinga
Atlantic croaker
Atlantic spadefish
Atlantic sturgeon

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Atlantic thread herring
 Bald eagle
 Bay anchovy
 Beaver
 Black crappie
 Black drum
 Black duck
 Black guillemot
 Black rail
 Black scoter (common)
 Black skimmer
 Black tern
 Black-bellied plover
 Black-crowned night heron
 Black-necked stilt
 Blacktip shark
 Blue catfish
 Blue crab
 Blue runner
 Blue-faced booby (masked)
 Bluefish
 Bluegill
 Blue-winged teal
 Bonapartes gull
 Bonnethead shark
 Broad flounder
 Brown bullhead
 Brown pelican
 Brown shrimp
 Bufflehead
 Butterfly fish
 Canada goose
 Canvasback
 Caspian tern
 Cattle egret
 Chain pickerel
 Channel catfish
 Clapper rail
 Cobia
 Common goldeneye
 Common loon
 Common moorhen
 Common tern
 Coontail
 Crevalle jack

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Diamond killifish
Dolphin
Double-crested cormorant
Dowitcher
Dunlin
Egeria
Eurasian water-milfoil
Finetooth shark
Florida pompano
Forsters tern
Gafftopsail catfish
Gag grouper
Gizzard shad
Glossy ibis
Grass pickeral
Gray snapper
Great barracuda
Great barracuda
Great blue heron
Great egret
Greater scaup
Greater yellowlegs
Green-backed heron
Green-winged teal
Gulf butterfish
Gulf flounder
Gulf killifish
Gulf kingfish
Gulf menhaden
Gulf salt marsh snake
Gulf sturgeon
Gull-billed tern
Halfbeak
Hardhead catfish
Harvestfish
Herring gull
Hooded merganser
Horned grebe
Hydrilla
Inland silverside
Killdeer
King mackerel
King rail
Ladyfish
Lane snapper

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Largemouth bass
 Laughing gull
 Least bittern
 Least sandpiper
 Least tern
 Lesser scaup
 Lesser yellowlegs
 Little blue heron
 Little tunny
 Loggerhead sea turtle
 Long-billed curlew
 Longear sunfish
 Longnose killifish
 Magnificent frigatebird
 Mallard
 Marbled godwit
 Marsh killifish
 Mink
 Mississippi diamondback terrapin
 Mottled duck
 Muskrat
 Northern gannet
 Northern harrier
 Northern kingfish
 Northern pintail
 Northern raccoon
 Northern river otter
 Northern shoveler
 Nutria
 Oldsquaw
 Osprey
 Paddlefish
 Peamouth
 Pectoral sandpiper
 Perdido Key beach mouse
 Pied-billed grebe
 Pigfish
 Pinfish
 Pink shrimp
 Piping plover
 Pondweed
 Purple gallinule
 Rainwater killifish
 Red drum
 Red knot

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Red snapper
 Red-breasted merganser
 Reddish egret
 Redear sunfish
 Redhead
 Red-throated loon
 Ring-billed gull
 Ring-necked duck
 Rough scad
 Rough silverside
 Royal tern
 Ruddy duck
 Ruddy turnstone
 Sailfin molly
 Saltmarsh topminnow
 Sand seatrout
 Sanderling
 Sandhill crane
 Sandwich tern
 Scaled sardine
 Seagrass
 Semipalmated plover
 Semipalmated sandpiper
 Sheepshead
 Sheepshead minnow
 Shiners
 Shoal grass
 Short-billed dowitcher
 Silver perch
 Silver seatrout
 Skipjack herring
 Snow goose
 Snowy egret
 Snowy plover
 Solitary sandpiper
 Sooty tern
 Sora rail
 Southern flounder
 Southern hake
 Southern kingfish (whiting)
 Southern naiad
 Spanish mackerel
 Spanish sardine
 Spot
 Spotfin mojarra

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Spotted hake
 Spotted sandpiper
 Spotted seatrout
 Spotted sunfish
 Star drum
 Stilt sandpiper
 Striped anchovy
 Striped bass
 Striped mullet
 Surf scoter
 Surgeon fish
 Tarpon
 Threadfin shad
 Tricolored heron
 Tripletail
 Water celery
 Water stargrass
 Western sandpiper
 Whimbrel
 White ibis
 White mullet
 White shrimp
 White-rumped sandpiper
 White-winged scoter
 Widgeon grass
 Willet
 Wilsons plover
 Wood duck
 Yellow bass
 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:

Acanthurus sp.
Acipenser oxyrinchus
Acipenser oxyrinchus desotoi
Actitis macularia
Adenia xenica
Aix sponsa
Alligator mississippiensis
Alosa chrysochloris
Anas acuta
Anas americana
Anas clypeata
Anas crecca
Anas discors
Anas fulvigula
Anas platyrhynchos
Anas rubripes
Anchoa hepsetus
Anchoa mitchilli
Anguilla rostrata
Anhinga anhinga
Archosargus probatocephalus
Ardea herodias
Arenaria interpres
Arius felis
Aythya affinis
Aythya americana
Aythya collaris
Aythya marila
Aythya valisineria
Bagre marinus
Bairdiella chrysoura
Botaurus lentiginosus
Branta canadensis
Brevoortia patronus
Bubulcus ibis
Bucephala albeola
Bucephala clangula
Butorides striatus
Calidris alba
Calidris alpina
Calidris canutus
Calidris fuscicollis
Calidris himantopus
Calidris mauri

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Calidris melanotos
Calidris minutilla
Calidris pusilla
Callinectes sapidus
Caranx crysos
Caranx hippos
Carcharhinus isodon
Carcharhinus limbatus
Caretta caretta
Casmerodius albus
Castor canadensis
Catoptrophorus semipalmatus
Cepphus grylle
Ceratophyllum demersum
Chaetodipterus faber
Chaetodon sp.
Charadrius alexandrinus
Charadrius melodus
Charadrius semipalmatus
Charadrius vociferus
Charadrius wilsonia
Chen caerulescens
Chlidonias niger
Circus cyaneus
Clangula hyemalis
Coryphaena hippurus
Crassostrea virginica
Cynoscion arenarius
Cynoscion nebulosus
Cynoscion nothus
Cyprinodon variegatus
Dorosoma cepedianum
Dorosoma petenense
Egeria densa
Egretta caerulea
Egretta rufescens
Egretta thula
Egretta tricolor
Elops saurus
Esox americanus
Esox niger
Eucinostomus argenteus
Eudocimus albus
Euthynnus alletteratus
Fregata magnificens

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Fulica americana
Fundulus confluentus
Fundulus grandis
Fundulus jenkinsi
Fundulus similis
Gallinula chloropus
Gavia immer
Gavia stellata
Grus canadensis
Haematopus palliatus
Haliaeetus leucocephalus
Halodule wrightii
Harengula jaguana
Hereranthra dubia
Himantopus mexicanus
Hydrilla verticillata
Hyporhamphus unifasciatus
Ictalurus furcatus
Ictalurus nebulosus
Ictalurus punctatus
Ixobrychus exilis
Lagodon rhomboides
Larus argentatus
Larus atricilla
Larus delawarensis
Larus philadelphia
Laterallus jamaicensis
Leiostomus xanthurus
Lepomis macrochirus
Lepomis megalotis
Lepomis microlophus
Lepomis punctatus miniatus
Limnodromus griseus
Limnodromus spp.
Limosa fedoa
Lobotes surinamensis
Lophodytes cucullatus
Lucania parva
Lutjanus campechanus
Lutjanus griseus
Lutjanus griseus
Lutjanus synagris
Lutra canadensis
Malaclemys terrapin pileata
Megalops atlanticus

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Melanitta deglandi
Melanitta nigra
Melanitta perspicillata
Membras martinica
Menidia beryllina
Menticirrhus americanus
Menticirrhus littoralis
Menticirrhus saxatilis
Mergus serrator
Micropogonias undulatus
Micropterus salmoides
Morone mississippiensis
Morone saxatilis
Morus bassanus
Mugil cephalus
Mugil curema
Mustela vison
Mycteroperca microlepis
Mylocheilus caurinus
Myocastor coypus
Myriophyllum spicatum
Najas sp.
Nerodia clarkii
Notropis spp.
Numenius americanus
Numenius phaeopus
Nyctanassa violacea
Nycticorax nycticorax
Ondatra zibethicus
Opisthonema oglinum
Orthoprists chrysoptera
Oxyura jamaicensis
Pandion haliaetus
Paralichthys albigutta
Paralichthys lethostigma
Paralichthys squamilentus
Pelecanus erythrorhynchos
Pelecanus occidentalis
Penaes aztecus
Penaes aztecus
Penaes duorarum
Penaes setiferus
Peprilus alepidotus
Peprilus burti
Peromyscus polionotus ammobates

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Peromyscus polionotus trissyllepsis
Phalacrocorax auritus
Plegadis falcinellus
Pluvialis squatarola
Podiceps auritus
Podilymbus podiceps
Poecilia latipinna
Pogonias cromis
Polyodon spathula
Pomatomus saltatrix
Pomoxis nigromaculatus
Porphyra martinica
Porzana carolina
Potamogeton sp.
Procyon lotor
Pseudemys alabamensis
Rachycentron canadum
Rallus elegans
Rallus longirostris
Recurvirostra americana
Ruppia maritima
Rynchops niger
Sardinella aurita
Sarracenia rubra ssp. *alabamensis*
Schwalbea americana
Sciaenops ocellatus
Scomberomorus cavalla
Scomberomorus maculatus
Sphyraena barracuda
Sphyrna tiburo
Stellifer lanceolatus
Sterna antillarum
Sterna caspia
Sterna fosteri
Sterna fuscata
Sterna hirundo
Sterna maxima
Sterna nilotica
Sterna sandvicensis
Sula dactylatra
Trachinotus carolinus
Trachurus lathami
Tringa flavipes
Tringa melanaleuca
Tringa solitaria

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Urophycis floridanus
 Urophycis regius
 Vallisneria americana

**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. There are no State threatened or endangered species in this data set, so only Federally listed species are shown.

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:**

F

Federally listed

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE
 DEFINITION SOURCE:**

USFWS

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:**E
T**5.1.2.4.1.2. ENUMERATED DOMAIN
VALUE DEFINITION:**Endangered
Threatened**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE
DEFINITION SOURCE:
USFWS****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 of the species at a specific location. For the biological elements (except HABITATS), values include LOW, MEDIUM, or HIGH. For the HABITATS element, values include CONTINUOUS, DENSE, MODERATE, SPARSE, VERY SPARSE, ABUNDANT, COMMON, SLIGHT, or SCARCE.

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:**

X

**5.1.2.4.1.2. ENUMERATED DOMAIN
VALUE DEFINITION:**

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:**

X

**5.1.2.4.1.2. ENUMERATED DOMAIN
VALUE DEFINITION:**

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:**

X

**5.1.2.4.1.2. ENUMERATED DOMAIN
VALUE DEFINITION:**

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
<hr/>	
	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
<hr/>	
	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/juveniles;
 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/juveniles;
 if ELEMENT = INVERT then BREED3 = mating;
 if ELEMENT = REPTILE then BREED3 = interesting

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

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:
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 of the species at a specific location. For the biological elements (except HABITATS), values include LOW, MEDIUM, or HIGH. For the HABITATS element, values include CONTINUOUS, DENSE, MODERATE, SPARSE, VERY SPARSE, ABUNDANT, COMMON, SLIGHT, or SCARCE.

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
FISH
HABITAT
INVERT
REPTILE
T_MAMMALBirds
Fish
Habitats and Rare Plants
Invertebrates
Reptiles and Amphibians
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

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5.1. DETAILED DESCRIPTION: BIRDS

This coverage contains the polygons with bird species. The following BIRDS species are found in the Alabama ESI atlas:

SPECIES ID	NAME
1	Common loon
3	Red-throated loon
5	Horned grebe
8	Double-crested cormorant
12	Canada goose
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
29	White-winged scoter
30	Surf scoter
33	Red-breasted merganser
34	American coot
38	Herring gull
40	Ring-billed gull
42	Bonaparte's gull
54	Great blue heron
55	Whimbrel
56	Spotted sandpiper
58	Greater yellowlegs
59	Lesser yellowlegs
60	Red knot
61	Pectoral sandpiper
62	Least sandpiper
63	Dunlin
64	Short-billed dowitcher
66	Western sandpiper
67	Sanderling
69	Semipalmated plover
70	Killdeer
71	Black-bellied plover
73	Ruddy turnstone
76	Bald eagle

SPECIES ID	NAME
77	Osprey
86	Least tern
87	Little blue heron
88	Great egret
89	Snowy egret
90	Black-crowned night heron
93	Cattle egret
94	Tricolored heron
97	Green-backed heron
98	Laughing gull
112	Black guillemot
115	White ibis
118	Brown pelican
119	Magnificent frigatebird
120	Yellow-crowned night heron
121	Anhinga
124	Redhead
125	Clapper rail
127	Sooty tern
128	Blue-faced booby (masked)
134	Gull-billed tern
135	Sandwich tern
136	Caspian tern
137	Royal tern
138	Forster's tern
139	Snowy plover
141	American avocet
142	Black-necked stilt
148	Ruddy duck
150	Black rail
152	American oystercatcher
153	Piping plover
154	Wilson's plover
155	Willet
156	Semipalmated sandpiper
163	Reddish egret
167	Northern gannet
169	American wigeon
172	Sandhill crane
173	American white pelican
178	Least bittern
179	Pied-billed grebe
180	Ring-necked duck
181	Northern harrier

SPECIES ID	NAME
184	King rail
185	American bittern
186	Black duck
190	Blue-winged teal
191	Wood duck
192	Common moorhen
193	Black tern
197	Black scoter (common)
198	Hooded merganser
209	Long-billed curlew
210	Marbled godwit
211	Mottled duck
212	Purple gallinule
213	Stilt sandpiper
214	Solitary sandpiper
238	White rumped sandpiper
286	Dowitcher

5.1.1. ENTITY TYPES:**5.1.1.1. ENTITY TYPE LABEL:**GT-Polygons**5.1.1.2. ENTITY TYPE DEFINITION:**

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 (31), 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

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 HABITAT or T_MAMMAL elements.)

5.1.1. ENTITY TYPES:**5.1.1.1. ENTITY TYPE LABEL:**Attributes**5.1.1.2. ENTITY TYPE DEFINITION:**

EL_SPE_SEA	character
MONTH	integer
BREED1	character
BREED2	character
BREED3	character
BREED4	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:

Research Planning, Inc.

**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:**

Research Planning, Inc.

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/juveniles;

if EL_SPE_SEA contains "R" then BREED2 = hatching

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:**

N

Not occurring

Y

Occurring

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:

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/juveniles;

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:

Research Planning, Inc.

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:**
Research Planning, Inc.

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;

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:
N	Not occurring
Y	Occurring

**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: 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 HABITAT or T_MAMMAL elements.)

5.1.1. ENTITY TYPES:**5.1.1.1. ENTITY TYPE LABEL:**Attributes**5.1.1.2. ENTITY TYPE DEFINITION:**

BREED	integer
MONTH	integer
BREED1	character
BREED2	character
BREED3	character
BREED4	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:

1-N

5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:

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/juveniles;

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/juveniles;

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

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

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5.1. DETAILED DESCRIPTION: ESI

The coverage ESI contains arc (Complete Chain) and polygon (GT-polygon) features for the ESI shoreline classification and is based on *Guidelines for Developing Digital Environmental Sensitivity Index Atlases and Databases* (Michel, J. and J. Dahlin, 1993, Hazardous Materials Response and Assessment Division, NOAA). The ESI classification was performed 20-26 October 1992.

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:
<u>Complete Chain</u>	ESI character LINE character SOURCE_ID integer ENVIR character
<u>GT Polygon</u>	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. In many cases, the shorelines are ranked with multiple codes such as 10A/7. The first number is the most landward shoreline type, salt and brackish water marshes, with exposed tidal flats being the shoreline type closest to the water. Only 7s (exposed tidal flats) and 9As (sheltered tidal flats) are attributed in the polygon features. The Alabama shoreline types are listed below.

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
1/10A	Exposed Walls and Other Solid Structures Made of Concrete, Wood, or Metal/Salt and Brackish Water Marshes
1/3A	Exposed Walls and Other Solid Structures made of Concrete, Wood, or Metal/Fine-grained Sand Beaches
1/3B	Exposed Walls and Other Solid Structures made of Concrete, Wood, or Metal/Scarps and Steep Slopes in Sand
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
3A	Fine-grained Sand Beaches
3A/1	Fine-grained Sand Beaches/Exposed Walls and Other Solid Structures made of Concrete, Wood, or Metal
3A/10A	Fine-grained Sand Beaches/Salt and Brackish Water Marshes
3A/6B	Fine-grained Sand Beaches/Exposed Riprap Structures
3A/7	Fine-grained Sand Beaches/Exposed Tidal Flats
3B	Scarps and Steep Slopes in Sand
3B/1	Scarps and Steep Slopes in Sand/Exposed Walls and Other Solid Structures made of Concrete, Wood, or Metal
3B/1/10A	Scarps and Steep Slopes in Sand/Exposed Walls and Other Solid Structures made of Concrete, Wood, or Metal/Salt and Brackish Water Marshes
3B/1/3A	Scarps and Steep Slopes in Sand/Exposed Walls and Other Solid Structures made of Concrete, Wood, or Metal/Fine-grained Sand Beaches
3B/10A	Scarps and Steep Slopes in Sand/Salt and Brackish Water Marshes
3B/3A	Scarps and Steep Slopes in Sand/Fine-grained Sand Beaches
3B/3A/10A	Scarps and Steep Slopes in Sand/Fine-grained Sand Beaches/Salt and Brackish Water Marshes
3B/6B	Scarps and Steep Slopes in Sand/Exposed Riprap Structures
6B	Exposed Riprap Structures
6B/1	Exposed Riprap Structures/Exposed Walls and Other Solid Structures Made of Concrete, Wood, or Metal

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
6B/3A	Exposed Riprap Structures/Fine-grained Sand Beaches
7	Exposed Tidal Flats
8A	Sheltered Solid Man-made Structures
8A/10A	Sheltered Solid Man-made Structures/Salt and Brackish Water Marshes
8A/3A	Sheltered Solid Man-made Structures/Fine-grained Sand Beaches
8B	Sheltered Riprap Structures
8B/10A	Sheltered Riprap Structures/Salt and Brackish Water Marshes
8C	Sheltered Riprap Structures
9B	Riverine Banks with Grasses or Trees
9B/10A	Riverine Banks with Grasses or Trees/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
10A/5	Salt and Brackish Water Marshes/Mixed Sand and Gravel (Shell) Beaches
10A/7	Salt and Brackish Water Marshes/Exposed Tidal Flats
10A/9A	Salt and Brackish Water Marshes/Sheltered Tidal Flats
10B	Freshwater Marshes (Herbaceous Vegetation)
10C	Freshwater Swamps (Woody Vegetation)
10C/10A	Freshwater Swamps (Woody Vegetation)/Salt and Brackish Water Marshes
10C/10B	Freshwater Swamps (Woody Vegetation)/Freshwater Marshes (Herbaceous Vegetation)
10C/3A	Freshwater Swamps (Woody Vegetation)/Fine-grained Sand Beaches
10C/7	Freshwater Swamps (Woody Vegetation)/Exposed Tidal Flats
U	Unranked holes

**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:**

S

Shoreline

F

Flat

B

Breakwater

**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:**

0

Original Digital Data

1

Overflight

2

Digitization from USGS Quadrangle

3

Digital Data from Mississippi Atlas

**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.

5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:

nominal

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5.1. DETAILED DESCRIPTION: FISH

The coverage FISH contains the polygons with fish species. The following FISH species are found in the Alabama ESI atlas:

SPECIES ID	NAME
65	Bluefish
98	American eel
102	Atlantic sturgeon
103	Threadfin shad
104	Striped bass
107	Spotted seatrout
109	Red drum
111	Southern flounder
112	Gulf flounder
113	Bay anchovy
114	Florida pompano
116	Striped mullet
117	Pinfish
119	Silver perch
120	Pigfish
121	Spot
122	Black drum
123	Atlantic croaker
124	Southern kingfish (whiting)
126	King mackerel
127	Spanish mackerel
128	Blue runner
129	Atlantic thread herring
130	Scaled sardine
131	Great barracuda
134	Cobia
136	Dolphin
137	Sheepshead
139	Spanish sardine
140	Ladyfish
142	Crevalle jack
143	Tarpon
153	Northern kingfish
163	Gizzard shad
173	White mullet
179	Largemouth bass
181	Black crappie
182	Bluegill
184	Grass pickerel
200	Blue catfish
201	Channel catfish

SPECIES ID	NAME
204	Redear sunfish
206	Spotted sunfish
209	Peamouth
211	Brown bullhead
213	Gulf menhaden
214	Gulf kingfish
215	Sand seatrout
217	Gafftopsail catfish
243	Longear sunfish
252	Yellow bass
253	Butterfly fish
254	Surgeon fish
268	Silver seatrout
269	Gulf killifish
270	Longnose killifish
271	Inland silverside
273	Star drum
274	Sheepshead minnow
277	Paddlefish
278	Little tunny
287	Hardhead catfish
288	Tripletail
289	Skipjack herring
290	Striped anchovy
291	Shiners
292	Chain pickerel
293	Southern hake
294	Spotted hake
295	Halfbeak
296	Diamond killifish
297	Marsh killifish
298	Saltmarsh topminnow
299	Rainwater killifish
300	Sailfin molly
301	Rough silverside
302	Gag grouper
304	Rough scad
305	Red snapper
306	Gray snapper
307	Lane snapper
309	Spotfin mojarra
310	Atlantic spadefish
312	Harvestfish
313	Gulf butterfish

SPECIES ID	NAME
314	Broad flounder
315	Blacktip shark
319	Gulf sturgeon
326	Bonnethead shark
334	Finetooth shark

5.1.1. ENTITY TYPES:**5.1.1.1. ENTITY TYPE LABEL:**GT-Polygons**5.1.1.2. ENTITY TYPE DEFINITION:**

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 (31), 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

5.1. DETAILED DESCRIPTION: HABITATS

The coverage HABITATS contains the polygons with plant species. The following HABITATS species are found in the Alabama ESI atlas:

SPECIES ID	NAME
79	Shoal grass
80	Widgeon grass
82	Southern naiad
79	Shoal grass
83	Water celery
85	Seagrass
138	Coontail
139	Egeria
140	Water stargrass
141	Hydrilla
142	Eurasian water-milfoil
143	Pondweed
149	American chaffseed
205	Alabama canebrake pitcher-plant

5.1.1. ENTITY TYPES:**5.1.1.1. ENTITY TYPE LABEL:**GT-Polygons**5.1.1.2. ENTITY TYPE DEFINITION:**

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 (31), element number (3), 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: HYDRO

The coverage 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:
<u>GT-Polygons</u>	WATER_CODE character
<u>Complete Chains</u>	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:****5.1.2.4.1.2. ENUMERATED DOMAIN
VALUE DEFINITION:**

B	Breakwater
H	Hydrography
I	Map/Quad Index
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:**

0	Original Digital Data
1	Overflight
2	Digitization from USGS Quadrangle
3	Digital Data from Mississippi Atlas
4	Digital Data from West Florida Atlas

**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: INDEX

The coverage INDEX contains the map boundaries for each quad/map in the atlas.

5.1.1. ENTITY TYPES:

5.1.1.1. ENTITY TYPE LABEL:	5.1.1.2. ENTITY TYPE DEFINITION:
<u>GT-Polygons</u>	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 26.

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:

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 date (latest/revised) of the USGS maps is also included in this field.

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

BELLEFONTAINE, ALA. (1985)
BON SECOUR BAY, ALA. (1985)
BRIDGEHEAD, ALA. (1982)

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

CHICKASAW, ALA. (1982)
 CODEN, ALA. (1985)
 DAPHNE, ALA. (1982)
 FORT MORGAN, ALA. (1958)
 FORT MORGAN NW, ALA. (1958)
 GRAND BAY, ALA. (1986)
 GRAND BAY SW, ALA. (1977)
 GULF SHORES, ALA. (1980)
 HERON BAY, ALA. (1982)
 HOLLINGERS ISLAND, ALA. (1982)
 HURRICANE, ALA. (1982)
 ISLE AUX HERBES, ALA. (1958)
 KREOLE, ALA.-MISS. (1977)
 LILLIAN, ALA.-FLA. (1987)
 LITTLE DAUPHIN ISLAND, ALA. (1982)
 MAGNOLIA SPRINGS, ALA. (1986)
 MOBILE, ALA. (1982)
 ORANGE BEACH, ALA. (1980)
 PERDIDO BAY, ALA.-FLA. (1987)
 PETIT BOIS PASS, ALA. (1982)
 PINE BEACH, ALA. (1980); BON SECOUR BAY, ALA.
 (1985)
 POINT CLEAR, ALA. (1985)
 ST. ANDREWS BAY, ALA. (1980); LITTLE POINT
 CLEAR, ALA. (1980)
 THEODORE, ALA. (1982)

**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:

 50,000

**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:

 0.545

**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 coverage INVERT contains the polygons with invertebrate species. The following INVERT species are found in the Alabama ESI atlas:

SPECIES ID	NAME
4	Pink shrimp
43	American oyster (eastern)
49	Blue crab
50	White shrimp
51	Brown shrimp

5.1.1. ENTITY TYPES:**5.1.1.1. ENTITY TYPE LABEL:**GT-Polygons**5.1.1.2. ENTITY TYPE DEFINITION:**

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 (31), 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 coverage MGT contains the polygons for the human-use data.

5.1.1. ENTITY TYPES:**5.1.1.1. ENTITY TYPE LABEL:**

GT-Polygons

5.1.1.2. ENTITY TYPE DEFINITION:

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:

P
WR

5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:

Regional or State Park
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 (31), 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: NESTS

The coverage NESTS contains entity points representing nesting sites. The following NESTS are found in the Alabama ESI atlas:

SPECIES ID	NAME
45	Common tern
54	Great blue heron
76	Bald eagle
77	Osprey
86	Least tern
87	Little blue heron
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
133	Black skimmer
134	Gull-billed tern
135	Sandwich tern
136	Caspian tern
137	Royal tern
139	Snowy plover
152	American oystercatcher
155	Willet
163	Reddish egret
188	Sora rail
193	Black tern

5.1.1. ENTITY TYPES:**5.1.1.1. ENTITY TYPE LABEL:**

<u>Entity Points</u>

5.1.1.2. ENTITY TYPE DEFINITION:

ID	integer
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RARNUM	integer
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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 (31), 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 coverage REPTILES contains the polygons with reptile species. The following REPTILES species are found in the Alabama ESI atlas:

SPECIES ID	NAME
3	American alligator
6	Loggerhead sea turtle
12	Gulf salt marsh snake
18	Mississippi diamondback terrapin
19	Alabama red-bellied turtle

5.1.1. ENTITY TYPES:**5.1.1.1. ENTITY TYPE LABEL:**

GT-Polygons

5.1.1.2. ENTITY TYPE DEFINITION:

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 (31), 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:**Attributes**5.1.1.2. ENTITY TYPE
DEFINITION:**

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
HABITAT	Habitats and Rare Plants
INVERT	Invertebrates
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:**

1-N

**5.1.2.4.1.2. ENUMERATED DOMAIN
VALUE DEFINITION:**

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:**

X

**5.1.2.4.1.2. ENUMERATED DOMAIN
VALUE DEFINITION:**

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
<hr/>	
	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
<hr/>	
	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
<hr/>	
	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
<hr/>	
	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
<div data-bbox="669 405 1380 541"> 5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE: Research Planning, Inc. </div>	
<div data-bbox="406 552 1161 636"> 5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT: nominal </div>	
<div data-bbox="406 678 836 762"> 5.1.2.1. ATTRIBUTE LABEL: NOV </div>	
<div data-bbox="406 772 933 856"> 5.1.2.2. ATTRIBUTE DEFINITION: Present in November </div>	
<div data-bbox="406 867 1071 951"> 5.1.2.3. ATTRIBUTE DEFINITION SOURCE: Research Planning, Inc. </div>	
5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:	5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:
X	Present (blank) Not Present
<div data-bbox="669 1180 1380 1316"> 5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE: Research Planning, Inc. </div>	
<div data-bbox="406 1327 1161 1411"> 5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT: nominal </div>	
<div data-bbox="406 1453 836 1537"> 5.1.2.1. ATTRIBUTE LABEL: DEC </div>	
<div data-bbox="406 1547 933 1631"> 5.1.2.2. ATTRIBUTE DEFINITION: Present in December </div>	
<div data-bbox="406 1642 1071 1722"> 5.1.2.3. ATTRIBUTE DEFINITION SOURCE: Research Planning, Inc. </div>	

**5.1.2.4.1.1. ENUMERATED
DOMAIN VALUE:**

X

**5.1.2.4.1.2. ENUMERATED DOMAIN
VALUE DEFINITION:**

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:**Attributes**5.1.1.2. ENTITY TYPE DEFINITION:**

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:

1-N

5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:

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
ARCHAEOLOGICAL SITE	Archaeological Site
BOAT RAMP	Boat Ramp
HISTORICAL SITE	Historical Site
MARINA	Marina
REGIONAL OR STATE PARK	Park
WATER INTAKE	Water Intake
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:

AIRPORT
 ALBA CLUB BOAT LAUNCH
 ALBA CLUB MARINA
 ARCHAEOLOGICAL SITE
 ATLANTIC MARINE, INC.
 BAY YACHTING CENTER
 BEACHCOMBER DRY DOCK AND MARINA
 BEAR POINT MARINA
 BOAT RAMP
 BON SECOUR NATIONAL WILDLIFE RESERVE
 BROOKLEY AIRPORT
 BUCCANEER YACHT CLUB

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

CHICKASAW MARINA
CLOVERLEAF LANDING
COLONY COVE YACHT CLUB
DAUPHIN ISLAND LANDING STRIP
DAUPHIN ISLAND MARINA
DEEP SEA FISHING RODEO BASIN
DOG RIVER MARINA
EASTERN SHORE MARINA
FAIR HARBOR MARINA
FAIRHOPE MUNICIPAL AIRPORT
FAIRHOPE PIER
FAIRHOPE YACHT CLUB
FISHERMENS LANDING
FISHERMENS MARINA
FORT MORGAN STATE PARK
FOWL RIVER MARINA
GRAND HOTEL
GRAND MARINER
GRIFFITHS MARINA
GULF STATE PARK
HISTORICAL SITE
HOOK, LINE, & SINKER
HUDSON MARINA
JACK EDWARDS AIRPORT
KITS MARINA
LAKE FOREST YACHT CLUB
LANDING FIELD
LANDING STRIP
MEAHER STATE PARK
MEAHER STATE PARK BOAT RAMP
MESS ABOUT MARINA
MOBILE YACHT CLUB
MORGANS MARINA
MULLET POINT PARK
NATURE PRESERVE
OLF MAGNOLIA US NAVAL RES (CLOSED)
ORANGE BEACH CHARTER BOAT BASIN
ORANGE BEACH MARINA
OUTCAST CHARTER MARINA
PERDIDO PASS MARINA
PINES PUBLIC ACCESS BOAT RAMP
PIRATES COVE MARINA
PRICHARD WATER WORKS BOARD
RIVER PARK MARINA
RIVER YACHT BASIN

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

ROMAR HARBOR HO-DRI MARINA
ROY E. RAY AIRPORT
SAFE HARBOR MARINA
SAFE HARBOUR
SAILBOAT BAY
SAND ISLAND MARINA
SATSUMA CITY MARINA
SHUTTS SAFE HARBOUR
SOUTHERN MARINA
SOUTHERN MARINA BOAT LAUNCH
SPORTSMANS MARINA
TURNER MARINE
U.S. NAVAL RES. WOLF FIELD
WALTER TRENT MARINA
WEEKS BAY BOAT RAMP
WEEKS BAY RESERVE
WINTERS MARINA
ZEKES MARINA

**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. This field was added to match the current standard, but was not populated when the data were collected.

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. This field was added to match the current standard, but was not populated when the data were collected.

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:	
<u>Attributes</u>	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 coverage 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:	
<u>Complete Chains</u>	TYPE	character
<u>Entity Points</u>	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)
AS	Archaeological Site (Point)
BR	Boat Ramp (Point)
HS	Historical Site (Point)
M	Marina (Point)
SB	State Border (Chain)
WI	Water Intake (Point)

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 (31), 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 atlas.

5.1.1. ENTITY TYPES:**5.1.1.1. ENTITY TYPE LABEL:**

Attributes

5.1.1.2. ENTITY TYPE DEFINITION:

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:

1-N

5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:

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:**

0-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. A zero in this field indicates that the data were published at various times

**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:

Digital ASCII

Expert Knowledge and Maps

Maps

Maps and Digital ASCII

Report

**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 atlas.

5.1.1. ENTITY TYPES:**5.1.1.1. ENTITY TYPE LABEL:**

Attributes

5.1.1.2. ENTITY TYPE DEFINITION:

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:

1-N

5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:

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:

Alabama beach mouse
Alabama canebrake pitcher-plant
Alabama red-bellied turtle
American alligator
American avocet
American bittern
American chaffseed
American coot
American eel
American oyster (eastern)
American oystercatcher
American white pelican
American wigeon
Anhinga
Atlantic croaker
Atlantic spadefish
Atlantic sturgeon
Atlantic thread herring
Bald eagle
Bay anchovy
Beaver
Black crappie
Black drum
Black duck
Black guillemot
Black rail
Black scoter (common)
Black skimmer
Black tern
Black-bellied plover
Black-crowned night heron
Black-necked stilt
Blacktip shark
Blue catfish
Blue crab
Blue runner

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Blue-faced booby (masked)

Bluefish

Bluegill

Blue-winged teal

Bonapartes gull

Bonnethead shark

Broad flounder

Brown bullhead

Brown pelican

Brown shrimp

Bufflehead

Butterfly fish

Canada goose

Canvasback

Caspian tern

Cattle egret

Chain pickerel

Channel catfish

Clapper rail

Cobia

Common goldeneye

Common loon

Common moorhen

Common tern

Coontail

Crevalle jack

Diamond killifish

Dolphin

Double-crested cormorant

Dowitcher

Dunlin

Egeria

Eurasian water-milfoil

Finetooth shark

Florida pompano

Forsters tern

Gafftopsail catfish

Gag grouper

Gizzard shad

Glossy ibis

Grass pickeral

Gray snapper

Great barracuda

Great barracuda

Great blue heron

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Great egret
Greater scaup
Greater yellowlegs
Green-backed heron
Green-winged teal
Gulf butterfish
Gulf flounder
Gulf killifish
Gulf kingfish
Gulf menhaden
Gulf salt marsh snake
Gulf sturgeon
Gull-billed tern
Halfbeak
Hardhead catfish
Harvestfish
Herring gull
Hooded merganser
Horned grebe
Hydrilla
Inland silverside
Killdeer
King mackerel
King rail
Ladyfish
Lane snapper
Largemouth bass
Laughing gull
Least bittern
Least sandpiper
Least tern
Lesser scaup
Lesser yellowlegs
Little blue heron
Little tunny
Loggerhead sea turtle
Long-billed curlew
Longear sunfish
Longnose killifish
Magnificent frigatebird
Mallard
Marbled godwit
Marsh killifish
Mink
Mississippi diamondback terrapin

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Mottled duck
Muskrat
Northern gannet
Northern harrier
Northern kingfish
Northern pintail
Northern raccoon
Northern river otter
Northern shoveler
Nutria
Oldsquaw
Osprey
Paddlefish
Peamouth
Pectoral sandpiper
Perdido Key beach mouse
Pied-billed grebe
Pigfish
Pinfish
Pink shrimp
Piping plover
Pondweed
Purple gallinule
Rainwater killifish
Red drum
Red knot
Red snapper
Red-breasted merganser
Reddish egret
Redear sunfish
Redhead
Red-throated loon
Ring-billed gull
Ring-necked duck
Rough scad
Rough silverside
Royal tern
Ruddy duck
Ruddy turnstone
Sailfin molly
Saltmarsh topminnow
Sand seatrout
Sanderling
Sandhill crane
Sandwich tern

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Scaled sardine
 Seagrass
 Semipalmated plover
 Semipalmated sandpiper
 Sheepshead
 Sheepshead minnow
 Shiners
 Shoal grass
 Short-billed dowitcher
 Silver perch
 Silver seatrout
 Skipjack herring
 Snow goose
 Snowy egret
 Snowy plover
 Solitary sandpiper
 Sooty tern
 Sora rail
 Southern flounder
 Southern hake
 Southern kingfish (whiting)
 Southern naiad
 Spanish mackerel
 Spanish sardine
 Spot
 Spotfin mojarra
 Spotted hake
 Spotted sandpiper
 Spotted seatrout
 Spotted sunfish
 Star drum
 Stilt sandpiper
 Striped anchovy
 Striped bass
 Striped mullet
 Surf scoter
 Surgeon fish
 Tarpon
 Threadfin shad
 Tricolored heron
 Tripletail
 Water celery
 Water stargrass
 Western sandpiper
 Whimbrel

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

White ibis
 White mullet
 White shrimp
 White-rumped sandpiper
 White-winged scoter
 Widgeon grass
 Willet
 Wilsons plover
 Wood duck
 Yellow bass
 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:

Acanthurus sp.
 Acipenser oxyrhynchus
 Acipenser oxyrhynchus desotoi
 Actitis macularia
 Adenia xenica
 Aix sponsa
 Alligator mississippiensis
 Alosa chrysochloris
 Anas acuta
 Anas americana
 Anas clypeata
 Anas crecca
 Anas discors
 Anas fulvigula
 Anas platyrhynchos
 Anas rubripes

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Anchoa hepsetus
Anchoa mitchilli
Anguilla rostrata
Anhinga anhinga
Archosargus probatocephalus
Ardea herodias
Arenaria interpres
Arius felis
Aythya affinis
Aythya americana
Aythya collaris
Aythya marila
Aythya valisineria
Bagre marinus
Bairdiella chrysoura
Botaurus lentiginosus
Branta canadensis
Brevoortia patronus
Bubulcus ibis
Bucephala albeola
Bucephala clangula
Butorides striatus
Calidris alba
Calidris alpina
Calidris canutus
Calidris fuscicollis
Calidris himantopus
Calidris mauri
Calidris melanotos
Calidris minutilla
Calidris pusilla
Callinectes sapidus
Caranx crysos
Caranx hippos
Carcharhinus isodon
Carcharhinus limbatus
Caretta caretta
Casmerodius albus
Castor canadensis
Catoptrophorus semipalmatus
Cepphus grylle
Ceratophyllum demersum
Chaetodipterus faber
Chaetodon sp.
Charadrius alexandrinus

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Charadrius melodus
 Charadrius semipalmatus
 Charadrius vociferus
 Charadrius wilsonia
 Chen caerulescens
 Chlidonias niger
 Circus cyaneus
 Clangula hyemalis
 Coryphaena hippurus
 Crassostrea virginica
 Cynoscion arenarius
 Cynoscion nebulosus
 Cynoscion nothus
 Cyprinodon variegatus
 Dorosoma cepedianum
 Dorosoma petenense
 Egeria densa
 Egretta caerulea
 Egretta rufescens
 Egretta thula
 Egretta tricolor
 Elops saurus
 Esox americanus
 Esox niger
 Eucinostomus argenteus
 Eudocimus albus
 Euthynnus alletteratus
 Fregata magnificens
 Fulica americana
 Fundulus confluentus
 Fundulus grandis
 Fundulus jenkinsi
 Fundulus similis
 Gallinula chloropus
 Gavia immer
 Gavia stellata
 Grus canadensis
 Haematopus palliatus
 Haliaeetus leucocephalus
 Halodule wrightii
 Harengula jaguana
 Hereranthra dubia
 Himantopus mexicanus
 Hydrilla verticillata
 Hyporhamphus unifasciatus

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Ictalurus furcatus
Ictalurus nebulosus
Ictalurus punctatus
Ixobrychus exilis
Lagodon rhomboides
Larus argentatus
Larus atricilla
Larus delawarensis
Larus philadelphia
Laterallus jamaicensis
Leiostomus xanthurus
Lepomis macrochirus
Lepomis megalotis
Lepomis microlophus
Lepomis punctatus miniatus
Limnodromus griseus
Limnodromus spp.
Limosa fedoa
Lobotes surinamensis
Lophodytes cucullatus
Lucania parva
Lutjanus campechanus
Lutjanus griseus
Lutjanus griseus
Lutjanus synagris
Lutra canadensis
Malaclemys terrapin pileata
Megalops atlanticus
Melanitta deglandi
Melanitta nigra
Melanitta perspicillata
Membras martinica
Menidia beryllina
Menticirrhus americanus
Menticirrhus littoralis
Menticirrhus saxatilis
Mergus serrator
Micropogonias undulatus
Micropterus salmoides
Morone mississippiensis
Morone saxatilis
Morus bassanus
Mugil cephalus
Mugil curema
Mustela vison

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Mycteroperca microlepis
Mylocheilus caurinus
Myocastor coypus
Myriophyllum spicatum
Najas sp.
Nerodia clarkii
Notropis spp.
Numenius americanus
Numenius phaeopus
Nyctanassa violacea
Nycticorax nycticorax
Ondatra zibethicus
Opisthonema oglinum
Orthopristis chrysoptera
Oxyura jamaicensis
Pandion haliaetus
Paralichthys albigutta
Paralichthys lethostigma
Paralichthys squamilentus
Pelecanus erythrorhynchos
Pelecanus occidentalis
Penaes aztecus
Penaes aztecus
Penaes duorarum
Penaes setiferus
Peprilus alepidotus
Peprilus burti
Peromyscus polionotus ammobates
Peromyscus polionotus trissyllepsis
Phalacrocorax auritus
Plegadis falcinellus
Pluvialis squatarola
Podiceps auritus
Podilymbus podiceps
Poecilia latipinna
Pogonias cromis
Polyodon spathula
Pomatomus saltatrix
Pomoxis nigromaculatus
Porphyra martinica
Porzana carolina
Potamogeton sp.
Procyon lotor
Pseudemys alabamensis
Rachycentron canadum

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

Rallus elegans
Rallus longirostris
Recurvirostra americana
Ruppia maritima
Rynchops niger
Sardinella aurita
Sarracenia rubra ssp. *alabamensis*
Schwalbea americana
Sciaenops ocellatus
Scomberomorus cavalla
Scomberomorus maculatus
Sphyraena barracuda
Sphyrna tiburo
Stellifer lanceolatus
Sterna antillarum
Sterna caspia
Sterna fosteri
Sterna fuscata
Sterna hirundo
Sterna maxima
Sterna nilotica
Sterna sandvicensis
Sula dactylatra
Trachinotus carolinus
Trachurus lathami
Tringa flavipes
Tringa melanaleuca
Tringa solitaria
Urophycis floridanus
Urophycis regius
Vallisneria americana

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
HABITAT	Habitats and Rare Plants
INVERT	Invertebrates
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:

alcid
 alligator
 anadromous
 bivalve
 crab
 diving
 gull_tern
 mustelid
 pelagic
 raptor
 rare plant
 reef
 rodent
 sav
 shorebird
 shrimp
 shrub
 snake

5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

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:**

Attributes

5.1.1.2. ENTITY TYPE DEFINITION:

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
HABITAT	Habitats and Rare Plants
INVERT	Invertebrates
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. There are no State threatened or endangered species in this data set, so this field is not populated.

5.1.2.1. ATTRIBUTE LABEL:

S_F

5.1.2.2. ATTRIBUTE DEFINITION:

State and Federal status. There are no State threatened or endangered species in this data set, so only Federally listed species are shown

5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED
DOMAIN VALUE:**

F

**5.1.2.4.1.2. ENUMERATED DOMAIN
VALUE DEFINITION:**

Federally listed

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE
DEFINITION SOURCE:
USFWS****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:**E
T**5.1.2.4.1.2. ENUMERATED DOMAIN
VALUE DEFINITION:**Endangered
Threatened**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE
DEFINITION SOURCE:
USFWS****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 coverage T_MAMMAL contains the polygons with terrestrial mammal species. The following T_MAMMAL species are found in the Alabama ESI atlas:

SPECIES ID	NAME
8	River otter
36	Beaver
37	Muskrat
38	Mink
43	Nutria
44	Northern raccoon
75	Perdido Key beach mouse
89	Alabama beach mouse

5.1.1. ENTITY TYPES:**5.1.1.1. ENTITY TYPE LABEL:**GT-Polygons**5.1.1.2. ENTITY TYPE DEFINITION:**

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 (31), 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:

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:

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) 526-6400

6.1.7. CONTACT FACSIMILE TELEPHONE:

(206) 526-6329

6.2. RESOURCE DESCRIPTION:

ESI Atlas for Alabama

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:**

200008

7.2. METADATA REVIEW DATE:

200008

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

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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