

# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: South Florida: BENTHIC (Benthic Polygons)

Metadata also available as - [[Parseable text](#)] - [[SGML](#)] - [[XML](#)]

## Metadata:

- [Identification Information](#)
  - [Data Quality Information](#)
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  - [Metadata Reference Information](#)
- 

### *Identification\_Information:*

#### *Citation:*

##### *Citation\_Information:*

##### *Originator:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington.

*Publication\_Date:* 201304

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: South Florida: BENTHIC (Benthic Polygons)

*Edition:* Second

*Geospatial\_Data\_Presentation\_Form:* vector digital data

##### *Series\_Information:*

*Series\_Name:* South Florida

*Issue\_Identification:* South Florida

##### *Publication\_Information:*

*Publication\_Place:* Seattle, Washington

##### *Publisher:*

NOAA's Ocean Service, Office of Response and Restoration (OR&R), Emergency Response Division (ERD).

##### *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, Emergency Response Division, Seattle, Washington.  
*Online\_Linkage:* <<http://response.restoration.noaa.gov/esi>>

*Description:*

*Abstract:*

This data set contains benthic habitats, including: coral reef and hardbottom, seagrass, algae, and others in [for] South Florida. This data set comprises a portion of the ESI data for South Florida. ESI data characterize the marine and 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.

*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.

*Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1994

*Ending\_Date:* 2013

*Currentness\_Reference:*

The data were compiled during 2011-2013. The currentness dates for this data range from 1994 to 2013 and are documented in the Lineage section.

*Status:*

*Progress:* Complete

*Maintenance\_and\_Update\_Frequency:* None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -82.93300

*East\_Bounding\_Coordinate:* -80.00000

*North\_Bounding\_Coordinate:* 26.37500

*South\_Bounding\_Coordinate:* 24.50000

*Keywords:*

*Theme:*

*Theme\_Keyword\_Thesaurus:* ISO 19115 Topic Category

*Theme\_Keyword:* biota

*Theme\_Keyword:* environment

*Theme:*

*Theme\_Keyword\_Thesaurus:* None

*Theme\_Keyword:* Environmental Monitoring

*Theme\_Keyword:* ESI

*Theme\_Keyword:* Sensitivity maps  
*Theme\_Keyword:* Coastal resources  
*Theme\_Keyword:* Oil spill planning  
*Theme\_Keyword:* Coastal Zone Management  
*Theme\_Keyword:* Wildlife  
*Theme\_Keyword:* Benthic

*Place:*

*Place\_Keyword\_Thesaurus:* None  
*Place\_Keyword:* South Florida

*Access\_Constraints:* None

*Use\_Constraints:*

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* datafig.jpg

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and attribute data tables for the South Florida ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* datafig2.jpg

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and desktop data tables for the South Florida ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington, the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness Washington, D.C. and the Fish and Wildlife Research Institute (FWRI), Florida Fish and Wildlife Conservation Commission (FWC), St. Petersburg, Florida.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 10.0) and SQL SERVER(R) (version 2005). The hardware configuration is PC's with Windows Operating System 7.

The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in the data set: benthic.e00, birds.e00, esil.e00, esip.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, mgt\_fish.e00, nests.e00,

reptiles.e00, socecon.e00, and t\_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio\_lut.e00, biofile.e00, biores.e00, breed.e00, seasonal.e00, soc\_dat.e00, soc\_lut.e00, sources.e00, species.e00, status.e00, mgt\_fish\_lut.e00, and mgt\_fish.e00.

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## *Data\_Quality\_Information:*

### *Attribute\_Accuracy:*

#### *Attribute\_Accuracy\_Report:*

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

### *Logical\_Consistency\_Report:*

A multi-stage error checking process, described in the above Attribute\_Accuracy\_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary node, etc.), and SQL SERVER(R) to ARC/INFO(R) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks.

### *Completeness\_Report:*

These data represent digital data sets representing benthic habitats (coral reef, hardbottom, seagrass, etc.). The following species are included in this data set: (Species\_ID, Common Name, Scientific Name [n/a if not applicable]): 85, Seagrass; 1028, Algae; 1032, Rock reef; 1034, Coral patch reef; 1078, Aggregate reef; 1079, Linear reef; 1080, Pavement; 1081, Reef rubble; 1082, Reef terrace; 1083, Remnant; 1084, Ridge; 1085, Live coral; 1086, Spur and groove; 1087, Wormrock; 1098, Elkhorn coral, Acropora palmata; 1099, Staghorn coral, Acropora cervicornis; 1174, Johnson's seagrass, Halophila johnsonii; 1175, Unconsolidated sediments; and 1182, Patch reef.

### *Positional\_Accuracy:*

#### *Horizontal\_Positional\_Accuracy:*

##### *Horizontal\_Positional\_Accuracy\_Report:*

Spatial components for the biological data layers can come from expert interviews, hardcopy, or digital sources. Some of the spatial components of the biological data layers may have been developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy base maps with a scale of 1:24,000. Some of the spatial components of the biological data sets are developed from pre-existing digital or hardcopy sources and reflect the positional accuracy of these original data. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources. See the Lineage and Process\_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

### *Lineage:*

#### *Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI), FLORIDA FISH  
AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Publication\_Date:* 2012

*Title:* INTEGRATED FLORIDA REEF TRACT BENTHIC MAP

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BENTHIC INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

NATIONAL MARINE FISHERIES SERVICE (NFMS) NATIONAL COASTAL  
DATA DEVELOPMENT CENTER

*Publication\_Date:* 1999

*Title:* JOHNSON'S SEAGRASS CRITICAL HABITAT

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* STENNIS SPACE CENTER, MS

*Publisher:*

NATIONAL MARINE FISHERIES SERVICE (NMFS) NATIONAL  
COASTAL DATA DEVELOPMENT CENTER

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 1999

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* BENTHIC INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION (NOAA),  
SOUTHEAST FISHERIES SCIENCE CENTER (SEFSC)

*Publication\_Date:* 2011

*Title:*

DENSITIES OF COMMON REEF FISH BY GEOGRAPHIC REGION,  
HABITAT AND PROTECTION STATUS FROM THE REEF VISUAL  
CENSUS DATABASE

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2011

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* BENTHIC INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

UNIVERSITY OF MIAMI ROSENSTIEL SCHOOL OF MARINE AND  
ATMOSPHERIC SCIENCE

*Publication\_Date:* 2006

*Title:* BENTHIC HABITAT MAP FOR THE DRY TORTUGAS REGION

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2006

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BENTHIC INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

WIRT, K., FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI),  
FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Publication\_Date:* 2009

*Title:* ACROPORA PALMATA PRESENT

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* REMOVABLE DISK

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2009

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BENTHIC INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

WIRT, K., FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI),  
FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Publication\_Date:* 2009

*Title:* ACROPORA CERVICORNIS PRESENT

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* REMOVABLE DISK

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2009

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BENTHIC INFORMATION

*Process\_Step:*

*Process\_Description:*

The main source of data used to depict habitat distribution and seasonality for this data layer were digital data sets provided by Florida Fish and Wildlife Conservation Commission - Fish and Wildlife Research Institute (FWC-FWRI), National Marine Fisheries Service (NMFS), and University of Miami Rosenstiel School of Marine and Atmospheric Science. FWRI provided the Unified Florida Reef Tract Map for use as the primary benthic marine habitat layer in the South FL ESI. This map provides common class values for five levels of thematic detail, UC Level 0 – 4, allowing for flexibility in the scope of analysis. In order to maintain a level of detail commensurate with oil spill response and planning, we chose to display UC Level 3 in the ESI. The classification schema included attributes describing both the geological formation and biological communities associated with each feature, when available. FWRI provided point locations for elkhorn coral (*Acropora palmata*) and staghorn coral (*Acropora cervicornis*) depicting observations of these two species (presence/absence) from surveys conducted between 1996-2009. For display in the South FL ESI, the points were buffered by 10 m to create small polygons. Additional data from NOAA and FWRI was used to map benthic habitats in the Dry Tortugas Ecological Reserves.

*Process\_Date:* 201304

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Person:* Jill Petersen

*Contact\_Address:*

*Address\_Type:* Physical address

*Address:* 7600 Sand Point Way, N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6944

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

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*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:* Vector

*Point\_and\_Vector\_Object\_Information:*

*SDTS\_Terms\_Description:*



*SDTS\_Point\_and\_Vector\_Object\_Type*: GT-polygon composed of chains  
*Point\_and\_Vector\_Object\_Count*: 27659

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: Area point  
*Point\_and\_Vector\_Object\_Count*: 27658

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: Complete chain  
*Point\_and\_Vector\_Object\_Count*: 48334

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: Link  
*Point\_and\_Vector\_Object\_Count*: 2953934

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: Node, planar graph  
*Point\_and\_Vector\_Object\_Count*: 37903

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*Spatial\_Reference\_Information*:

*Horizontal\_Coordinate\_System\_Definition*:

*Geographic*:

*Latitude\_Resolution*: 0.0000001  
*Longitude\_Resolution*: 0.0000001  
*Geographic\_Coordinate\_Units*: Decimal degrees

*Geodetic\_Model*:

*Horizontal\_Datum\_Name*: North American Datum of 1983  
*Ellipsoid\_Name*: Geodetic Reference System 80  
*Semi-major\_Axis*: 6378137.000000  
*Denominator\_of\_Flattening\_Ratio*: 298.257222

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*Entity\_and\_Attribute\_Information*:

*Overview\_Description*:

*Entity\_and\_Attribute\_Overview*:

In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, T\_MAMMAL) 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 the South Florida atlas, the number is 221), an element/layer 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. BIORES and the other relational data tables are described below in detail. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure. Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN\_SPEC, S, F, NHP, DATE\_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G\_SOURCE, S\_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED\_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed\_Description of the BREED data table. The link to the BIOFILE may be made through the BIO\_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED\_DT is an auxiliary support data table 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 table is SOURCES. This is the same as the source 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 data tables. The entity-relationship diagram describing relationships between attribute tables in the ESI data structure does NOT include the BIOFILE data table, and this data table is NOT described in detail below.

*Entity\_and\_Attribute\_Detail\_Citation:*

A complete description of entity types, attributes, and attribute values for ESI atlases can be found in the NOAA ESI Guidelines ([http://response.restoration.noaa.gov/esi\\_guidelines](http://response.restoration.noaa.gov/esi_guidelines)).

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BENTHIC.PAT

*Entity\_Type\_Definition:*

The BENTHIC.PAT table contains attribute information for the vector polygons in this data set representing benthic habitat distribution. Note that all attribute information is stored in a series of relational files, described below. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (221), element number (9), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Attribute:*

*Attribute\_Label:* RARNUM

*Attribute\_Definition:*

An identifier that links directly to the BIORES table or the flat format BIOFILE table. RARNUM values of 0 are holes in the polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BIO\_LUT

*Entity\_Type\_Definition:*

The data table BIO\_LUT is a lookup table that contains items necessary for linking vector objects in the biological data layers with the BIORES data table. Note that all attribute information is stored in a series of relational files, described below. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* RARNUM

*Attribute\_Definition:*

An identifier that links records in the BIO\_LUT data table to records in the BIORES data table or the flat format BIOFILE data table. RARNUM values of 0 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (221), element number (9), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BIORES

*Entity\_Type\_Definition:*

The data table BIORES contains both biological attribute data and items necessary for linking vector objects in the biological data layers via the BIO\_LUT data table to other associated data tables. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* RARNUM

*Attribute\_Definition:*

An identifier that links records in the BIORES data table to records in the BIO\_LUT data table or the flat format BIOFILE data table.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* CONC

*Attribute\_Definition:*

The field CONC refers to "concentration," abundance, or density values. No concentration data was available, so the field is blank.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* SEASON\_ID

*Attribute\_Definition:*

Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* G\_SOURCE

*Attribute\_Definition:*

Geographic source identifier that links records in the BIORES data table to records in the SOURCES data table.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* S\_SOURCE

*Attribute\_Definition:*

Seasonality source identifier that links records in the BIORES data table to records in the SOURCES data table.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and plants

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links records in the BIORES data table to records in the SPECIES and STATUS data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BIORES data table to records in the SEASONAL and BREED data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SPECIES

*Entity\_Type\_Definition:*

The data table SPECIES identifies all species in the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure. Refer to the Completeness Report for list of layer specific species.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* NAME

*Attribute\_Definition:* Species common name for the entire ESI data set.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* GEN\_SPEC

*Attribute\_Definition:* Species scientific name for the entire ESI data set.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and plants

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*



*Enumerated\_Domain\_Value:* M\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:* Marine Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE  
*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SUBELEMENT  
*Attribute\_Definition:* Element subgroup delineating a logical grouping of species.  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* algae  
*Enumerated\_Domain\_Value\_Definition:* Algae  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* alligator  
*Enumerated\_Domain\_Value\_Definition:* Alligator  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* coral  
*Enumerated\_Domain\_Value\_Definition:* Coral  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* crab  
*Enumerated\_Domain\_Value\_Definition:* Crab

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* diving

*Enumerated\_Domain\_Value\_Definition:* Diving bird

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* dolphin

*Enumerated\_Domain\_Value\_Definition:* Dolphin

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* e\_nursery

*Enumerated\_Domain\_Value\_Definition:* Estuarine nursery fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* e\_resident

*Enumerated\_Domain\_Value\_Definition:* Estuarine resident fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* echinoderm

*Enumerated\_Domain\_Value\_Definition:* Echinoderm

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* fish

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* gastropod

*Enumerated\_Domain\_Value\_Definition:* Gastropod

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* gull\_tern

*Enumerated\_Domain\_Value\_Definition:* Gull or tern

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* hardbottom

*Enumerated\_Domain\_Value\_Definition:* Hardbottom

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* insect

*Enumerated\_Domain\_Value\_Definition:* Insect

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* invert

*Enumerated\_Domain\_Value\_Definition:* Invertebrate

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* lizard

*Enumerated\_Domain\_Value\_Definition:* Lizard

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* lobster

*Enumerated\_Domain\_Value\_Definition:* Lobster

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* m\_benthic

*Enumerated\_Domain\_Value\_Definition:* Marine benthic fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* m\_pelagic

*Enumerated\_Domain\_Value\_Definition:* Marine pelagic fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* manatee

*Enumerated\_Domain\_Value\_Definition:* Manatee

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* passerine

*Enumerated\_Domain\_Value\_Definition:* Passerine bird

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* pelagic

*Enumerated\_Domain\_Value\_Definition:* Pelagic bird

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* plant

*Enumerated\_Domain\_Value\_Definition:* Plant

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* raptor

*Enumerated\_Domain\_Value\_Definition:* Raptor

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* reef

*Enumerated\_Domain\_Value\_Definition:* Reef

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* sav

*Enumerated\_Domain\_Value\_Definition:* Submerged aquatic vegetation

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* shorebird

*Enumerated\_Domain\_Value\_Definition:* Shorebird

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* shrimp

*Enumerated\_Domain\_Value\_Definition:* Shrimp

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* sm\_mammal

*Enumerated\_Domain\_Value\_Definition:* Small mammal

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* snake

*Enumerated\_Domain\_Value\_Definition:* Snake

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* turtle

*Enumerated\_Domain\_Value\_Definition:* Turtle

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* ungulate

*Enumerated\_Domain\_Value\_Definition:* Ungulate

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* upland

*Enumerated\_Domain\_Value\_Definition:* Upland vegetation

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* wading

*Enumerated\_Domain\_Value\_Definition:* Wading bird

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* waterfowl

*Enumerated\_Domain\_Value\_Definition:* Waterfowl

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* NHP

*Attribute\_Definition:* Natural Heritage Program global ranking.

*Attribute\_Definition\_Source:* Network of Natural Heritage Program

*Attribute\_Domain\_Values:*

*Codeset\_Domain:*

*Codeset\_Name:* NHP Global Conservation Status Rank

*Codeset\_Source:* Natural Heritage Program

*Attribute:*

*Attribute\_Label:* DATE\_PUB

*Attribute\_Definition:* Date of NHP listing.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 0

*Enumerated\_Domain\_Value\_Definition:* Date unspecified  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links records in the SPECIES data table to records in the BIORES and STATUS data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SEASONAL

*Entity\_Type\_Definition:*

The data table SEASONAL contains information on the seasonal presence of each species associated with each spatial vector object. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and plants

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* SEASON\_ID

*Attribute\_Definition:*



Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1

*Range\_Domain\_Maximum*: N

*Attribute*:

*Attribute\_Label*: JAN

*Attribute\_Definition*: January

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

*Enumerated\_Domain\_Value\_Definition*: Present in January

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute*:

*Attribute\_Label*: FEB

*Attribute\_Definition*: February

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

*Enumerated\_Domain\_Value\_Definition*: Present in February

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute*:

*Attribute\_Label*: MAR

*Attribute\_Definition*: March

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

*Enumerated\_Domain\_Value\_Definition*: Present in March

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute*:

*Attribute\_Label*: APR

*Attribute\_Definition*: April

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: X*

*Enumerated\_Domain\_Value\_Definition: Present in April*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute:*

*Attribute\_Label: MAY*

*Attribute\_Definition: May*

*Attribute\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: X*

*Enumerated\_Domain\_Value\_Definition: Present in May*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute:*

*Attribute\_Label: JUN*

*Attribute\_Definition: June*

*Attribute\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: X*

*Enumerated\_Domain\_Value\_Definition: Present in June*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute:*

*Attribute\_Label: JUL*

*Attribute\_Definition: July*

*Attribute\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: X*

*Enumerated\_Domain\_Value\_Definition: Present in July*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute:*

*Attribute\_Label: AUG*

*Attribute\_Definition: August*

*Attribute\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: X*

*Enumerated\_Domain\_Value\_Definition:* Present in August  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SEP  
*Attribute\_Definition:* September  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in September  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* OCT  
*Attribute\_Definition:* October  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in October  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* NOV  
*Attribute\_Definition:* November  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in November  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* DEC  
*Attribute\_Definition:* December  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in December  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the SEASONAL data table to records in the BIORES and BREED data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BREED

*Entity\_Type\_Definition:*

The data table BREED identifies the monthly presence of certain life-history stages or activities for each species at a given location.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BREED data table to records in the BIORES and SEASONAL data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* MONTH

*Attribute\_Definition:*

Two-digit calendar month. Each life history stage or activity type for a particular species can have up to 12 records to account for each month of the year.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1  
*Range\_Domain\_Maximum:* 12

*Attribute:*

*Attribute\_Label:* BREED1

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED1 = nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning; if ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M\_MAMMAL" then BREED1 = mating. This attribute is not used for HABITAT or T\_MAMMAL.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* BREED2

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = migrating; if ELEMENT is "FISH" then BREED2 = eggs; if ELEMENT is "INVERT" then BREED2 = eggs; if ELEMENT is "REPTILE" then BREED2 = hatching; if ELEMENT is "M\_MAMMAL" then BREED2 = calving. This attribute is not used for HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* BREED3

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED3 = molting; if ELEMENT is "FISH" then BREED3 = larvae; if ELEMENT is "INVERT" then BREED3 = larvae; if ELEMENT is "REPTILE" then BREED3 = internesting; if ELEMENT is "M\_MAMMAL" then BREED3 = pupping. This attribute is not used for HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* BREED4

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "FISH" then BREED4 = juveniles; if ELEMENT is "INVERT" then BREED4 = juveniles; if ELEMENT is "REPTILE" then BREED4 = juveniles; if ELEMENT is "M\_MAMMAL" then BREED4 = molting. This attribute is not used for BIRD, HABITAT, or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* BREED5

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 = adults; if ELEMENT is "INVERT" then BREED5 = adults; if ELEMENT is "REPTILE" then BREED5 = adults. This attribute is not used for BIRD, M\_MAMMAL, HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* STATUS

*Entity\_Type\_Definition:*

The data table STATUS identifies the species that are listed as either threatened or endangered by a state, federal, or international authority. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines



*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* STATE

*Attribute\_Definition:* Two-letter state abbreviation.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* COUNTRY

*Attribute\_Definition:* Three-letter country abbreviation.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* S

*Attribute\_Definition:* State threatened or endangered status.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

*Enumerated\_Domain\_Value\_Definition:* Endangered on state list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T

*Enumerated\_Domain\_Value\_Definition:* Threatened on state list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* C

*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* F

*Attribute\_Definition:* Federal threatened or endangered status.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

*Enumerated\_Domain\_Value\_Definition:* Endangered on federal list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T

*Enumerated\_Domain\_Value\_Definition:* Threatened on federal list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* C

*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* I

*Attribute\_Definition:* International threatened or endangered status.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

*Enumerated\_Domain\_Value\_Definition:* Endangered on international list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T

*Enumerated\_Domain\_Value\_Definition:* Threatened on international list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* C

*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* S\_DATE

*Attribute\_Definition:*

Publication date of source material used to assign state status values for each species, if used.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* F\_DATE

*Attribute\_Definition:*

Publication date of source material used to assign federal status values for each species, if used.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* I\_DATE

*Attribute\_Definition:*

Publication date of source material used to assign international status values for each species, if used.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links the STATUS data table to the BIORES and SPECIES data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SOURCES

*Entity\_Type\_Definition:*

The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SOURCE\_ID

*Attribute\_Definition:*

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table; G\_SOURCE and S\_SOURCE in the BIORES table; and SOURCE\_ID and ESI\_Source in the ESI and HYDRO data layers.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* ORIGINATOR

*Attribute\_Definition:* Author or developer of source material or data set.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* DATE\_PUB

*Attribute\_Definition:*

Date of source material, publication, or date of personal communication with expert source.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* TITLE

*Attribute\_Definition:* Title of source material or data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* DATA\_FORMAT

*Attribute\_Definition:* The format of the source material.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUB\_PLACE

*Attribute\_Definition:* Publication place.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUBLISHER

*Attribute\_Definition:* Publisher.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUBLICATION

*Attribute\_Definition:* Additional citation information.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* ONLINE\_LINK

*Attribute\_Definition:* Online computer resource URL.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* SCALE

*Attribute\_Definition:* Description of the source scale.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* TIME\_PERIOD

*Attribute\_Definition:*

Date(s) of data collection that the source material is based upon.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

---

*Distribution\_Information:*

*Distributor:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:* John Kaperick

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Address:*

*Address\_Type:* Physical Address

*Address:* 7600 Sand Point Way N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6400

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Resource\_Description:* Downloadable Data

*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.

*Custom\_Order\_Process:*

Contact NOAA for distribution options (see Distributor). 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 distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

---

*Metadata\_Reference\_Information:*

*Metadata\_Date:* 201304

*Metadata\_Review\_Date:* 201304

*Metadata\_Contact:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:* Jill Petersen

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Position:* GIS Manager

*Contact\_Address:*

*Address\_Type*: Physical Address  
*Address*: 7600 Sand Point Way, N.E.  
*City*: Seattle  
*State\_or\_Province*: Washington  
*Postal\_Code*: 98115-6349

*Contact\_Voice\_Telephone*: (206) 526-6944  
*Contact\_Facsimile\_Telephone*: (206) 526-6329  
*Contact\_Electronic\_Mail\_Address*: Jill.Petersen@noaa.gov

*Metadata\_Standard\_Name*: Content Standards for Digital Geospatial Metadata  
*Metadata\_Standard\_Version*: FGDC-STD-001-1998



# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: South Florida: BIRDS (Bird Polygons)

Metadata also available as - [[Parseable text](#)] - [[SGML](#)] - [[XML](#)]

## Metadata:

- [Identification Information](#)
  - [Data Quality Information](#)
  - [Spatial Data Organization Information](#)
  - [Spatial Reference Information](#)
  - [Entity and Attribute Information](#)
  - [Distribution Information](#)
  - [Metadata Reference Information](#)
- 

### *Identification\_Information:*

#### *Citation:*

##### *Citation\_Information:*

##### *Originator:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington.

*Publication\_Date:* 201304

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: South Florida: BIRDS (Bird Polygons)

*Edition:* Second

*Geospatial\_Data\_Presentation\_Form:* vector digital data

##### *Series\_Information:*

*Series\_Name:* South Florida

*Issue\_Identification:* South Florida

##### *Publication\_Information:*

*Publication\_Place:* Seattle, Washington

##### *Publisher:*

NOAA's Ocean Service, Office of Response and Restoration (OR&R), Emergency Response Division (ERD).

##### *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, Emergency Response Division, Seattle, Washington.

*Online\_Linkage:* <<http://response.restoration.noaa.gov/esi>>

*Description:*

*Abstract:*

This data set contains sensitive biological resource data for diving birds, gulls, terns, passerine birds, pelagic birds, raptors, shorebirds, wading birds, and waterfowl in [for] South Florida. Vector polygons in this data set represent bird nesting, migratory staging, wintering, and foraging/resting sites. Species specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the ESI data for South Florida. ESI data characterize the marine and 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. See also the NESTS data layer, part of the larger South Florida ESI database, for additional bird information.

*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.

*Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1971

*Ending\_Date:* 2013

*Currentness\_Reference:*

The data were compiled during 2011-2013. The currentness dates for this data range from 1971 to 2013 and are documented in the Lineage section.

*Status:*

*Progress:* Complete

*Maintenance\_and\_Update\_Frequency:* None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -82.93300

*East\_Bounding\_Coordinate:* -80.00000

*North\_Bounding\_Coordinate:* 26.37500

*South\_Bounding\_Coordinate:* 24.50000

*Keywords:*

*Theme:*

*Theme\_Keyword\_Thesaurus:* ISO 19115 Topic Category

*Theme\_Keyword:* biota

*Theme\_Keyword:* environment

*Theme:*

*Theme\_Keyword\_Thesaurus:* None  
*Theme\_Keyword:* Environmental Monitoring  
*Theme\_Keyword:* ESI  
*Theme\_Keyword:* Sensitivity maps  
*Theme\_Keyword:* Coastal resources  
*Theme\_Keyword:* Oil spill planning  
*Theme\_Keyword:* Coastal Zone Management  
*Theme\_Keyword:* Wildlife  
*Theme\_Keyword:* Bird

*Place:*

*Place\_Keyword\_Thesaurus:* None  
*Place\_Keyword:* South Florida

*Access\_Constraints:* None

*Use\_Constraints:*

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* datafig.jpg

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and attribute data tables for the South Florida ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* datafig2.jpg

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and desktop data tables for the South Florida ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington, the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness Washington, D.C. and the Fish and Wildlife Research Institute (FWRI), Florida Fish and Wildlife Conservation Commission (FWC), St. Petersburg, Florida.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 10.0) and SQL SERVER(R) (version 2005). The hardware configuration is PC's with Windows Operating System 7.

The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in the data set: benthic.e00, birds.e00, esil.e00, esip.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, mgt\_fish.e00, nests.e00, reptiles.e00, socecon.e00, and t\_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio\_lut.e00, biofile.e00, biores.e00, breed.e00, seasonal.e00, soc\_dat.e00, soc\_lut.e00, sources.e00, species.e00, status.e00, mgt\_fish\_lut.e00, and mgt\_fish.e00.

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### *Data\_Quality\_Information:*

#### *Attribute\_Accuracy:*

##### *Attribute\_Accuracy\_Report:*

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

##### *Logical\_Consistency\_Report:*

A multi-stage error checking process, described in the above Attribute\_Accuracy\_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary node, etc.), and SQL SERVER(R) to ARC/INFO(R) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM 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 ID's and RARNUM's or HUNUM's are also generated. The new ID's 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 RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resources at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

##### *Completeness\_Report:*

These data represent a synthesis of expert knowledge, survey data, digital maps, published reports, peer-reviewed articles, and digital data on bird nesting, migratory staging, wintering, and foraging/resting sites. See also the NESTS data layer, part of the larger South Florida ESI database, for additional bird information. These data do not necessarily represent all bird occurrences in South Florida. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name [n/a if not applicable]): 1, Common loon, *Gavia immer*; 5, Horned grebe, *Podiceps auritus*; 8, Double-crested cormorant, *Phalacrocorax auritus*; 33, Red-breasted merganser, *Mergus serrator*; 34, American coot, *Fulica americana*; 38, Herring gull, *Larus argentatus*; 40, Ring-billed gull, *Larus delawarensis*; 54, Great blue heron, *Ardea herodias*; 55, Whimbrel, *Numenius phaeopus*; 56, Spotted sandpiper, *Actitis macularia*; 58, Greater yellowlegs, *Tringa melanoleuca*; 60, Red knot, *Calidris canutus*; 62, Least sandpiper, *Calidris minutilla*; 63, Dunlin, *Calidris alpina*; 64, Short-billed dowitcher, *Limnodromus griseus*; 65, Long-billed dowitcher, *Limnodromus scolopaceus*; 66, Western sandpiper, *Calidris mauri*; 67, Sanderling, *Calidris alba*; 69, Semipalmated plover, *Charadrius semipalmatus*; 70, Killdeer, *Charadrius vociferus*; 71, Black-bellied plover, *Pluvialis squatarola*; 73, Ruddy turnstone, *Arenaria interpres*; 76, Bald eagle, *Haliaeetus*

leucocephalus; 77, Osprey, Pandion haliaetus; 86, Least tern, Sternula antillarum; 87, Little blue heron, Egretta caerulea; 88, Great egret, Ardea alba; 89, Snowy egret, Egretta thula; 90, Black-crowned night-heron, Nycticorax nycticorax; 93, Cattle egret, Bubulcus ibis; 94, Tricolored heron, Egretta tricolor; 95, Roseate tern, Sterna dougallii; 97, Green heron, Butorides virescens; 98, Laughing gull, Larus atricilla; 107, Peregrine falcon, Falco peregrinus; 115, White ibis, Eudocimus albus; 116, Roseate spoonbill, Ajaia ajaja; 117, Great white heron, Ardea herodias; 118, Brown pelican, Pelecanus occidentalis; 119, Magnificent frigatebird, Fregata magnificens; 120, Yellow-crowned night-heron, Nyctanassa violacea; 121, Anhinga, Anhinga anhinga; 126, Brown noddy, Anous stolidus; 127, Sooty tern, Onychoprion fuscatus; 128, Masked booby, Sula dactylatra; 132, Wood stork, Mycteria americana; 133, Black skimmer, Rynchops niger; 135, Sandwich tern, Thalasseus sandvicensis; 136, Caspian tern, Hydroprogne caspia; 137, Royal tern, Thalasseus maximus; 138, Forster's tern, Sterna forsteri; 139, Snowy plover, Charadrius alexandrinus; 142, Black-necked stilt, Himantopus mexicanus; 153, Piping plover, Charadrius melodus; 154, Wilson's plover, Charadrius wilsonia; 155, Willet, Catoptrophorus semipalmatus; 156, Semipalmated sandpiper, Calidris pusilla; 163, Reddish egret, Egretta rufescens; 167, Northern gannet, Morus bassanus; 173, American white pelican, Pelecanus erythrorhynchos; 179, Pied-billed grebe, Podilymbus podiceps; 181, Northern harrier, Circus cyaneus; 182, American kestrel, Falco sparverius; 190, Blue-winged teal, Anas discors; 209, Long-billed curlew, Numenius americanus; 210, Marbled godwit, Limosa fedoa; 213, Stilt sandpiper, Calidris himantopus; 216, Belted kingfisher, Ceryle alcyon; 218, Red-shouldered hawk, Buteo lineatus; 219, Sharp-shinned hawk, Accipiter striatus; 220, Merlin, Falco columbarius; 221, Cooper's hawk, Accipiter cooperii; 231, Broad-winged hawk, Buteo platypterus; 249, Black noddy, Anous minutus; 261, Brown booby, Sula leucogaster; 277, Seaside sparrow, Ammodramus maritimus; 280, Swallow-tailed kite, Elanoides forficatus; 283, Bridled tern, Onychoprion anaethetus; 294, Cape Sable seaside sparrow, Ammodramus maritimus mirabilis; 297, White-crowned pigeon, Patagioenas leucocephala; 334, Yellow warbler, Dendroica petechia; 354, Short-tailed hawk, Buteo brachyurus; 357, Swainson's hawk, Buteo swainsoni; 367, American flamingo, Phoenicopterus ruber; 393, Lesser black-backed gull, Larus fuscus; 420, Mangrove cuckoo, Coccyzus minor; 455, Yellow-billed cuckoo, Coccyzus americanus; 458, Northern waterthrush, Seiurus noveboracensis; 459, Florida burrowing owl, Athene cunicularia floridana; 590, Black-and-white warbler, Mniotilta varia; 722, Common yellowthroat, Geothlypis trichas; 843, White-eyed vireo, Vireo griseus; 861, Yellow-throated warbler, Setophaga dominica; 862, Prairie warbler, Setophaga discolor; 863, Palm warbler, Setophaga palmarum; 1001, Gulls, n/a; 1002, Shorebirds, n/a; 1004, Wading birds, n/a; 1005, Raptors, n/a; 1006, Diving birds, n/a; 1008, Terns, n/a; 1038, Warblers, Parulidae; 1039, Thrushes, n/a.

#### *Positional\_Accuracy:*

##### *Horizontal\_Positional\_Accuracy:*

##### *Horizontal\_Positional\_Accuracy\_Report:*

Spatial components for the biological data layers can come from expert interviews, hardcopy, or digital sources. Some of the spatial components of the biological data layers may have been developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy base maps with a scale of 1:24,000. Some of the spatial components of the biological data sets are developed from pre-existing digital or hardcopy sources and reflect the positional accuracy of these original data. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources. See the Lineage and Process\_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

#### *Lineage:*

##### *Source\_Information:*

##### *Source\_Citation:*

*Citation\_Information:*

*Originator:*

2011 INTERNATIONAL WINTER PLOVER CENSUS, UNITED STATES  
FISH AND WILDLIFE SERVICE (USFWS), SOUTH FLORIDA  
ECOLOGICAL SERVICES OFFICE

*Publication\_Date:* 2011

*Title:* SOUTH FLORIDA INTERNATIONAL WINTER PLOVER CENSUS 2011

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* VERO BEACH, FL

*Publisher:*

UNITED STATES FISH AND WILDLIFE SERVICE (USFWS), SOUTH  
FLORIDA ECOLOGICAL SERVICES OFFICE

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2011

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

ALVARADO, M. (EVERGLADES NATIONAL PARK, NATIONAL PARK  
SERVICE (NPS))

*Publication\_Date:* 2012

*Title:* CAPE SABLE SEASIDE SPARROW OCCUPANCY AREA

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* ALVARADO, M. (EVERGLADES NATIONAL PARK, NATIONAL PARK SERVICE)  
*Publication\_Date:* 2013  
*Title:* EVERGLADES WOOD STORK FORAGING DATA  
*Geospatial\_Data\_Presentation\_Form:* SPREADSHEET

*Type\_of\_Source\_Media:* EMAIL  
*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1985  
*Ending\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* FLORIDA NATURAL AREAS INVENTORY (FNAI)  
*Publication\_Date:* 2011  
*Title:* FLORIDA NATURAL AREAS INVENTORY, FLORIDA ELEMENT OCCURRENCE  
*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA  
*Publication\_Information:*

*Publication\_Place:* TALLAHASSEE, FL  
*Publisher:* FLORIDA NATURAL AREAS INVENTORY (FNAI)

*Type\_of\_Source\_Media:* EMAIL  
*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2011

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* FREZZA, P. (AUDUBON OF FLORIDA)  
*Publication\_Date:* 2012  
*Title:* KEY LARGO-PLANTATION KEY CHRISTMAS BIRD COUNT 2008-2012  
*Geospatial\_Data\_Presentation\_Form:* SPREADSHEET  
*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* EMAIL  
*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 2008  
*Ending\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* FREZZA, P. (AUDUBON OF FLORIDA)  
*Publication\_Date:* 2013  
*Title:* BIRD DISTRIBUTION AND SEASONALITY IN FLORIDA BAY  
*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE  
*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* PERSONAL COMMUNICATION  
*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2013

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* BIRDS INFORMATION



*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* FROHRING, P. C. AND J. A. KUSHLAN

*Publication\_Date:* 1986

*Title:*

NESTING STATUS AND COLONY SITE VARIABILITY OF LAUGHING  
GULLS IN SOUTHERN FLORIDA

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* Gainesville, FL

*Publisher:* FLORIDA ORNITHOLOGICAL SOCIETY

*Other\_Citation\_Details:* FLORIDA FIELD NATURALIST, 14: 1-17

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 1986

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* LLOYD, J.D. AND K.E. MILLER

*Publication\_Date:* 2011

*Title:*

ABUNDANCE, POPULATION STATUS, AND BREEDING-SEASON  
HABITAT REQUIREMENTS OF MANGROVE LANDBIRDS IN SOUTHERN  
FLORIDA

*Geospatial\_Data\_Presentation\_Form:* HARDCOPY TEXT

*Publication\_Information:*

*Publication\_Place:* GAINESVILLE, FL

*Publisher:* FLORIDA'S NONGAME WILDLIFE GRANTS PROGRAM

*Other\_Citation\_Details:* PROJECT NUMBER: NG07-106 (9250-264-1000)

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2011

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* LORENZ, J. (AUDUBON OF FLORIDA)

*Publication\_Date:* 2013

*Title:* DISTRIBUTION AND SEASONALITY OF FLORIDA BAY BIRDS

*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2013

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* LOWER FLORIDA KEYS NATIONAL WILDLIFE REFUGES

*Publication\_Date:* 2009

*Title:*

LOWER FLORIDA KEYS NATIONAL WILDLIFE REFUGES  
COMPREHENSIVE CONSERVATION PLAN

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* ATLANTA, GA

*Publisher:*

UNITED STATES FISH AND WILDLIFE SERVICE (USFWS),  
SOUTHEAST REGION

*Type\_of\_Source\_Media:* ONLINE  
*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2009

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* MAEHR, D. S. AND KALE, H. W. II  
*Publication\_Date:* 2009  
*Title:* FLORIDA'S BIRDS: A FIELD GUIDE AND REFERENCE  
*Geospatial\_Data\_Presentation\_Form:* HARDCOPY TEXT  
*Publication\_Information:*

*Publication\_Place:* SARASOTA, FL  
*Publisher:* PINEAPPLE PRESS

*Other\_Citation\_Details:* 359 PP.

*Type\_of\_Source\_Media:* BOOK  
*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2009

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* MIDWINTER WATERFOWL INVENTORY  
*Publication\_Date:* 2003  
*Title:* MID-WINTER WATERFOWL INVENTORY DATA  
*Geospatial\_Data\_Presentation\_Form:* SPREADSHEET  
*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* EMAIL  
*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1971  
*Ending\_Date:* 2003

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION (NOAA),  
NATIONAL OCEAN SERVICE (NOS), OFFICE OF RESPONSE AND  
RESTORATION (OR&R), EMERGENCY RESPONSE DIVISION (ERD)

*Publication\_Date:* 1996

*Title:*

SENSITIVITY OF COASTAL ENVIRONMENTS AND WILDLIFE TO  
SPILLED OIL: SOUTH FLORIDA ATLAS

*Geospatial\_Data\_Presentation\_Form:* ATLAS

*Publication\_Information:*

*Publication\_Place:* SEATTLE, WA

*Publisher:* NOAA

*Online\_Linkage:* <<http://response.restoration.noaa.gov/esi>>

*Type\_of\_Source\_Media:* ATLAS HARDCOPY  
*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 1996

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* NATIONAL PARK SERVICE (NPS)

*Publication\_Date:* 2004

*Title:* DRY TORTUGAS NATIONAL PARK BIRD CHECKLIST

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* KEY WEST, FL

*Publisher:* DRY TORTUGAS NATIONAL PARK, NATIONAL PARK SERVICE (NPS)

*Online\_Linkage:*

<http://www.nps.gov/drto/planyourvisit/loader.cfm?csModule=security/getfile&PageID=178974>

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2004

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* NATIONAL PARK SERVICE (NPS) MIAMI

*Publication\_Date:* 2012

*Title:* BISCAYNE BAY NATIONAL PARK RESOURCES

*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* NATIONAL PARK SERVICE (NPS) SOUTH FLORIDA/CARIBBEAN NETWORK

*Publication\_Date:* 2012

*Title:* DRY TORTUGAS NATIONAL PARK BIRD COLONIES

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* PALMETTO BAY, FL

*Publisher:* NATIONAL PARK SERVICE (NPS) SOUTH FLORIDA/CARIBBEAN NETWORK

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* NATIONAL PARK SERVICE (NPS), BISCAYNE NATIONAL PARK

*Publication\_Date:* 2012

*Title:* BIRDING TIPS, ETHICS, AND WHERE TO BIRD IN BISCAYNE

*Geospatial\_Data\_Presentation\_Form:* WEBSITE

*Publication\_Information:*

*Publication\_Place:* HOMESTEAD, FL

*Publisher:* NATIONAL PARK SERVICE (NPS)

*Online\_Linkage:* <<http://www.nps.gov/bisc/naturescience/birding.htm>>

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

OBERHOFER, L. (NATIONAL PARK SERVICE (NPS), EVERGLADES  
NATIONAL PARK)

*Publication\_Date:* 2012

*Title:* BIRD DISTRIBUTION IN EVERGLADES NATIONAL PARK AND FLORIDA  
BAY

*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

OBERHOFER, L. (NATIONAL PARK SERVICE (NPS), EVERGLADES  
NATIONAL PARK)

*Publication\_Date:* 2013

*Title:*

GOOGLE EARTH FILE: BROWN PELICANS AND MAGNIFICENT  
FRIGATEBIRDS IN THE FLORIDA KEYS AND FLORIDA BAY

*Geospatial\_Data\_Presentation\_Form:* MAP

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2013

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* PATTERSON, J. (NATIONAL PARK SERVICE/CARIBBEAN NETWORK)

*Publication\_Date:* 2013

*Title:*

EBIRD DATA FOR THE DRY TORTUGAS, EVERGLADES, AND BISCAYNE BAY NATIONAL PARKS

*Geospatial\_Data\_Presentation\_Form:* SPREADSHEET

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2013

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* PATTERSON, J. (NATIONAL PARK SERVICE/CARIBBEAN NETWORK)

*Publication\_Date:* 2013

*Title:* NATIONAL PARK SERVICE RESOURCES

*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* PAPER

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*



*Single\_Date/Time:*

*Calendar\_Date:* 2013

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

PRANTY, B. (FLORIDA MUSEUM OF NATURAL HISTORY), AUDUBON OF FLORIDA; NOSS, R. F. AND S. SINGH, EDS.

*Publication\_Date:* 2010

*Title:* THE IMPORTANT BIRD AREAS OF FLORIDA

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* GAINESVILLE, FL

*Publisher:* FLORIDA ORNITHOLOGICAL SOCIETY

*Other\_Citation\_Details:* SPECIAL PUBLICATION NO. 8

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2010

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* UNITED STATES FISH AND WILDLIFE SERVICE (USFWS)

*Publication\_Date:* 2001

*Title:* PIPING PLOVER CRITICAL HABITAT

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* FEDERAL REGISTER

*Publisher:* UNITED STATES FISH AND WILDLIFE SERVICE (USFWS)

*Online\_Linkage:* <<http://criticalhabitat.fws.gov/>>

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2001

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* UNITED STATES FISH AND WILDLIFE SERVICE (USFWS)

*Publication\_Date:* 2002

*Title:* FLORIDA KEYS NATIONAL WILDLIFE REFUGES BIRD LIST

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* BIG PINE KEY, FL

*Publisher:*

FLORIDA KEYS NATIONAL WILDLIFE REFUGES, UNITED STATES  
FISH AND WILDLIFE SERVICE (USFWS)

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2002

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

WILMERS, T. (UNITED STATES FISH AND WILDLIFE SERVICE (USFWS),

FLORIDA KEYS NATIONAL WILDLIFE REFUGES)

*Publication\_Date:* 2012

*Title:*

DISTRIBUTION AND SEASONALITY OF BIRDS AND REPTILES IN  
SOUTH FLORIDA

*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

ZAMBRANO, R. (FLORIDA FISH AND WILDLIFE CONSERVATION  
COMMISSION (FWC))

*Publication\_Date:* 2012

*Title:* DISTRIBUTION AND SEASONALITY OF BIRDS AND REPTILES IN  
SOUTH FL

*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Process\_Step:*

*Process\_Description:*

Three main sources of data were used to depict bird distribution and seasonality for this data layer: 1) personal interviews with resource experts from Florida Fish and Wildlife

Conservation Commission (FWC), Audubon of Florida, National Park Service (NPS) - (Everglades National Park, Biscayne Bay National Park, Dry Tortugas National Park), and U.S. Fish and Wildlife Service (USFWS) - Florida Keys National Wildlife Refuges; 2) digital data sets (based on field surveys) provided by: NPS-Everglades National Park and Dry Tortugas National Park and USFWS; and 3) literature provided by Audubon of Florida and NPS. Survey data on locations of breeding, wintering, and resident birds was provided via shapefiles for the following species and species groups in the birds layer (other nest points were included in the nests layer): Dry Tortugas National Park breeding colonies, wood stork, Cape Sable seaside sparrow, brown pelican, and magnificent frigatebird. For species and data sets for which concentration information was available, if the data provided contained a single year of count data, that count was displayed in the concentration field. For data sets with multiple years of data the maximum value or most recent year recorded at a site over the months or years surveyed is displayed in the concentration field. USFWS, NPS, Audubon of FL, and FFWCC staff provided additional insight on birds that nest on the Florida Keys and keys within Florida Bay. Bird data collected through Christmas Bird Counts and reported to www.eBird.org were used to depict species utilizing the Dry Tortugas, Florida Bay, and Biscayne Bay.

The above digital and/or hardcopy sources were compiled by the project biologist to create the BIRDS data layer. Depending on the type of source data, three general approaches are used for compiling the data layer: 1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:24,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the BIRDS data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:* 201304

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Person:* Jill Petersen

*Contact\_Address:*

*Address\_Type:* Physical address

*Address:* 7600 Sand Point Way, N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6944

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

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*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:* Vector

*Point\_and\_Vector\_Object\_Information:*

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* GT-polygon composed of chains  
*Point\_and\_Vector\_Object\_Count:* 1655

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Area point  
*Point\_and\_Vector\_Object\_Count:* 1654

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Complete chain  
*Point\_and\_Vector\_Object\_Count:* 2645

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Link  
*Point\_and\_Vector\_Object\_Count:* 528710

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Node, planar graph  
*Point\_and\_Vector\_Object\_Count:* 2478

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*Spatial\_Reference\_Information:*

*Horizontal\_Coordinate\_System\_Definition:*

*Geographic:*

*Latitude\_Resolution:* 0.0000001  
*Longitude\_Resolution:* 0.0000001  
*Geographic\_Coordinate\_Units:* Decimal degrees

*Geodetic\_Model:*

*Horizontal\_Datum\_Name:* North American Datum of 1983  
*Ellipsoid\_Name:* Geodetic Reference System 80  
*Semi-major\_Axis:* 6378137.000000  
*Denominator\_of\_Flattening\_Ratio:* 298.257222

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*Entity\_and\_Attribute\_Information:*

*Overview\_Description:*

*Entity\_and\_Attribute\_Overview:*

In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, BIRDS) 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 the South Florida atlas, the number is 221), an element/layer 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. BIORES and the other relational data tables are described below in detail. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure. Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN\_SPEC, S, F, NHP, DATE\_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G\_SOURCE, S\_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED\_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed\_Description of the BREED data table. The link to the BIOFILE may be made through the BIO\_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED\_DT is an auxiliary support data table 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 table is SOURCES. This is the same as the source 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 data tables. The entity-relationship diagram describing relationships between attribute tables in the ESI data structure does NOT include the BIOFILE data table, and this data table is NOT described in detail below.

*Entity\_and\_Attribute\_Detail\_Citation:*

A complete description of entity types, attributes, and attribute values for ESI atlases can be found in the NOAA ESI Guidelines ([http://response.restoration.noaa.gov/esi\\_guidelines](http://response.restoration.noaa.gov/esi_guidelines)).

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BIRDS.PAT

*Entity\_Type\_Definition:*

The BIRDS.PAT table contains attribute information for the vector polygons in this data set representing bird nesting, migratory staging, wintering, and foraging/resting sites. Note that all attribute information is stored in a series of relational files, described below. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (221), element number (1), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Attribute:*

*Attribute\_Label:* RARNUM

*Attribute\_Definition:*

An identifier that links directly to the BIORES table or the flat format BIOFILE table. RARNUM values of 0 are holes in the polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BIO\_LUT

*Entity\_Type\_Definition:*

The data table BIO\_LUT is a lookup table that contains items necessary for linking vector objects in the biological data layers with the BIORES data table. Note that all attribute information is stored in a series of relational files, described below. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* RARNUM

*Attribute\_Definition:*

An identifier that links records in the BIO\_LUT data table to records in the BIORES data table or the flat format BIOFILE data table. RARNUM values of 0 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (221), element number (1), and record

number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BIORES

*Entity\_Type\_Definition:*

The data table BIORES contains both biological attribute data and items necessary for linking vector objects in the biological data layers via the BIO\_LUT data table to other associated data tables. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* RARNUM

*Attribute\_Definition:*

An identifier that links records in the BIORES data table to records in the BIO\_LUT data table or the flat format BIOFILE data table.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* CONC

*Attribute\_Definition:*

The field CONC refers to "concentration," abundance, or density values, and may contain counts of individuals or nests or a term that describes relative abundance of birds at a



particular site. The field may contain counts (XX BIRDS or NESTS or PAIRS or ADULTS) or a range of counts (X-XX BIRDS). In cases where no quantitative count data was available, the field may either be blank or contain descriptive terms such as "HIGH" or "LOW". Counts were derived from a variety of surveys, and may range in date (see lineage).

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label*: SEASON\_ID

*Attribute\_Definition*:

Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1

*Range\_Domain\_Maximum*: N

*Attribute*:

*Attribute\_Label*: G\_SOURCE

*Attribute\_Definition*:

Geographic source identifier that links records in the BIORES data table to records in the SOURCES data table.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1

*Range\_Domain\_Maximum*: N

*Attribute*:

*Attribute\_Label*: S\_SOURCE

*Attribute\_Definition*:

Seasonality source identifier that links records in the BIORES data table to records in the SOURCES data table.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1

*Range\_Domain\_Maximum*: N

*Attribute*:

*Attribute\_Label*: ELEMENT

*Attribute\_Definition*: Major categories of biological data.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: BIRD

*Enumerated\_Domain\_Value\_Definition*: Birds

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: FISH

*Enumerated\_Domain\_Value\_Definition*: Fish

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: HABITAT

*Enumerated\_Domain\_Value\_Definition*: Habitats and plants

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: INVERT

*Enumerated\_Domain\_Value\_Definition*: Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition*: Marine mammals

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: REPTILE

*Enumerated\_Domain\_Value\_Definition*: Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition*: Terrestrial mammals

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links records in the BIORES data table to records in the SPECIES and STATUS data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BIORES data table to records in the SEASONAL and BREED data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SPECIES

*Entity\_Type\_Definition:*

The data table SPECIES identifies all species in the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure. Refer to the Completeness Report for list of layer specific species.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source*: NOAA ESI Guidelines  
*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1  
*Range\_Domain\_Maximum*: N

*Attribute*:

*Attribute\_Label*: NAME  
*Attribute\_Definition*: Species common name for the entire ESI data set.  
*Attribute\_Definition\_Source*: NOAA ESI Guidelines  
*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label*: GEN\_SPEC  
*Attribute\_Definition*: Species scientific name for the entire ESI data set.  
*Attribute\_Definition\_Source*: NOAA ESI Guidelines  
*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label*: ELEMENT  
*Attribute\_Definition*: Major categories of biological data.  
*Attribute\_Definition\_Source*: NOAA ESI Guidelines  
*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: BIRD  
*Enumerated\_Domain\_Value\_Definition*: Birds  
*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: FISH  
*Enumerated\_Domain\_Value\_Definition*: Fish  
*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: HABITAT  
*Enumerated\_Domain\_Value\_Definition*: Habitats and plants  
*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SUBELEMENT

*Attribute\_Definition:* Element subgroup delineating a logical grouping of species.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* algae

*Enumerated\_Domain\_Value\_Definition:* Algae

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* alligator

*Enumerated\_Domain\_Value\_Definition:* Alligator

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* coral  
*Enumerated\_Domain\_Value\_Definition:* Coral  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* crab  
*Enumerated\_Domain\_Value\_Definition:* Crab  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* diving  
*Enumerated\_Domain\_Value\_Definition:* Diving bird  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* dolphin  
*Enumerated\_Domain\_Value\_Definition:* Dolphin  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* e\_nursery  
*Enumerated\_Domain\_Value\_Definition:* Estuarine nursery fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* e\_resident  
*Enumerated\_Domain\_Value\_Definition:* Estuarine resident fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* echinoderm  
*Enumerated\_Domain\_Value\_Definition:* Echinoderm  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value*: fish  
*Enumerated\_Domain\_Value\_Definition*: Fish  
*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: gastropod  
*Enumerated\_Domain\_Value\_Definition*: Gastropod  
*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: gull\_tern  
*Enumerated\_Domain\_Value\_Definition*: Gull or tern  
*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: hardbottom  
*Enumerated\_Domain\_Value\_Definition*: Hardbottom  
*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: insect  
*Enumerated\_Domain\_Value\_Definition*: Insect  
*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: invert  
*Enumerated\_Domain\_Value\_Definition*: Invertebrate  
*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: lizard  
*Enumerated\_Domain\_Value\_Definition*: Lizard  
*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value:* lobster  
*Enumerated\_Domain\_Value\_Definition:* Lobster  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* m\_benthic  
*Enumerated\_Domain\_Value\_Definition:* Marine benthic fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* m\_pelagic  
*Enumerated\_Domain\_Value\_Definition:* Marine pelagic fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* manatee  
*Enumerated\_Domain\_Value\_Definition:* Manatee  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* passerine  
*Enumerated\_Domain\_Value\_Definition:* Passerine bird  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* pelagic  
*Enumerated\_Domain\_Value\_Definition:* Pelagic bird  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* plant  
*Enumerated\_Domain\_Value\_Definition:* Plant  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*



*Enumerated\_Domain\_Value*: raptor  
*Enumerated\_Domain\_Value\_Definition*: Raptor  
*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: reef  
*Enumerated\_Domain\_Value\_Definition*: Reef  
*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: sav  
*Enumerated\_Domain\_Value\_Definition*: Submerged aquatic vegetation  
*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: shorebird  
*Enumerated\_Domain\_Value\_Definition*: Shorebird  
*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: shrimp  
*Enumerated\_Domain\_Value\_Definition*: Shrimp  
*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: sm\_mammal  
*Enumerated\_Domain\_Value\_Definition*: Small mammal  
*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: snake  
*Enumerated\_Domain\_Value\_Definition*: Snake  
*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value:* turtle  
*Enumerated\_Domain\_Value\_Definition:* Turtle  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* ungulate  
*Enumerated\_Domain\_Value\_Definition:* Ungulate  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* upland  
*Enumerated\_Domain\_Value\_Definition:* Upland vegetation  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* wading  
*Enumerated\_Domain\_Value\_Definition:* Wading bird  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* waterfowl  
*Enumerated\_Domain\_Value\_Definition:* Waterfowl  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* NHP  
*Attribute\_Definition:* Natural Heritage Program global ranking.  
*Attribute\_Definition\_Source:* Network of Natural Heritage Program  
*Attribute\_Domain\_Values:*

*Codeset\_Domain:*

*Codeset\_Name:* NHP Global Conservation Status Rank  
*Codeset\_Source:* Natural Heritage Program

*Attribute:*

*Attribute\_Label:* DATE\_PUB  
*Attribute\_Definition:* Date of NHP listing.  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM  
*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 0  
*Enumerated\_Domain\_Value\_Definition:* Date unspecified  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links records in the SPECIES data table to records in the BIORES and STATUS data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####  
*Enumerated\_Domain\_Value\_Definition:*  
Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SEASONAL

*Entity\_Type\_Definition:*

The data table SEASONAL contains information on the seasonal presence of each species associated with each spatial vector object. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD  
*Enumerated\_Domain\_Value\_Definition:* Birds  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and plants

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* SEASON\_ID

*Attribute\_Definition:*

Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* JAN

*Attribute\_Definition:* January

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in January

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* FEB

*Attribute\_Definition:* February

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in February

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* MAR

*Attribute\_Definition:* March

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in March  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* APR  
*Attribute\_Definition:* April  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in April  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* MAY  
*Attribute\_Definition:* May  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in May  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* JUN  
*Attribute\_Definition:* June  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in June  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* JUL  
*Attribute\_Definition:* July  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in July  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* AUG  
*Attribute\_Definition:* August  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in August  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SEP  
*Attribute\_Definition:* September  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in September  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* OCT  
*Attribute\_Definition:* October  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in October  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* NOV  
*Attribute\_Definition:* November  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in November  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* DEC  
*Attribute\_Definition:* December

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in December

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the SEASONAL data table to records in the BIORES and BREED data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BREED

*Entity\_Type\_Definition:*

The data table BREED identifies the monthly presence of certain life-history stages or activities for each species at a given location.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BREED data table to records in the BIORES and SEASONAL data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines



*Attribute:*

*Attribute\_Label:* MONTH

*Attribute\_Definition:*

Two-digit calendar month. Each life history stage or activity type for a particular species can have up to 12 records to account for each month of the year.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* 12

*Attribute:*

*Attribute\_Label:* BREED1

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED1 = nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning; if ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M\_MAMMAL" then BREED1 = mating. This attribute is not used for HABITAT or T\_MAMMAL.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* BREED2

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = migrating;

if ELEMENT is "FISH" then BREED2 = eggs; if ELEMENT is "INVERT" then BREED2 = eggs; if ELEMENT is "REPTILE" then BREED2 = hatching; if ELEMENT is "M\_MAMMAL" then BREED2 = calving. This attribute is not used for HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* BREED3

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED3 = molting; if ELEMENT is "FISH" then BREED3 = larvae; if ELEMENT is "INVERT" then BREED3 = larvae; if ELEMENT is "REPTILE" then BREED3 = interesting; if ELEMENT is "M\_MAMMAL" then BREED3 = pupping. This attribute is not used for HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not

reported  
*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: -  
*Enumerated\_Domain\_Value\_Definition*:  
Breed category not used or not appropriate for record(s) in question  
*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute*:

*Attribute\_Label*: BREED4

*Attribute\_Definition*:

Life history stage or activity type, where: if ELEMENT is "FISH" then BREED4 = juveniles; if ELEMENT is "INVERT" then BREED4 = juveniles; if ELEMENT is "REPTILE" then BREED4 = juveniles; if ELEMENT is "M\_MAMMAL" then BREED4 = molting. This attribute is not used for BIRD, HABITAT, or T\_MAMMAL elements.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: Y  
*Enumerated\_Domain\_Value\_Definition*: Life-history stage or activity present  
*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: N  
*Enumerated\_Domain\_Value\_Definition*: Life-history stage or activity not present or not reported  
*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: -  
*Enumerated\_Domain\_Value\_Definition*:  
Breed category not used or not appropriate for record(s) in question  
*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute*:

*Attribute\_Label*: BREED5

*Attribute\_Definition*:

Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 = adults; if ELEMENT is "INVERT" then BREED5 = adults; if ELEMENT is "REPTILE" then BREED5 = adults. This attribute is not used for BIRD, M\_MAMMAL, HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* STATUS

*Entity\_Type\_Definition:*

The data table STATUS identifies the species that are listed as either threatened or endangered by a state, federal, or international authority. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH  
*Enumerated\_Domain\_Value\_Definition:* Fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT  
*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT  
*Enumerated\_Domain\_Value\_Definition:* Invertebrates  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:* Marine Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE  
*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* STATE

*Attribute\_Definition:* Two-letter state abbreviation.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* COUNTRY

*Attribute\_Definition:* Three-letter country abbreviation.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* S

*Attribute\_Definition:* State threatened or endangered status.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

*Enumerated\_Domain\_Value\_Definition:* Endangered on state list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T

*Enumerated\_Domain\_Value\_Definition:* Threatened on state list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* C

*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* F

*Attribute\_Definition:* Federal threatened or endangered status.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

*Enumerated\_Domain\_Value\_Definition:* Endangered on federal list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T

*Enumerated\_Domain\_Value\_Definition:* Threatened on federal list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* C

*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* I

*Attribute\_Definition:* International threatened or endangered status.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

*Enumerated\_Domain\_Value\_Definition:* Endangered on international list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T

*Enumerated\_Domain\_Value\_Definition:* Threatened on international list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* C

*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* S\_DATE

*Attribute\_Definition:*

Publication date of source material used to assign state status values for each species, if used.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* F\_DATE

*Attribute\_Definition:*

Publication date of source material used to assign federal status values for each species, if used.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* I\_DATE

*Attribute\_Definition:*

Publication date of source material used to assign international status values for each species, if used.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links the STATUS data table to the BIORES and SPECIES data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').



*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SOURCES

*Entity\_Type\_Definition:*

The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SOURCE\_ID

*Attribute\_Definition:*

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table; G\_SOURCE and S\_SOURCE in the BIORRES table; and SOURCE\_ID and ESI\_Source in the ESI and HYDRO data layers.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* ORIGINATOR

*Attribute\_Definition:* Author or developer of source material or data set.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* DATE\_PUB

*Attribute\_Definition:*

Date of source material, publication, or date of personal communication with expert source.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* TITLE

*Attribute\_Definition:* Title of source material or data.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines  
*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label*: DATA\_FORMAT  
*Attribute\_Definition*: The format of the source material.  
*Attribute\_Definition\_Source*: NOAA ESI Guidelines  
*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label*: PUB\_PLACE  
*Attribute\_Definition*: Publication place.  
*Attribute\_Definition\_Source*: NOAA ESI Guidelines  
*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label*: PUBLISHER  
*Attribute\_Definition*: Publisher.  
*Attribute\_Definition\_Source*: NOAA ESI Guidelines  
*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label*: PUBLICATION  
*Attribute\_Definition*: Additional citation information.  
*Attribute\_Definition\_Source*: NOAA ESI Guidelines  
*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label*: ONLINE\_LINK  
*Attribute\_Definition*: Online computer resource URL.  
*Attribute\_Definition\_Source*: NOAA ESI Guidelines  
*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label*: SCALE  
*Attribute\_Definition*: Description of the source scale.  
*Attribute\_Definition\_Source*: NOAA ESI Guidelines  
*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* TIME\_PERIOD

*Attribute\_Definition:*

Date(s) of data collection that the source material is based upon.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

---

*Distribution\_Information:*

*Distributor:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:* John Kaperick

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Address:*

*Address\_Type:* Physical Address

*Address:* 7600 Sand Point Way N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6400

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Resource\_Description:* Downloadable Data

*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.

*Custom\_Order\_Process:*

Contact NOAA for distribution options (see Distributor). 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 distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

---

*Metadata\_Reference\_Information:*

*Metadata\_Date:* 201304

*Metadata\_Review\_Date:* 201304

*Metadata\_Contact:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:* Jill Petersen

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Position:* GIS Manager

*Contact\_Address:*

*Address\_Type:* Physical Address

*Address:* 7600 Sand Point Way, N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6944

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

*Metadata\_Standard\_Name:* Content Standards for Digital Geospatial Metadata

*Metadata\_Standard\_Version:* FGDC-STD-001-1998

# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: South Florida: ESIL (Environmental Sensitivity Index Shoreline Types - Lines)

Metadata also available as - [[Parseable text](#)] - [[SGML](#)] - [[XML](#)]

## Metadata:

- [Identification Information](#)
  - [Data Quality Information](#)
  - [Spatial Data Organization Information](#)
  - [Spatial Reference Information](#)
  - [Entity and Attribute Information](#)
  - [Distribution Information](#)
  - [Metadata Reference Information](#)
- 

### *Identification\_Information:*

#### *Citation:*

#### *Citation\_Information:*

#### *Originator:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington.

*Publication\_Date:* 201304

#### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: South Florida: ESIL (Environmental Sensitivity Index Shoreline Types - Lines)

*Edition:* Second

*Geospatial\_Data\_Presentation\_Form:* vector digital data

#### *Series\_Information:*

*Series\_Name:* South Florida

*Issue\_Identification:* South Florida

#### *Publication\_Information:*

*Publication\_Place:* Seattle, Washington

#### *Publisher:*

NOAA's Ocean Service, Office of Response and Restoration (OR&R), Emergency Response Division (ERD).

#### *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, Emergency Response Division, Seattle, Washington.

Online\_Linkage: <<http://response.restoration.noaa.gov/esi>>

*Description:*

*Abstract:*

This data set contains vector lines and polygons representing the shoreline and coastal habitats of South Florida classified according to the Environmental Sensitivity Index (ESI) classification system. This data set comprises a portion of the ESI data for South Florida. ESI data characterize the marine and 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. See also the ESIP and HYDRO data layers, part of the larger South Florida ESI database, for additional ESI information.

*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.

*Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1999

*Ending\_Date:* 2011

*Currentness\_Reference:*

The data were compiled during 2011-2013. The currentness dates for this data range from 1999 to 2011 and are documented in the Lineage section.

*Status:*

*Progress:* Complete

*Maintenance\_and\_Update\_Frequency:* None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -82.93300

*East\_Bounding\_Coordinate:* -80.00000

*North\_Bounding\_Coordinate:* 26.37500

*South\_Bounding\_Coordinate:* 24.50000

*Keywords:*

*Theme:*

*Theme\_Keyword\_Thesaurus:* ISO 19115 Topic Category

*Theme\_Keyword:* biota

*Theme\_Keyword:* environment

*Theme:*

*Theme\_Keyword\_Thesaurus:* None

*Theme\_Keyword:* Environmental Monitoring

*Theme\_Keyword:* ESI  
*Theme\_Keyword:* Sensitivity maps  
*Theme\_Keyword:* Coastal resources  
*Theme\_Keyword:* Oil spill planning  
*Theme\_Keyword:* Coastal Zone Management  
*Theme\_Keyword:* Wildlife

*Place:*

*Place\_Keyword\_Thesaurus:* None  
*Place\_Keyword:* South Florida

*Access\_Constraints:* None

*Use\_Constraints:*

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* datafig.jpg

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and attribute data tables for the South Florida ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* datafig2.jpg

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and desktop data tables for the South Florida ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington, the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness Washington, D.C. and the Fish and Wildlife Research Institute (FWRI), Florida Fish and Wildlife Conservation Commission (FWC), St. Petersburg, Florida.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 10.0) and SQL SERVER(R) (version 2005). The hardware configuration is PC's with Windows Operating System 7.

The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in the data set: benthic.e00, birds.e00, esil.e00, esip.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, mgt\_fish.e00, nests.e00, reptiles.e00, socecon.e00, and t\_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio\_lut.e00, biofile.e00, biores.e00, breed.e00, seasonal.e00, soc\_dat.e00,

*Data\_Quality\_Information:*

*Attribute\_Accuracy:*

*Attribute\_Accuracy\_Report:*

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

*Logical\_Consistency\_Report:*

A multi-stage error checking process, described in the above Attribute\_Accuracy\_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary node, etc.), and SQL SERVER(R) to ARC/INFO(R) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks.

*Completeness\_Report:*

These data represent coastal shorelines and habitats classified according to the Environmental Sensitivity Index (ESI) classification system. See also the ESIP and HYDRO data layers, part of the larger South Florida ESI database, for additional ESI information.

*Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy\_Report:*

The spatial location of the ESI shoreline was developed from pre-existing digital sources and reflects the positional accuracy of these original data. The horizontal positional accuracy of the 1:24,000 USGS topographic quads should conform to National Map Accuracy Standards at scales of 1:24,000. The minimum mapping unit (MMU) of the actual shoreline classification segments is estimated at 50 meters where mapping is conducted using 1:24,000 hardcopy fieldmaps. Field verification has shown that the absolute positional accuracy of breaks between shoreline ESI types with a 95-percent error bound is approximately 58 meters. See the Lineage and Process\_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION  
(FWC)

*Publication\_Date:* 2011

*Title:* SOUTH FLORIDA SHORELINE LANDWATER



*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA  
*Publication\_Information:*

*Publication\_Place:* ST. PETERSBURG, FL

*Publisher:*

FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI), FLORIDA FISH  
AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Other\_Citation\_Details:*

COMPILED FROM: LAND USE LAND COVER SOUTH FLORIDA WATER  
MANAGEMENT DISTRICT 2004-2005; BENTHIC HABITATS FLORIDA BAY  
2004; TORTUGAS BENTHIC 2008; SHORELINE 1:12,000 SCALE FLORIDA  
2004.

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 2004

*Ending\_Date:* 2008

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* ESIL INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

MARINE RESOURCE GEOGRAPHIC INFORMATION SYSTEM, FLORIDA  
FISH AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Publication\_Date:* 2011

*Title:* FWC\_IMAGERY\_WEB

*Geospatial\_Data\_Presentation\_Form:* RASTER DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* ST. PETERSBURG, FL

*Publisher:*

FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI), FLORIDA FISH  
AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Other\_Citation\_Details:*

THIS DATA SET IS COMPRISED OF A VARIETY OF DATES OF IMAGERY.  
THE PRIMARY DATA SET USED WAS THE 2004 DOQQS.

*Online\_Linkage:*

[http://atoll.floridamarine.org/ArcGIS/rest/services/FWC\\_Imagery\\_Web/MapServer](http://atoll.floridamarine.org/ArcGIS/rest/services/FWC_Imagery_Web/MapServer)

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2011

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* ESIL INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* PICTOMERTY INTERNATIONAL CORP.

*Publication\_Date:* 2011

*Title:* OBLIQUE AERIAL PHOTOGRAPHY

*Geospatial\_Data\_Presentation\_Form:* REMOTE-SENSING IMAGE

*Publication\_Information:*

*Publication\_Place:* ROCHESTER, NY

*Publisher:* PICTOMETRY INTERNATIONAL CORP.

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2010

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* ESIL INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* RESEARCH PLANNING, INC. (RPI)

*Publication\_Date:* 2010

*Title:* OVERFLIGHT OBLIQUE PHOTOGRAPHS

*Geospatial\_Data\_Presentation\_Form:* REMOTE-SENSING IMAGE

*Other\_Citation\_Details:* UNPUBLISHED

*Online\_Linkage:* <<http://esionline.researchplanning.com>>

*Type\_of\_Source\_Media:* DIGITAL PHOTOGRAPH

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2010

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* ESIL INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* RESEARCH PLANNING, INC. (RPI)

*Publication\_Date:* 2011

*Title:* STUDY AREA BOUNDARY

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Other\_Citation\_Details:* UNPUBLISHED

*Source\_Scale\_Denominator:* 24000

*Type\_of\_Source\_Media:* DIGITAL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2011

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* ESIL INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD)

*Publication\_Date:* 1999

*Title:* LAND COVER/ LAND USE 1999 MAPPING PROJECT

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* WEST PALM BEACH, FL

*Publisher:* SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD)

*Online\_Linkage:* <<http://my.sfwmd.gov/gisapps/sfwmdxwebdc/dataview.asp?>>

*Source\_Scale\_Denominator:* 40000

*Type\_of\_Source\_Media:* DIGITAL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 1999

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* ESIL INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD)

*Publication\_Date:* 2005

*Title:*

SOUTH FLORIDA WATER MANAGEMENT DISTRICT LAND USE AND COVER 2004-05

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* WEST PALM BEACH, FL

*Publisher:* SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD)

*Online\_Linkage:* <<http://www.sfwmd.gov>>

*Source\_Scale\_Denominator:* 12000

*Type\_of\_Source\_Media:* DIGITAL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 2004

*Ending\_Date:* 2005

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* ESIL INFORMATION

*Process\_Step:*

*Process\_Description:*

Original ESI maps published in 1996 were re-examined and fully updated using the sources and methods described below. The intertidal shoreline habitats of South Florida were mapped and classified via interpretation of a continuous, overlapping set of georeferenced aerial photographs covering the entire study area. These aerial photographs were obtained via a geographic web server from the Marine Resource Geographic Information System and the Florida Fish and Wildlife Commission (FWC). Also used for classification was a continuous, overlapping set of

georeferenced oblique aerial photographs acquired for Monroe and Miami-Dade counties in 2010 during overflights conducted by Research Planning, Inc. (RPI) at elevations of 400-600 feet and slow air speed. All flights were planned to maximize time on site during the 2.5 hours preceding and the 2.5 hours following peak low tide. An additional imagery source for a continuous, overlapping set of georeferenced oblique aerial photographs in Broward County was Pictometry International Corp. of Rochester, New York. Where appropriate, revisions to the existing shoreline were made and, where necessary, multiple habitats were described for each shoreline segment. See the hydro metadata for additional source information for the vector lines attributed with the ESI.

The above digital and/or hardcopy sources were compiled to create the ESI data layer. Depending on the type of source data, three general approaches are used for compiling the data layer: 1) hardcopy maps are digitized at their source scale; 2) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources; and 3) overflight changes are digitized from the scanned and registered hardcopy field maps or aerial photography. After the initial shoreline classification, these data are edgematched and checked for logical consistency errors. Review maps are plotted at 1:24,000 scale for verification of polygonal and linear attributes. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the ESI data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:* 201304

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Person:* Jill Petersen

*Contact\_Address:*

*Address\_Type:* Physical address

*Address:* 7600 Sand Point Way, N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6944

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

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*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:* Vector

*Point\_and\_Vector\_Object\_Information:*

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* GT-polygon composed of chains

*Point\_and\_Vector\_Object\_Count:* 1

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type*: Area point  
*Point\_and\_Vector\_Object\_Count*: 1

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: Complete chain  
*Point\_and\_Vector\_Object\_Count*: 19209

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: Link  
*Point\_and\_Vector\_Object\_Count*: 1166302

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: Node, planar graph  
*Point\_and\_Vector\_Object\_Count*: 17036

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*Spatial\_Reference\_Information*:

*Horizontal\_Coordinate\_System\_Definition*:

*Geographic*:

*Latitude\_Resolution*: 0.0000001  
*Longitude\_Resolution*: 0.0000001  
*Geographic\_Coordinate\_Units*: Decimal degrees

*Geodetic\_Model*:

*Horizontal\_Datum\_Name*: North American Datum of 1983  
*Ellipsoid\_Name*: Geodetic Reference System 80  
*Semi-major\_Axis*: 6378137.000000  
*Denominator\_of\_Flattening\_Ratio*: 298.257222

---

*Entity\_and\_Attribute\_Information*:

*Overview\_Description*:

*Entity\_and\_Attribute\_Overview*:

In addition to the geographic data layers, one relational attribute or data table, SOURCES, is used to store the source data information in the ESI data structure. The geographic data layer containing resource information (in this case, ESI) is linked to the SOURCES table using the SOURCE\_ID. The entity-relationship diagram describes relationships between attribute tables in the ESI data structure.

*Entity\_and\_Attribute\_Detail\_Citation*:

A complete description of entity types, attributes, and attribute values for ESI atlases can be found in the NOAA ESI Guidelines ([http://response.restoration.noaa.gov/esi\\_guidelines](http://response.restoration.noaa.gov/esi_guidelines)).

*Detailed\_Description*:

*Entity\_Type*:

*Entity\_Type\_Label*: ESI.AAT  
*Entity\_Type\_Definition*:

The ESI.AAT table contains attribute information for the vector lines representing linear shoreline features with ESI classification.

*Entity\_Type\_Definition\_Source*: NOAA ESI Guidelines

*Attribute*:

*Attribute\_Label*: ESI

*Attribute\_Definition*:

The item ESI contains values representing the ESI shoreline type. In many cases shorelines are ranked with multiple codes, such as "6B/3A" (listed landward to seaward from left to right). The first code, "6B", is the most landward shoreline type and the second code, "3A", is the shoreline type closest to the water. Singular shoreline types are listed below. No multiple codes are listed, but all multiple codes included in the data set can be assembled from the codes described. The ESI rankings progress from low to high susceptibility to oil spills. To determine the sensitivity of a particular intertidal shoreline habitat, the following factors are integrated: 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. Prediction of the behavior and persistence of oil in intertidal habitats is based on an understanding of the dynamics of the coastal environments, not just the substrate type and grain size. 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. The potential for biological injury, and ease of cleanup of spilled oil are also important factors in the ESI ranking. 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.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: 1A

*Enumerated\_Domain\_Value\_Definition*: Exposed Rocky Shores

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: 1B

*Enumerated\_Domain\_Value\_Definition*: Exposed, Solid Man-made Structures

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: 2A

*Enumerated\_Domain\_Value\_Definition*: Exposed Wave-cut Platforms in Bedrock, Mud, or Clay

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value: 2B*

*Enumerated\_Domain\_Value\_Definition: Exposed Scarps and Steep Slopes in Clay*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: 3A*

*Enumerated\_Domain\_Value\_Definition: Fine- to Medium-grained Sand Beaches*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: 3B*

*Enumerated\_Domain\_Value\_Definition: Scarps and Steep Slopes in Sand*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: 4*

*Enumerated\_Domain\_Value\_Definition: Coarse-grained Sand Beaches*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: 5*

*Enumerated\_Domain\_Value\_Definition: Mixed Sand and Gravel Beaches*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: 6B*

*Enumerated\_Domain\_Value\_Definition: Riprap*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: 7*

*Enumerated\_Domain\_Value\_Definition: Exposed Tidal Flats*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: 8A*



*Enumerated\_Domain\_Value\_Definition:*

Sheltered Rocky Shores and Sheltered Scarps in Bedrock, Mud, or Clay

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 8B

*Enumerated\_Domain\_Value\_Definition:* Sheltered, Solid Man-made Structures

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 8C

*Enumerated\_Domain\_Value\_Definition:* Sheltered Riprap

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 9A

*Enumerated\_Domain\_Value\_Definition:* Sheltered Tidal Flats

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 9B

*Enumerated\_Domain\_Value\_Definition:* Vegetated Low Banks

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 9C

*Enumerated\_Domain\_Value\_Definition:* Hypersaline Tidal Flats

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 10A

*Enumerated\_Domain\_Value\_Definition:* Salt- and Brackish-water Marshes

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 10B

*Enumerated\_Domain\_Value\_Definition:* Freshwater Marshes  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 10C  
*Enumerated\_Domain\_Value\_Definition:* Swamps  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 10D  
*Enumerated\_Domain\_Value\_Definition:* Scrub-shrub Wetlands  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* U  
*Enumerated\_Domain\_Value\_Definition:* Unranked  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* LINE  
*Attribute\_Definition:* Type of geographic feature.  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E  
*Enumerated\_Domain\_Value\_Definition:* Extent of Digital Data  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* F  
*Enumerated\_Domain\_Value\_Definition:* Flat  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* H  
*Enumerated\_Domain\_Value\_Definition:* Hydrography  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M

*Enumerated\_Domain\_Value\_Definition:* Marsh

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* S

*Enumerated\_Domain\_Value\_Definition:* Shoreline

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SOURCE\_ID

*Attribute\_Definition:*

Source identifier that links to the SOURCES data table. This id indicates the source of a vector line segment.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* ENVIR

*Attribute\_Definition:* Type of regional environment.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

*Enumerated\_Domain\_Value\_Definition:* Estuarine

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* U

*Enumerated\_Domain\_Value\_Definition:* Unclassified

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* ESI\_SOURCE

*Attribute\_Definition:*

Source identifier that links to the SOURCES data table. This id indicates the source of the ESI classification of a line segment. Vector features that were not surveyed or do not qualify for an ESI classification have a value of -1.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1

*Range\_Domain\_Maximum*: N

*Detailed\_Description*:

*Entity\_Type*:

*Entity\_Type\_Label*: ESI.PAT

*Entity\_Type\_Definition*:

The ESI.PAT table contains attribute information for the vector polygons representing polygonal features with ESI classification.

*Entity\_Type\_Definition\_Source*: NOAA ESI Guidelines

*Attribute*:

*Attribute\_Label*: ESI

*Attribute\_Definition*: The item ESI contains values representing the ESI polygon type.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: 7

*Enumerated\_Domain\_Value\_Definition*: Exposed Tidal Flats

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: 9A

*Enumerated\_Domain\_Value\_Definition*: Sheltered Tidal Flats

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: 9C

*Enumerated\_Domain\_Value\_Definition*: Hypersaline Tidal Flats

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: 10A

*Enumerated\_Domain\_Value\_Definition*: Salt- and Brackish-water Marshes

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 10B

*Enumerated\_Domain\_Value\_Definition:* Freshwater Marshes

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 10C

*Enumerated\_Domain\_Value\_Definition:* Swamps

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 10D

*Enumerated\_Domain\_Value\_Definition:* Scrub-shrub Wetlands

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* U

*Enumerated\_Domain\_Value\_Definition:* Unranked

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* WATER\_CODE

*Attribute\_Definition:* Specifies a polygon as either water or land.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* L

*Enumerated\_Domain\_Value\_Definition:* Land

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* W

*Enumerated\_Domain\_Value\_Definition:* Water

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* ENVIR

*Attribute\_Definition:* Type of regional environment.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

*Enumerated\_Domain\_Value\_Definition:* Estuarine

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* U

*Enumerated\_Domain\_Value\_Definition:* Unclassified

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* ESI\_SOURCE

*Attribute\_Definition:*

Source identifier that links to the SOURCES data table. This id indicates the source of the ESI classification of a polygon. Vector features that were not surveyed or do not qualify for an ESI classification have a value of -1.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SOURCES

*Entity\_Type\_Definition:*

The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SOURCE\_ID

*Attribute\_Definition:*

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table; G\_SOURCE and S\_SOURCE in the BIORES table; and SOURCE\_ID and ESI\_Source in the ESI and HYDRO data layers.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* ORIGINATOR

*Attribute\_Definition:* Author or developer of source material or data set.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* DATE\_PUB

*Attribute\_Definition:*

Date of source material, publication, or date of personal communication with expert source.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* TITLE

*Attribute\_Definition:* Title of source material or data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* DATA\_FORMAT

*Attribute\_Definition:* The format of the source material.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUB\_PLACE

*Attribute\_Definition:* Publication place.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUBLISHER

*Attribute\_Definition:* Publisher.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUBLICATION

*Attribute\_Definition:* Additional citation information.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* ONLINE\_LINK

*Attribute\_Definition:* Online computer resource URL.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* SCALE

*Attribute\_Definition:* Description of the source scale.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* TIME\_PERIOD

*Attribute\_Definition:*

Date(s) of data collection that the source material is based upon.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

---

*Distribution\_Information:*

*Distributor:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:* John Kaperick

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Address:*

*Address\_Type:* Physical Address

*Address:* 7600 Sand Point Way N.E.

*City:* Seattle



*State\_or\_Province:* Washington  
*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6400  
*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Resource\_Description:* Downloadable Data

*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.

*Custom\_Order\_Process:*

Contact NOAA for distribution options (see Distributor). 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 distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

---

*Metadata\_Reference\_Information:*

*Metadata\_Date:* 201304  
*Metadata\_Review\_Date:* 201304  
*Metadata\_Contact:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:* Jill Petersen  
*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Position:* GIS Manager  
*Contact\_Address:*

*Address\_Type:* Physical Address  
*Address:* 7600 Sand Point Way, N.E.  
*City:* Seattle  
*State\_or\_Province:* Washington  
*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6944  
*Contact\_Facsimile\_Telephone:* (206) 526-6329  
*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

*Metadata\_Standard\_Name:* Content Standards for Digital Geospatial Metadata  
*Metadata\_Standard\_Version:* FGDC-STD-001-1998

# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: South Florida: ESIP (Environmental Sensitivity Index Shoreline Types - Polys)

Metadata also available as - [[Parseable text](#)] - [[SGML](#)] - [[XML](#)]

## Metadata:

- [Identification Information](#)
  - [Data Quality Information](#)
  - [Spatial Data Organization Information](#)
  - [Spatial Reference Information](#)
  - [Entity and Attribute Information](#)
  - [Distribution Information](#)
  - [Metadata Reference Information](#)
- 

### *Identification\_Information:*

#### *Citation:*

#### *Citation\_Information:*

#### *Originator:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington.

*Publication\_Date:* 201304

#### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: South Florida: ESIP (Environmental Sensitivity Index Shoreline Types - Polys)

*Edition:* Second

*Geospatial\_Data\_Presentation\_Form:* vector digital data

#### *Series\_Information:*

*Series\_Name:* South Florida

*Issue\_Identification:* South Florida

#### *Publication\_Information:*

*Publication\_Place:* Seattle, Washington

#### *Publisher:*

NOAA's Ocean Service, Office of Response and Restoration (OR&R), Emergency Response Division (ERD).

#### *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, Emergency Response Division, Seattle, Washington.

Online\_Linkage: <<http://response.restoration.noaa.gov/esi>>

*Description:*

*Abstract:*

This data set contains vector lines and polygons representing the shoreline and coastal habitats of South Florida classified according to the Environmental Sensitivity Index (ESI) classification system. This data set comprises a portion of the ESI data for South Florida. ESI data characterize the marine and 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. See also the ESIL and HYDRO data layers, part of the larger South Florida ESI database, for additional ESI information.

*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.

*Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1999

*Ending\_Date:* 2011

*Currentness\_Reference:*

The data were compiled during 2011-2013. The currentness dates for this data range from 1999 to 2011 and are documented in the Lineage section.

*Status:*

*Progress:* Complete

*Maintenance\_and\_Update\_Frequency:* None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -82.93300

*East\_Bounding\_Coordinate:* -80.00000

*North\_Bounding\_Coordinate:* 26.37500

*South\_Bounding\_Coordinate:* 24.50000

*Keywords:*

*Theme:*

*Theme\_Keyword\_Thesaurus:* ISO 19115 Topic Category

*Theme\_Keyword:* biota

*Theme\_Keyword:* environment

*Theme:*

*Theme\_Keyword\_Thesaurus:* None

*Theme\_Keyword:* Environmental Monitoring

*Theme\_Keyword:* ESI  
*Theme\_Keyword:* Sensitivity maps  
*Theme\_Keyword:* Coastal resources  
*Theme\_Keyword:* Oil spill planning  
*Theme\_Keyword:* Coastal Zone Management  
*Theme\_Keyword:* Wildlife

*Place:*

*Place\_Keyword\_Thesaurus:* None  
*Place\_Keyword:* South Florida

*Access\_Constraints:* None

*Use\_Constraints:*

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* datafig.jpg

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and attribute data tables for the South Florida ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* datafig2.jpg

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and desktop data tables for the South Florida ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington, the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness Washington, D.C. and the Fish and Wildlife Research Institute (FWRI), Florida Fish and Wildlife Conservation Commission (FWC), St. Petersburg, Florida.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 10.0) and SQL SERVER(R) (version 2005). The hardware configuration is PC's with Windows Operating System 7.

The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in the data set: benthic.e00, birds.e00, esil.e00, esip.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, mgt\_fish.e00, nests.e00, reptiles.e00, socecon.e00, and t\_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio\_lut.e00, biofile.e00, biores.e00, breed.e00, seasonal.e00, soc\_dat.e00,

*Data\_Quality\_Information:*

*Attribute\_Accuracy:*

*Attribute\_Accuracy\_Report:*

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

*Logical\_Consistency\_Report:*

A multi-stage error checking process, described in the above Attribute\_Accuracy\_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary node, etc.), and SQL SERVER(R) to ARC/INFO(R) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks.

*Completeness\_Report:*

These data represent coastal shorelines and habitats classified according to the Environmental Sensitivity Index (ESI) classification system. See also the ESIL and HYDRO data layers, part of the larger South Florida ESI database, for additional ESI information.

*Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy\_Report:*

The spatial location of the ESI shoreline was developed from pre-existing digital sources and reflects the positional accuracy of these original data. The horizontal positional accuracy of the 1:24,000 USGS topographic quads should conform to National Map Accuracy Standards at scales of 1:24,000. The minimum mapping unit (MMU) of the actual shoreline classification segments is estimated at 50 meters where mapping is conducted using 1:24,000 hardcopy fieldmaps. Field verification has shown that the absolute positional accuracy of breaks between shoreline ESI types with a 95-percent error bound is approximately 58 meters. See the Lineage and Process\_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION  
(FWC)

*Publication\_Date:* 2011

*Title:* SOUTH FLORIDA SHORELINE LANDWATER

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA  
*Publication\_Information:*

*Publication\_Place:* ST. PETERSBURG, FL

*Publisher:*

FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI), FLORIDA FISH  
AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Other\_Citation\_Details:*

COMPILED FROM: LAND USE LAND COVER SOUTH FLORIDA WATER  
MANAGEMENT DISTRICT 2004-2005; BENTHIC HABITATS FLORIDA BAY  
2004; TORTUGAS BENTHIC 2008; SHORELINE 1:12,000 SCALE FLORIDA  
2004.

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 2004

*Ending\_Date:* 2008

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* ESIP INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

MARINE RESOURCE GEOGRAPHIC INFORMATION SYSTEM, FLORIDA  
FISH AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Publication\_Date:* 2011

*Title:* FWC\_IMAGERY\_WEB

*Geospatial\_Data\_Presentation\_Form:* RASTER DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* ST. PETERSBURG, FL

*Publisher:*

FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI), FLORIDA FISH  
AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Other\_Citation\_Details:*

THIS DATA SET IS COMPRISED OF A VARIETY OF DATES OF IMAGERY.  
THE PRIMARY DATA SET USED WAS THE 2004 DOQQS.

*Online\_Linkage:*

[http://atoll.floridamarine.org/ArcGIS/rest/services/FWC\\_Imagery\\_Web/MapServer](http://atoll.floridamarine.org/ArcGIS/rest/services/FWC_Imagery_Web/MapServer)

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2011

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* ESIP INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* PICTOMERTY INTERNATIONAL CORP.

*Publication\_Date:* 2011

*Title:* OBLIQUE AERIAL PHOTOGRAPHY

*Geospatial\_Data\_Presentation\_Form:* REMOTE-SENSING IMAGE

*Publication\_Information:*

*Publication\_Place:* ROCHESTER, NY

*Publisher:* PICTOMETRY INTERNATIONAL CORP.

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2010

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* ESIP INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* RESEARCH PLANNING, INC. (RPI)

*Publication\_Date:* 2010

*Title:* OVERFLIGHT OBLIQUE PHOTOGRAPHS

*Geospatial\_Data\_Presentation\_Form:* REMOTE-SENSING IMAGE

*Other\_Citation\_Details:* UNPUBLISHED

*Online\_Linkage:* <<http://esionline.researchplanning.com>>

*Type\_of\_Source\_Media:* DIGITAL PHOTOGRAPH

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2010

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* ESIP INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* RESEARCH PLANNING, INC. (RPI)

*Publication\_Date:* 2011

*Title:* STUDY AREA BOUNDARY

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Other\_Citation\_Details:* UNPUBLISHED

*Source\_Scale\_Denominator:* 24000

*Type\_of\_Source\_Media:* DIGITAL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2011

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* ESIP INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD)

*Publication\_Date:* 1999

*Title:* LAND COVER/ LAND USE 1999 MAPPING PROJECT

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* WEST PALM BEACH, FL

*Publisher:* SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD)

*Online\_Linkage:* <<http://my.sfwmd.gov/gisapps/sfwmdxwebdc/dataview.asp?>>

*Source\_Scale\_Denominator:* 40000

*Type\_of\_Source\_Media:* DIGITAL



*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 1999

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* ESIP INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD)

*Publication\_Date:* 2005

*Title:*

SOUTH FLORIDA WATER MANAGEMENT DISTRICT LAND USE AND  
COVER 2004-05

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* WEST PALM BEACH, FL

*Publisher:* SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD)

*Online\_Linkage:* <<http://www.sfwmd.gov>>

*Source\_Scale\_Denominator:* 12000

*Type\_of\_Source\_Media:* DIGITAL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 2004

*Ending\_Date:* 2005

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* ESIP INFORMATION

*Process\_Step:*

*Process\_Description:*

Original ESI maps published in 1996 were re-examined and fully updated using the sources and methods described below. The intertidal shoreline habitats of South Florida were mapped and classified via interpretation of a continuous, overlapping set of georeferenced aerial photographs covering the entire study area. These aerial photographs were obtained via a geographic web server from the Marine Resource Geographic Information System and the Florida Fish and Wildlife Commission (FWC). Also used for classification was a continuous, overlapping set of

georeferenced oblique aerial photographs acquired for Monroe and Miami-Dade counties in 2010 during overflights conducted by Research Planning, Inc. (RPI) at elevations of 400-600 feet and slow air speed. All flights were planned to maximize time on site during the 2.5 hours preceding and the 2.5 hours following peak low tide. An additional imagery source for a continuous, overlapping set of georeferenced oblique aerial photographs in Broward County was Pictometry International Corp. of Rochester, New York. Where appropriate, revisions to the existing shoreline were made and, where necessary, multiple habitats were described for each shoreline segment. See the hydro metadata for additional source information for the vector lines attributed with the ESI.

The above digital and/or hardcopy sources were compiled to create the ESI data layer. Depending on the type of source data, three general approaches are used for compiling the data layer: 1) hardcopy maps are digitized at their source scale; 2) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources; and 3) overflight changes are digitized from the scanned and registered hardcopy field maps or aerial photography. After the initial shoreline classification, these data are edgematched and checked for logical consistency errors. Review maps are plotted at 1:24,000 scale for verification of polygonal and linear attributes. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the ESI data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:* 201304

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Person:* Jill Petersen

*Contact\_Address:*

*Address\_Type:* Physical address

*Address:* 7600 Sand Point Way, N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6944

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

---

*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:* Vector

*Point\_and\_Vector\_Object\_Information:*

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* GT-polygon composed of chains

*Point\_and\_Vector\_Object\_Count:* 8898

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type*: Area point  
*Point\_and\_Vector\_Object\_Count*: 8897

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: Complete chain  
*Point\_and\_Vector\_Object\_Count*: 22284

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: Link  
*Point\_and\_Vector\_Object\_Count*: 1166288

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: Node, planar graph  
*Point\_and\_Vector\_Object\_Count*: 20114

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*Spatial\_Reference\_Information*:

*Horizontal\_Coordinate\_System\_Definition*:

*Geographic*:

*Latitude\_Resolution*: 0.0000001  
*Longitude\_Resolution*: 0.0000001  
*Geographic\_Coordinate\_Units*: Decimal degrees

*Geodetic\_Model*:

*Horizontal\_Datum\_Name*: North American Datum of 1983  
*Ellipsoid\_Name*: Geodetic Reference System 80  
*Semi-major\_Axis*: 6378137.000000  
*Denominator\_of\_Flattening\_Ratio*: 298.257222

---

*Entity\_and\_Attribute\_Information*:

*Overview\_Description*:

*Entity\_and\_Attribute\_Overview*:

In addition to the geographic data layers, one relational attribute or data table, SOURCES, is used to store the source data information in the ESI data structure. The geographic data layer containing resource information (in this case, ESI) is linked to the SOURCES table using the SOURCE\_ID. The entity-relationship diagram describes relationships between attribute tables in the ESI data structure.

*Entity\_and\_Attribute\_Detail\_Citation*:

A complete description of entity types, attributes, and attribute values for ESI atlases can be found in the NOAA ESI Guidelines ([http://response.restoration.noaa.gov/esi\\_guidelines](http://response.restoration.noaa.gov/esi_guidelines)).

*Detailed\_Description*:

*Entity\_Type*:

*Entity\_Type\_Label*: ESI.AAT  
*Entity\_Type\_Definition*:

The ESI.AAT table contains attribute information for the vector lines representing linear shoreline features with ESI classification.

*Entity\_Type\_Definition\_Source*: NOAA ESI Guidelines

*Attribute*:

*Attribute\_Label*: ESI

*Attribute\_Definition*:

The item ESI contains values representing the ESI shoreline type. In many cases shorelines are ranked with multiple codes, such as "6B/3A" (listed landward to seaward from left to right). The first code, "6B", is the most landward shoreline type and the second code, "3A", is the shoreline type closest to the water. Singular shoreline types are listed below. No multiple codes are listed, but all multiple codes included in the data set can be assembled from the codes described. The ESI rankings progress from low to high susceptibility to oil spills. To determine the sensitivity of a particular intertidal shoreline habitat, the following factors are integrated: 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. Prediction of the behavior and persistence of oil in intertidal habitats is based on an understanding of the dynamics of the coastal environments, not just the substrate type and grain size. 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. The potential for biological injury, and ease of cleanup of spilled oil are also important factors in the ESI ranking. 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.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: 1A

*Enumerated\_Domain\_Value\_Definition*: Exposed Rocky Shores

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: 1B

*Enumerated\_Domain\_Value\_Definition*: Exposed, Solid Man-made Structures

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: 2A

*Enumerated\_Domain\_Value\_Definition*: Exposed Wave-cut Platforms in Bedrock, Mud, or Clay

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value: 2B*

*Enumerated\_Domain\_Value\_Definition: Exposed Scarps and Steep Slopes in Clay*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: 3A*

*Enumerated\_Domain\_Value\_Definition: Fine- to Medium-grained Sand Beaches*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: 3B*

*Enumerated\_Domain\_Value\_Definition: Scarps and Steep Slopes in Sand*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: 4*

*Enumerated\_Domain\_Value\_Definition: Coarse-grained Sand Beaches*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: 5*

*Enumerated\_Domain\_Value\_Definition: Mixed Sand and Gravel Beaches*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: 6B*

*Enumerated\_Domain\_Value\_Definition: Riprap*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: 7*

*Enumerated\_Domain\_Value\_Definition: Exposed Tidal Flats*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: 8A*

*Enumerated\_Domain\_Value\_Definition:*

Sheltered Rocky Shores and Sheltered Scarps in Bedrock, Mud, or Clay

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 8B

*Enumerated\_Domain\_Value\_Definition:* Sheltered, Solid Man-made Structures

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 8C

*Enumerated\_Domain\_Value\_Definition:* Sheltered Riprap

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 9A

*Enumerated\_Domain\_Value\_Definition:* Sheltered Tidal Flats

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 9B

*Enumerated\_Domain\_Value\_Definition:* Vegetated Low Banks

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 9C

*Enumerated\_Domain\_Value\_Definition:* Hypersaline Tidal Flats

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 10A

*Enumerated\_Domain\_Value\_Definition:* Salt- and Brackish-water Marshes

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 10B

*Enumerated\_Domain\_Value\_Definition:* Freshwater Marshes  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 10C  
*Enumerated\_Domain\_Value\_Definition:* Swamps  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 10D  
*Enumerated\_Domain\_Value\_Definition:* Scrub-shrub Wetlands  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* U  
*Enumerated\_Domain\_Value\_Definition:* Unranked  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* LINE  
*Attribute\_Definition:* Type of geographic feature.  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E  
*Enumerated\_Domain\_Value\_Definition:* Extent of Digital Data  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* F  
*Enumerated\_Domain\_Value\_Definition:* Flat  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* H  
*Enumerated\_Domain\_Value\_Definition:* Hydrography  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M

*Enumerated\_Domain\_Value\_Definition:* Marsh

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* S

*Enumerated\_Domain\_Value\_Definition:* Shoreline

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SOURCE\_ID

*Attribute\_Definition:*

Source identifier that links to the SOURCES data table. This id indicates the source of a vector line segment.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* ENVIR

*Attribute\_Definition:* Type of regional environment.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

*Enumerated\_Domain\_Value\_Definition:* Estuarine

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* U

*Enumerated\_Domain\_Value\_Definition:* Unclassified

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* ESI\_SOURCE

*Attribute\_Definition:*

Source identifier that links to the SOURCES data table. This id indicates the source of the ESI classification of a line segment. Vector features that were not surveyed or do not qualify for an ESI classification have a value of -1.



*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1

*Range\_Domain\_Maximum*: N

*Detailed\_Description*:

*Entity\_Type*:

*Entity\_Type\_Label*: ESI.PAT

*Entity\_Type\_Definition*:

The ESI.PAT table contains attribute information for the vector polygons representing polygonal features with ESI classification.

*Entity\_Type\_Definition\_Source*: NOAA ESI Guidelines

*Attribute*:

*Attribute\_Label*: ESI

*Attribute\_Definition*: The item ESI contains values representing the ESI polygon type.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: 7

*Enumerated\_Domain\_Value\_Definition*: Exposed Tidal Flats

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: 9A

*Enumerated\_Domain\_Value\_Definition*: Sheltered Tidal Flats

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: 9C

*Enumerated\_Domain\_Value\_Definition*: Hypersaline Tidal Flats

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: 10A

*Enumerated\_Domain\_Value\_Definition*: Salt- and Brackish-water Marshes

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 10B

*Enumerated\_Domain\_Value\_Definition:* Freshwater Marshes

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 10C

*Enumerated\_Domain\_Value\_Definition:* Swamps

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 10D

*Enumerated\_Domain\_Value\_Definition:* Scrub-shrub Wetlands

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* U

*Enumerated\_Domain\_Value\_Definition:* Unranked

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* WATER\_CODE

*Attribute\_Definition:* Specifies a polygon as either water or land.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* L

*Enumerated\_Domain\_Value\_Definition:* Land

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* W

*Enumerated\_Domain\_Value\_Definition:* Water

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* ENVIR

*Attribute\_Definition:* Type of regional environment.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

*Enumerated\_Domain\_Value\_Definition:* Estuarine

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* U

*Enumerated\_Domain\_Value\_Definition:* Unclassified

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* ESI\_SOURCE

*Attribute\_Definition:*

Source identifier that links to the SOURCES data table. This id indicates the source of the ESI classification of a polygon. Vector features that were not surveyed or do not qualify for an ESI classification have a value of -1.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SOURCES

*Entity\_Type\_Definition:*

The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SOURCE\_ID

*Attribute\_Definition:*

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table; G\_SOURCE and S\_SOURCE in the BIORES table; and SOURCE\_ID and ESI\_Source in the ESI and HYDRO data layers.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* ORIGINATOR

*Attribute\_Definition:* Author or developer of source material or data set.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* DATE\_PUB

*Attribute\_Definition:*

Date of source material, publication, or date of personal communication with expert source.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* TITLE

*Attribute\_Definition:* Title of source material or data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* DATA\_FORMAT

*Attribute\_Definition:* The format of the source material.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUB\_PLACE

*Attribute\_Definition:* Publication place.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUBLISHER

*Attribute\_Definition:* Publisher.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUBLICATION

*Attribute\_Definition:* Additional citation information.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* ONLINE\_LINK

*Attribute\_Definition:* Online computer resource URL.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* SCALE

*Attribute\_Definition:* Description of the source scale.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* TIME\_PERIOD

*Attribute\_Definition:*

Date(s) of data collection that the source material is based upon.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

---

*Distribution\_Information:*

*Distributor:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:* John Kaperick

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Address:*

*Address\_Type:* Physical Address

*Address:* 7600 Sand Point Way N.E.

*City:* Seattle

*State\_or\_Province:* Washington  
*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6400  
*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Resource\_Description:* Downloadable Data

*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.

*Custom\_Order\_Process:*

Contact NOAA for distribution options (see Distributor). 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 distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

---

*Metadata\_Reference\_Information:*

*Metadata\_Date:* 201304  
*Metadata\_Review\_Date:* 201304  
*Metadata\_Contact:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:* Jill Petersen  
*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Position:* GIS Manager  
*Contact\_Address:*

*Address\_Type:* Physical Address  
*Address:* 7600 Sand Point Way, N.E.  
*City:* Seattle  
*State\_or\_Province:* Washington  
*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6944  
*Contact\_Facsimile\_Telephone:* (206) 526-6329  
*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

*Metadata\_Standard\_Name:* Content Standards for Digital Geospatial Metadata  
*Metadata\_Standard\_Version:* FGDC-STD-001-1998

# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: South Florida: FISH (Fish Polygons)

Metadata also available as - [[Parseable text](#)] - [[SGML](#)] - [[XML](#)]

## Metadata:

- [Identification Information](#)
  - [Data Quality Information](#)
  - [Spatial Data Organization Information](#)
  - [Spatial Reference Information](#)
  - [Entity and Attribute Information](#)
  - [Distribution Information](#)
  - [Metadata Reference Information](#)
- 

### *Identification\_Information:*

#### *Citation:*

##### *Citation\_Information:*

##### *Originator:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington.

*Publication\_Date:* 201304

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: South Florida: FISH (Fish Polygons)

*Edition:* Second

*Geospatial\_Data\_Presentation\_Form:* vector digital data

##### *Series\_Information:*

*Series\_Name:* South Florida

*Issue\_Identification:* South Florida

##### *Publication\_Information:*

*Publication\_Place:* Seattle, Washington

##### *Publisher:*

NOAA's Ocean Service, Office of Response and Restoration (OR&R), Emergency Response Division (ERD).

##### *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, Emergency Response Division, Seattle, Washington.

*Online\_Linkage:* <<http://response.restoration.noaa.gov/esi>>

### *Description:*

#### *Abstract:*

This data set contains sensitive biological resource data for marine and estuarine fish species in South Florida. Vector polygons in this data set represent fish distribution, concentration areas, nursery areas and spawning areas. Species specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the ESI data for South Florida. ESI data characterize the marine and 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.

*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.

*Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1972

*Ending\_Date:* 2013

*Currentness\_Reference:*

The data were compiled during 2011-2013. The currentness dates for this data range from 1972 to 2013 and are documented in the Lineage section.

*Status:*

*Progress:* Complete

*Maintenance\_and\_Update\_Frequency:* None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -82.93300

*East\_Bounding\_Coordinate:* -80.00000

*North\_Bounding\_Coordinate:* 26.37500

*South\_Bounding\_Coordinate:* 24.50000

*Keywords:*

*Theme:*

*Theme\_Keyword\_Thesaurus:* ISO 19115 Topic Category

*Theme\_Keyword:* biota

*Theme\_Keyword:* environment

*Theme:*

*Theme\_Keyword\_Thesaurus:* None

*Theme\_Keyword:* Environmental Monitoring

*Theme\_Keyword:* ESI

*Theme\_Keyword:* Sensitivity maps

*Theme\_Keyword:* Coastal resources

*Theme\_Keyword:* Oil spill planning

*Theme\_Keyword:* Coastal Zone Management

*Theme\_Keyword:* Wildlife

*Theme\_Keyword:* Fish

*Place:*

*Place\_Keyword\_Thesaurus:* None

*Place\_Keyword:* South Florida

*Access\_Constraints:* None

*Use\_Constraints:*

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural,



and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* datafig.jpg

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and attribute data tables for the South Florida ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* datafig2.jpg

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and desktop data tables for the South Florida ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington, the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness Washington, D.C. and the Fish and Wildlife Research Institute (FWRI), Florida Fish and Wildlife Conservation Commission (FWC), St. Petersburg, Florida.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 10.0) and SQL SERVER(R) (version 2005). The hardware configuration is PC's with Windows Operating System 7. The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in the data set: benthic.e00, birds.e00, esil.e00, esip.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, mgt\_fish.e00, nests.e00, reptiles.e00, socecon.e00, and t\_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio\_lut.e00, biofile.e00, biores.e00, breed.e00, seasonal.e00, soc\_dat.e00, soc\_lut.e00, sources.e00, species.e00, status.e00, mgt\_fish\_lut.e00, and mgt\_fish.e00.

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*Data\_Quality\_Information:*

*Attribute\_Accuracy:*

*Attribute\_Accuracy\_Report:*

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

*Logical\_Consistency\_Report:*

A multi-stage error checking process, described in the above Attribute\_Accuracy\_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary node, etc.), and SQL SERVER(R) to ARC/INFO(R) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM 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 ID's and RARNUM's or HUNUM's are also generated. The new ID's 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 RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resources at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

*Completeness\_Report:*

These data represent a synthesis of expert knowledge, digital data and hardcopy maps. These data do not necessarily represent all fish occurrences in South Florida. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name [n/a if not applicable]): 65, Bluefish, *Pomatomus saltatrix*; 107, Spotted seatrout, *Cynoscion nebulosus*; 109, Red drum, *Sciaenops ocellatus*; 112, Gulf flounder, *Paralichthys albigutta*; 113, Bay anchovy, *Anchoa mitchilli*; 116, Striped mullet, *Mugil cephalus*; 117, Pinfish, *Lagodon rhomboides*; 119, Silver perch, *Bairdiella chrysoura*; 122, Black drum, *Pogonias cromis*; 126, King mackerel, *Scomberomorus cavalla*; 127, Spanish mackerel, *Scomberomorus maculatus*; 128, Blue runner, *Caranx crysos*; 131, Great barracuda, *Sphyrna barracuda*; 134, Cobia, *Rachycentron canadum*; 136, Dolphin, *Coryphaena hippurus*; 137, Sheepshead, *Archosargus probatocephalus*; 140, Ladyfish, *Elops saurus*; 141, Common snook, *Centropomus undecimalis*; 142, Crevalle jack, *Caranx hippos*; 143, Tarpon, *Megalops atlanticus*; 268, Silver seatrout, *Cynoscion nothus*; 272, Rainbow runner, *Elagatis bipinnulata*; 278, Little tunny, *Euthynnus alletteratus*; 287, Hardhead catfish, *Arius felis*; 288, Atlantic tripletail, *Lobotes surinamensis*; 299, Rainwater killifish, *Lucania parva*; 303, Permit, *Trachinotus falcatus*; 306, Gray snapper, *Lutjanus griseus*; 307, Lane snapper, *Lutjanus synagris*; 310, Atlantic spadefish, *Chaetodipterus faber*; 315, Blacktip shark, *Carcharhinus limbatus*; 317, Bull shark, *Carcharhinus leucas*; 326, Bonnethead shark, *Sphyrna tiburo*; 327, Dwarf seahorse, *Hippocampus zosterae*; 335, Silversides, n/a; 343, Yellow jack, *Caranx bartholomaei*; 344, Bar jack, *Caranx ruber*; 345, Spotfin butterflyfish, *Chaetodon ocellatus*; 347, Round scad, *Decapterus punctatus*; 350, Tomate, *Haemulon aurolineatum*; 351, Slippery dick, *Halichoeres bivittatus*; 352, Blue angelfish, *Holacanthus bermudensis*; 356, Greater amberjack, *Seriola dumerili*; 358, Cocoa damselfish, *Stegastes variabilis*; 362, Southern stingray, *Dasyatis americana*; 366, Hogchoker, *Trinectes maculatus*; 369, Code goby, *Gobiosoma robustum*; 377, Gulf toadfish, *Opsanus beta*; 384, Spotted eagle ray, *Aetobatus narinari*; 389, Nassau grouper, *Epinephelus striatus*; 412, Mojarras, *Eucinostomus* spp.; 430, Lookdown, *Selene vomer*; 433, Gulf pipefish, *Syngnathus scovelli*; 438, Scalloped hammerhead, *Sphyrna lewini*; 495, Gray triggerfish, *Balistes capricus*; 497, Sergeant major, *Abudefduf saxatilis*; 512, Coney, *Cephalopholis fulva*; 514, Mutton snapper, *Lutjanus analis*; 515, Yellowtail snapper, *Ocyurus chrysurus*; 518, Goliath grouper, *Epinephelus itajara*; 520, White grunt, *Haemulon plumieri*; 521, Blue marlin, *Makaira nigricans*; 522, Yellowfin tuna, *Thunnus albacares*; 523, Swordfish, *Xiphias gladius*; 525, Bonefish, *Albula vulpes*; 580, Tarpon snook, *Centropomus pectinatus*; 598, Anchovies, *Anchoa* sp.; 611, Lined sole, *Achirus lineatus*; 612, Speckled worm eel, *Myrophis punctatus*; 638, Wahoo, *Acanthocybium solandri*; 719, Hogfish, *Lachnolaimus maximus*; 720, Ocean surgeon, *Acanthurus bahianus*; 721, Doctorfish, *Acanthurus chirurgus*; 722, Blue tang, *Acanthurus coeruleus*; 724, Cottonwick grunt, *Haemulon melanurum*; 725, Clown wrasse, *Halichoeres maculipinna*; 726, Queen angelfish, *Holacanthus ciliaris*; 727, Rock beauty, *Holacanthus tricolor*; 729, Mahogany snapper, *Lutjanus mahogoni*; 732, Bluehead, *Thalassoma bifasciatum*; 734, Porkfish, *Anisotremus virginicus*; 736, Swordspine snook, *Centropomus ensiferus*; 737, Blue chromis, *Chromis cyanea*; 739, Sharpnose puffer, *Canthigaster rostrata*; 742, French grunt, *Haemulon flavolineatum*; 743, Squirrelfish, *Holocentrus adscensionis*; 748, Yellowtail damselfish, *Microspathodon chrysurus*; 752, Gray angelfish, *Pomacanthus arcuatus*; 753, French angelfish, *Pomacanthus paru*; 754, Blue parrotfish, *Scarus coeruleus*; 755, Rainbow parrotfish, *Scarus guacamaia*; 756, Redband parrotfish, *Sparisoma aurofrenatum*; 757, Stoplight parrotfish, *Sparisoma viride*; 759, African pompano, *Alectis ciliaris*; 775, Rock hind, *Epinephelus adscensionis*; 776, Red grouper, *Epinephelus morio*; 783, Bluestriped grunt, *Haemulon sciurus*; 791, Sailfish, *Istiophorus platypterus*; 797, Blackfin snapper, *Lutjanus buccanella*; 798, Cubera snapper, *Lutjanus cyanopterus*; 800, Dog snapper, *Lutjanus jocu*; 807, Black grouper, *Mycteroperca bonaci*; 823, Queen parrotfish, *Scarus vetula*; 826, Cero, *Scomberomorus regalis*; 835, Blackfin tuna, *Thunnus atlanticus*; 840, Houndfish, *Tylosurus crocodilus crocodilus*; 851, Sea bream, *Archosargus rhomboidalis*; 855, Horse-eye jack, *Caranx latus*; 864, Bermuda sea chub, *Kyphosus sectatrix*; 872, Scrawled cowfish, *Acanthostracion quadricornis*; 903, Ocean triggerfish, *Canthidermis sufflamen*; 968, Nurse shark, *Ginglymostoma cirratum*; 972, Schoolmaster, *Lutjanus apodus*; 1001, Blennies, n/a; 1017, Grunts, *Haemulidae*; 1018, Porgies, n/a; 1026, Cardinalfishes, n/a; 1027, Filefishes, n/a; 1031, Moray eels, n/a; 1042, Needlefishes, *Belonidae*; 1045, Scorpionfishes, n/a; 1046, Flying fishes, n/a; 1053, Lizardfishes, n/a; 1088, Lined seahorse, *Hippocampus erectus*; 1130, Dusky shark, *Carcharhinus obscurus*; 1146, Bluefin tuna, *Thunnus thynnus*; 1154, Snowy grouper, *Hyporthodus niveatus*; 1155, Warsaw grouper, *Hyporthodus nigritus*; 1156, Yellowedge grouper, *Hyporthodus flavolimbatus*; 1159, Smalltooth sawfish, *Pristis pectinata*; 1161, Cherubfish, *Centropyge argi*; 1162, Yellowtail reefish, *Chromis enchrysurus*; 1163, Sunshinefish, *Chromis insolata*; 1164, Brown chromis, *Chromis multilineata*; 1165, Purple reefish, *Chromis scotti*; 1166, Creole wrasse, *Clepticus parrae*; 1168, Yellowhead wrasse, *Halichoeres garnoti*; 1169, Blackear wrasse, *Halichoeres poeyi*; 1170, Puddingwife, *Halichoeres radiatus*; 1171, Ballyhoo, *Hemiramphus* spp.; 1172, Tilefish, *Lopholatilus chamaeleonticeps*; 1173, Yellowhead jawfish, *Opistognathus aurifrons*; 1175, Dusky damselfish, *Stegastes adustus*; 1176, Longfin damselfish, *Stegastes diencaeus*; 1177, Beaugregory, *Stegastes leucostictus*; 1178, Bicolor damselfish, *Stegastes partitus*; 1179, Threespot damselfish, *Stegastes planifrons*; 1180, Banded butterflyfish, *Chaetodon striatus*; 1181, Bucktooth parrotfish, *Sparisoma radians*; 1182, Foureye butterflyfish, *Chaetodon capistratus*; 1183, Graysby, *Cephalopholis cruentata*; 1184, Midnight parrotfish, *Scarus coelestinus*; 1185, Princess parrotfish, *Scarus taeniopterus*; 1186, Redtail parrotfish, *Sparisoma chrysopterus*; 1187, Reef butterflyfish, *Chaetodon sedentarius*; 1188, Reef croaker, *Odontoscion dentex*; 1189, Sailors choice, *Haemulon parra*; 1190, Sand tilefish, *Malacanthus plumieri*; 1191, Smooth trunkfish, *Rhinesomus triquetus*; 1192, Spanish hogfish, *Bodianus rufus*; 1193, Striped parrotfish, *Scarus iseri*; 1194, Yellowtail parrotfish, *Sparisoma rubripinne*; 1195, Balao, *Hemiramphus balao*; 1196, Bank butterflyfish, *Prognathodes aya*; 1197, Banner goby, *Microgobius microlepis*; 1198, Barred hamlet, *Hypoplectrus puella*; 1199, Batfish, *Ogcocephalus* spp.; 1200, Bearded goby, *Barbulifer ceuthoecus*; 1201, Bluelip parrotfish, *Cryptotomus roseus*; 1202, Bridled goby, *Coryphopterus glaucofraenum*; 1203, Snake eels, *Ophichthidae*; 1204, Chain pipefish, *Syngnathus louisianae*; 1205, Clown goby, *Microgobius gulosus*; 1206, Dusky pipefish, *Syngnathus floridae*; 1207, Fantail mullet, *Mugil trichodon*; 1208, Fat snook, *Centropomus parallelus*; 1209, Fringed pipefish, *Anarchopterus criniger*; 1210, Frogfishes, *Antennariidae*; 1211,

Goldspotted killifish, *Floridichthys carpio*; 1212, Hamlets, *Hypoplectrus* spp.; 1213, Key anchovy, *Anchoa cayorum*; 1214, Key blenny, *Starksia starcki*; 1215, Key silverside, *Menidia conchorum*; 1216, Key worm eel, *Ahlia egmontis*; 1217, Lemon shark, *Negaprion brevirostris*; 1218, Longsnout butterflyfish, *Prognathodes aculeatus*; 1219, Mangrove rivulus, *Kryptolebias marmoratus*; 1220, Neon goby, *Elacatinus oceanops*; 1221, Ornamental serranids, n/a; 1222, Speckled hind, *Epinephelus drummondhayi*; 1223, White marlin, *Kajikia albida*; 1224, Wreckfish, *Polyprion americanus*; 1225, Yellowcheek wrasse, *Halichoeres cyanocephalus*; 1226, Masked goby, *Coryphopterus personatus*; 1227, Peacock flounder, *Bothus lunatus*; 1228, Reef shark, *Carcharhinus perezii*; 1229, Ribbonfishes, *Equetus* spp..

*Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy\_Report:*

Spatial components for the biological data layers can come from expert interviews, hardcopy, or digital sources. Some of the spatial components of the biological data layers may have been developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy base maps with a scale of 1:24,000. Some of the spatial components of the biological data sets are developed from pre-existing digital or hardcopy sources and reflect the positional accuracy of these original data. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources. See the Lineage and Process\_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* ACOSTA A., C. BARTELS, J. COLVOCORESSES, AND M.F.D. GREENWOOD

*Publication\_Date:* 2007

*Title:*

FISH ASSEMBLAGES IN SEAGRASS HABITATS OF THE FLORIDA KEYS, FLORIDA:  
SPATIAL AND TEMPORAL CHARACTERISTICS

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* MIAMI, FLORIDA

*Publisher:*

ROSENSTIEL SCHOOL OF MARINE & ATMOSPHERIC SCIENCE, UNIVERSITY OF  
MIAMI

*Other\_Citation\_Details:* BULLETIN OF MARINE SCIENCE, 81(1):1-19

*Type\_of\_Source\_Media:* PAPER

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1999

*Ending\_Date:* 2001

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

ACOSTA, A. (FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION - FISH AND WILDLIFE RESEARCH INSTITUTE)

*Publication\_Date:* 2013

*Title:* DISTRIBUTION AND ABUNDANCE OF FISH IN THE FLORIDA KEYS

*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 2013

*Ending\_Date:* 2013

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* AULT J., J. LUO, S.G. SMITH, D.B. MCLELLAN

*Publication\_Date:* 2012

*Title:*

LARVAL TRANSPORT MODELING TO ASSESS THE REPRODUCTIVE POTENTIAL OF REEF FISH SPAWNING IN THE TORTUGAS REGION

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* HOMESTEAD, FLORIDA AND TALLAHASSEE, FLORIDA

*Publisher:*

NATIONAL PARK SERVICE AND FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION

*Other\_Citation\_Details:*

CHAPTER 11 OF 'IMPLEMENTING THE DRY TORTUGAS NATIONAL PARK RESEARCH NATURAL AREA SCIENCE PLAN: THE 5-YEAR REPORT'

*Online\_Linkage:*

<http://www.nps.gov/ever/naturescience/upload/DRTORNA5YrFINALComplete04092012LoRes.pdf>

*Type\_of\_Source\_Media:* PAPER

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

AULT J.S., S.G. SMITH, J.A. BOHNSACK, J. LUO, D.E. HARPER, D.B. MCLELLAN

*Publication\_Date:* 2006

*Title:*

BUILDING SUSTAINABLE FISHERIES IN FLORIDA'S CORAL REEF ECOSYSTEM:  
POSITIVE SIGNS IN THE DRY TORTUGAS

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* MIAMI, FL

*Publisher:*

ROSENSTIEL SCHOOL OF MARINE & ATMOSPHERIC SCIENCE, UNIVERSITY OF  
MIAMI

*Other\_Citation\_Details:* BULLETIN OF MARINE SCIENCE, 78(3):633-654

*Type\_of\_Source\_Media:* PAPER

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2006

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* BARBERA, P.

*Publication\_Date:* 2012

*Title:* REEF FISH SPAWNING AGGREGATIONS

*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 2000

*Ending\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* BERKELEY, S.A.

*Publication\_Date:* 1984

*Title:* FISHERIES ASSESSMENT OF BISCAYNE BAY

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* MIAMI, FL

*Publisher:*

FINAL REPORT TO THE DADE COUNTY DEPARTMENT OF ENVIRONMENTAL  
RESEARCH AND MANAGEMENT

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1984

*Ending\_Date:* 1984

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

BROWN, STEVE (FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION)

*Publication\_Date:* 2012

*Title:*

SEASONALITY OF PELAGIC FISHES BY DEPTH ZONES BASED ON MARINE FISHERIES  
DATA LANDINGS

*Geospatial\_Data\_Presentation\_Form:* SPREADSHEET

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* EKLUND, A.M., D.B. MCLELLAN AND D.E. HARPER

*Publication\_Date:* 2000

*Title:*

BLACK GROUPER AGGREGATIONS IN RELATION TO PROTECTED AREAS WITHIN THE  
FLORIDA KEYS NATIONAL MARINE SANCTUARY

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* MIAMI, FL

*Publisher:*

ROSENSTIEL SCHOOL OF MARINE & ATMOSPHERIC SCIENCE, UNIVERSITY OF  
MIAMI

*Other\_Citation\_Details:* BULLETIN OF MARINE SCIENCE, 66(3):721-728

*Type\_of\_Source\_Media:* PAPER

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1997

*Ending\_Date:* 1998

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

FEELEY, M. (NATIONAL PARK SERVICE - SOUTH FLORIDA/CARIBBEAN NETWORK)

*Publication\_Date:* 2013

*Title:* MARINE ECOLOGY OF SOUTH FLORIDA

*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2013

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* FEELEY, M. ET AL.

*Publication\_Date:* 2012

*Title:*

REGIONAL CONNECTIVITY OF FISHES WITHIN TORTUGAS REGION OF FLORIDA

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* HOMESTEAD, FLORIDA AND TALLAHASSEE, FLORIDA

*Publisher:*

NATIONAL PARK SERVICE (NPS), FLORIDA FISH AND WILDLIFE CONSERVATION  
COMMISSION (FWC)

*Other\_Citation\_Details:*

CHAPTER 3 OF 'IMPLEMENTING THE DRY TORTUGAS NATIONAL PARK RESEARCH  
NATURAL AREA SCIENCE PLAN: THE 5-YEAR REPORT'

*Online\_Linkage:*

<http://www.nps.gov/ever/naturescience/upload/DRTORNA5Y:FINALComplete04092012LoRes.pdf>

*Type\_of\_Source\_Media:* PAPER

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI), FLORIDA FISH AND WILDLIFE  
CONSERVATION COMMISSION (FWC)

*Publication\_Date:* 2012

*Title:* SALTWATER FISH CATALOG

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Online\_Linkage:* <http://myfwc.com/wildlifehabitats/profiles/fish/saltwater/>

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*



*Originator:* FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION (FWC)  
*Publication\_Date:* 2009  
*Title:* SEA STATS: BONEFISH  
*Geospatial\_Data\_Presentation\_Form:* DOCUMENT  
*Publication\_Information:*

*Publication\_Place:* ST. PETERSBURG, FL  
*Publisher:*  
FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION, FISH AND  
WILDLIFE RESEARCH INSTITUTE

*Online\_Linkage:* <http://www.myfwc.com/fishing/saltwater/recreational/bonefish/>

*Type\_of\_Source\_Media:* ONLINE  
*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 2009  
*Ending\_Date:* 2009

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION FINFISH GROUP  
*Publication\_Date:* 2012  
*Title:* REEF FISH SPAWNING AGGREGATIONS  
*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE  
*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* PERSONAL COMMUNICATION  
*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 2012  
*Ending\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* FLORIDA MUSEUM OF NATURAL HISTORY  
*Publication\_Date:* 2012  
*Title:* ICTHYOLOGY DEPARTMENT SPECIES PROFILES  
*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Other\_Citation\_Details*: ACCESSED DECEMBER 2012

*Online\_Linkage*: <<http://www.flmnh.ufl.edu/fish/Education/biopofile.htm>>

*Type\_of\_Source\_Media*: ONLINE

*Source\_Time\_Period\_of\_Content*:

*Time\_Period\_Information*:

*Single\_Date/Time*:

*Calendar\_Date*: 2012

*Source\_Currentness\_Reference*: DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation*: NONE

*Source\_Contribution*: FISH INFORMATION

*Source\_Information*:

*Source\_Citation*:

*Citation\_Information*:

*Originator*: FLORIDA NATURAL AREAS INVENTORY (FNAI)

*Publication\_Date*: 2001

*Title*: KEY BLENNY

*Geospatial\_Data\_Presentation\_Form*: DOCUMENT

*Publication\_Information*:

*Publication\_Place*: TALLAHASSEE, FL

*Publisher*: FLORIDA NATURAL AREAS INVENTORY

*Online\_Linkage*: <[http://fwcg.myfwc.com/docs/key\\_blenny.pdf](http://fwcg.myfwc.com/docs/key_blenny.pdf)>

*Type\_of\_Source\_Media*: ONLINE

*Source\_Time\_Period\_of\_Content*:

*Time\_Period\_Information*:

*Single\_Date/Time*:

*Calendar\_Date*: 2001

*Source\_Currentness\_Reference*: DATE OF PUBLICATION

*Source\_Citation\_Abbreviation*: NONE

*Source\_Contribution*: FISH INFORMATION

*Source\_Information*:

*Source\_Citation*:

*Citation\_Information*:

*Originator*: FROESE, R. AND D. PAULY. EDITORS.

*Publication\_Date*: 2011

*Title*: FISHBASE

*Geospatial\_Data\_Presentation\_Form*: ONLINE DATABASE

*Other\_Citation\_Details*: ACCESSED SPRING 2012

*Online\_Linkage*: <<http://www.fishbase.org>>

*Type\_of\_Source\_Media*: ONLINE

*Source\_Time\_Period\_of\_Content*:

*Time\_Period\_Information*:

*Single\_Date/Time:*

*Calendar\_Date:* 2011

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* GILBERT, C.R. (EDITOR)

*Publication\_Date:* 1992

*Title:* RARE AND ENDANGERED BIOTA OF FLORIDA, VOLUME II: FISHES

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* GAINESVILLE, FL

*Publisher:* UNIVERSITY PRESS OF FLORIDA

*Type\_of\_Source\_Media:* BOOK

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 1992

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

GUINDON, K. (FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI), FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION (FWC))

*Publication\_Date:* 2013

*Title:* LIFE HISTORY OF PERMIT AND TARPON

*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 2013

*Ending\_Date:* 2013

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* HEITHAUS, M. ET AL.

*Publication\_Date:* 2007

*Title:*

SPATIAL AND TEMPORAL VARIATION IN SHARK COMMUNITIES OF THE LOWER  
FLORIDA KEYS AND EVIDENCE FOR POPULATION DECLINES

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* CANADA

*Publisher:* NRC RESEARCH PRESS

*Other\_Citation\_Details:* CANADIAN JOURNAL OF FISHERIES AND AQUATIC SCIENCE, 64:1302-  
1313

*Type\_of\_Source\_Media:* PAPER

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 2001

*Ending\_Date:* 2003

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

HERREMA, D.J., PEERY, B.D., WILLIAMS-WALLS, N., AND WILCOX, J.R.

*Publication\_Date:* 1985

*Title:*

SPAWNING SEASONS OF COMMON INSHORE FISHES OF THE FLORIDA EAST COAST

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* DAUPHIN ISLAND, AL

*Publisher:* MARINE ENVIRONMENTAL SCIENCES CONSORTIUM OF ALABAMA

*Other\_Citation\_Details:* Northeast Gulf Science 7(2):153-155

*Type\_of\_Source\_Media:* PAPER

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1985

*Ending\_Date:* 1985

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* HUMANN, PAUL

*Publication\_Date:* 1996

*Title:* REEF FISH IDENTIFICATION: FLORIDA, CARIBBEAN, BAHAMAS

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* JACKSONVILLE, FL

*Publisher:* NEW WORLD PUBLICATIONS, INC.

*Type\_of\_Source\_Media:* PAPER

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1996

*Ending\_Date:* 1996

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* JOSE I. CASTRO

*Publication\_Date:* 2011

*Title:* THE SHARKS OF NORTH AMERICA

*Geospatial\_Data\_Presentation\_Form:* HARDCOPY TEXT

*Publication\_Information:*

*Publication\_Place:* NEW YORK, NY

*Publisher:* OXFORD UNIVERSITY PRESS

*Type\_of\_Source\_Media:* BOOK

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2011

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

KELLISON, T. (NATIONAL MARINE FISHERIES SERVICE, SOUTHEAST FISHERIES  
SCIENCE CENTER)

*Publication\_Date:* 2012

*Title:* REEF FISH SPAWNING AGGREGATIONS IN SOUTH FLORIDA

*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE

*Type\_of\_Source\_Media:* PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* LINDEMAN, K.C., R. PUGLIESE, G.T. WAUGH AND J.S. AULT

*Publication\_Date:* 2000

*Title:*

DEVELOPMENTAL PATTERNS WITHIN A MULTISPECIES REEF FISHERY:  
MANAGEMENT APPLICATIONS FOR ESSENTIAL FISH HABITATS AND PROTECTED  
AREAS

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* MIAMI, FL

*Publisher:*

ROSENSTIEL SCHOOL OF MARINE & ATMOSPHERIC SCIENCE, UNIVERSITY OF  
MIAMI

*Other\_Citation\_Details:* BULLETIN OF MARINE SCIENCE, 66(3):929-956

*Type\_of\_Source\_Media:* PAPER

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2000

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

MATHESON, E. (FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI), FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION (FWC))

*Publication\_Date:* 2012

*Title:* DISTRIBUTION AND SEASONALITY OF FISH IN SOUTH FLORIDA

*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE BASED ON PUBLISHED LITERATURE

*Type\_of\_Source\_Media:* PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* MUNRO, J.L., V.C. GAUT, R. THOMPSON, AND P.H. REESON

*Publication\_Date:* 1972

*Title:* THE SPAWNING SEASONS OF CARIBBEAN REEF FISHES

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* United Kingdom

*Publisher:* WILEY ONLINE LIBRARY

*Other\_Citation\_Details:* JOURNAL OF FISH BIOLOGY, 5:69-84

*Type\_of\_Source\_Media:* PAPER

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 1972

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION (NOAA) NATIONAL MARINE FISHERIES SERVICE (NMFS)

*Publication\_Date:* 2006

*Title:*

STATUS REPORT ON THE CONTINENTAL UNITED STATES DISTINCT POPULATIONS SEGMENT OF THE GOLIATH GROUPER (EPINEPHELUS ITAJARA)

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* ST. PETERSBURG, FL

*Publisher:* NATIONAL MARINE FISHERIES SERVICE, SOUTHEAST REGIONAL OFFICE

*Online\_Linkage:*

[http://sero.nmfs.noaa.gov/pr/pdf/Final\\_Status\\_Report\\_on\\_the\\_Goliath\\_Grouper.pdf](http://sero.nmfs.noaa.gov/pr/pdf/Final_Status_Report_on_the_Goliath_Grouper.pdf)

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2006

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION (NOAA) NATIONAL MARINE FISHERIES SERVICE (NMFS)

*Publication\_Date:* 2009

*Title:* SPECKLED HIND SPECIES OF CONCERN FACT SHEET: DETAILED

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* ST. PETERSBURG, FL

*Publisher:* NATIONAL MARINE FISHERIES SERVICE, SOUTHEAST REGIONAL OFFICE

*Online\_Linkage:* [http://sero.nmfs.noaa.gov/pr/pdf/speckledhind\\_detailed.pdf](http://sero.nmfs.noaa.gov/pr/pdf/speckledhind_detailed.pdf)

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2009

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*



*Citation\_Information:*

*Originator:*

NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION (NOAA), NATIONAL MARINE FISHERIES SERVICE (NMFS), FISHERIES OFFICE OF SUSTAINABLE FISHERIES (OSF)

*Publication\_Date:* 2009

*Title:* BLACKTIP SHARK EFH

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* SILVER SPRING, MD

*Publisher:* NATIONAL MARINE FISHERIES SERVICE

*Other\_Citation\_Details:* DOWNLOADED SUMMER 2011

*Online\_Linkage:* <<http://www.nmfs.noaa.gov/sfa/hms/EFH/shapefiles.htm>>

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2009

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION (NOAA), NATIONAL MARINE FISHERIES SERVICE (NMFS), FISHERIES OFFICE OF SUSTAINABLE FISHERIES (OSF)

*Publication\_Date:* 2009

*Title:* BLUE MARLIN EFH

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* SILVER SPRING, MD

*Publisher:* NATIONAL MARINE FISHERIES SERVICE

*Other\_Citation\_Details:* DOWNLOADED SUMMER 2011

*Online\_Linkage:* <<http://www.nmfs.noaa.gov/sfa/hms/EFH/shapefiles.htm>>

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2009

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION (NOAA), NATIONAL MARINE FISHERIES SERVICE (NMFS), FISHERIES OFFICE OF SUSTAINABLE FISHERIES (OSF)

*Publication\_Date:* 2009

*Title:* BLUEFIN TUNA EFH

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* SILVER SPRING, MD

*Publisher:* NATIONAL MARINE FISHERIES SERVICE

*Other\_Citation\_Details:* DOWNLOADED SUMMER 2011

*Online\_Linkage:* <<http://www.nmfs.noaa.gov/sfa/hms/EFH/shapefiles.htm>>

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2009

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

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*Source\_Citation:*

*Citation\_Information:*

*Originator:*

NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION (NOAA), NATIONAL MARINE FISHERIES SERVICE (NMFS), FISHERIES OFFICE OF SUSTAINABLE FISHERIES (OSF)

*Publication\_Date:* 2009

*Title:* BONNETHEAD SHARK EFH

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* SILVER SPRING, MD

*Publisher:* NATIONAL MARINE FISHERIES SERVICE

*Other\_Citation\_Details:* DOWNLOADED SUMMER 2011

*Online\_Linkage:* <<http://www.nmfs.noaa.gov/sfa/hms/EFH/shapefiles.htm>>

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION (NOAA), NATIONAL MARINE FISHERIES SERVICE (NMFS), FISHERIES OFFICE OF SUSTAINABLE FISHERIES (OSF)

*Publication\_Date:* 2009

*Title:* BULL SHARK EFH

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* SILVER SPRING, MD

*Publisher:* NATIONAL MARINE FISHERIES SERVICE

*Other\_Citation\_Details:* DOWNLOADED SUMMER 2011

*Online\_Linkage:* <<http://www.nmfs.noaa.gov/sfa/hms/EFH/shapefiles.htm>>

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2009

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

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*Source\_Citation:*

*Citation\_Information:*

*Originator:*

NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION (NOAA), NATIONAL MARINE FISHERIES SERVICE (NMFS), FISHERIES OFFICE OF SUSTAINABLE FISHERIES (OSF)

*Publication\_Date:* 2009

*Title:* DUSKY SHARK EFH

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* SILVER SPRING, MD

*Publisher:* NATIONAL MARINE FISHERIES SERVICE

*Other\_Citation\_Details:* DOWNLOADED SUMMER 2011

*Online\_Linkage:* <<http://www.nmfs.noaa.gov/sfa/hms/EFH/shapefiles.htm>>

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2009

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION (NOAA), NATIONAL MARINE FISHERIES SERVICE (NMFS), FISHERIES OFFICE OF SUSTAINABLE FISHERIES (OSF)

*Publication\_Date:* 2009

*Title:* LEMON SHARK EFH

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* SILVER SPRING, MD

*Publisher:* NATIONAL MARINE FISHERIES SERVICE

*Other\_Citation\_Details:* DOWNLOADED SUMMER 2011

*Online\_Linkage:* <<http://www.nmfs.noaa.gov/sfa/hms/EFH/shapefiles.htm>>

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2009

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION (NOAA), NATIONAL MARINE FISHERIES SERVICE (NMFS), FISHERIES OFFICE OF SUSTAINABLE FISHERIES (OSF)

*Publication\_Date:* 2009

*Title:* NURSE SHARK EFH

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* SILVER SPRING, MD

*Publisher:* NATIONAL MARINE FISHERIES SERVICE

*Other\_Citation\_Details:* DOWNLOADED SUMMER 2011

*Online\_Linkage:* <<http://www.nmfs.noaa.gov/sfa/hms/EFH/shapefiles.htm>>

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2009

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION (NOAA), NATIONAL MARINE FISHERIES SERVICE (NMFS), FISHERIES OFFICE OF SUSTAINABLE FISHERIES (OSF)

*Publication\_Date:* 2009

*Title:* SAILFISH EFH

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* SILVER SPRING, MD

*Publisher:* NATIONAL MARINE FISHERIES SERVICE

*Other\_Citation\_Details:* DOWNLOADED SUMMER 2011

*Online\_Linkage:* <<http://www.nmfs.noaa.gov/sfa/hms/EFH/shapefiles.htm>>

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2009

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION (NOAA), NATIONAL MARINE FISHERIES SERVICE (NMFS), FISHERIES OFFICE OF SUSTAINABLE FISHERIES (OSF)

*Publication\_Date:* 2009

*Title:* SWORDFISH EFH

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* SILVER SPRING, MD

*Publisher:* NATIONAL MARINE FISHERIES SERVICE

*Other\_Citation\_Details:* DOWNLOADED SUMMER 2011

*Online\_Linkage:* <<http://www.nmfs.noaa.gov/sfa/hms/EFH/shapefiles.htm>>

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2009

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION (NOAA), NATIONAL MARINE FISHERIES SERVICE (NMFS), FISHERIES OFFICE OF SUSTAINABLE FISHERIES (OSF)

*Publication\_Date:* 2009

*Title:* WHITE MARLIN EFH

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* SILVER SPRING, MD

*Publisher:* NATIONAL MARINE FISHERIES SERVICE

*Other\_Citation\_Details:* DOWNLOADED SUMMER 2011

*Online\_Linkage:* <http://www.nmfs.noaa.gov/sfa/hms/EFH/shapefiles.htm>

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2009

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION (NOAA), NATIONAL MARINE FISHERIES SERVICE (NMFS), FISHERIES OFFICE OF SUSTAINABLE FISHERIES (OSF)

*Publication\_Date:* 2009

*Title:* YELLOWFIN TUNA EFH

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* SILVER SPRING, MD

*Publisher:* NMFS

*Other\_Citation\_Details:* DOWNLOADED SUMMER 2011

*Online\_Linkage:* <http://www.nmfs.noaa.gov/sfa/hms/EFH/shapefiles.htm>

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2009

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION (NOAA), NATIONAL MARINE FISHERIES SERVICE (NMFS), FISHERIES OFFICE OF SUSTAINABLE FISHERIES (OSF), HIGHLY MIGRATORY SPECIES MANAGEMENT DIVISION

*Publication\_Date:* 2009

*Title:*

FINAL AMENDMENT 1 TO THE CONSOLIDATED ATLANTIC HIGHLY MIGRATORY SPECIES FISHERY MANAGEMENT PLAN ESSENTIAL FISH HABITAT

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* SILVER SPRING, MD

*Publisher:* NATIONAL MARINE FISHERIES SERVICE

*Other\_Citation\_Details:* CHAPTER 5: LIFE HISTORY ACCOUNTS AND EFH DESCRIPTIONS AND MAPS

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2009

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION (NOAA), SOUTHEAST FISHERIES SCIENCE CENTER (SEFSC)

*Publication\_Date:* 2011

*Title:*

DENSITIES OF COMMON REEF FISH BY GEOGRAPHIC REGION, HABITAT AND PROTECTION STATUS FROM THE REEF VISUAL CENSUS DATABASE

*Geospatial\_Data\_Presentation\_Form*: VECTOR DIGITAL DATA  
*Other\_Citation\_Details*: UNPUBLISHED

*Type\_of\_Source\_Media*: PERSONAL COMMUNICATION  
*Source\_Time\_Period\_of\_Content*:

*Time\_Period\_Information*:

*Range\_of\_Dates/Times*:

*Beginning\_Date*: 2008  
*Ending\_Date*: 2011

*Source\_Currentness\_Reference*: DATE OF SURVEY

*Source\_Citation\_Abbreviation*: NONE  
*Source\_Contribution*: FISH INFORMATION

*Source\_Information*:

*Source\_Citation*:

*Citation\_Information*:

*Originator*:  
NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION (NOAA), SOUTHEAST  
FISHERIES SCIENCE CENTER (SEFSC), REEF FISH GROUP  
*Publication\_Date*: 2013  
*Title*: DISTRIBUTION AND ABUNDANCE OF REEF FISH IN SOUTH FLORIDA  
*Geospatial\_Data\_Presentation\_Form*: EXPERT KNOWLEDGE  
*Other\_Citation\_Details*: UNPUBLISHED

*Type\_of\_Source\_Media*: PERSONAL COMMUNICATION  
*Source\_Time\_Period\_of\_Content*:

*Time\_Period\_Information*:

*Range\_of\_Dates/Times*:

*Beginning\_Date*: 2013  
*Ending\_Date*: 2013

*Source\_Currentness\_Reference*: DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation*: NONE  
*Source\_Contribution*: FISH INFORMATION

*Source\_Information*:

*Source\_Citation*:

*Citation\_Information*:

*Originator*:  
NELSON, D.M. (EDITOR) ET AL (NOAA'S ESTUARINE LIVING MARINE RESOURCES  
PROGRAM)  
*Publication\_Date*: 1991  
*Title*:  
DISTRIBUTION AND ABUNDANCE OF FISHES AND INVERTEBRATES IN SOUTHEAST  
ESTUARIES  
*Geospatial\_Data\_Presentation\_Form*: DOCUMENT  
*Publication\_Information*:  
  
*Publication\_Place*: SILVER SPRING, MD



*Publisher:* NOAA/NOS STRATEGIC ENVIRONMENTAL ASSESSMENTS DIVISION

*Type\_of\_Source\_Media:* PAPER  
*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 1991

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

NELSON, D.M. (EDITOR) ET AL (NOAA'S ESTUARINE LIVING MARINE RESOURCES PROGRAM)

*Publication\_Date:* 1992

*Title:*

DISTRIBUTION AND ABUNDANCE OF FISHES AND INVERTEBRATES IN GULF OF MEXICO ESTUARIES, VOL. I: DATA SUMMARIES.

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* SILVER SPRING, MD

*Publisher:* NOAA/NOS STRATEGIC ENVIRONMENTAL ASSESSMENTS DIVISION

*Online\_Linkage:* <<http://ccma.nos.noaa.gov/ecosystems/estuaries/elmr.aspx>>

*Type\_of\_Source\_Media:* PAPER  
*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 1998

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

NORTON, S. (NATIONAL MARINE FISHERIES SERVICE, SOUTHEAST REGIONAL OFFICE)

*Publication\_Date:* 2012

*Title:*

SMALLTOOTH SAWFISH OCCURRENCES FROM THE NATIONAL SAWFISH ENCOUNTER DATABASE

*Geospatial\_Data\_Presentation\_Form:* MAP

*Type\_of\_Source\_Media:* EMAIL  
*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

PATILLO, M.E. ET AL (NOAA'S ESTUARINE LIVING MARINE RESOURCES PROGRAM)

*Publication\_Date:* 1997

*Title:*

DISTRIBUTION AND ABUNDANCE OF FISHES AND INVERTEBRATES IN GULF OF MEXICO ESTUARIES, VOLUME II: SPECIES LIFE HISTORY SUMMARIES

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* SILVER SPRING, MD

*Publisher:* NOAA/NOS STRATEGIC ENVIRONMENTAL ASSESSMENTS DIVISION

*Type\_of\_Source\_Media:* PAPER  
*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 1997

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

PATTENGILL-SEMMENS, C. (REEF ENVIRONMENTAL EDUCATION FOUNDATION (REEF))

*Publication\_Date:* 2012

*Title:* REEF FISH SURVEY DATA FOR SOUTH FLORIDA

*Geospatial\_Data\_Presentation\_Form:* TABULAR DIGITAL DATA

*Other\_Citation\_Details:* ACQUIRED 3 OCT 2012

*Online\_Linkage:* <<http://www.reef.org>>

*Type\_of\_Source\_Media:* EMAIL  
*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2008

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

POWELL, ALLYN B., GORDON THAYER, MICHAEL LACROIX, AND ROBIN CHESHIRE

*Publication\_Date:* 2007

*Title:*

JUVENILE AND SMALL RESIDENT FISHES OF FLORIDA BAY, A CRITICAL HABITAT IN THE EVERGLADES NATIONAL PARK, FLORIDA

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* SEATTLE, WA

*Publisher:*

SCIENTIFIC PUBLICATIONS OFFICE, NATIONAL MARINE FISHERIES SERVICE

*Other\_Citation\_Details:* NOAA PROFESSIONAL PAPER NMFS 6

*Online\_Linkage:* <<http://spo.nwr.noaa.gov/pp6.pdf>>

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2007

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* SADOVY, YVONNE AND ANNE-MARIE EKLUND

*Publication\_Date:* 1999

*Title:*

SYNOPSIS OF BIOLOGICAL DATA ON THE NASSAU GROUPER, EPINEPHELUS STRIATUS, AND THE JEWFISH, E. ITAJARA

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* SEATTLE, WA

*Publisher:* NOAA NATIONAL MARINE FISHERIES SERVICE

*Other\_Citation\_Details:* NOAA TECHNICAL REPORT NMFS 146; FAO FISHERIES SYNOPSIS 157

*Type\_of\_Source\_Media:* ONLINE  
*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 1999

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* SERAFY, J. AND D. JOHNSON

*Publication\_Date:* 2008

*Title:*

DEVELOPMENT OF HABITAT SUITABILITY MODELS FOR BISCAYNE BAY AREA  
FISHES: ASSESSING SALINITY AFFINITY FROM ABUNDANCE DATA

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* WEST PALM BEACH, FL

*Publisher:*

SOUTH FLORIDA WATER MANAGEMENT DISTRICT, COASTAL ECOSYSTEMS  
DIVISION

*Other\_Citation\_Details:* FINAL REPORT TO THE SOUTH FLORIDA WATER MANAGEMENT  
DISTRICT

*Type\_of\_Source\_Media:* ONLINE  
*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2008

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* SERAFY, JOSEPH E., CRAIG H. FAUNCE AND JEROME J. LORENZ

*Publication\_Date:* 2003

*Title:* MANGROVE SHORELINE FISHES OF BISCAYNE BAY FLORIDA

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* MIAMI, FLORIDA

*Publisher:*

ROSENSTIEL SCHOOL OF MARINE & ATMOSPHERIC SCIENCE, UNIVERSITY OF

MIAMI

*Other\_Citation\_Details:* BULLETIN OF MARINE SCIENCE, 72(1):161-180

*Type\_of\_Source\_Media:* PAPER

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1999

*Ending\_Date:* 2001

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL (SAFMC)

*Publication\_Date:* 2003

*Title:*

FISHERY MANAGEMENT PLAN FOR THE DOLPHIN AND WAHOO FISHERY OF THE ATLANTIC

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* CHARLESTON, SC

*Publisher:* SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL

*Online\_Linkage:*

<http://www.safmc.net/Portals/6/Library/FMP/DolphinWahoo/DolphinWahooFMP.pdf>

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2003

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

TELLIER, M. ET AL. (FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION - FLORIDA WILDLIFE RESEARCH INSTITUTE)

*Publication\_Date:* 2008

*Title:*

MONITORING THE FLORA AND FAUNA OF THE NEARSHORE HARBOTTOM

HABITATS OF THE FLORIDA KEYS  
*Geospatial\_Data\_Presentation\_Form*: DOCUMENT  
*Publication\_Information*:

*Publication\_Place*: MARATHON, FL  
*Publisher*: FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION

*Type\_of\_Source\_Media*: PAPER  
*Source\_Time\_Period\_of\_Content*:

*Time\_Period\_Information*:

*Range\_of\_Dates/Times*:

*Beginning\_Date*: 2003  
*Ending\_Date*: 2007

*Source\_Currentness\_Reference*: DATE OF PUBLICATION

*Source\_Citation\_Abbreviation*: NONE  
*Source\_Contribution*: FISH INFORMATION

*Source\_Information*:

*Source\_Citation*:

*Citation\_Information*:

*Originator*: TONYA R. WILEY AND COLIN A. SIMPENDORFER  
*Publication\_Date*: 2007  
*Title*:

THE ECOLOGY OF ELASMOBRANCHS OCCURRING IN THE EVERGLADES NATIONAL  
PARK, FLORIDA: IMPLICATIONS FOR CONSERVATION AND MANAGEMENT

*Geospatial\_Data\_Presentation\_Form*: DOCUMENT  
*Other\_Citation\_Details*: BULLETIN OF MARINE SCIENCE, 80(1): 171-189

*Type\_of\_Source\_Media*: PAPER  
*Source\_Time\_Period\_of\_Content*:

*Time\_Period\_Information*:

*Range\_of\_Dates/Times*:

*Beginning\_Date*: 2000  
*Ending\_Date*: 2005

*Source\_Currentness\_Reference*: DATE OF PUBLICATION

*Source\_Citation\_Abbreviation*: NONE  
*Source\_Contribution*: FISH INFORMATION

*Source\_Information*:

*Source\_Citation*:

*Citation\_Information*:

*Originator*: WILEY-LESCHER, TONYA (HAVEN WORTH CONSULTING)  
*Publication\_Date*: 2012  
*Title*: ELASMOBRANCHS OF SOUTH FLORIDA

*Geospatial\_Data\_Presentation\_Form*: EXPERT KNOWLEDGE  
*Other\_Citation\_Details*: UNPUBLISHED

*Type\_of\_Source\_Media*: PERSONAL COMMUNICATION  
*Source\_Time\_Period\_of\_Content*:

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* WILLIAMS, ERIK H. AND JOHN CARMICHAEL

*Publication\_Date:* 2009

*Title:*

FINAL REPORT: SOUTH ATLANTIC FISHERY INDEPENDENT MONITORING PROGRAM WORKSHOP

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* BEAUFORT, NC

*Publisher:*

SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL AND SOUTHEAST FISHERIES SCIENCE CENTER

*Other\_Citation\_Details:*

HOSTED BY THE NATIONAL MARINE FISHERIES SERVICE AND SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2009

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Process\_Step:*

*Process\_Description:*

The main sources of data used to depict fish distribution and seasonality for this data layer include: 1) personal interviews with resource experts from Fish and Wildlife Research Institute (FWRI); 2) reef fish densities provided by NOAA Southeast Fisheries Science Center (SEFSC) based on reef visual census (RVC) sampling; 3) reef fish observation information based on Reef Environmental Education Foundation (REEF) database; 4) Estuarine Living Marine Resources (ELMR) database; 5) spawning aggregation areas identified in published literature and expert information; 6) commercial fisheries data provided by FWRI; 7) NOAA Fisheries Office of Protected Resources (OPR) essential fish habitat (EFH) shapefiles and 8) distribution information available from fishbase and other publicly available sources. Densities derived from RVC data were assigned to habitat-based polygons matching the ESI benthic layer. REEF sampling points were assigned to polygons representing shallow hardbottom, inner reef or outer reef. Observed densities and occurrences were converted into categorical densities for each species in each REEF polygon. Spawning aggregation sites are represented by polygons that contain the actual site. Polygons are larger than actual aggregation sites in order to account for annual variability. ELMR

information was attributed to polygons representing Biscayne Bay and Florida Bay. Commercial fishing data were mapped to statistical reporting grids. Monthly catch rates were used to assign seasonalities for some pelagic fish. EFH information was used to guide mapping for select highly migratory species and sharks. Expert knowledge and other public sources were assigned to depth and/or habitat based categories. Depth bins used for mapping are: 0-3.7m, 3.7-10m, 10-30m, 30-100m, 100-200m and greater than 200m.

The above digital and/or hardcopy sources were compiled by the project biologist to create the FISH data layer. Depending on the type of source data, three general approaches are used for compiling the data layer: 1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:24,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the FISH data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:* 201304

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Person:* Jill Petersen

*Contact\_Address:*

*Address\_Type:* Physical address

*Address:* 7600 Sand Point Way, N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6944

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

---

*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:* Vector

*Point\_and\_Vector\_Object\_Information:*

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* GT-polygon composed of chains

*Point\_and\_Vector\_Object\_Count:* 44906

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Area point

*Point\_and\_Vector\_Object\_Count:* 44905

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Complete chain

*Point\_and\_Vector\_Object\_Count:* 90760

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Link

*Point\_and\_Vector\_Object\_Count:* 3706975

*SDTS\_Terms\_Description:*



*SDTS\_Point\_and\_Vector\_Object\_Type*: Node, planar graph  
*Point\_and\_Vector\_Object\_Count*: 61733

---

*Spatial\_Reference\_Information*:

*Horizontal\_Coordinate\_System\_Definition*:

*Geographic*:

*Latitude\_Resolution*: 0.0000001  
*Longitude\_Resolution*: 0.0000001  
*Geographic\_Coordinate\_Units*: Decimal degrees

*Geodetic\_Model*:

*Horizontal\_Datum\_Name*: North American Datum of 1983  
*Ellipsoid\_Name*: Geodetic Reference System 80  
*Semi-major\_Axis*: 6378137.000000  
*Denominator\_of\_Flattening\_Ratio*: 298.257222

---

*Entity\_and\_Attribute\_Information*:

*Overview\_Description*:

*Entity\_and\_Attribute\_Overview*:

In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, FISH) 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 the South Florida atlas, the number is 221), an element/layer 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. BIORES and the other relational data tables are described below in detail. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure. Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN\_SPEC, S, F, NHP, DATE\_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G\_SOURCE, S\_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED\_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed\_Description of the BREED data table. The link to the BIOFILE may be made through the BIO\_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED\_DT is an auxiliary support data table 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 table is SOURCES. This is the same as the source 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 data tables. The entity-relationship diagram describing relationships between attribute tables in the ESI data structure does NOT include the BIOFILE data table, and this data table is NOT described in detail below.

*Entity\_and\_Attribute\_Detail\_Citation*:

A complete description of entity types, attributes, and attribute values for ESI atlases can be found in the NOAA ESI Guidelines ([http://response.restoration.noaa.gov/esi\\_guidelines](http://response.restoration.noaa.gov/esi_guidelines)).

*Detailed\_Description*:

*Entity\_Type*:

*Entity\_Type\_Label:* FISH.PAT

*Entity\_Type\_Definition:*

The FISH.PAT table contains attribute information for the vector polygons in this data set representing fish distribution, concentration areas, nursery areas and spawning areas. Note that all attribute information is stored in a series of relational files, described below. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (221), element number (2), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Attribute:*

*Attribute\_Label:* RARNUM

*Attribute\_Definition:*

An identifier that links directly to the BIORES table or the flat format BIOFILE table. RARNUM values of 0 are holes in the polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BIO\_LUT

*Entity\_Type\_Definition:*

The data table BIO\_LUT is a lookup table that contains items necessary for linking vector objects in the biological data layers with the BIORES data table. Note that all attribute information is stored in a series of relational files, described below. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* RARNUM

*Attribute\_Definition:*

An identifier that links records in the BIO\_LUT data table to records in the BIORES data table or the flat format BIOFILE data table. RARNUM values of 0 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (221), element number (2), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BIORES

*Entity\_Type\_Definition:*

The data table BIORES contains both biological attribute data and items necessary for linking vector objects in the biological data layers via the BIO\_LUT data table to other associated data tables. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* RARNUM

*Attribute\_Definition:*

An identifier that links records in the BIORES data table to records in the BIO\_LUT data table or the flat format BIOFILE data table.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* CONC

*Attribute\_Definition:*

The field CONC refers to concentration, abundance, or density values of a species at a particular location. Density values from RVC data are given in "XX fish/ha". Densities derived from the nearshore hardbottom sampling dataset are given in "XX per 100 sq m". Categorical concentrations used in the atlas were derived from expert opinion, ELMR data or REEF data. Of these, ELMR concentrations can be 'RARE', 'COMMON', 'ABUNDANT', or 'HIGHLY ABUNDANT'. REEF data concentrations are given as 'UNCOMMON',

'COMMON', 'ABUNDANT', and 'HIGHLY ABUNDANT'. Spawning aggregation areas are noted as 'SPAWNING AREA' or 'SPAWNING', along with estimated number of fish. Where quantitative or qualitative data are lacking, species are noted as 'PRESENT' or the field is left blank.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label*: SEASON\_ID

*Attribute\_Definition*:

Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1

*Range\_Domain\_Maximum*: N

*Attribute*:

*Attribute\_Label*: G\_SOURCE

*Attribute\_Definition*:

Geographic source identifier that links records in the BIORES data table to records in the SOURCES data table.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1

*Range\_Domain\_Maximum*: N

*Attribute*:

*Attribute\_Label*: S\_SOURCE

*Attribute\_Definition*:

Seasonality source identifier that links records in the BIORES data table to records in the SOURCES data table.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1

*Range\_Domain\_Maximum*: N

*Attribute*:

*Attribute\_Label*: ELEMENT

*Attribute\_Definition*: Major categories of biological data.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: BIRD

*Enumerated\_Domain\_Value\_Definition*: Birds

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value:* FISH  
*Enumerated\_Domain\_Value\_Definition:* Fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT  
*Enumerated\_Domain\_Value\_Definition:* Habitats and plants  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT  
*Enumerated\_Domain\_Value\_Definition:* Invertebrates  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:* Marine mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE  
*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:* Terrestrial mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links records in the BIORES data table to records in the SPECIES and STATUS data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####  
*Enumerated\_Domain\_Value\_Definition:*  
Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BIORES data table to records in the SEASONAL and BREED data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SPECIES

*Entity\_Type\_Definition:*

The data table SPECIES identifies all species in the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure. Refer to the Completeness Report for list of layer specific species.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* NAME

*Attribute\_Definition:* Species common name for the entire ESI data set.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* GEN\_SPEC

*Attribute\_Definition:* Species scientific name for the entire ESI data set.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and plants

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SUBELEMENT

*Attribute\_Definition:* Element subgroup delineating a logical grouping of species.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* algae

*Enumerated\_Domain\_Value\_Definition:* Algae  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* alligator  
*Enumerated\_Domain\_Value\_Definition:* Alligator  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* coral  
*Enumerated\_Domain\_Value\_Definition:* Coral  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* crab  
*Enumerated\_Domain\_Value\_Definition:* Crab  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* diving  
*Enumerated\_Domain\_Value\_Definition:* Diving bird  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* dolphin  
*Enumerated\_Domain\_Value\_Definition:* Dolphin  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* e\_nursery  
*Enumerated\_Domain\_Value\_Definition:* Estuarine nursery fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* e\_resident  
*Enumerated\_Domain\_Value\_Definition:* Estuarine resident fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* echinoderm  
*Enumerated\_Domain\_Value\_Definition:* Echinoderm



*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: fish*

*Enumerated\_Domain\_Value\_Definition: Fish*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: gastropod*

*Enumerated\_Domain\_Value\_Definition: Gastropod*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: gull\_tern*

*Enumerated\_Domain\_Value\_Definition: Gull or tern*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: hardbottom*

*Enumerated\_Domain\_Value\_Definition: Hardbottom*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: insect*

*Enumerated\_Domain\_Value\_Definition: Insect*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: invert*

*Enumerated\_Domain\_Value\_Definition: Invertebrate*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: lizard*

*Enumerated\_Domain\_Value\_Definition: Lizard*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: lobster*

*Enumerated\_Domain\_Value\_Definition: Lobster*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* m\_benthic  
*Enumerated\_Domain\_Value\_Definition:* Marine benthic fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* m\_pelagic  
*Enumerated\_Domain\_Value\_Definition:* Marine pelagic fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* manatee  
*Enumerated\_Domain\_Value\_Definition:* Manatee  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* passerine  
*Enumerated\_Domain\_Value\_Definition:* Passerine bird  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* pelagic  
*Enumerated\_Domain\_Value\_Definition:* Pelagic bird  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* plant  
*Enumerated\_Domain\_Value\_Definition:* Plant  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* raptor  
*Enumerated\_Domain\_Value\_Definition:* Raptor  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* reef  
*Enumerated\_Domain\_Value\_Definition:* Reef  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* sav

*Enumerated\_Domain\_Value\_Definition:* Submerged aquatic vegetation

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* shorebird

*Enumerated\_Domain\_Value\_Definition:* Shorebird

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* shrimp

*Enumerated\_Domain\_Value\_Definition:* Shrimp

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* sm\_mammal

*Enumerated\_Domain\_Value\_Definition:* Small mammal

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* snake

*Enumerated\_Domain\_Value\_Definition:* Snake

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* turtle

*Enumerated\_Domain\_Value\_Definition:* Turtle

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* ungulate

*Enumerated\_Domain\_Value\_Definition:* Ungulate

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* upland

*Enumerated\_Domain\_Value\_Definition:* Upland vegetation

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* wading

*Enumerated\_Domain\_Value\_Definition:* Wading bird

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* waterfowl

*Enumerated\_Domain\_Value\_Definition:* Waterfowl

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* NHP

*Attribute\_Definition:* Natural Heritage Program global ranking.

*Attribute\_Definition\_Source:* Network of Natural Heritage Program

*Attribute\_Domain\_Values:*

*Codeset\_Domain:*

*Codeset\_Name:* NHP Global Conservation Status Rank

*Codeset\_Source:* Natural Heritage Program

*Attribute:*

*Attribute\_Label:* DATE\_PUB

*Attribute\_Definition:* Date of NHP listing.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 0

*Enumerated\_Domain\_Value\_Definition:* Date unspecified

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links records in the SPECIES data table to records in the BIORES and STATUS data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B0001').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SEASONAL

*Entity\_Type\_Definition:*

The data table SEASONAL contains information on the seasonal presence of each species associated with each spatial vector object. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and plants

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* SEASON\_ID

*Attribute\_Definition:*

Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* JAN

*Attribute\_Definition:* January

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in January

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* FEB

*Attribute\_Definition:* February

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in February

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* MAR

*Attribute\_Definition:* March  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in March  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* APR  
*Attribute\_Definition:* April  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in April  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* MAY  
*Attribute\_Definition:* May  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in May  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* JUN  
*Attribute\_Definition:* June  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in June  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* JUL  
*Attribute\_Definition:* July  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in July  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* AUG  
*Attribute\_Definition:* August  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in August  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SEP  
*Attribute\_Definition:* September  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in September  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* OCT  
*Attribute\_Definition:* October  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in October  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* NOV  
*Attribute\_Definition:* November  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in November  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* DEC  
*Attribute\_Definition:* December  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in December  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*



*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the SEASONAL data table to records in the BIORES and BREED data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BREED

*Entity\_Type\_Definition:*

The data table BREED identifies the monthly presence of certain life-history stages or activities for each species at a given location.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BREED data table to records in the BIORES and SEASONAL data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* MONTH

*Attribute\_Definition:*

Two-digit calendar month. Each life history stage or activity type for a particular species can have up to 12 records to account for each month of the year.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* 12

*Attribute:*

*Attribute\_Label:* BREED1

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED1 = nesting; if ELEMENT is

"FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning; if ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M\_MAMMAL" then BREED1 = mating. This attribute is not used for HABITAT or T\_MAMMAL.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* BREED2

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = migrating; if ELEMENT is "FISH" then BREED2 = eggs; if ELEMENT is "INVERT" then BREED2 = eggs; if ELEMENT is "REPTILE" then BREED2 = hatching; if ELEMENT is "M\_MAMMAL" then BREED2 = calving. This attribute is not used for HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* BREED3

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED3 = molting; if ELEMENT is "FISH" then BREED3 = larvae; if ELEMENT is "INVERT" then BREED3 = larvae; if ELEMENT is "REPTILE" then BREED3 = interesting; if ELEMENT is "M\_MAMMAL" then BREED3 = pupping. This attribute is not used for HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* BREED4

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "FISH" then BREED4 = juveniles; if ELEMENT is "INVERT" then BREED4 = juveniles; if ELEMENT is "REPTILE" then BREED4 = juveniles; if ELEMENT is "M\_MAMMAL" then BREED4 = molting. This attribute is not used for BIRD, HABITAT, or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* BREED5

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 = adults; if ELEMENT is "INVERT" then BREED5 = adults; if ELEMENT is "REPTILE" then BREED5 = adults. This attribute is not used for BIRD, M\_MAMMAL, HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* STATUS

*Entity\_Type\_Definition:*

The data table STATUS identifies the species that are listed as either threatened or endangered by a state, federal, or international authority. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT  
*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT  
*Enumerated\_Domain\_Value\_Definition:* Invertebrates  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:* Marine Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE  
*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1  
*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* STATE

*Attribute\_Definition:* Two-letter state abbreviation.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* COUNTRY

*Attribute\_Definition:* Three-letter country abbreviation.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* S

*Attribute\_Definition:* State threatened or endangered status.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

*Enumerated\_Domain\_Value\_Definition:* Endangered on state list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T

*Enumerated\_Domain\_Value\_Definition:* Threatened on state list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* C

*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* F

*Attribute\_Definition:* Federal threatened or endangered status.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

*Enumerated\_Domain\_Value\_Definition:* Endangered on federal list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T

*Enumerated\_Domain\_Value\_Definition:* Threatened on federal list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* C

*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* I  
*Attribute\_Definition:* International threatened or endangered status.  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E  
*Enumerated\_Domain\_Value\_Definition:* Endangered on international list  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T  
*Enumerated\_Domain\_Value\_Definition:* Threatened on international list  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* C  
*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* S\_DATE  
*Attribute\_Definition:*  
Publication date of source material used to assign state status values for each species, if used.  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM  
*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* F\_DATE  
*Attribute\_Definition:*  
Publication date of source material used to assign federal status values for each species, if used.  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM  
*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* I\_DATE  
*Attribute\_Definition:*

Publication date of source material used to assign international status values for each species, if used.  
*Attribute\_Definition\_Source*: NOAA ESI Guidelines  
*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: YYYYMM  
*Enumerated\_Domain\_Value\_Definition*: YYYY for year and optionally MM for month  
*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute*:

*Attribute\_Label*: EL\_SPE

*Attribute\_Definition*:

Concatenation of ELEMENT and SPECIES\_ID. This item links the STATUS data table to the BIORES and SPECIES data tables.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: E#####  
*Enumerated\_Domain\_Value\_Definition*:  
Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').  
*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Detailed\_Description*:

*Entity\_Type*:

*Entity\_Type\_Label*: SOURCES

*Entity\_Type\_Definition*:

The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source*: NOAA ESI Guidelines

*Attribute*:

*Attribute\_Label*: SOURCE\_ID

*Attribute\_Definition*:

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table; G\_SOURCE and S\_SOURCE in the BIORES table; and SOURCE\_ID and ESI\_Source in the ESI and HYDRO data layers.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1  
*Range\_Domain\_Maximum*: N

*Attribute*:

*Attribute\_Label*: ORIGINATOR

*Attribute\_Definition*: Author or developer of source material or data set.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:



*Attribute\_Label:* DATE\_PUB

*Attribute\_Definition:*

Date of source material, publication, or date of personal communication with expert source.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* TITLE

*Attribute\_Definition:* Title of source material or data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* DATA\_FORMAT

*Attribute\_Definition:* The format of the source material.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUB\_PLACE

*Attribute\_Definition:* Publication place.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUBLISHER

*Attribute\_Definition:* Publisher.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUBLICATION

*Attribute\_Definition:* Additional citation information.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* ONLINE\_LINK

*Attribute\_Definition:* Online computer resource URL.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* SCALE

*Attribute\_Definition:* Description of the source scale.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* TIME\_PERIOD

*Attribute\_Definition:*

Date(s) of data collection that the source material is based upon.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

---

*Distribution\_Information:*

*Distributor:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:* John Kaperick

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Address:*

*Address\_Type:* Physical Address

*Address:* 7600 Sand Point Way N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6400

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Resource\_Description:* Downloadable Data

*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.

*Custom\_Order\_Process:*

Contact NOAA for distribution options (see Distributor). 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 distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

---

*Metadata\_Reference\_Information:*

*Metadata\_Date:* 201304

*Metadata\_Review\_Date:* 201304

*Metadata\_Contact:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:* Jill Petersen

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Position:* GIS Manager

*Contact\_Address:*

*Address\_Type:* Physical Address

*Address:* 7600 Sand Point Way, N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6944

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

*Metadata\_Standard\_Name:* Content Standards for Digital Geospatial Metadata

*Metadata\_Standard\_Version:* FGDC-STD-001-1998

# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: South Florida: HABITATS (Habitat Polygons)

Metadata also available as - [[Parseable text](#)] - [[SGML](#)] - [[XML](#)]

## Metadata:

- [Identification Information](#)
  - [Data Quality Information](#)
  - [Spatial Data Organization Information](#)
  - [Spatial Reference Information](#)
  - [Entity and Attribute Information](#)
  - [Distribution Information](#)
  - [Metadata Reference Information](#)
- 

### *Identification\_Information:*

#### *Citation:*

##### *Citation\_Information:*

##### *Originator:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington.

*Publication\_Date:* 201304

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: South Florida: HABITATS (Habitat Polygons)

*Edition:* Second

*Geospatial\_Data\_Presentation\_Form:* vector digital data

##### *Series\_Information:*

*Series\_Name:* South Florida

*Issue\_Identification:* South Florida

##### *Publication\_Information:*

*Publication\_Place:* Seattle, Washington

##### *Publisher:*

NOAA's Ocean Service, Office of Response and Restoration (OR&R), Emergency Response Division (ERD).

##### *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

*Description:*

*Abstract:*

This data set contains sensitive biological resource data for threatened/endangered/rare terrestrial plants and communities in [for] South Florida. Vector polygons in this data set represent plants and communities. Species specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the ESI data for South Florida. ESI data characterize the marine and 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.

*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.

*Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1994

*Ending\_Date:* 2013

*Currentness\_Reference:*

The data were compiled during 2011-2013. The currentness dates for this data range from 1994 to 2013 and are documented in the Lineage section.

*Status:*

*Progress:* Complete

*Maintenance\_and\_Update\_Frequency:* None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -82.93300

*East\_Bounding\_Coordinate:* -80.00000

*North\_Bounding\_Coordinate:* 26.37500

*South\_Bounding\_Coordinate:* 24.50000

*Keywords:*

*Theme:*

*Theme\_Keyword\_Thesaurus:* ISO 19115 Topic Category

*Theme\_Keyword:* biota

*Theme\_Keyword:* environment

*Theme:*

*Theme\_Keyword\_Thesaurus:* None  
*Theme\_Keyword:* Environmental Monitoring  
*Theme\_Keyword:* ESI  
*Theme\_Keyword:* Sensitivity maps  
*Theme\_Keyword:* Coastal resources  
*Theme\_Keyword:* Oil spill planning  
*Theme\_Keyword:* Coastal Zone Management  
*Theme\_Keyword:* Wildlife  
*Theme\_Keyword:* Habitat

*Place:*

*Place\_Keyword\_Thesaurus:* None  
*Place\_Keyword:* South Florida

*Access\_Constraints:* None

*Use\_Constraints:*

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* datafig.jpg

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and attribute data tables for the South Florida ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* datafig2.jpg

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and desktop data tables for the South Florida ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington, the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness Washington, D.C. and the Fish and Wildlife Research Institute (FWRI), Florida Fish and Wildlife Conservation Commission (FWC), St. Petersburg, Florida.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 10.0) and SQL SERVER(R) (version 2005). The hardware configuration is PC's with Windows Operating System 7.

The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in the data set: benthic.e00, birds.e00, esil.e00, esip.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, mgt\_fish.e00, nests.e00, reptiles.e00, socecon.e00, and t\_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio\_lut.e00, biofile.e00, biores.e00, breed.e00, seasonal.e00, soc\_dat.e00, soc\_lut.e00, sources.e00, species.e00, status.e00, mgt\_fish\_lut.e00, and mgt\_fish.e00.

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## *Data\_Quality\_Information:*

### *Attribute\_Accuracy:*

#### *Attribute\_Accuracy\_Report:*

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

#### *Logical\_Consistency\_Report:*

A multi-stage error checking process, described in the above Attribute\_Accuracy\_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary node, etc.), and SQL SERVER(R) to ARC/INFO(R) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM 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 ID's and RARNUM's or HUNUM's are also generated. The new ID's 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 RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resources at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

#### *Completeness\_Report:*

These data represent a synthesis of digital data sets representing rare plant and terrestrial community occurrences. These data do not necessarily represent all habitat occurrences in South Florida. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name [n/a if not applicable]): 498, West Indian falsebox, *Gyminda latifolia*; 1076, Deering's tree cactus, *Pilosocereus polygonus*; 1077, Florida shrubverbena, *Lantana depressa* var. *floridana*; 1088, Bahama brake, *Pteris bahamensis*; 1089, Bahama maidenbush, *Heterosavia bahamensis*; 1090, Bahama sachsia, *Sachsia polycephala*; 1091, Bahama wild coffee, *Psychotria ligustrifolia*; 1092, Beach clustervine, *Jacquemontia reclinata*; 1093, Narrowpod sensitive pea, *Chamaecrista lineata* var. *keyensis*; 1094, Florida bitterbush, *Picramnia pentandra*; 1095, Blodgett's silverbush, *Argythamnia blodgettii*; 1100, Key thatch palm, *Thrinax morrisii*; 1101, Burrowing four o'clock, *Okenia hypogaea*; 1102, Cape Sable whiteweed, *Ageratum maritimum*; 1103, Cape Sable thoroughwort, *Chromolaena frustrata*; 1105, Christmasberry, *Crossopetalum ilicifolium*; 1107, Clinging snakefern, *Microgramma heterophylla*; 1110, Creeping maiden fern, *Thelypteris reptans*; 1111, Clusterspike false indigo, *Amorpha herbacea* var. *crenulata*; 1112, Florida toadwood, *Cupania glabra*; 1113, Wedge sandmat, *Chamaesyce deltoidea* ssp. *Deltoidea*; 1114, Smooth

devil's-claws, *Pisonia rotundata*; 1116, Fewflower holdback, *Caesalpinia pauciflora*; 1119, Florida gamagrass, *Tripsacum floridanum*; 1120, Florida prairie clover, *Dalea carthagensis* var. *floridana*; 1121, Florida royal palm, *Roystonea regia*; 1122, Florida thatch palm, *Thrinax radiata*; 1123, Garber's spurge, *Euphorbia garberi*; 1125, Golden leatherfern, *Acrostichum aureum*; 1126, Pepperleaf sweetwood, *Licaria triandra*; 1127, Hand fern, *Cheiroglossa palmata*; 1130, Joewood, *Jacquinia keyensis*; 1131, Tawnyberry holly, *Ilex krugiana*; 1132, Lamarck's trema, *Trema lamarckiana*; 1133, Least halberd fern, *Tectaria fimbriata*; 1134, Long Key locustberry, *Byrsonima lucida*; 1135, Manchineel, *Hippomane mancinella*; 1136, Mangroveberry, *Mosiera longipes*; 1137, Marsh's dutchman's pipe, *Aristolochia pentandra*; 1138, Meadow jointvetch, *Aeschynomene pratensis*; 1139, Milkbark, *Drypetes diversifolia*; 1140, Limestone spleenwort, *Asplenium verecundum*; 1141, Myrtle of the river, *Calyptranthes zuzygium*; 1142, Pineland clustervine, *Jacquemontia curtissii*; 1143, Florida Keys noseburn, *Tragia saxicola*; 1144, Everglade Key pencilflower, *Stylosanthes calcicola*; 1146, Porter's sandmat, *Chamaesyce porteriana*; 1147, Pride of Big Pine, *Strumpfia maritima*; 1148, Caribbean princewood, *Exostema caribaeum*; 1149, Red stopper, *Eugenia rhombea*; 1150, Maidenberry, *Crossopetalum rhacoma*; 1151, Pineland spurge, *Euphorbia pinetorum*; 1153, Rough strongbark, *Bourreria tomentosa*; 1154, Sand flax, *Linum arenicola*; 1155, sea rosemary, *Tournefortia gnaphalodes*; 1156, Florida silver palm, *Coccothrinax argentata*; 1157, Skyblue clustervine, *Jacquemontia pentanthos*; 1158, Florida hopbush, *Dodonaea viscosa*; 1160, Swartz's snoutbean, *Rhynchosia swartzii*; 1161, Florida Keys thoroughwort, *Koanophyllon villosum*; 1162, Wedge sandmat, *Chamaesyce deltoidea* ssp. *serpyllum*; 1163, West Indian cherry, *Prunus myrtifolia*; 1164, West Indian mahogany, *Swietenia mahagoni*; 1165, Inkwood, *Hypelate trifoliata*; 1166, Whiteflower passionflower, *Passiflora multiflora*; 1167, Wild cinnamon, *Canella winterana*; 1168, Upland cotton, *Gossypium hirsutum*; 1169, Wild dilly, *Manilkara jaimiqui*; 1171, Florida boxwood, *Schaefferia frutescens*; 1176, White fenrose, *Kosteletzkya depressa*; 1177, Roadside leafbract, *Malachra fasciata*; 1178, Tearshrub, *Vallesia antillana*; 1179, Polynesian peperomia, *Peperomia humilis*; 1180, Buttonwood hammock, n/a; 1181, Hardwood hammock, n/a.

*Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy\_Report:*

Spatial components for the biological data layers can come from expert interviews, hardcopy, or digital sources. Some of the spatial components of the biological data layers may have been developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy base maps with a scale of 1:24,000. Some of the spatial components of the biological data sets are developed from pre-existing digital or hardcopy sources and reflect the positional accuracy of these original data. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources. See the Lineage and Process\_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* FLORIDA NATURAL AREAS INVENTORY (FNAI)

*Publication\_Date:* 2011

*Title:* FLORIDA NATURAL AREAS INVENTORY, FLORIDA ELEMENT OCCURRENCE



*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA  
*Publication\_Information:*

*Publication\_Place:* TALLAHASSEE, FL  
*Publisher:* FLORIDA NATURAL AREAS INVENTORY (FNAI)

*Type\_of\_Source\_Media:* EMAIL  
*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2011

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* HABITATS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*  
SADLE, J. (NATIONAL PARK SERVICE (NPS), EVERGLADES NATIONAL  
PARK)  
*Publication\_Date:* 2013  
*Title:* ENP SENSITIVE COASTAL HABITATS  
*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA  
*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* EMAIL  
*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2013

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* HABITATS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*  
SADLE, J. (NATIONAL PARK SERVICE (NPS), EVERGLADES NATIONAL

PARK)  
*Publication\_Date*: 2013  
*Title*: EVERGLADES NATIONAL PARK PLANTS AND HABITATS  
*Geospatial\_Data\_Presentation\_Form*: EXPERT KNOWLEDGE  
*Other\_Citation\_Details*: UNPUBLISHED

*Type\_of\_Source\_Media*: PERSONAL COMMUNICATION  
*Source\_Time\_Period\_of\_Content*:

*Time\_Period\_Information*:

*Single\_Date/Time*:

*Calendar\_Date*: 2013

*Source\_Currentness\_Reference*: DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation*: NONE  
*Source\_Contribution*: HABITATS INFORMATION

*Source\_Information*:

*Source\_Citation*:

*Citation\_Information*:

*Originator*: UNITED STATES FISH AND WILDLIFE SERVICE (USFWS)  
*Publication\_Date*: 2009  
*Title*: KEYS TREE CACTUS FOCUS AREA  
*Geospatial\_Data\_Presentation\_Form*: VECTOR DIGITAL DATA  
*Publication\_Information*:

*Publication\_Place*: VERO BEACH, FL

*Publisher*:

UNITED STATES FISH AND WILDLIFE SERVICE (USFWS), SOUTH  
FLORIDA FIELD OFFICE

*Source\_Scale\_Denominator*: 12000  
*Type\_of\_Source\_Media*: EMAIL  
*Source\_Time\_Period\_of\_Content*:

*Time\_Period\_Information*:

*Single\_Date/Time*:

*Calendar\_Date*: 2009

*Source\_Currentness\_Reference*: DATE OF PUBLICATION

*Source\_Citation\_Abbreviation*: NONE  
*Source\_Contribution*: HABITATS INFORMATION

*Process\_Step*:

*Process\_Description*:

Federally and state threatened/endangered plant occurrences that fell within the study area

were included. Data was provided by Florida Natural Areas Inventory (FNAI) for most records, U.S. Fish and Wildlife Service (USFWS) for Keys tree cactus (State endangered /Federally Endangered), and National Park Service (NPS) for species and communities located in Everglades National Park.

The above digital and/or hardcopy sources were compiled by the project biologist to create the HABITATS data layer. Depending on the type of source data, three general approaches are used for compiling the data layer: 1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:24,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the HABITATS data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:* 201304

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Person:* Jill Petersen

*Contact\_Address:*

*Address\_Type:* Physical address

*Address:* 7600 Sand Point Way, N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6944

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

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*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:* Vector

*Point\_and\_Vector\_Object\_Information:*

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* GT-polygon composed of chains

*Point\_and\_Vector\_Object\_Count:* 1512

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Area point

*Point\_and\_Vector\_Object\_Count:* 1511

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type*: Complete chain  
*Point\_and\_Vector\_Object\_Count*: 1985

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: Link  
*Point\_and\_Vector\_Object\_Count*: 100886

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: Node, planar graph  
*Point\_and\_Vector\_Object\_Count*: 1619

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*Spatial\_Reference\_Information*:

*Horizontal\_Coordinate\_System\_Definition*:

*Geographic*:

*Latitude\_Resolution*: 0.0000001  
*Longitude\_Resolution*: 0.0000001  
*Geographic\_Coordinate\_Units*: Decimal degrees

*Geodetic\_Model*:

*Horizontal\_Datum\_Name*: North American Datum of 1983  
*Ellipsoid\_Name*: Geodetic Reference System 80  
*Semi-major\_Axis*: 6378137.000000  
*Denominator\_of\_Flattening\_Ratio*: 298.257222

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*Entity\_and\_Attribute\_Information*:

*Overview\_Description*:

*Entity\_and\_Attribute\_Overview*:

In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, HABITATS) 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 the South Florida atlas, the number is 221), an element/layer 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. BIORES and the other relational data tables are described below in detail. See the *Browse\_Graphic* section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure. Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN\_SPEC, S, F, NHP, DATE\_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G\_SOURCE, S\_SOURCE, and

BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED\_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed\_Description of the BREED data table. The link to the BIOFILE may be made through the BIO\_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED\_DT is an auxiliary support data table 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 table is SOURCES. This is the same as the source 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 data tables. The entity-relationship diagram describing relationships between attribute tables in the ESI data structure does NOT include the BIOFILE data table, and this data table is NOT described in detail below.

*Entity\_and\_Attribute\_Detail\_Citation:*

A complete description of entity types, attributes, and attribute values for ESI atlases can be found in the NOAA ESI Guidelines ([http://response.restoration.noaa.gov/esi\\_guidelines](http://response.restoration.noaa.gov/esi_guidelines)).

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* HABITATS.PAT

*Entity\_Type\_Definition:*

The HABITATS.PAT table contains attribute information for the vector polygons in this data set representing plants and communities. Note that all attribute information is stored in a series of relational files, described below. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (221), element number (3), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Attribute:*

*Attribute\_Label:* RARNUM

*Attribute\_Definition:*

An identifier that links directly to the BIORES table or the flat format BIOFILE table. RARNUM values of 0 are holes in the polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BIO\_LUT

*Entity\_Type\_Definition:*

The data table BIO\_LUT is a lookup table that contains items necessary for linking vector objects in the biological data layers with the BIORES data table. Note that all attribute information is stored in a series of relational files, described below. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* RARNUM

*Attribute\_Definition:*

An identifier that links records in the BIO\_LUT data table to records in the BIORES data table or the flat format BIOFILE data table. RARNUM values of 0 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (221), element number (3), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BIORES

*Entity\_Type\_Definition:*

The data table BIORES contains both biological attribute data and items necessary for linking vector objects in the biological data layers via the BIO\_LUT data table to other associated data tables. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* RARNUM

*Attribute\_Definition:*

An identifier that links records in the BIORES data table to records in the BIO\_LUT data table or the flat format BIOFILE data table.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* CONC

*Attribute\_Definition:*

The field CONC refers to "concentration," abundance, or density values. Where no concentration data was available or appropriate for mapping, the field is blank. The concentration field may either be blank or contain descriptive terms such as "POTENTIAL" or "HISTORIC".

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* SEASON\_ID

*Attribute\_Definition:*

Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* G\_SOURCE

*Attribute\_Definition:*

Geographic source identifier that links records in the BIORES data table to records in the SOURCES data table.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* S\_SOURCE

*Attribute\_Definition:*

Seasonality source identifier that links records in the BIORES data table to records in the SOURCES data table.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines



*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and plants

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links records in the BIORES data table to records in the SPECIES and STATUS data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BIORES data table to records in the SEASONAL and BREED data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SPECIES

*Entity\_Type\_Definition:*

The data table SPECIES identifies all species in the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure. Refer to the Completeness Report for list of layer specific species.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* NAME

*Attribute\_Definition:* Species common name for the entire ESI data set.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* GEN\_SPEC

*Attribute\_Definition:* Species scientific name for the entire ESI data set.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and plants

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SUBELEMENT

*Attribute\_Definition:* Element subgroup delineating a logical grouping of species.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* algae

*Enumerated\_Domain\_Value\_Definition:* Algae

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* alligator

*Enumerated\_Domain\_Value\_Definition:* Alligator

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* coral

*Enumerated\_Domain\_Value\_Definition:* Coral

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* crab

*Enumerated\_Domain\_Value\_Definition:* Crab

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* diving

*Enumerated\_Domain\_Value\_Definition:* Diving bird  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* dolphin  
*Enumerated\_Domain\_Value\_Definition:* Dolphin  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* e\_nursery  
*Enumerated\_Domain\_Value\_Definition:* Estuarine nursery fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* e\_resident  
*Enumerated\_Domain\_Value\_Definition:* Estuarine resident fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* echinoderm  
*Enumerated\_Domain\_Value\_Definition:* Echinoderm  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* fish  
*Enumerated\_Domain\_Value\_Definition:* Fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* gastropod  
*Enumerated\_Domain\_Value\_Definition:* Gastropod  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* gull\_tern

*Enumerated\_Domain\_Value\_Definition:* Gull or tern  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* hardbottom  
*Enumerated\_Domain\_Value\_Definition:* Hardbottom  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* insect  
*Enumerated\_Domain\_Value\_Definition:* Insect  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* invert  
*Enumerated\_Domain\_Value\_Definition:* Invertebrate  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* lizard  
*Enumerated\_Domain\_Value\_Definition:* Lizard  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* lobster  
*Enumerated\_Domain\_Value\_Definition:* Lobster  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* m\_benthic  
*Enumerated\_Domain\_Value\_Definition:* Marine benthic fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* m\_pelagic

*Enumerated\_Domain\_Value\_Definition:* Marine pelagic fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* manatee  
*Enumerated\_Domain\_Value\_Definition:* Manatee  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* passerine  
*Enumerated\_Domain\_Value\_Definition:* Passerine bird  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* pelagic  
*Enumerated\_Domain\_Value\_Definition:* Pelagic bird  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* plant  
*Enumerated\_Domain\_Value\_Definition:* Plant  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* raptor  
*Enumerated\_Domain\_Value\_Definition:* Raptor  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* reef  
*Enumerated\_Domain\_Value\_Definition:* Reef  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* sav

*Enumerated\_Domain\_Value\_Definition:* Submerged aquatic vegetation  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* shorebird  
*Enumerated\_Domain\_Value\_Definition:* Shorebird  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* shrimp  
*Enumerated\_Domain\_Value\_Definition:* Shrimp  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* sm\_mammal  
*Enumerated\_Domain\_Value\_Definition:* Small mammal  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* snake  
*Enumerated\_Domain\_Value\_Definition:* Snake  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* turtle  
*Enumerated\_Domain\_Value\_Definition:* Turtle  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* ungulate  
*Enumerated\_Domain\_Value\_Definition:* Ungulate  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* upland



*Enumerated\_Domain\_Value\_Definition:* Upland vegetation  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* wading  
*Enumerated\_Domain\_Value\_Definition:* Wading bird  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* waterfowl  
*Enumerated\_Domain\_Value\_Definition:* Waterfowl  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* NHP  
*Attribute\_Definition:* Natural Heritage Program global ranking.  
*Attribute\_Definition\_Source:* Network of Natural Heritage Program  
*Attribute\_Domain\_Values:*

*Codeset\_Domain:*

*Codeset\_Name:* NHP Global Conservation Status Rank  
*Codeset\_Source:* Natural Heritage Program

*Attribute:*

*Attribute\_Label:* DATE\_PUB  
*Attribute\_Definition:* Date of NHP listing.  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM  
*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 0  
*Enumerated\_Domain\_Value\_Definition:* Date unspecified  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE  
*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links records in the SPECIES data table to records in the BIORRES and STATUS data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SEASONAL

*Entity\_Type\_Definition:*

The data table SEASONAL contains information on the seasonal presence of each species associated with each spatial vector object. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and plants

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* SEASON\_ID

*Attribute\_Definition:*

Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1  
*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* JAN  
*Attribute\_Definition:* January  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in January  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* FEB  
*Attribute\_Definition:* February  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in February  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* MAR  
*Attribute\_Definition:* March  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in March  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* APR  
*Attribute\_Definition:* April  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in April  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* MAY  
*Attribute\_Definition:* May  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in May  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* JUN  
*Attribute\_Definition:* June  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in June  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* JUL  
*Attribute\_Definition:* July  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in July  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* AUG  
*Attribute\_Definition:* August  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in August  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SEP  
*Attribute\_Definition:* September

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

*Enumerated\_Domain\_Value\_Definition*: Present in September

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute*:

*Attribute\_Label*: OCT

*Attribute\_Definition*: October

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

*Enumerated\_Domain\_Value\_Definition*: Present in October

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute*:

*Attribute\_Label*: NOV

*Attribute\_Definition*: November

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

*Enumerated\_Domain\_Value\_Definition*: Present in November

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute*:

*Attribute\_Label*: DEC

*Attribute\_Definition*: December

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

*Enumerated\_Domain\_Value\_Definition*: Present in December

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute*:

*Attribute\_Label*: EL\_SPE\_SEA

*Attribute\_Definition*:

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the SEASONAL data table to records in the BIORES and BREED data tables.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BREED

*Entity\_Type\_Definition:*

The data table BREED identifies the monthly presence of certain life-history stages or activities for each species at a given location.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BREED data table to records in the BIORES and SEASONAL data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* MONTH

*Attribute\_Definition:*

Two-digit calendar month. Each life history stage or activity type for a particular species can have up to 12 records to account for each month of the year.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* 12

*Attribute:*

*Attribute\_Label:* BREED1

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED1 = nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning; if ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M\_MAMMAL" then BREED1 = mating. This attribute is not used for HABITAT or T\_MAMMAL.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* BREED2

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = migrating; if ELEMENT is "FISH" then BREED2 = eggs; if ELEMENT is "INVERT" then BREED2 = eggs; if ELEMENT is "REPTILE" then BREED2 = hatching; if ELEMENT is "M\_MAMMAL" then BREED2 = calving. This attribute is not used for HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*



*Enumerated\_Domain\_Value:* N  
*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not reported  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -  
*Enumerated\_Domain\_Value\_Definition:*  
Breed category not used or not appropriate for record(s) in question  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* BREED3

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED3 = molting; if ELEMENT is "FISH" then BREED3 = larvae; if ELEMENT is "INVERT" then BREED3 = larvae; if ELEMENT is "REPTILE" then BREED3 = interesting; if ELEMENT is "M\_MAMMAL" then BREED3 = pupping. This attribute is not used for HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y  
*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N  
*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not reported  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -  
*Enumerated\_Domain\_Value\_Definition:*  
Breed category not used or not appropriate for record(s) in question  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* BREED4

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "FISH" then BREED4 = juveniles;

if ELEMENT is "INVERT" then BREED4 = juveniles; if ELEMENT is "REPTILE" then BREED4 = juveniles; if ELEMENT is "M\_MAMMAL" then BREED4 = molting. This attribute is not used for BIRD, HABITAT, or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* BREED5

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 = adults; if ELEMENT is "INVERT" then BREED5 = adults; if ELEMENT is "REPTILE" then BREED5 = adults. This attribute is not used for BIRD, M\_MAMMAL, HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* STATUS

*Entity\_Type\_Definition:*

The data table STATUS identifies the species that are listed as either threatened or endangered by a state, federal, or international authority. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:* Marine Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE  
*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1  
*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* STATE

*Attribute\_Definition:* Two-letter state abbreviation.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* COUNTRY

*Attribute\_Definition:* Three-letter country abbreviation.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label*: S

*Attribute\_Definition*: State threatened or endangered status.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: E

*Enumerated\_Domain\_Value\_Definition*: Endangered on state list

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: T

*Enumerated\_Domain\_Value\_Definition*: Threatened on state list

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: C

*Enumerated\_Domain\_Value\_Definition*: Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute*:

*Attribute\_Label*: F

*Attribute\_Definition*: Federal threatened or endangered status.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: E

*Enumerated\_Domain\_Value\_Definition*: Endangered on federal list

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: T

*Enumerated\_Domain\_Value\_Definition*: Threatened on federal list

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value:* C  
*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* I  
*Attribute\_Definition:* International threatened or endangered status.  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E  
*Enumerated\_Domain\_Value\_Definition:* Endangered on international list  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T  
*Enumerated\_Domain\_Value\_Definition:* Threatened on international list  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* C  
*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* S\_DATE  
*Attribute\_Definition:*  
Publication date of source material used to assign state status values for each species, if used.  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM  
*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* F\_DATE  
*Attribute\_Definition:*  
Publication date of source material used to assign federal status values for each species, if used.  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* I\_DATE

*Attribute\_Definition:*

Publication date of source material used to assign international status values for each species, if used.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links the STATUS data table to the BIORES and SPECIES data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SOURCES

*Entity\_Type\_Definition:*

The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SOURCE\_ID

*Attribute\_Definition:*

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and

A\_SOURCE in the SOC\_DAT table; G\_SOURCE and S\_SOURCE in the BIORRES table; and SOURCE\_ID and ESI\_Source in the ESI and HYDRO data layers.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1

*Range\_Domain\_Maximum*: N

*Attribute*:

*Attribute\_Label*: ORIGINATOR

*Attribute\_Definition*: Author or developer of source material or data set.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label*: DATE\_PUB

*Attribute\_Definition*:

Date of source material, publication, or date of personal communication with expert source.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: YYYYMM

*Enumerated\_Domain\_Value\_Definition*: YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute*:

*Attribute\_Label*: TITLE

*Attribute\_Definition*: Title of source material or data.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label*: DATA\_FORMAT

*Attribute\_Definition*: The format of the source material.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label*: PUB\_PLACE

*Attribute\_Definition*: Publication place.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines



*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUBLISHER

*Attribute\_Definition:* Publisher.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUBLICATION

*Attribute\_Definition:* Additional citation information.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* ONLINE\_LINK

*Attribute\_Definition:* Online computer resource URL.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* SCALE

*Attribute\_Definition:* Description of the source scale.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* TIME\_PERIOD

*Attribute\_Definition:*

Date(s) of data collection that the source material is based upon.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

---

*Distribution\_Information:*

*Distributor:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:* John Kaperick

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Address:*

*Address\_Type:* Physical Address

*Address:* 7600 Sand Point Way N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6400

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Resource\_Description:* Downloadable Data

*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.

*Custom\_Order\_Process:*

Contact NOAA for distribution options (see Distributor). 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 distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

---

*Metadata\_Reference\_Information:*

*Metadata\_Date:* 201304

*Metadata\_Review\_Date:* 201304

*Metadata\_Contact:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:* Jill Petersen

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Position:* GIS Manager

*Contact\_Address:*

*Address\_Type:* Physical Address

*Address:* 7600 Sand Point Way, N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code*: 98115-6349

*Contact\_Voice\_Telephone*: (206) 526-6944

*Contact\_Facsimile\_Telephone*: (206) 526-6329

*Contact\_Electronic\_Mail\_Address*: Jill.Petersen@noaa.gov

*Metadata\_Standard\_Name*: Content Standards for Digital Geospatial Metadata

*Metadata\_Standard\_Version*: FGDC-STD-001-1998

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# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: South Florida: INDEX (Index Polygons)

Metadata also available as - [[Parseable text](#)] - [[SGML](#)] - [[XML](#)]

## Metadata:

- [Identification Information](#)
  - [Data Quality Information](#)
  - [Spatial Data Organization Information](#)
  - [Spatial Reference Information](#)
  - [Entity and Attribute Information](#)
  - [Distribution Information](#)
  - [Metadata Reference Information](#)
- 

### *Identification\_Information:*

#### *Citation:*

##### *Citation\_Information:*

##### *Originator:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington.

*Publication\_Date:* 201304

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: South Florida: INDEX (Index Polygons)

*Edition:* Second

*Geospatial\_Data\_Presentation\_Form:* vector digital data

##### *Series\_Information:*

*Series\_Name:* South Florida

*Issue\_Identification:* South Florida

##### *Publication\_Information:*

*Publication\_Place:* Seattle, Washington

##### *Publisher:*

NOAA's Ocean Service, Office of Response and Restoration (OR&R), Emergency Response Division (ERD).

##### *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, Emergency Response Division, Seattle, Washington.

*Online\_Linkage:* <<http://response.restoration.noaa.gov/esi>>

*Description:*

*Abstract:*

This data set contains vector polygons representing the boundaries of all hardcopy cartographic products produced as part of the Environmental Sensitivity Index (ESI) for South Florida. This data set comprises a portion of the ESI data for South Florida. ESI data characterize the marine and 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.

*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.

*Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1969

*Ending\_Date:* 1990

*Currentness\_Reference:*

The data were compiled during 2011-2013. The currentness dates for this data range from 1969 to 1990 and are documented in the Lineage section.

*Status:*

*Progress:* Complete

*Maintenance\_and\_Update\_Frequency:* None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -82.93300

*East\_Bounding\_Coordinate:* -80.00000

*North\_Bounding\_Coordinate:* 26.37500

*South\_Bounding\_Coordinate:* 24.50000

*Keywords:*

*Theme:*

*Theme\_Keyword\_Thesaurus:* ISO 19115 Topic Category

*Theme\_Keyword:* biota

*Theme\_Keyword:* environment

*Theme:*

*Theme\_Keyword\_Thesaurus:* None

*Theme\_Keyword:* Environmental Monitoring

*Theme\_Keyword:* ESI

*Theme\_Keyword:* Sensitivity maps

*Theme\_Keyword:* Coastal resources  
*Theme\_Keyword:* Oil spill planning  
*Theme\_Keyword:* Coastal Zone Management  
*Theme\_Keyword:* Wildlife

*Place:*

*Place\_Keyword\_Thesaurus:* None  
*Place\_Keyword:* South Florida

*Access\_Constraints:* None

*Use\_Constraints:*

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* datafig.jpg

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and attribute data tables for the South Florida ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* datafig2.jpg

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and desktop data tables for the South Florida ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington, the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness Washington, D.C. and the Fish and Wildlife Research Institute (FWRI), Florida Fish and Wildlife Conservation Commission (FWC), St. Petersburg, Florida.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 10.0) and SQL SERVER(R) (version 2005). The hardware configuration is PC's with Windows Operating System 7.

The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in the data set: benthic.e00, birds.e00, esil.e00, esip.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, mgt\_fish.e00, nests.e00, reptiles.e00, socecon.e00, and t\_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio\_lut.e00, biofile.e00, biores.e00, breed.e00, seasonal.e00, soc\_dat.e00,

*Data\_Quality\_Information:*

*Attribute\_Accuracy:*

*Attribute\_Accuracy\_Report:*

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

*Logical\_Consistency\_Report:*

A multi-stage error checking process, described in the above *Attribute\_Accuracy\_Report*, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary node, etc.), and SQL SERVER(R) to ARC/INFO(R) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks.

*Completeness\_Report:*

These data represent the boundaries of all hardcopy cartographic products and digital data extents produced as part of the South Florida ESI atlas.

*Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy\_Report:*

The index polygons in this data layer were generated in ArcInfo from the coordinates of the USGS 1:24,000 topographic map corners. Some small amount of positional error may be present along the arcs forming the boundaries of these polygons, particularly away from the polygon corners. Some boundaries were developed from pre-existing digital and hardcopy sources and reflect the positional accuracy of these original data. See the Lineage and Process\_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Publication\_Date:* 2003

*Title:* ENVIRONMENTAL SENSITIVITY INDEX FLORIDA

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* ST. PETERSBURG, FL

*Publisher:*

FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI), FLORIDA  
FISH AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Source\_Scale\_Denominator:* 12000

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1993

*Ending\_Date:* 2003

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:*

ARSENICKER KEYS, FLA. (1988); BAY KEYS, FLA.(1972); BIG PINE KEY, FLA. (1972); BLACKWATER SOUND, FLA. (1973); BOCA CHICA KEY, FLA. (1971); BOCA RATON, FLA. (1983); BUCHANAN KEYS, FLA. (1972); CALUSA KEYS, FLA. (1972); CARD SOUND, FLA. (1988); CLIVE KEY, FLA. (1972); CONTENT KEYS, FLA. (1972); COTTRELL KEY, FLA. (1972); CRAWL KEY, FLA. (1971); DRY TORTUGAS, FLA. (1971); EAST BAHIA HONDA KEY, FLA. (1972); ELLIOT KEY, FLA. (1988); FLAMINGO, FLA. (1990); FORT LAUDERDALE SOUTH, FLA. (1983); GARDEN COVE, FLA. (1969); GLADES, FLA. (1988); GRASSY KEY, FLA. (1990); HORSESHOE KEYS, FLA. (1972); JOE BAY, FLA. (1972); KEY BISCAYNE, FLA. (1988); KEY WEST, FLA. (1971); LAKE INGRAHAM EAST, FLA. (1972); LOGGERHEAD KEY, FLA. (1972); LONG KEY, FLA. (1971); LOWER MATECUMBE KEY, FLA. (1971); MADEIRA BAY, FLA. (1972); MARATHON, FLA. (1971); MARQUESAS KEYS EAST, FLA. (1971); MARQUESAS KEYS WEST, FLA. (1971); MIAMI, FLA. (1990); NORTH MIAMI, FLA. (1988); PACIFIC REEF, FLA. (1988); PELICAN KEYS, FLA. (1972); PERRINE, FLA. (1988); PLANTATION KEY, FLA. (1971); POMPANO BEACH, FLA. (1983); PORT EVERGLADES, FLA. (1983); ROCK HARBOR, FLA. (1990); SADDLEBUNCH KEYS, FLA. (1972); SANDY KEY, FLA. (1972); SAWYER KEY, FLA. (1972); SEVENMILE BRIDGE, FLA. (1979); SNIPE KEYS, FLA. (1972); SOLDIER KEY, FLA. (1988); SOUTH MIAMI, FLA. (1988); SUGARLOAF KEY, FLA. (1972); SUMMERLAND KEY, FLA. (1972); TAVERNIER, FLA. (1971); UPPER MATECUMBE KEY, FLA. (1971); WEST LAKE, FLA. (1972);

*Process\_Step:*

*Process\_Description:*

Primarily, 1:24000 USGS topographic maps were used to provide boundaries for cartographic products. In some cases the polygons represent USGS topographic maps that were re-tiled, moved, or extended to provide better cartographic coverage of the study area.

*Process\_Date:* 201304

*Process\_Contact:*

*Contact\_Information:*



*Contact\_Organization\_Primary:*

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Person:* Jill Petersen

*Contact\_Address:*

*Address\_Type:* Physical address

*Address:* 7600 Sand Point Way, N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6944

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

---

*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:* Vector

*Point\_and\_Vector\_Object\_Information:*

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* GT-polygon composed of chains

*Point\_and\_Vector\_Object\_Count:* 55

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Area point

*Point\_and\_Vector\_Object\_Count:* 54

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Complete chain

*Point\_and\_Vector\_Object\_Count:* 149

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Link

*Point\_and\_Vector\_Object\_Count:* 149

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Node, planar graph

*Point\_and\_Vector\_Object\_Count:* 97

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*Spatial\_Reference\_Information:*

*Horizontal\_Coordinate\_System\_Definition:*

*Geographic:*

*Latitude\_Resolution:* 0.0000001

*Longitude\_Resolution:* 0.0000001  
*Geographic\_Coordinate\_Units:* Decimal degrees

*Geodetic\_Model:*

*Horizontal\_Datum\_Name:* North American Datum of 1983  
*Ellipsoid\_Name:* Geodetic Reference System 80  
*Semi-major\_Axis:* 6378137.000000  
*Denominator\_of\_Flattening\_Ratio:* 298.257222

---

*Entity\_and\_Attribute\_Information:*

*Overview\_Description:*

*Entity\_and\_Attribute\_Overview:*

In addition to the geographic data layers, relational attribute or data tables are used to store information in the ESI data structure. The entity-relationship diagram describes relationships between attribute tables in the ESI data structure. This particular geographic data layer (INDEX) does not link to other ESI tables.

*Entity\_and\_Attribute\_Detail\_Citation:*

A complete description of entity types, attributes, and attribute values for ESI atlases can be found in the NOAA ESI Guidelines ([http://response.restoration.noaa.gov/esi\\_guidelines](http://response.restoration.noaa.gov/esi_guidelines)).

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* INDEX.PAT

*Entity\_Type\_Definition:*

The INDEX.PAT table contains attribute information for the vector polygons representing the boundaries of the maps and digital data boundaries used in the creation of the ESI atlas.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* TILE-NAME

*Attribute\_Definition:*

The TILE-NAME contains the map number according to the specified layout of the atlas.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* 54

*Attribute:*

*Attribute\_Label:* TOPO-NAME

*Attribute\_Definition:*

USGS Topographic map name, short description of location, or atlas name.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* SCALE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 24000

*Enumerated\_Domain\_Value\_Definition:* Scale = 1:24,000

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* MAPANGLE

*Attribute\_Definition:*

MAPANGLE contains the value to rotate the final map product so that it is situated straight up and down.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* -1.8310

*Range\_Domain\_Maximum:* -0.5270

*Attribute\_Units\_of\_Measure:* Degree

*Attribute:*

*Attribute\_Label:* PAGESIZE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 11,17

*Enumerated\_Domain\_Value\_Definition:* Page size= 11" by 17"

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

---

*Distribution\_Information:*

*Distributor:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:* John Kaperick

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Address:*

*Address\_Type:* Physical Address  
*Address:* 7600 Sand Point Way N.E.  
*City:* Seattle  
*State\_or\_Province:* Washington  
*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6400  
*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Resource\_Description:* Downloadable Data

*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.

*Custom\_Order\_Process:*

Contact NOAA for distribution options (see Distributor). 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 distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

---

*Metadata\_Reference\_Information:*

*Metadata\_Date:* 201304  
*Metadata\_Review\_Date:* 201304  
*Metadata\_Contact:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:* Jill Petersen  
*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Position:* GIS Manager

*Contact\_Address:*

*Address\_Type:* Physical Address  
*Address:* 7600 Sand Point Way, N.E.  
*City:* Seattle  
*State\_or\_Province:* Washington  
*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6944  
*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

*Metadata\_Standard\_Name:* Content Standards for Digital Geospatial Metadata

*Metadata\_Standard\_Version:* FGDC-STD-001-1998

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# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: South Florida: HYDRO (Hydrography Lines and Polygons)

Metadata also available as - [[Parseable text](#)] - [[SGML](#)] - [[XML](#)]

## Metadata:

- [Identification Information](#)
  - [Data Quality Information](#)
  - [Spatial Data Organization Information](#)
  - [Spatial Reference Information](#)
  - [Entity and Attribute Information](#)
  - [Distribution Information](#)
  - [Metadata Reference Information](#)
- 

### *Identification\_Information:*

#### *Citation:*

#### *Citation\_Information:*

#### *Originator:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington.

*Publication\_Date:* 201304

#### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: South Florida: HYDRO (Hydrography Lines and Polygons)

*Edition:* Second

*Geospatial\_Data\_Presentation\_Form:* vector digital data

#### *Series\_Information:*

*Series\_Name:* South Florida

*Issue\_Identification:* South Florida

#### *Publication\_Information:*

*Publication\_Place:* Seattle, Washington

#### *Publisher:*

NOAA's Ocean Service, Office of Response and Restoration (OR&R), Emergency Response Division (ERD).

#### *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, Emergency Response Division, Seattle, Washington.

*Online\_Linkage:* <<http://response.restoration.noaa.gov/esi>>

*Description:*

*Abstract:*

This data set contains vector lines and polygons representing coastal hydrography used in the creation of the Environmental Sensitivity Index (ESI) South Florida. This data set comprises a portion of the ESI data for South Florida. ESI data characterize the marine and 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. See also the ESIL and ESIP data layers, part of the larger South Florida ESI database, for additional ESI information.

*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.

*Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1999

*Ending\_Date:* 2011

*Currentness\_Reference:*

The data were compiled during 2011-2013. The currentness dates for this data range from 1999 to 2011 and are documented in the Lineage section.

*Status:*

*Progress:* Complete

*Maintenance\_and\_Update\_Frequency:* None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -82.93300

*East\_Bounding\_Coordinate:* -80.00000

*North\_Bounding\_Coordinate:* 26.37500

*South\_Bounding\_Coordinate:* 24.50000

*Keywords:*

*Theme:*

*Theme\_Keyword\_Thesaurus:* ISO 19115 Topic Category

*Theme\_Keyword:* biota

*Theme\_Keyword:* environment

*Theme:*

*Theme\_Keyword\_Thesaurus:* None

*Theme\_Keyword:* Environmental Monitoring

*Theme\_Keyword:* ESI

*Theme\_Keyword:* Sensitivity maps  
*Theme\_Keyword:* Coastal resources  
*Theme\_Keyword:* Oil spill planning  
*Theme\_Keyword:* Coastal Zone Management  
*Theme\_Keyword:* Wildlife  
*Theme\_Keyword:* Hydrography

*Place:*

*Place\_Keyword\_Thesaurus:* None  
*Place\_Keyword:* South Florida

*Access\_Constraints:* None

*Use\_Constraints:*

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* datafig.jpg

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and attribute data tables for the South Florida ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* datafig2.jpg

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and desktop data tables for the South Florida ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington, the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness Washington, D.C. and the Fish and Wildlife Research Institute (FWRI), Florida Fish and Wildlife Conservation Commission (FWC), St. Petersburg, Florida.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 10.0) and SQL SERVER(R) (version 2005). The hardware configuration is PC's with Windows Operating System 7.

The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in the data set: benthic.e00, birds.e00, esil.e00, esip.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, mgt\_fish.e00, nests.e00, reptiles.e00, socecon.e00, and t\_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio\_lut.e00, biofile.e00, biores.e00, breed.e00, seasonal.e00, soc\_dat.e00,



*Data\_Quality\_Information:*

*Attribute\_Accuracy:*

*Attribute\_Accuracy\_Report:*

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

*Logical\_Consistency\_Report:*

A multi-stage error checking process, described in the above Attribute\_Accuracy\_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary node, etc.), and SQL SERVER(R) to ARC/INFO(R) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks.

*Completeness\_Report:*

These data represent linear and polygonal hydrography for South Florida. See also the ESIL and ESIP data layers, part of the larger South Florida ESI database, for additional ESI information.

*Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy\_Report:*

The hydrography data set was developed from pre-existing digital data and reflects the positional accuracy of these original data. The horizontal positional accuracy of the 1:24,000 USGS topographic quads should conform to National Map Accuracy Standards at scales of 1:24,000. See the Lineage and Process\_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION  
(FWC)

*Publication\_Date:* 2011

*Title:* SOUTH FLORIDA SHORELINE LANDWATER

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* ST. PETERSBURG, FL

*Publisher:*

FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI), FLORIDA FISH  
AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Other\_Citation\_Details:*

COMPILED FROM: LAND USE LAND COVER SOUTH FLORIDA WATER  
MANAGEMENT DISTRICT 2004-2005; BENTHIC HABITATS FLORIDA BAY  
2004; TORTUGAS BENTHIC 2008; SHORELINE 1:12,000 SCALE FLORIDA  
2004.

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 2004

*Ending\_Date:* 2008

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* HYDRO INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

MARINE RESOURCE GEOGRAPHIC INFORMATION SYSTEM, FLORIDA  
FISH AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Publication\_Date:* 2011

*Title:* FWC\_IMAGERY\_WEB

*Geospatial\_Data\_Presentation\_Form:* RASTER DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* ST. PETERSBURG, FL

*Publisher:*

FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI), FLORIDA FISH  
AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Other\_Citation\_Details:*

THIS DATA SET IS COMPRISED OF A VARIETY OF DATES OF IMAGERY.  
THE PRIMARY DATA SET USED WAS THE 2004 DOQQS.

*Online\_Linkage:*

[http://atoll.floridamarine.org/ArcGIS/rest/services/FWC\\_Imagery\\_Web/MapServer](http://atoll.floridamarine.org/ArcGIS/rest/services/FWC_Imagery_Web/MapServer)

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2011

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* HYDRO INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* PICTOMERTY INTERNATIONAL CORP.

*Publication\_Date:* 2011

*Title:* OBLIQUE AERIAL PHOTOGRAPHY

*Geospatial\_Data\_Presentation\_Form:* REMOTE-SENSING IMAGE

*Publication\_Information:*

*Publication\_Place:* ROCHESTER, NY

*Publisher:* PICTOMETRY INTERNATIONAL CORP.

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2010

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* HYDRO INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* RESEARCH PLANNING, INC. (RPI)

*Publication\_Date:* 2010

*Title:* OVERFLIGHT OBLIQUE PHOTOGRAPHS

*Geospatial\_Data\_Presentation\_Form:* REMOTE-SENSING IMAGE

*Other\_Citation\_Details:* UNPUBLISHED

*Online\_Linkage:* <<http://esionline.researchplanning.com>>

*Type\_of\_Source\_Media:* DIGITAL PHOTOGRAPH

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2010

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* HYDRO INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* RESEARCH PLANNING, INC. (RPI)

*Publication\_Date:* 2011

*Title:* STUDY AREA BOUNDARY

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Other\_Citation\_Details:* UNPUBLISHED

*Source\_Scale\_Denominator:* 24000

*Type\_of\_Source\_Media:* DIGITAL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2011

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* HYDRO INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD)

*Publication\_Date:* 1999

*Title:* LAND COVER/ LAND USE 1999 MAPPING PROJECT

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* WEST PALM BEACH, FL

*Publisher:* SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD)

*Online\_Linkage:* <<http://my.sfwmd.gov/gisapps/sfwmdxwebdc/dataview.asp?>>

*Source\_Scale\_Denominator:* 40000

*Type\_of\_Source\_Media:* DIGITAL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 1999

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* HYDRO INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD)

*Publication\_Date:* 2005

*Title:*

SOUTH FLORIDA WATER MANAGEMENT DISTRICT LAND USE AND COVER 2004-05

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* WEST PALM BEACH, FL

*Publisher:* SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD)

*Online\_Linkage:* <<http://www.sfwmd.gov>>

*Source\_Scale\_Denominator:* 12000

*Type\_of\_Source\_Media:* DIGITAL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 2004

*Ending\_Date:* 2005

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* HYDRO INFORMATION

*Process\_Step:*

*Process\_Description:*

The shoreline was constructed from three data sets: 1) the South Florida shoreline landwater data from Florida Fish and Wildlife Conservation Commission (FWC); 2) Land use/land cover 1999 mapping project data from the South Florida Water Management District (SFWMD); and 3) Land use/land cover 2004-2005 data also from the SFWMD . The data were integrated and visually compared to: 1) fwc\_imagery from Marine Resources Geographic Information Systems and FWC; 2) overflight oblique photographs from Research Planning, Inc (RPI); and 3) oblique aerial photography from Pictometry International Corporation at a scale of 1:6000 or less to determine gross shoreline change. Edits to bay, inlet, and river shoreline were digitized at a scale of 1:3000. The study area boundary originated from RPI.

The above digital and/or hardcopy sources were compiled to create the HYDRO data layer.

Depending on the type of source data, four general approaches are used for compiling the data

layer: 1) hardcopy maps are digitized at their source scale; 2) digital data layers are evaluated and used "as is" or integrated with the other data sources; 3) overflight classifications are digitized from the scanned and registered hardcopy field maps; and/or 4) classifications are interpreted from oblique gps referenced photography or video taken during the overflights. After the initial shoreline classification, these data are edgematched and checked for logical consistency errors. Review maps are plotted at 1:24,000 scale for verification of polygonal and linear attributes. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the HYDRO data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:* 201304

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Person:* Jill Petersen

*Contact\_Address:*

*Address\_Type:* Physical address

*Address:* 7600 Sand Point Way, N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6944

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

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*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:* Vector

*Point\_and\_Vector\_Object\_Information:*

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* GT-polygon composed of chains

*Point\_and\_Vector\_Object\_Count:* 5860

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Area point

*Point\_and\_Vector\_Object\_Count:* 5859

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Complete chain

*Point\_and\_Vector\_Object\_Count:* 8057

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type*: Link  
*Point\_and\_Vector\_Object\_Count*: 904767

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: Label Point  
*Point\_and\_Vector\_Object\_Count*: 1

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: Node, planar graph  
*Point\_and\_Vector\_Object\_Count*: 7863

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*Spatial\_Reference\_Information*:

*Horizontal\_Coordinate\_System\_Definition*:

*Geographic*:

*Latitude\_Resolution*: 0.0000001  
*Longitude\_Resolution*: 0.0000001  
*Geographic\_Coordinate\_Units*: Decimal degrees

*Geodetic\_Model*:

*Horizontal\_Datum\_Name*: North American Datum of 1983  
*Ellipsoid\_Name*: Geodetic Reference System 80  
*Semi-major\_Axis*: 6378137.000000  
*Denominator\_of\_Flattening\_Ratio*: 298.257222

---

*Entity\_and\_Attribute\_Information*:

*Overview\_Description*:

*Entity\_and\_Attribute\_Overview*:

In addition to the geographic data layers, one relational attribute or data table, SOURCES, is used to store the source data information in the ESI data structure. The geographic data layer containing resource information (in this case, HYDRO) is linked to the SOURCES table using the SOURCE\_ID. The entity-relationship diagram describes relationships between attribute tables in the ESI data structure.

*Entity\_and\_Attribute\_Detail\_Citation*:

A complete description of entity types, attributes, and attribute values for ESI atlases can be found in the NOAA ESI Guidelines ([http://response.restoration.noaa.gov/esi\\_guidelines](http://response.restoration.noaa.gov/esi_guidelines)).

*Detailed\_Description*:

*Entity\_Type*:

*Entity\_Type\_Label*: HYDRO.AAT

*Entity\_Type\_Definition*:

The HYDRO.AAT table contains attribute information for the vector lines representing linear hydrography features in the HYDRO data layer.

*Entity\_Type\_Definition\_Source*: NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* LINE

*Attribute\_Definition:* Type of geographic feature.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* B

*Enumerated\_Domain\_Value\_Definition:* Breakwater

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

*Enumerated\_Domain\_Value\_Definition:* Extent of Digital Data

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* H

*Enumerated\_Domain\_Value\_Definition:* Hydrography

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* S

*Enumerated\_Domain\_Value\_Definition:* Shoreline

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SOURCE\_ID

*Attribute\_Definition:*

Source identifier that links to the SOURCES data table. This id indicates the source of a vector line segment.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* HYDRO.PAT

*Entity\_Type\_Definition:*



The HYDRO.PAT table contains attribute information for the vector polygons representing polygonal hydrography features in the HYDRO data layer.  
*Entity\_Type\_Definition\_Source*: NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label*: WATER\_CODE  
*Attribute\_Definition*: Specifies a polygon as either water or land.  
*Attribute\_Definition\_Source*: NOAA ESI Guidelines  
*Attribute\_Domain\_Values*:

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value*: L  
*Enumerated\_Domain\_Value\_Definition*: Land  
*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value*: W  
*Enumerated\_Domain\_Value\_Definition*: Water  
*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label*: ANNO.GEOG  
*Entity\_Type\_Definition*:  
The spatial data layer HYDRO contains label points representing annotation for geographic features.  
*Entity\_Type\_Definition\_Source*: NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label*: ANNO.HYDRO  
*Entity\_Type\_Definition*:  
The spatial data layer HYDRO contains label points representing annotation for water features.  
*Entity\_Type\_Definition\_Source*: NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label*: ANNO.SOC  
*Entity\_Type\_Definition*:  
The spatial data layer HYDRO contains label points representing annotation for socioeconomic features.  
*Entity\_Type\_Definition\_Source*: NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SOURCES

*Entity\_Type\_Definition:*

The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SOURCE\_ID

*Attribute\_Definition:*

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table; G\_SOURCE and S\_SOURCE in the BIORES table; and SOURCE\_ID and ESI\_Source in the ESI and HYDRO data layers.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* ORIGINATOR

*Attribute\_Definition:* Author or developer of source material or data set.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* DATE\_PUB

*Attribute\_Definition:*

Date of source material, publication, or date of personal communication with expert source.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* TITLE

*Attribute\_Definition:* Title of source material or data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* DATA\_FORMAT

*Attribute\_Definition:* The format of the source material.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUB\_PLACE

*Attribute\_Definition:* Publication place.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUBLISHER

*Attribute\_Definition:* Publisher.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUBLICATION

*Attribute\_Definition:* Additional citation information.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* ONLINE\_LINK

*Attribute\_Definition:* Online computer resource URL.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* SCALE

*Attribute\_Definition:* Description of the source scale.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* TIME\_PERIOD

*Attribute\_Definition:*

Date(s) of data collection that the source material is based upon.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

---

*Distribution\_Information:*

*Distributor:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:* John Kaperick

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Address:*

*Address\_Type:* Physical Address

*Address:* 7600 Sand Point Way N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6400

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Resource\_Description:* Downloadable Data

*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.

*Custom\_Order\_Process:*

Contact NOAA for distribution options (see Distributor). 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 distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

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*Metadata\_Reference\_Information:*

*Metadata\_Date:* 201304

*Metadata\_Review\_Date:* 201304

*Metadata\_Contact:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:* Jill Petersen

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Position:* GIS Manager

*Contact\_Address:*

*Address\_Type:* Physical Address

*Address:* 7600 Sand Point Way, N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6944

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

*Metadata\_Standard\_Name:* Content Standards for Digital Geospatial Metadata

*Metadata\_Standard\_Version:* FGDC-STD-001-1998

# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: South Florida: INVERT (Invertebrate Polygons)

Metadata also available as - [[Parseable text](#)] - [[SGML](#)] - [[XML](#)]

## Metadata:

- [Identification Information](#)
  - [Data Quality Information](#)
  - [Spatial Data Organization Information](#)
  - [Spatial Reference Information](#)
  - [Entity and Attribute Information](#)
  - [Distribution Information](#)
  - [Metadata Reference Information](#)
- 

### *Identification\_Information:*

#### *Citation:*

##### *Citation\_Information:*

##### *Originator:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington.

*Publication\_Date:* 201304

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: South Florida: INVERT (Invertebrate Polygons)

*Edition:* Second

*Geospatial\_Data\_Presentation\_Form:* vector digital data

##### *Series\_Information:*

*Series\_Name:* South Florida

*Issue\_Identification:* South Florida

##### *Publication\_Information:*

*Publication\_Place:* Seattle, Washington

##### *Publisher:*

NOAA's Ocean Service, Office of Response and Restoration (OR&R), Emergency Response Division (ERD).

##### *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

*Description:*

*Abstract:*

This data set contains sensitive biological resource data for marine and estuarine invertebrate species in South Florida. Vector polygons in this data set represent invertebrate distribution and concentration areas. Species specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the ESI data for South Florida. ESI data characterize the marine and 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.

*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.

*Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1983

*Ending\_Date:* 2013

*Currentness\_Reference:*

The data were compiled during 2011-2013. The currentness dates for this data range from 1983 to 2013 and are documented in the Lineage section.

*Status:*

*Progress:* Complete

*Maintenance\_and\_Update\_Frequency:* None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -82.93300

*East\_Bounding\_Coordinate:* -80.00000

*North\_Bounding\_Coordinate:* 26.37500

*South\_Bounding\_Coordinate:* 24.50000

*Keywords:*

*Theme:*

*Theme\_Keyword\_Thesaurus:* ISO 19115 Topic Category

*Theme\_Keyword:* biota

*Theme\_Keyword:* environment

*Theme:*

*Theme\_Keyword\_Thesaurus:* None  
*Theme\_Keyword:* Environmental Monitoring  
*Theme\_Keyword:* ESI  
*Theme\_Keyword:* Sensitivity maps  
*Theme\_Keyword:* Coastal resources  
*Theme\_Keyword:* Oil spill planning  
*Theme\_Keyword:* Coastal Zone Management  
*Theme\_Keyword:* Wildlife  
*Theme\_Keyword:* Invertebrate

*Place:*

*Place\_Keyword\_Thesaurus:* None  
*Place\_Keyword:* South Florida

*Access\_Constraints:* None

*Use\_Constraints:*

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* datafig.jpg

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and attribute data tables for the South Florida ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* datafig2.jpg

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and desktop data tables for the South Florida ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington, the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness Washington, D.C. and the Fish and Wildlife Research Institute (FWRI), Florida Fish and Wildlife Conservation Commission (FWC), St. Petersburg, Florida.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 10.0) and SQL SERVER(R) (version 2005). The hardware configuration is PC's with Windows Operating System 7.



The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in the data set: benthic.e00, birds.e00, esil.e00, esip.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, mgt\_fish.e00, nests.e00, reptiles.e00, socecon.e00, and t\_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio\_lut.e00, biofile.e00, biores.e00, breed.e00, seasonal.e00, soc\_dat.e00, soc\_lut.e00, sources.e00, species.e00, status.e00, mgt\_fish\_lut.e00, and mgt\_fish.e00.

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## *Data\_Quality\_Information:*

### *Attribute\_Accuracy:*

#### *Attribute\_Accuracy\_Report:*

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

#### *Logical\_Consistency\_Report:*

A multi-stage error checking process, described in the above Attribute\_Accuracy\_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary node, etc.), and SQL SERVER(R) to ARC/INFO(R) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM 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 ID's and RARNUM's or HUNUM's are also generated. The new ID's 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 RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resources at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

#### *Completeness\_Report:*

These data represent a synthesis of expert knowledge, available hardcopy documents, survey data, maps, and digital data on invertebrate distribution and concentration areas. These data do not necessarily represent all invertebrate occurrences in South Florida. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name [n/a if not applicable]): 4, Pink shrimp, Farfantepenaeus duorarum; 49, Blue crab, Callinectes sapidus; 72, Caribbean spiny lobster, Panulirus argus; 97, Grass shrimp, Palaemonetes spp.; 101, Queen conch, Strombus gigas; 288, Florida stone crab, Menippe mercenaria; 621, Peppermint shrimp, Lysmata wurdemanni; 623, Bartram's scrub-hairstreak, Strymon acis bartrami; 624, Miami blue, Cyclargus thomasi bethunebakeri; 625, Stock Island treesnail, Orthalicus reses reses; 627, Variegated sea urchin, Lytechinus variegatus; 1024, Hermit crabs, n/a.

#### *Positional\_Accuracy:*

##### *Horizontal\_Positional\_Accuracy:*

##### *Horizontal\_Positional\_Accuracy\_Report:*

Spatial components for the biological data layers can come from expert interviews, hardcopy, or digital sources. Some of the spatial components of the biological data layers may have been developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy base maps with a scale of 1:24,000. Some of the spatial components of the biological data sets are developed from pre-existing digital or hardcopy sources and reflect the positional accuracy of these original data. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources. See the Lineage and Process\_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

BERTELSEN, R. AND T. MATTHEWS (FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION - FISH AND WILDLIFE RESEARCH INSTITUTE)

*Publication\_Date:* 2013

*Title:* INVERTEBRATE DISTRIBUTION AND ABUNDANCE IN SOUTH FLORIDA

*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE

*Type\_of\_Source\_Media:* PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2013

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* INVERT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* BIELSA, L.M., WILLIAM H. MURDICH, AND RONALD F. LABISKY

*Publication\_Date:* 1983

*Title:*

SPECIES PROFILES: LIFE HISTORY AND ENVIRONMENTAL REQUIREMENTS OF COASTAL FISHES AND INVERTEBRATES (SOUTH FLORIDA)

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* WASHINGTON, D.C.

*Publisher:* FISH AND WILDLIFE SERVICE, U.S. DEPARTMENT OF THE INTERIOR

*Other\_Citation\_Details:* US FISH AND WILDLIFE SERVICE REPORT: FWS/OBS-82/11.17

*Online\_Linkage:* <[http://www.nwrc.usgs.gov/wdb/pub/species\\_profiles/82\\_11-017.pdf](http://www.nwrc.usgs.gov/wdb/pub/species_profiles/82_11-017.pdf)>

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 1983

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* INVERT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

DELGADO, GABRIEL (FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION - FISH AND WILDLIFE RESEARCH INSTITUTE)

*Publication\_Date:* 2012

*Title:* QUEEN CONCH DISTRIBUTION AND ABUNDANCE IN SOUTH FLORIDA

*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* INVERT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI), FLORIDA FISH  
AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Publication\_Date:* 2011

*Title:* QUEEN CONCH AGGREGATION AREAS

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 2000

*Ending\_Date:* 2011

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* INVERT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* FLORIDA NATURAL AREAS INVENTORY (FNAI)

*Publication\_Date:* 2011

*Title:* FLORIDA NATURAL AREAS INVENTORY, FLORIDA ELEMENT  
OCCURRENCE

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* TALLAHASSEE, FL

*Publisher:* FLORIDA NATURAL AREAS INVENTORY (FNAI)

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2011

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* INVERT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

GANDY, R. AND CRAWFORD, C. (FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI), FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION (FWC))

*Publication\_Date:* 2013

*Title:*

DISTRIBUTION, ABUNDANCE AND SEASONALITY OF STONE CRAB, BLUE CRAB AND PINK SHRIMP IN SOUTH FLORIDA WATERS

*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 2013

*Ending\_Date:* 2013

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* INVERT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

MATTHEWS, TOM (FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI), FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION (FWC))

*Publication\_Date:* 2012

*Title:*

SPINY LOBSTER DENSITY AND DISTRIBUTION IN SOUTH FLORIDA FOR SOUTH FLORIDA ESI

*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* INVERT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION (NOAA),  
OFFICE OF PROTECTED RESOURCES (OPR)

*Publication\_Date:* 2012

*Title:* QUEEN CONCH FACT SHEET

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* SILVER SPRING, MD

*Publisher:* NATIONAL MARINE FISHERIES SERVICE

*Online\_Linkage:*

<http://www.nmfs.noaa.gov/pr/species/invertebrates/queenconch.htm>

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* INVERT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

NELSON, D.M. (EDITOR) ET AL (NOAA'S ESTUARINE LIVING MARINE  
RESOURCES PROGRAM)

*Publication\_Date:* 1991

*Title:*

DISTRIBUTION AND ABUNDANCE OF FISHES AND INVERTEBRATES IN  
SOUTHEAST ESTUARIES

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* SILVER SPRING, MD

*Publisher:* NOAA/NOS STRATEGIC ENVIRONMENTAL ASSESSMENTS  
DIVISION

*Type\_of\_Source\_Media:* PAPER  
*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 1991

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* INVERT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

NELSON, D.M. (EDITOR) ET AL (NOAA'S ESTUARINE LIVING MARINE  
RESOURCES PROGRAM)

*Publication\_Date:* 1992

*Title:*

DISTRIBUTION AND ABUNDANCE OF FISHES AND INVERTEBRATES IN  
GULF OF MEXICO ESTUARIES, VOL. I: DATA SUMMARIES.

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* SILVER SPRING, MD

*Publisher:* NOAA/NOS STRATEGIC ENVIRONMENTAL ASSESSMENTS  
DIVISION

*Online\_Linkage:* <<http://ccma.nos.noaa.gov/ecosystems/estuaries/elmr.aspx>>

*Type\_of\_Source\_Media:* PAPER  
*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 1998

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* INVERT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

PATILLO, M.E. ET AL (NOAA'S ESTUARINE LIVING MARINE  
RESOURCES PROGRAM)

*Publication\_Date:* 1997

*Title:*

DISTRIBUTION AND ABUNDANCE OF FISHES AND INVERTEBRATES IN  
GULF OF MEXICO ESTUARIES, VOLUME II: SPECIES LIFE HISTORY  
SUMMARIES

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* SILVER SPRING, MD

*Publisher:* NOAA/NOS STRATEGIC ENVIRONMENTAL ASSESSMENTS  
DIVISION

*Type\_of\_Source\_Media:* PAPER

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 1997

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* INVERT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

TELLIER, M. ET AL. (FLORIDA FISH AND WILDLIFE CONSERVATION  
COMMISSION - FLORIDA WILDLIFE RESEARCH INSTITUTE)

*Publication\_Date:* 2008

*Title:*

MONITORING THE FLORA AND FAUNA OF THE NEARSHORE  
HARDBOTTOM HABITATS OF THE FLORIDA KEYS

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* MARATHON, FL

*Publisher:* FLORIDA FISH AND WILDLIFE CONSERVATION  
COMMISSION

*Type\_of\_Source\_Media:* PAPER

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*



*Range\_of\_Dates/Times:*

*Beginning\_Date:* 2003

*Ending\_Date:* 2007

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* INVERT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* UNITED STATES FISH AND WILDLIFE SERVICE (USFWS)

*Publication\_Date:* 2009

*Title:* TREE SNAIL FOCUS AREA

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* VERO BEACH, FL

*Publisher:*

UNITED STATES FISH AND WILDLIFE SERVICE (USFWS), SOUTH  
FLORIDA FIELD OFFICE

*Source\_Scale\_Denominator:* 12000

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2009

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* INVERT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* USFWS

*Publication\_Date:* 2012

*Title:*

50 CFR PART 17 ENDANGERED AND THREATENED WILDLIFE AND  
PLANTS; LISTING OF THE MIAMI BLUE BUTTERFLY AS ENDANGERED  
THROUGHOUT ITS RANGE; FINAL RULE

*Geospatial\_Data\_Presentation\_Form:* HARDCOPY TEXT

*Publication\_Information:*

*Publication\_Place:* WWW.FEDERALREGISTER.GOV

*Publisher:* USFWS

*Other\_Citation\_Details:*

FEDERAL REGISTER/VOL. 77, NO. 67/FRIDAY, APRIL 6, 2012/RULES AND REGULATIONS

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* INVERT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* WATTS, S. A., J. B. MCCLINTOCK & J. M. LAWRENCE

*Publication\_Date:* 2001

*Title:* THE ECOLOGY OF LYTECHINUS VARIEGATUS

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* AMSTERDAM

*Publisher:* ELSEVIER SCIENCE PRESS

*Other\_Citation\_Details:*

BOOK CHAPTER IN: J.M. LAWRENCE (ED.), EDIBLE SEA URCHINS: BIOLOGY AND ECOLOGY

*Type\_of\_Source\_Media:* BOOK

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2001

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* INVERT INFORMATION

*Process\_Step:*

*Process\_Description:*

Four main sources of data were used to depict invertebrate distribution and seasonality for this data layer: 1) personal interviews with resource experts from the Fish and Wildlife Research Institute (FWRI); 2) digital data sets provided by FWRI; 3) fishery dependent catch data; and 4) published and unpublished reports. Queen conch aggregation sites were derived from areas delineated by FWRI survey data. Site information has been generalized to include areas that may be used due to annual variation. Contact FWRI for more specific information on the abundance and distribution of any invertebrate species.

The above digital and/or hardcopy sources were compiled by the project biologist to create the INVERT data layer. Depending on the type of source data, three general approaches are used for compiling the data layer: 1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:24,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the INVERT data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:* 201304

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Person:* Jill Petersen

*Contact\_Address:*

*Address\_Type:* Physical address

*Address:* 7600 Sand Point Way, N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6944

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

---

*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:* Vector

*Point\_and\_Vector\_Object\_Information:*

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* GT-polygon composed of chains

*Point\_and\_Vector\_Object\_Count:* 23850

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Area point  
*Point\_and\_Vector\_Object\_Count:* 23849

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Complete chain  
*Point\_and\_Vector\_Object\_Count:* 42516

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Link  
*Point\_and\_Vector\_Object\_Count:* 1940382

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Node, planar graph  
*Point\_and\_Vector\_Object\_Count:* 32335

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*Spatial\_Reference\_Information:*

*Horizontal\_Coordinate\_System\_Definition:*

*Geographic:*

*Latitude\_Resolution:* 0.0000001  
*Longitude\_Resolution:* 0.0000001  
*Geographic\_Coordinate\_Units:* Decimal degrees

*Geodetic\_Model:*

*Horizontal\_Datum\_Name:* North American Datum of 1983  
*Ellipsoid\_Name:* Geodetic Reference System 80  
*Semi-major\_Axis:* 6378137.000000  
*Denominator\_of\_Flattening\_Ratio:* 298.257222

---

*Entity\_and\_Attribute\_Information:*

*Overview\_Description:*

*Entity\_and\_Attribute\_Overview:*

In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, INVERT) 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 the South Florida atlas, the number is 221), an element/layer 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. BIORES and the other relational data tables are described below in detail. See the Browse\_Graphic section for a link

to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure. Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN\_SPEC, S, F, NHP, DATE\_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G\_SOURCE, S\_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED\_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed\_Description of the BREED data table. The link to the BIOFILE may be made through the BIO\_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED\_DT is an auxiliary support data table 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 table is SOURCES. This is the same as the source 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 data tables. The entity-relationship diagram describing relationships between attribute tables in the ESI data structure does NOT include the BIOFILE data table, and this data table is NOT described in detail below.

*Entity\_and\_Attribute\_Detail\_Citation:*

A complete description of entity types, attributes, and attribute values for ESI atlases can be found in the NOAA ESI Guidelines ([http://response.restoration.noaa.gov/esi\\_guidelines](http://response.restoration.noaa.gov/esi_guidelines)).

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* INVERT.PAT

*Entity\_Type\_Definition:*

The INVERT.PAT table contains attribute information for the vector polygons in this data set representing invertebrate distribution and concentration areas. Note that all attribute information is stored in a series of relational files, described below. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (221), element number (7), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Attribute:*

*Attribute\_Label:* RARNUM

*Attribute\_Definition:*

An identifier that links directly to the BIORES table or the flat format BIOFILE table. RARNUM values of 0 are holes in the polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BIO\_LUT

*Entity\_Type\_Definition:*

The data table BIO\_LUT is a lookup table that contains items necessary for linking vector objects in the biological data layers with the BIORES data table. Note that all attribute information is stored in a series of relational files, described below. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* RARNUM

*Attribute\_Definition:*

An identifier that links records in the BIO\_LUT data table to records in the BIORES data table or the flat format BIOFILE data table. RARNUM values of 0 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (221), element number (7), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BIORES

*Entity\_Type\_Definition:*

The data table BIORES contains both biological attribute data and items necessary for linking vector objects in the biological data layers via the BIO\_LUT data table to other associated data tables. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* RARNUM

*Attribute\_Definition:*

An identifier that links records in the BIORES data table to records in the BIO\_LUT data table or the flat format BIOFILE data table.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* CONC

*Attribute\_Definition:*

The field CONC refers to "concentration," abundance, or density values. Densities are given for queen conch concentrations at specific sites for adults and juveniles in the form of (XX\_ADULT / XX\_JUV), and represent the following ranges: low - less than 200/hectare; medium - 200-800/hectare; high - greater than 800/hectare. Densities reported for spiny lobsters are based on Bertelsen et al. 2004, and categorized as high or low. Data from the nearshore hardbottom dataset are reported as densities in number of organisms per 100 square meters. In cases where no qualitative or quantitative concentration information was available, the field was left blank.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* SEASON\_ID

*Attribute\_Definition:*

Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* G\_SOURCE

*Attribute\_Definition:*

Geographic source identifier that links records in the BIORES data table to records in the SOURCES data table.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* S\_SOURCE

*Attribute\_Definition:*

Seasonality source identifier that links records in the BIORES data table to records in the SOURCES data table.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD



*Enumerated\_Domain\_Value\_Definition:* Birds  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH  
*Enumerated\_Domain\_Value\_Definition:* Fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT  
*Enumerated\_Domain\_Value\_Definition:* Habitats and plants  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT  
*Enumerated\_Domain\_Value\_Definition:* Invertebrates  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:* Marine mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE  
*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:* Terrestrial mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links records in the BIORES data

table to records in the SPECIES and STATUS data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BIORES data table to records in the SEASONAL and BREED data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SPECIES

*Entity\_Type\_Definition:*

The data table SPECIES identifies all species in the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure. Refer to the Completeness Report for list of layer specific species.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* NAME

*Attribute\_Definition:* Species common name for the entire ESI data set.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* GEN\_SPEC

*Attribute\_Definition:* Species scientific name for the entire ESI data set.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and plants

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SUBELEMENT

*Attribute\_Definition:* Element subgroup delineating a logical grouping of species.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* algae

*Enumerated\_Domain\_Value\_Definition:* Algae

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* alligator

*Enumerated\_Domain\_Value\_Definition:* Alligator

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* coral

*Enumerated\_Domain\_Value\_Definition:* Coral

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* crab

*Enumerated\_Domain\_Value\_Definition:* Crab

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* diving

*Enumerated\_Domain\_Value\_Definition:* Diving bird

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* dolphin

*Enumerated\_Domain\_Value\_Definition:* Dolphin

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* e\_nursery

*Enumerated\_Domain\_Value\_Definition:* Estuarine nursery fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* e\_resident

*Enumerated\_Domain\_Value\_Definition:* Estuarine resident fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* echinoderm

*Enumerated\_Domain\_Value\_Definition:* Echinoderm

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* fish

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* gastropod  
*Enumerated\_Domain\_Value\_Definition:* Gastropod  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* gull\_tern  
*Enumerated\_Domain\_Value\_Definition:* Gull or tern  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* hardbottom  
*Enumerated\_Domain\_Value\_Definition:* Hardbottom  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* insect  
*Enumerated\_Domain\_Value\_Definition:* Insect  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* invert  
*Enumerated\_Domain\_Value\_Definition:* Invertebrate  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* lizard  
*Enumerated\_Domain\_Value\_Definition:* Lizard  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* lobster  
*Enumerated\_Domain\_Value\_Definition:* Lobster  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* m\_benthic

*Enumerated\_Domain\_Value\_Definition:* Marine benthic fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* m\_pelagic

*Enumerated\_Domain\_Value\_Definition:* Marine pelagic fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* manatee

*Enumerated\_Domain\_Value\_Definition:* Manatee

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* passerine

*Enumerated\_Domain\_Value\_Definition:* Passerine bird

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* pelagic

*Enumerated\_Domain\_Value\_Definition:* Pelagic bird

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* plant

*Enumerated\_Domain\_Value\_Definition:* Plant

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* raptor

*Enumerated\_Domain\_Value\_Definition:* Raptor

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* reef

*Enumerated\_Domain\_Value\_Definition:* Reef

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* sav

*Enumerated\_Domain\_Value\_Definition:* Submerged aquatic vegetation

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* shorebird

*Enumerated\_Domain\_Value\_Definition:* Shorebird

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* shrimp

*Enumerated\_Domain\_Value\_Definition:* Shrimp

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* sm\_mammal

*Enumerated\_Domain\_Value\_Definition:* Small mammal

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* snake

*Enumerated\_Domain\_Value\_Definition:* Snake

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* turtle

*Enumerated\_Domain\_Value\_Definition:* Turtle

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*



*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* ungulate

*Enumerated\_Domain\_Value\_Definition:* Ungulate

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* upland

*Enumerated\_Domain\_Value\_Definition:* Upland vegetation

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* wading

*Enumerated\_Domain\_Value\_Definition:* Wading bird

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* waterfowl

*Enumerated\_Domain\_Value\_Definition:* Waterfowl

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* NHP

*Attribute\_Definition:* Natural Heritage Program global ranking.

*Attribute\_Definition\_Source:* Network of Natural Heritage Program

*Attribute\_Domain\_Values:*

*Codeset\_Domain:*

*Codeset\_Name:* NHP Global Conservation Status Rank

*Codeset\_Source:* Natural Heritage Program

*Attribute:*

*Attribute\_Label:* DATE\_PUB

*Attribute\_Definition:* Date of NHP listing.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 0

*Enumerated\_Domain\_Value\_Definition:* Date unspecified

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links records in the SPECIES data table to records in the BIORES and STATUS data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SEASONAL

*Entity\_Type\_Definition:*

The data table SEASONAL contains information on the seasonal presence of each species associated with each spatial vector object. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and plants

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* SEASON\_ID

*Attribute\_Definition:*

Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* JAN

*Attribute\_Definition:* January

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in January

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* FEB

*Attribute\_Definition:* February

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in February

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* MAR

*Attribute\_Definition:* March

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in March

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* APR

*Attribute\_Definition:* April  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in April  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* MAY  
*Attribute\_Definition:* May  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in May  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* JUN  
*Attribute\_Definition:* June  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in June  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* JUL  
*Attribute\_Definition:* July  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in July  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* AUG  
*Attribute\_Definition:* August  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: X*

*Enumerated\_Domain\_Value\_Definition: Present in August*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute:*

*Attribute\_Label: SEP*

*Attribute\_Definition: September*

*Attribute\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: X*

*Enumerated\_Domain\_Value\_Definition: Present in September*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute:*

*Attribute\_Label: OCT*

*Attribute\_Definition: October*

*Attribute\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: X*

*Enumerated\_Domain\_Value\_Definition: Present in October*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute:*

*Attribute\_Label: NOV*

*Attribute\_Definition: November*

*Attribute\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: X*

*Enumerated\_Domain\_Value\_Definition: Present in November*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute:*

*Attribute\_Label: DEC*

*Attribute\_Definition: December*

*Attribute\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: X*

*Enumerated\_Domain\_Value\_Definition:* Present in December  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the SEASONAL data table to records in the BIORES and BREED data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BREED

*Entity\_Type\_Definition:*

The data table BREED identifies the monthly presence of certain life-history stages or activities for each species at a given location.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BREED data table to records in the BIORES and SEASONAL data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* MONTH

*Attribute\_Definition:*

Two-digit calendar month. Each life history stage or activity type for a particular species can have up to 12 records to account for each month of the year.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1  
*Range\_Domain\_Maximum:* 12

*Attribute:*

*Attribute\_Label:* BREED1

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED1 = nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning; if ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M\_MAMMAL" then BREED1 = mating. This attribute is not used for HABITAT or T\_MAMMAL.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y  
*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N  
*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not reported  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -  
*Enumerated\_Domain\_Value\_Definition:*  
Breed category not used or not appropriate for record(s) in question  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* BREED2

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = migrating; if ELEMENT is "FISH" then BREED2 = eggs; if ELEMENT is "INVERT" then BREED2 = eggs; if ELEMENT is "REPTILE" then BREED2 = hatching; if ELEMENT is "M\_MAMMAL" then BREED2 = calving. This attribute is not used for HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*



*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* BREED3

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED3 = molting; if ELEMENT is "FISH" then BREED3 = larvae; if ELEMENT is "INVERT" then BREED3 = larvae; if ELEMENT is "REPTILE" then BREED3 = interesting; if ELEMENT is "M\_MAMMAL" then BREED3 = pupping. This attribute is not used for HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* BREED4

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "FISH" then BREED4 = juveniles; if ELEMENT is "INVERT" then BREED4 = juveniles; if ELEMENT is "REPTILE" then BREED4 = juveniles; if ELEMENT is "M\_MAMMAL" then BREED4 = molting. This attribute is not used for BIRD, HABITAT, or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* BREED5

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 = adults; if ELEMENT is "INVERT" then BREED5 = adults; if ELEMENT is "REPTILE" then BREED5 = adults. This attribute is not used for BIRD, M\_MAMMAL, HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* STATUS

*Entity\_Type\_Definition:*

The data table STATUS identifies the species that are listed as either threatened or endangered by a state, federal, or international authority. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT  
*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT  
*Enumerated\_Domain\_Value\_Definition:* Invertebrates  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:* Marine Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE  
*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* STATE

*Attribute\_Definition:* Two-letter state abbreviation.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* COUNTRY

*Attribute\_Definition:* Three-letter country abbreviation.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* S

*Attribute\_Definition:* State threatened or endangered status.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

*Enumerated\_Domain\_Value\_Definition:* Endangered on state list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T

*Enumerated\_Domain\_Value\_Definition:* Threatened on state list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* C

*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* F

*Attribute\_Definition:* Federal threatened or endangered status.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

*Enumerated\_Domain\_Value\_Definition:* Endangered on federal list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T

*Enumerated\_Domain\_Value\_Definition:* Threatened on federal list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* C

*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* I

*Attribute\_Definition:* International threatened or endangered status.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

*Enumerated\_Domain\_Value\_Definition:* Endangered on international list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T

*Enumerated\_Domain\_Value\_Definition:* Threatened on international list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* C

*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* S\_DATE

*Attribute\_Definition:*

Publication date of source material used to assign state status values for each species, if used.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* F\_DATE

*Attribute\_Definition:*

Publication date of source material used to assign federal status values for each species, if used.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* I\_DATE

*Attribute\_Definition:*

Publication date of source material used to assign international status values for each species, if used.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links the STATUS data table to the BIORES and SPECIES data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SOURCES

*Entity\_Type\_Definition:*

The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SOURCE\_ID

*Attribute\_Definition:*

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table; G\_SOURCE and S\_SOURCE in the BIORES table; and SOURCE\_ID and ESI\_Source in the ESI and HYDRO data layers.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* ORIGINATOR

*Attribute\_Definition:* Author or developer of source material or data set.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* DATE\_PUB

*Attribute\_Definition:*

Date of source material, publication, or date of personal communication with expert source.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* TITLE

*Attribute\_Definition:* Title of source material or data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*



*Attribute\_Label:* DATA\_FORMAT

*Attribute\_Definition:* The format of the source material.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUB\_PLACE

*Attribute\_Definition:* Publication place.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUBLISHER

*Attribute\_Definition:* Publisher.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUBLICATION

*Attribute\_Definition:* Additional citation information.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* ONLINE\_LINK

*Attribute\_Definition:* Online computer resource URL.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* SCALE

*Attribute\_Definition:* Description of the source scale.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* TIME\_PERIOD

*Attribute\_Definition:*

Date(s) of data collection that the source material is based upon.  
*Attribute\_Definition\_Source*: NOAA ESI Guidelines  
*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

---

*Distribution\_Information*:

*Distributor*:

*Contact\_Information*:

*Contact\_Person\_Primary*:

*Contact\_Person*: John Kaperick  
*Contact\_Organization*: NOAA, Office of Response and Restoration

*Contact\_Address*:

*Address\_Type*: Physical Address  
*Address*: 7600 Sand Point Way N.E.  
*City*: Seattle  
*State\_or\_Province*: Washington  
*Postal\_Code*: 98115-6349

*Contact\_Voice\_Telephone*: (206) 526-6400  
*Contact\_Facsimile\_Telephone*: (206) 526-6329

*Resource\_Description*: Downloadable Data

*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.

*Custom\_Order\_Process*:

Contact NOAA for distribution options (see Distributor). 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 distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

---

*Metadata\_Reference\_Information*:

*Metadata\_Date*: 201304  
*Metadata\_Review\_Date*: 201304  
*Metadata\_Contact*:

*Contact\_Information*:

*Contact\_Person\_Primary:*

*Contact\_Person:* Jill Petersen

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Position:* GIS Manager

*Contact\_Address:*

*Address\_Type:* Physical Address

*Address:* 7600 Sand Point Way, N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6944

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

*Metadata\_Standard\_Name:* Content Standards for Digital Geospatial Metadata

*Metadata\_Standard\_Version:* FGDC-STD-001-1998

# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: South Florida: M\_MAMMAL (Marine Mammal Polygons)

Metadata also available as - [[Parseable text](#)] - [[SGML](#)] - [[XML](#)]

## Metadata:

- [Identification Information](#)
  - [Data Quality Information](#)
  - [Spatial Data Organization Information](#)
  - [Spatial Reference Information](#)
  - [Entity and Attribute Information](#)
  - [Distribution Information](#)
  - [Metadata Reference Information](#)
- 

### *Identification\_Information:*

#### *Citation:*

##### *Citation\_Information:*

##### *Originator:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington.

*Publication\_Date:* 201304

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: South Florida:  
M\_MAMMAL (Marine Mammal Polygons)

*Edition:* Second

*Geospatial\_Data\_Presentation\_Form:* vector digital data

##### *Series\_Information:*

*Series\_Name:* South Florida

*Issue\_Identification:* South Florida

##### *Publication\_Information:*

*Publication\_Place:* Seattle, Washington

##### *Publisher:*

NOAA's Ocean Service, Office of Response and Restoration (OR&R), Emergency Response Division (ERD).

##### *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

*Description:*

*Abstract:*

This data set contains sensitive biological resource data for manatees and bottlenose dolphins in [for] South Florida. Vector polygons in this data set represent marine mammal distributions. Species specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the ESI data for South Florida. ESI data characterize the marine and 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.

*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.

*Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 2009

*Ending\_Date:* 2012

*Currentness\_Reference:*

The data were compiled during 2011-2013. The currentness dates for this data range from 2009 to 2012 and are documented in the Lineage section.

*Status:*

*Progress:* Complete

*Maintenance\_and\_Update\_Frequency:* None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -82.93300

*East\_Bounding\_Coordinate:* -80.00000

*North\_Bounding\_Coordinate:* 26.37500

*South\_Bounding\_Coordinate:* 24.50000

*Keywords:*

*Theme:*

*Theme\_Keyword\_Thesaurus:* ISO 19115 Topic Category

*Theme\_Keyword:* biota

*Theme\_Keyword:* environment

*Theme:*

*Theme\_Keyword\_Thesaurus:* None  
*Theme\_Keyword:* Environmental Monitoring  
*Theme\_Keyword:* ESI  
*Theme\_Keyword:* Sensitivity maps  
*Theme\_Keyword:* Coastal resources  
*Theme\_Keyword:* Oil spill planning  
*Theme\_Keyword:* Coastal Zone Management  
*Theme\_Keyword:* Wildlife  
*Theme\_Keyword:* Marine Mammal

*Place:*

*Place\_Keyword\_Thesaurus:* None  
*Place\_Keyword:* South Florida

*Access\_Constraints:* None

*Use\_Constraints:*

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* datafig.jpg

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and attribute data tables for the South Florida ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* datafig2.jpg

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and desktop data tables for the South Florida ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington, the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness Washington, D.C. and the Fish and Wildlife Research Institute (FWRI), Florida Fish and Wildlife Conservation Commission (FWC), St. Petersburg, Florida.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 10.0) and SQL SERVER(R) (version 2005). The hardware configuration is PC's with Windows Operating System 7.

The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in the data set: benthic.e00, birds.e00, esil.e00, esip.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, mgt\_fish.e00, nests.e00, reptiles.e00, socecon.e00, and t\_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio\_lut.e00, biofile.e00, biores.e00, breed.e00, seasonal.e00, soc\_dat.e00, soc\_lut.e00, sources.e00, species.e00, status.e00, mgt\_fish\_lut.e00, and mgt\_fish.e00.

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## *Data\_Quality\_Information:*

### *Attribute\_Accuracy:*

#### *Attribute\_Accuracy\_Report:*

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

#### *Logical\_Consistency\_Report:*

A multi-stage error checking process, described in the above Attribute\_Accuracy\_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary node, etc.), and SQL SERVER(R) to ARC/INFO(R) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM 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 ID's and RARNUM's or HUNUM's are also generated. The new ID's 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 RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resources at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

#### *Completeness\_Report:*

These data represent a synthesis of expert knowledge, digital data and published reports on marine mammal distribution. These data do not necessarily represent all marine mammal occurrences in South Florida. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name [n/a if not applicable]): 10, West Indian manatee, Trichechus manatus; 17, Bottlenose dolphin, Tursiops truncatus.

#### *Positional\_Accuracy:*

##### *Horizontal\_Positional\_Accuracy:*

###### *Horizontal\_Positional\_Accuracy\_Report:*

Spatial components for the biological data layers can come from expert interviews, hardcopy, or digital sources. Some of the spatial components of the biological data layers may have been developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy base

maps with a scale of 1:24,000. Some of the spatial components of the biological data sets are developed from pre-existing digital or hardcopy sources and reflect the positional accuracy of these original data. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources. See the Lineage and Process\_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI), FLORIDA FISH  
AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Publication\_Date:* 2012

*Title:* MANATEE ABUNDANCE

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Other\_Citation\_Details:*

MIAMI-DADE DEPARTMENT OF ENVIRONMENTAL RESOURCE  
MANAGEMENT, BROWARD COUNTY, PALM BEACH COUNTY, SEA TO  
SHORE ALLIANCE

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* M\_MAMMAL INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION (NOAA),  
OFFICE OF PROTECTED RESOURCES (OPR)

*Publication\_Date:* 2009

*Title:*

BOTTLENOSE DOLPHIN (TURSIOPS TRUNCATUS), BISCAYNE BAY  
STOCK ASSESSMENT REPORT

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT



*Publication\_Information:*

*Publication\_Place:* SILVER SPRING, MD

*Publisher:* NOAA FISHERIES

*Online\_Linkage:* <<http://www.nmfs.noaa.gov/pr/pdfs/sars/ao2009dobn-bb.pdf>>

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2009

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* M\_MAMMAL INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION (NOAA),  
OFFICE OF PROTECTED RESOURCES (OPR)

*Publication\_Date:* 2009

*Title:*

BOTTLENOSE DOLPHIN (TURSIOPS TRUNCATUS), FLORIDA BAY  
STOCK ASSESSMENT REPORT

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* SILVER SPRING, MD

*Publisher:* NOAA FISHERIES

*Online\_Linkage:* <<http://www.nmfs.noaa.gov/pr/sars/species.htm>>

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2009

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* M\_MAMMAL INFORMATION

*Process\_Step:*

*Process\_Description:*

West Indian manatee geographic distribution, abundance, and seasonality data was provided via shapefile through a collaboration between Florida Fish and Wildlife Conservation Commission (FWC) – Fish and Wildlife Research Institute (FWRI), Miami-Dade Department of Environmental Resources Management, Broward County – Natural Resources Planning and Management Division – Marine Resources Section, Palm Beach County Department of Environmental Resources Management, and Sea to Shore Alliance. Estuarine stocks of bottlenose dolphins were mapped to coastal waters according to the concentrations reported in the National Marine Fisheries Service (NMFS) stock assessment reports. Bottlenose dolphins are mapped as present in other shelf waters in the region.

The above digital and/or hardcopy sources were compiled by the project biologist to create the M\_MAMMAL data layer. Depending on the type of source data, three general approaches are used for compiling the data layer: 1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:24,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the M\_MAMMAL data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:* 201304

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Person:* Jill Petersen

*Contact\_Address:*

*Address\_Type:* Physical address

*Address:* 7600 Sand Point Way, N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6944

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

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*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:* Vector

*Point\_and\_Vector\_Object\_Information:*

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* GT-polygon composed of chains

*Point\_and\_Vector\_Object\_Count: 1718*

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type: Area point*  
*Point\_and\_Vector\_Object\_Count: 1717*

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type: Complete chain*  
*Point\_and\_Vector\_Object\_Count: 2992*

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type: Link*  
*Point\_and\_Vector\_Object\_Count: 499386*

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type: Node, planar graph*  
*Point\_and\_Vector\_Object\_Count: 2716*

---

*Spatial\_Reference\_Information:*

*Horizontal\_Coordinate\_System\_Definition:*

*Geographic:*

*Latitude\_Resolution: 0.0000001*  
*Longitude\_Resolution: 0.0000001*  
*Geographic\_Coordinate\_Units: Decimal degrees*

*Geodetic\_Model:*

*Horizontal\_Datum\_Name: North American Datum of 1983*  
*Ellipsoid\_Name: Geodetic Reference System 80*  
*Semi-major\_Axis: 6378137.000000*  
*Denominator\_of\_Flattening\_Ratio: 298.257222*

---

*Entity\_and\_Attribute\_Information:*

*Overview\_Description:*

*Entity\_and\_Attribute\_Overview:*

In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, M\_MAMMAL) 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 the South Florida atlas, the number is 221), an element/layer 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. BIORES and the

other relational data tables are described below in detail. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure. Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN\_SPEC, S, F, NHP, DATE\_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G\_SOURCE, S\_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED\_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed\_Description of the BREED data table. The link to the BIOFILE may be made through the BIO\_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED\_DT is an auxiliary support data table 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 table is SOURCES. This is the same as the source 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 data tables. The entity-relationship diagram describing relationships between attribute tables in the ESI data structure does NOT include the BIOFILE data table, and this data table is NOT described in detail below.

*Entity\_and\_Attribute\_Detail\_Citation:*

A complete description of entity types, attributes, and attribute values for ESI atlases can be found in the NOAA ESI Guidelines ([http://response.restoration.noaa.gov/esi\\_guidelines](http://response.restoration.noaa.gov/esi_guidelines)).

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* M\_MAMMAL.PAT

*Entity\_Type\_Definition:*

The M\_MAMMAL.PAT table contains attribute information for the vector polygons in this data set representing marine mammal distributions. Note that all attribute information is stored in a series of relational files, described below. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (221), element number (4), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Attribute:*

*Attribute\_Label:* RARNUM

*Attribute\_Definition:*

An identifier that links directly to the BIORES table or the flat format BIOFILE table. RARNUM values of 0 are holes in the polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BIO\_LUT

*Entity\_Type\_Definition:*

The data table BIO\_LUT is a lookup table that contains items necessary for linking vector objects in the biological data layers with the BIORES data table. Note that all attribute information is stored in a series of relational files, described below. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* RARNUM

*Attribute\_Definition:*

An identifier that links records in the BIO\_LUT data table to records in the BIORES data table or the flat format BIOFILE data table. RARNUM values of 0 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (221), element number (4), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BIORES

*Entity\_Type\_Definition:*

The data table BIORES contains both biological attribute data and items necessary for linking vector objects in the biological data layers via the BIO\_LUT data table to other associated data tables. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* RARNUM

*Attribute\_Definition:*

An identifier that links records in the BIORES data table to records in the BIO\_LUT data table or the flat format BIOFILE data table.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* CONC

*Attribute\_Definition:*

The field CONC refers to "concentration," abundance, or density values. The field may contain counts of individuals (greater than or APPROX. XXX DOLPHINS). The field may contain descriptive terms such as "HIGH" or "LOW".

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* SEASON\_ID

*Attribute\_Definition:*

Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* G\_SOURCE

*Attribute\_Definition:*

Geographic source identifier that links records in the BIORES data table to records in the SOURCES data table.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* S\_SOURCE

*Attribute\_Definition:*

Seasonality source identifier that links records in the BIORES data table to records in the SOURCES data table.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and plants

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links records in the BIORES data table to records in the SPECIES and STATUS data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*



*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BIORES data table to records in the SEASONAL and BREED data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SPECIES

*Entity\_Type\_Definition:*

The data table SPECIES identifies all species in the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure. Refer to the Completeness Report for list of layer specific species.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* NAME

*Attribute\_Definition:* Species common name for the entire ESI data set.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* GEN\_SPEC

*Attribute\_Definition:* Species scientific name for the entire ESI data set.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and plants

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:* Marine Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE  
*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SUBELEMENT  
*Attribute\_Definition:* Element subgroup delineating a logical grouping of species.  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* algae  
*Enumerated\_Domain\_Value\_Definition:* Algae  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* alligator  
*Enumerated\_Domain\_Value\_Definition:* Alligator  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* coral  
*Enumerated\_Domain\_Value\_Definition:* Coral  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* crab  
*Enumerated\_Domain\_Value\_Definition:* Crab

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* diving

*Enumerated\_Domain\_Value\_Definition:* Diving bird

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* dolphin

*Enumerated\_Domain\_Value\_Definition:* Dolphin

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* e\_nursery

*Enumerated\_Domain\_Value\_Definition:* Estuarine nursery fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* e\_resident

*Enumerated\_Domain\_Value\_Definition:* Estuarine resident fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* echinoderm

*Enumerated\_Domain\_Value\_Definition:* Echinoderm

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* fish

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* gastropod

*Enumerated\_Domain\_Value\_Definition:* Gastropod

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* gull\_tern

*Enumerated\_Domain\_Value\_Definition:* Gull or tern

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* hardbottom

*Enumerated\_Domain\_Value\_Definition:* Hardbottom

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* insect

*Enumerated\_Domain\_Value\_Definition:* Insect

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* invert

*Enumerated\_Domain\_Value\_Definition:* Invertebrate

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* lizard

*Enumerated\_Domain\_Value\_Definition:* Lizard

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* lobster

*Enumerated\_Domain\_Value\_Definition:* Lobster

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* m\_benthic

*Enumerated\_Domain\_Value\_Definition:* Marine benthic fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* m\_pelagic

*Enumerated\_Domain\_Value\_Definition:* Marine pelagic fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* manatee

*Enumerated\_Domain\_Value\_Definition:* Manatee

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* passerine

*Enumerated\_Domain\_Value\_Definition:* Passerine bird

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* pelagic

*Enumerated\_Domain\_Value\_Definition:* Pelagic bird

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* plant

*Enumerated\_Domain\_Value\_Definition:* Plant

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* raptor

*Enumerated\_Domain\_Value\_Definition:* Raptor

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* reef

*Enumerated\_Domain\_Value\_Definition:* Reef

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: sav*

*Enumerated\_Domain\_Value\_Definition: Submerged aquatic vegetation*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: shorebird*

*Enumerated\_Domain\_Value\_Definition: Shorebird*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: shrimp*

*Enumerated\_Domain\_Value\_Definition: Shrimp*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: sm\_mammal*

*Enumerated\_Domain\_Value\_Definition: Small mammal*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: snake*

*Enumerated\_Domain\_Value\_Definition: Snake*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: turtle*

*Enumerated\_Domain\_Value\_Definition: Turtle*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: ungulate*

*Enumerated\_Domain\_Value\_Definition: Ungulate*

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* upland

*Enumerated\_Domain\_Value\_Definition:* Upland vegetation

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* wading

*Enumerated\_Domain\_Value\_Definition:* Wading bird

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* waterfowl

*Enumerated\_Domain\_Value\_Definition:* Waterfowl

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* NHP

*Attribute\_Definition:* Natural Heritage Program global ranking.

*Attribute\_Definition\_Source:* Network of Natural Heritage Program

*Attribute\_Domain\_Values:*

*Codeset\_Domain:*

*Codeset\_Name:* NHP Global Conservation Status Rank

*Codeset\_Source:* Natural Heritage Program

*Attribute:*

*Attribute\_Label:* DATE\_PUB

*Attribute\_Definition:* Date of NHP listing.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 0



*Enumerated\_Domain\_Value\_Definition:* Date unspecified  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links records in the SPECIES data table to records in the BIORES and STATUS data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SEASONAL

*Entity\_Type\_Definition:*

The data table SEASONAL contains information on the seasonal presence of each species associated with each spatial vector object. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and plants

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* SEASON\_ID

*Attribute\_Definition:*

Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1

*Range\_Domain\_Maximum*: N

*Attribute*:

*Attribute\_Label*: JAN

*Attribute\_Definition*: January

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

*Enumerated\_Domain\_Value\_Definition*: Present in January

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute*:

*Attribute\_Label*: FEB

*Attribute\_Definition*: February

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

*Enumerated\_Domain\_Value\_Definition*: Present in February

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute*:

*Attribute\_Label*: MAR

*Attribute\_Definition*: March

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

*Enumerated\_Domain\_Value\_Definition*: Present in March

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute*:

*Attribute\_Label*: APR

*Attribute\_Definition*: April

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: X*

*Enumerated\_Domain\_Value\_Definition: Present in April*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute:*

*Attribute\_Label: MAY*

*Attribute\_Definition: May*

*Attribute\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: X*

*Enumerated\_Domain\_Value\_Definition: Present in May*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute:*

*Attribute\_Label: JUN*

*Attribute\_Definition: June*

*Attribute\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: X*

*Enumerated\_Domain\_Value\_Definition: Present in June*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute:*

*Attribute\_Label: JUL*

*Attribute\_Definition: July*

*Attribute\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: X*

*Enumerated\_Domain\_Value\_Definition: Present in July*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute:*

*Attribute\_Label: AUG*

*Attribute\_Definition: August*

*Attribute\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: X*

*Enumerated\_Domain\_Value\_Definition:* Present in August  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SEP  
*Attribute\_Definition:* September  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in September  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* OCT  
*Attribute\_Definition:* October  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in October  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* NOV  
*Attribute\_Definition:* November  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in November  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* DEC  
*Attribute\_Definition:* December  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in December  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the SEASONAL data table to records in the BIORES and BREED data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BREED

*Entity\_Type\_Definition:*

The data table BREED identifies the monthly presence of certain life-history stages or activities for each species at a given location.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BREED data table to records in the BIORES and SEASONAL data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* MONTH

*Attribute\_Definition:*

Two-digit calendar month. Each life history stage or activity type for a particular species can have up to 12 records to account for each month of the year.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1  
*Range\_Domain\_Maximum:* 12

*Attribute:*

*Attribute\_Label:* BREED1

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED1 = nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning; if ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M\_MAMMAL" then BREED1 = mating. This attribute is not used for HABITAT or T\_MAMMAL.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* BREED2

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = migrating; if ELEMENT is "FISH" then BREED2 = eggs; if ELEMENT is "INVERT" then BREED2 = eggs; if ELEMENT is "REPTILE" then BREED2 = hatching; if ELEMENT is "M\_MAMMAL" then BREED2 = calving. This attribute is not used for HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* BREED3

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED3 = molting; if ELEMENT is "FISH" then BREED3 = larvae; if ELEMENT is "INVERT" then BREED3 = larvae; if ELEMENT is "REPTILE" then BREED3 = internesting; if ELEMENT is "M\_MAMMAL" then BREED3 = pupping. This attribute is not used for HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines



*Attribute:*

*Attribute\_Label:* BREED4

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "FISH" then BREED4 = juveniles; if ELEMENT is "INVERT" then BREED4 = juveniles; if ELEMENT is "REPTILE" then BREED4 = juveniles; if ELEMENT is "M\_MAMMAL" then BREED4 = molting. This attribute is not used for BIRD, HABITAT, or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* BREED5

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 = adults; if ELEMENT is "INVERT" then BREED5 = adults; if ELEMENT is "REPTILE" then BREED5 = adults. This attribute is not used for BIRD, M\_MAMMAL, HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* STATUS

*Entity\_Type\_Definition:*

The data table STATUS identifies the species that are listed as either threatened or endangered by a state, federal, or international authority. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* STATE

*Attribute\_Definition:* Two-letter state abbreviation.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* COUNTRY

*Attribute\_Definition:* Three-letter country abbreviation.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* S

*Attribute\_Definition:* State threatened or endangered status.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

*Enumerated\_Domain\_Value\_Definition:* Endangered on state list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T

*Enumerated\_Domain\_Value\_Definition:* Threatened on state list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* C

*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* F

*Attribute\_Definition:* Federal threatened or endangered status.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

*Enumerated\_Domain\_Value\_Definition:* Endangered on federal list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T

*Enumerated\_Domain\_Value\_Definition:* Threatened on federal list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* C

*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* I

*Attribute\_Definition:* International threatened or endangered status.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

*Enumerated\_Domain\_Value\_Definition:* Endangered on international list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T

*Enumerated\_Domain\_Value\_Definition:* Threatened on international list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* C

*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* S\_DATE

*Attribute\_Definition:*

Publication date of source material used to assign state status values for each species, if used.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* F\_DATE

*Attribute\_Definition:*

Publication date of source material used to assign federal status values for each species, if used.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* I\_DATE

*Attribute\_Definition:*

Publication date of source material used to assign international status values for each species, if used.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links the STATUS data table to the BIORES and SPECIES data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SOURCES

*Entity\_Type\_Definition:*

The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SOURCE\_ID

*Attribute\_Definition:*

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table; G\_SOURCE and S\_SOURCE in the BIORRES table; and SOURCE\_ID and ESI\_Source in the ESI and HYDRO data layers.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* ORIGINATOR

*Attribute\_Definition:* Author or developer of source material or data set.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* DATE\_PUB

*Attribute\_Definition:*

Date of source material, publication, or date of personal communication with expert source.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* TITLE

*Attribute\_Definition:* Title of source material or data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* DATA\_FORMAT

*Attribute\_Definition:* The format of the source material.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUB\_PLACE

*Attribute\_Definition:* Publication place.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUBLISHER

*Attribute\_Definition:* Publisher.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUBLICATION

*Attribute\_Definition:* Additional citation information.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* ONLINE\_LINK

*Attribute\_Definition:* Online computer resource URL.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* SCALE

*Attribute\_Definition:* Description of the source scale.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* TIME\_PERIOD

*Attribute\_Definition:*

Date(s) of data collection that the source material is based upon.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

---



*Distribution\_Information:*

*Distributor:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:* John Kaperick

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Address:*

*Address\_Type:* Physical Address

*Address:* 7600 Sand Point Way N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6400

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Resource\_Description:* Downloadable Data

*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.

*Custom\_Order\_Process:*

Contact NOAA for distribution options (see Distributor). 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 distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

---

*Metadata\_Reference\_Information:*

*Metadata\_Date:* 201304

*Metadata\_Review\_Date:* 201304

*Metadata\_Contact:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:* Jill Petersen

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Position:* GIS Manager

*Contact\_Address:*

*Address\_Type*: Physical Address  
*Address*: 7600 Sand Point Way, N.E.  
*City*: Seattle  
*State\_or\_Province*: Washington  
*Postal\_Code*: 98115-6349

*Contact\_Voice\_Telephone*: (206) 526-6944  
*Contact\_Facsimile\_Telephone*: (206) 526-6329  
*Contact\_Electronic\_Mail\_Address*: Jill.Petersen@noaa.gov

*Metadata\_Standard\_Name*: Content Standards for Digital Geospatial Metadata  
*Metadata\_Standard\_Version*: FGDC-STD-001-1998

# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: South Florida: MGT (Management Area Polygons)

Metadata also available as - [[Parseable text](#)] - [[SGML](#)] - [[XML](#)]

## Metadata:

- [Identification Information](#)
  - [Data Quality Information](#)
  - [Spatial Data Organization Information](#)
  - [Spatial Reference Information](#)
  - [Entity and Attribute Information](#)
  - [Distribution Information](#)
  - [Metadata Reference Information](#)
- 

### *Identification\_Information:*

#### *Citation:*

##### *Citation\_Information:*

##### *Originator:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington.

*Publication\_Date:* 201304

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: South Florida: MGT (Management Area Polygons)

*Edition:* Second

*Geospatial\_Data\_Presentation\_Form:* vector digital data

##### *Series\_Information:*

*Series\_Name:* South Florida

*Issue\_Identification:* South Florida

##### *Publication\_Information:*

*Publication\_Place:* Seattle, Washington

##### *Publisher:*

NOAA's Ocean Service, Office of Response and Restoration (OR&R), Emergency Response Division (ERD).

##### *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, Emergency Response Division, Seattle, Washington.  
*Online\_Linkage:* <<http://response.restoration.noaa.gov/esi>>

*Description:*

*Abstract:*

This data set contains boundaries of managed properties including: Critical Habitats, Management Areas, Marine Sanctuaries, National Parks, Nature Conservancy lands, Parks, and Wildlife Refuges in [for] South Florida. Vector polygons in this data set represent management areas. Location specific type and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the ESI data for South Florida. ESI data characterize the marine and 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. See also the SOCECON data layer, part of the larger South Florida ESI database, for additional human-use information.

*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.

*Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 2001

*Ending\_Date:* 2013

*Currentness\_Reference:*

The data were compiled during 2011-2013. The currentness dates for this data range from 2001 to 2013 and are documented in the Lineage section.

*Status:*

*Progress:* Complete

*Maintenance\_and\_Update\_Frequency:* None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -82.93300

*East\_Bounding\_Coordinate:* -80.00000

*North\_Bounding\_Coordinate:* 26.37500

*South\_Bounding\_Coordinate:* 24.50000

*Keywords:*

*Theme:*

*Theme\_Keyword\_Thesaurus:* ISO 19115 Topic Category

*Theme\_Keyword:* biota

*Theme\_Keyword:* environment

*Theme:*

*Theme\_Keyword\_Thesaurus:* None  
*Theme\_Keyword:* Environmental Monitoring  
*Theme\_Keyword:* ESI  
*Theme\_Keyword:* Sensitivity maps  
*Theme\_Keyword:* Coastal resources  
*Theme\_Keyword:* Oil spill planning  
*Theme\_Keyword:* Coastal Zone Management  
*Theme\_Keyword:* Wildlife  
*Theme\_Keyword:* Management

*Place:*

*Place\_Keyword\_Thesaurus:* None  
*Place\_Keyword:* South Florida

*Access\_Constraints:* None

*Use\_Constraints:*

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* datafig.jpg  
*Browse\_Graphic\_File\_Description:*  
Depicts the relationships between spatial data layers and attribute data tables for the South Florida ESI data.  
*Browse\_Graphic\_File\_Type:* JPEG

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* datafig2.jpg  
*Browse\_Graphic\_File\_Description:*  
Depicts the relationships between spatial data layers and desktop data tables for the South Florida ESI data.  
*Browse\_Graphic\_File\_Type:* JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington, the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness Washington, D.C. and the Fish and Wildlife Research Institute (FWRI), Florida Fish and Wildlife Conservation Commission (FWC), St. Petersburg, Florida.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 10.0) and SQL SERVER(R) (version 2005). The hardware configuration is PC's

with Windows Operating System 7.

The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in the data set: benthic.e00, birds.e00, esil.e00, esip.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, mgt\_fish.e00, nests.e00, reptiles.e00, socecon.e00, and t\_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio\_lut.e00, biofile.e00, biores.e00, breed.e00, seasonal.e00, soc\_dat.e00, soc\_lut.e00, sources.e00, species.e00, status.e00, mgt\_fish\_lut.e00, and mgt\_fish.e00.

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### *Data\_Quality\_Information:*

#### *Attribute\_Accuracy:*

##### *Attribute\_Accuracy\_Report:*

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

##### *Logical\_Consistency\_Report:*

A multi-stage error checking process, described in the above Attribute\_Accuracy\_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary node, etc.), and SQL SERVER(R) to ARC/INFO(R) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM 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 ID's and RARNUM's or HUNUM's are also generated. The new ID's 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 RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resources at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

##### *Completeness\_Report:*

These data represent a synthesis of digital boundaries for management areas. See also the SOCECON data layer, part of the larger South Florida ESI database, for additional human-use information. These data do not necessarily represent all management areas in South Florida.

##### *Positional\_Accuracy:*

##### *Horizontal\_Positional\_Accuracy:*

##### *Horizontal\_Positional\_Accuracy\_Report:*

Spatial components for the human-use data layers can come from expert interviews, hardcopy, or digital sources. Most of the spatial components of the human-use data layers are developed from pre-existing digital or hardcopy sources and reflect the positional accuracy of these original data. Some of the spatial components of the human-use data layers are compiled on hardcopy base maps with a scale of 1:24,000. See the Lineage and Process\_Description

sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI), FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Publication\_Date:* 2006

*Title:* BISCAYNE BAY/CARD SOUND SPINY LOBSTER SANCTUARY BOUNDARIES

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* ST PETERSBURG, FLORIDA

*Publisher:* FWC-FWRI

*Online\_Linkage:*

[http://ocean.floridamarine.org/mrgis/Description\\_Layers\\_Marine.htm](http://ocean.floridamarine.org/mrgis/Description_Layers_Marine.htm)

*Source\_Scale\_Denominator:* 12000

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2006

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* MGT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI), FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Publication\_Date:* 2008

*Title:* AQUATIC PRESERVES FLORIDA

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* ST. PETERSBURG, FL

*Publisher:*

FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI), FLORIDA  
FISH AND WILDLIFE CONSERVATION COMMISSION (FWC),  
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
(DEP)

*Type\_of\_Source\_Media:* FTP SITE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2008

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* MGT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI), FLORIDA FISH  
AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Publication\_Date:* 2012

*Title:* SPECIAL MANAGEMENT ZONES IN THE SOUTHEAST (SMZ)

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* CHARLESTON, SC

*Publisher:* NOAA COASTAL SERVICES CENTER

*Other\_Citation\_Details:* ACCESSED SUMMER 2012

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* MGT INFORMATION

*Source\_Information:*

*Source\_Citation:*



*Citation\_Information:*

*Originator:* FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP)

*Publication\_Date:* 2011

*Title:* OUTSTANDING FLORIDA WATERS

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* TALLAHASSEE, FL

*Publisher:* FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP)

*Type\_of\_Source\_Media:* FTP SITE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2011

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* MGT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* FLORIDA NATURAL AREAS INVENTORY (FNAI)

*Publication\_Date:* 2011

*Title:* MANAGED AREAS FLORIDA

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* TALLAHASSEE, FL

*Publisher:* FLORIDA NATURAL AREAS INVENTORY (FNAI)

*Online\_Linkage:* [https://www.fnai.org/gis\\_data.cfm](https://www.fnai.org/gis_data.cfm)

*Type\_of\_Source\_Media:* FTP SITE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2011

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* MGT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

NATIONAL MARINE FISHERIES SERVICE (NFMS) NATIONAL COASTAL  
DATA DEVELOPMENT CENTER

*Publication\_Date:* 1999

*Title:* JOHNSON'S SEAGRASS CRITICAL HABITAT

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* STENNIS SPACE CENTER, MS

*Publisher:*

NATIONAL MARINE FISHERIES SERVICE (NMFS) NATIONAL  
COASTAL DATA DEVELOPMENT CENTER

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2003

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* MGT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION (NOAA)  
NATIONAL MARINE FISHERIES SERVICE (NMFS)

*Publication\_Date:* 2008

*Title:* ACROPORA (ELKHORN/STAGHORN) CRITICAL HABITAT

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* ST. PETERSBURG, FL

*Publisher:*

NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION (NOAA)  
NATIONAL MARINE FISHERIES SERVICE (NMFS)

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2008

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* MGT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION (NOAA)  
NATIONAL MARINE FISHERIES SERVICE (NMFS)

*Publication\_Date:* 2009

*Title:* SMALLTOOTH SAWFISH CRITICAL HABITAT

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* ST. PETERSBURG, FL

*Publisher:*

NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION (NOAA)  
NATIONAL MARINE FISHERIES SERVICE (NMFS)

*Online\_Linkage:* <<http://www.nmfs.noaa.gov/gis/data/critical.htm#se>>

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2009

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* MGT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION (NOAA)

OCEAN AND COASTAL RESOURCE MANAGEMENT, NATIONAL  
MARINE PROTECTED AREAS CENTER

*Publication\_Date:* 2011

*Title:* MARINE PROTECTED AREAS POLYGON

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* MONTEREY, CA

*Publisher:*

NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION (NOAA)  
OCEAN AND COASTAL RESOURCE MANAGEMENT, NATIONAL  
MARINE PROTECTED AREAS CENTER

*Type\_of\_Source\_Media:* FTP SITE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2011

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* MGT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* NATIONAL PARK SERVICE (NPS)

*Publication\_Date:* 2013

*Title:* EVERGLADES NATIONAL PARK CROCODILE SANCTUARY

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2013

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* MGT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* NIMMO, K. (NATIONAL PARK SERVICE (NPS))  
*Publication\_Date:* 2012  
*Title:* DRY TORTUGAS NATIONAL PARK CLOSED AREAS  
*Geospatial\_Data\_Presentation\_Form:* SPREADSHEET

*Type\_of\_Source\_Media:* EMAIL  
*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* MGT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*  
SOUTH FLORIDA ECOLOGICAL SERVICE OFFICE, UNITED STATES  
FISH AND WILDLIFE SERVICE (USFWS)  
*Publication\_Date:* 2003  
*Title:* CAPE SABLE SEASIDE SPARROW DESIGNATED CRITICAL HABITAT  
*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA  
*Publication\_Information:*

*Publication\_Place:* VERO BEACH, FL

*Publisher:* UNITED STATES FISH AND WILDLIFE SERVICE (USFWS)

*Online\_Linkage:*

<http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?scode=B00Q>

*Type\_of\_Source\_Media:* ONLINE  
*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2003

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* MGT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* UNITED STATES FISH AND WILDLIFE SERVICE (USFWS)

*Publication\_Date:* 2001

*Title:* PIPING PLOVER CRITICAL HABITAT

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* FEDERAL REGISTER

*Publisher:* UNITED STATES FISH AND WILDLIFE SERVICE (USFWS)

*Online\_Linkage:* <<http://criticalhabitat.fws.gov/>>

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2001

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* MGT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* UNITED STATES FISH AND WILDLIFE SERVICE (USFWS)

*Publication\_Date:* 2003

*Title:* AMERICAN CROCODILE CRITICAL HABITAT

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* VERO BEACH, FL

*Publisher:* UNITED STATES FISH AND WILDLIFE SERVICE (USFWS)

*Online\_Linkage:* <<http://criticalhabitat.fws.gov/>>

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2003

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* MGT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* UNITED STATES FISH AND WILDLIFE SERVICE (USFWS)

*Publication\_Date:* 2003

*Title:* MANATEE CRITICAL HABITAT

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* VERO BEACH, FL

*Publisher:* UNITED STATES FISH AND WILDLIFE SERVICE (USFWS)

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2003

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* MGT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* UNITED STATES FISH AND WILDLIFE SERVICE (USFWS)

*Publication\_Date:* 2005

*Title:* RICE RAT CRITICAL HABITAT

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* VERO BEACH, FL

*Publisher:* UNITED STATES FISH AND WILDLIFE SERVICE (USFWS)

*Online\_Linkage:* <<http://criticalhabitat.fws.gov/>>

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2005

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* MGT INFORMATION

*Process\_Step:*

*Process\_Description:*

Numerous digital coverages were used to depict management areas for this data layer including: a 2008 Florida Fish and Wildlife Conservation Commission - Fish and Wildlife Research Institute (FWC-FWRI) Aquatic Preserves Florida data set, a 2011 Florida Department of Environmental Protection (DEP) Outstanding Florida Waters data set, a 2011 Florida Natural Areas Inventory (FNAI) Managed Areas Florida data set, a 2011 NOAA Ocean and Coastal Resource Management (OCRM) Marine Areas Polygon data set, a 2012 National Park Service (NPS) Dry Tortugas National Park Closed Areas data set, a 2006 FWRI Biscayne Bay/Card Sound Spiny Lobster Sanctuary boundaries data set, a 2012 FWRI Special Management Zones in the Southeast data set (SMZ); numerous NOAA National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS) Critical Habitat boundary layers for: Acropora (Elkhorn/Staghorn), manatee, Johnson's Seagrass, Smalltooth Sawfish, American Crocodile, Piping Plover, Rice Rat, Cape Sable Seaside Sparrow. The above digital and/or hardcopy sources were compiled by the project biologist to create the MGT data layer. Depending on the type of source data, three general approaches are used for compiling the data layer: 1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:24,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the MGT data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:* 201304

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Person:* Jill Petersen

*Contact\_Address:*

*Address\_Type:* Physical address

*Address:* 7600 Sand Point Way, N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6944



*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:* Vector

*Point\_and\_Vector\_Object\_Information:*

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* GT-polygon composed of chains

*Point\_and\_Vector\_Object\_Count:* 5947

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Area point

*Point\_and\_Vector\_Object\_Count:* 5946

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Complete chain

*Point\_and\_Vector\_Object\_Count:* 11883

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Link

*Point\_and\_Vector\_Object\_Count:* 747369

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Node, planar graph

*Point\_and\_Vector\_Object\_Count:* 8356

---

*Spatial\_Reference\_Information:*

*Horizontal\_Coordinate\_System\_Definition:*

*Geographic:*

*Latitude\_Resolution:* 0.0000001

*Longitude\_Resolution:* 0.0000001

*Geographic\_Coordinate\_Units:* Decimal degrees

*Geodetic\_Model:*

*Horizontal\_Datum\_Name:* North American Datum of 1983

*Ellipsoid\_Name:* Geodetic Reference System 80

*Semi-major\_Axis:* 6378137.000000

*Denominator\_of\_Flattening\_Ratio:* 298.257222

---

*Entity\_and\_Attribute\_Information:*

*Overview\_Description:*

*Entity\_and\_Attribute\_Overview:*

In addition to the geographic data layers, two relational attribute or data tables, SOC\_DAT, and SOURCES, are used to store the complex socioeconomic data in the ESI data structure. The geographic data layer containing socioeconomic data resource information (in this case, MGT) is linked to the Socioeconomic Resources table (SOC\_DAT) using the unique ID and the lookup table SOC\_LUT, or it can be linked directly using HUNUM. HUNUM is a unique reference number concatenated with the atlas number (for South Florida, the number is 221). ID is a unique combination of the atlas number (221), an element specific number (MGT = 11), and a unique record number. SOC\_DAT and the other relational data tables are described below in detail. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

*Entity\_and\_Attribute\_Detail\_Citation:*

A complete description of entity types, attributes, and attribute values for ESI atlases can be found in the NOAA ESI Guidelines ([http://response.restoration.noaa.gov/esi\\_guidelines](http://response.restoration.noaa.gov/esi_guidelines)).

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* MGT.PAT

*Entity\_Type\_Definition:*

The MGT.PAT table contains attribute information for the vector polygons representing critical habitats, management areas, marine sanctuaries, nature conservancy lands, national parks, parks, and wildlife refuges. Note that all attribute information is stored in a series of relational files, described below. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* TYPE

*Attribute\_Definition:*

The human-use features depicted on the maps are those that could be impacted by an oil spill or could provide access for response operations.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* CH

*Enumerated\_Domain\_Value\_Definition:* Designated Critical Habitat

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* MA

*Enumerated\_Domain\_Value\_Definition:* Management Area

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* MR

*Enumerated\_Domain\_Value\_Definition:*

Multiple Records - Signifies that multiple types overlap in the polygon

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* MS

*Enumerated\_Domain\_Value\_Definition:* Marine Sanctuary

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* NC

*Enumerated\_Domain\_Value\_Definition:* Nature Conservancy

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* NP

*Enumerated\_Domain\_Value\_Definition:* National Park

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* P

*Enumerated\_Domain\_Value\_Definition:* Regional or State Park

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* WR

*Enumerated\_Domain\_Value\_Definition:* Wildlife Refuge

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the human-use data layers to records in the SOC\_LUT data table. ID is a concatenation of atlas number (221), element number (11), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Attribute:*

*Attribute\_Label:* HUNUM

*Attribute\_Definition:*

An identifier that links directly to the SOC\_DAT table. HUNUM values of 0 are holes in the polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SOC\_LUT

*Entity\_Type\_Definition:*

The data table SOC\_LUT is a lookup table that contains items necessary for linking vector objects in the human-use data layers with the SOC\_DAT data table. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* HUNUM

*Attribute\_Definition:*

An identifier that links records in the SOC\_LUT data table to records in the SOC\_DAT data table. HUNUM values of 0 are holes in the polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the human-use data layers to records in the SOC\_LUT data table. ID is a concatenation of atlas number (221), element number (11), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SOC\_DAT

*Entity\_Type\_Definition:*

The data table SOC\_DAT contains both human-use attribute data and items necessary for linking the human-use spatial data layers to the SOURCES data table. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* HUNUM

*Attribute\_Definition:*

An identifier that links records in the SOC\_DAT data table to records in the SOC\_LUT data table. HUNUM values of 0 are holes in the polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* TYPE

*Attribute\_Definition:*

The human-use features depicted on the maps are those that could be impacted by an oil spill or could provide access for response operations.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* ABANDONED VESSEL

*Enumerated\_Domain\_Value\_Definition:* Abandoned Vessel

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* ACCESS

*Enumerated\_Domain\_Value\_Definition:* Access

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* AIRPORT

*Enumerated\_Domain\_Value\_Definition:* Airport

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* AQUACULTURE

*Enumerated\_Domain\_Value\_Definition:* Aquaculture

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* ARTIFICIAL REEF

*Enumerated\_Domain\_Value\_Definition:* Artificial Reef

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BEACH

*Enumerated\_Domain\_Value\_Definition:* Beach

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BOAT RAMP

*Enumerated\_Domain\_Value\_Definition:* Boat Ramp

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* COAST GUARD

*Enumerated\_Domain\_Value\_Definition:* Coast Guard

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* CRITICAL HABITAT

*Enumerated\_Domain\_Value\_Definition:* Designated Critical Habitat

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FERRY

*Enumerated\_Domain\_Value\_Definition:* Ferry

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HISTORICAL SITE

*Enumerated\_Domain\_Value\_Definition:* Historical Site

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* MANAGEMENT AREA

*Enumerated\_Domain\_Value\_Definition:* Management Area

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* MARINA

*Enumerated\_Domain\_Value\_Definition:* Marina

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* MARINE SANCTUARY

*Enumerated\_Domain\_Value\_Definition:* Marine Sanctuary

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* NATIONAL PARK

*Enumerated\_Domain\_Value\_Definition:* National Park

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* NATURE CONSERVANCY

*Enumerated\_Domain\_Value\_Definition:* Nature Conservancy

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* PARK

*Enumerated\_Domain\_Value\_Definition:* Regional or State Park

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* PORT

*Enumerated\_Domain\_Value\_Definition:* Port

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* RECREATIONAL FISHING

*Enumerated\_Domain\_Value\_Definition:* Recreational Fishing

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* WATER INTAKE

*Enumerated\_Domain\_Value\_Definition:* Water Intake

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* WILDLIFE REFUGE

*Enumerated\_Domain\_Value\_Definition:* Wildlife Refuge

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* NAME

*Attribute\_Definition:* The feature name.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* CONTACT

*Attribute\_Definition:* Contact person or entity.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.



*Attribute:*

*Attribute\_Label:* PHONE

*Attribute\_Definition:* Contact telephone number.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Any character

*Enumerated\_Domain\_Value\_Definition:* Free text

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* G\_SOURCE

*Attribute\_Definition:*

Geographic source identifier that links records in the SOC\_DAT data table to records in the SOURCES data table.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* A\_SOURCE

*Attribute\_Definition:*

Attribute source identifier that links records in the SOC\_DAT data table to records in the SOURCES data table.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SOURCES

*Entity\_Type\_Definition:*

The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SOURCE\_ID

*Attribute\_Definition:*

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table; G\_SOURCE and S\_SOURCE in the BIORES table; and SOURCE\_ID and ESI\_Source in the ESI and HYDRO data layers.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* ORIGINATOR

*Attribute\_Definition:* Author or developer of source material or data set.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* DATE\_PUB

*Attribute\_Definition:*

Date of source material, publication, or date of personal communication with expert source.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* TITLE

*Attribute\_Definition:* Title of source material or data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* DATA\_FORMAT

*Attribute\_Definition:* The format of the source material.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUB\_PLACE

*Attribute\_Definition:* Publication place.  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUBLISHER  
*Attribute\_Definition:* Publisher.  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUBLICATION  
*Attribute\_Definition:* Additional citation information.  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* ONLINE\_LINK  
*Attribute\_Definition:* Online computer resource URL.  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* SCALE  
*Attribute\_Definition:* Description of the source scale.  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* TIME\_PERIOD  
*Attribute\_Definition:*  
Date(s) of data collection that the source material is based upon.  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

---

*Distribution\_Information:*

*Distributor:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:* John Kaperick

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Address:*

*Address\_Type:* Physical Address

*Address:* 7600 Sand Point Way N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6400

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Resource\_Description:* Downloadable Data

*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.

*Custom\_Order\_Process:*

Contact NOAA for distribution options (see Distributor). 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 distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

---

*Metadata\_Reference\_Information:*

*Metadata\_Date:* 201304

*Metadata\_Review\_Date:* 201304

*Metadata\_Contact:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:* Jill Petersen

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Position:* GIS Manager

*Contact\_Address:*

*Address\_Type:* Physical Address

*Address:* 7600 Sand Point Way, N.E.

*City:* Seattle  
*State\_or\_Province:* Washington  
*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6944  
*Contact\_Facsimile\_Telephone:* (206) 526-6329  
*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

*Metadata\_Standard\_Name:* Content Standards for Digital Geospatial Metadata  
*Metadata\_Standard\_Version:* FGDC-STD-001-1998

# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: South Florida: MGT\_FISH (Fishery Management Area Polygons)

Metadata also available as - [[Parseable text](#)] - [[SGML](#)] - [[XML](#)]

## Metadata:

- [Identification Information](#)
  - [Data Quality Information](#)
  - [Spatial Data Organization Information](#)
  - [Spatial Reference Information](#)
  - [Entity and Attribute Information](#)
  - [Distribution Information](#)
  - [Metadata Reference Information](#)
- 

### *Identification\_Information:*

#### *Citation:*

##### *Citation\_Information:*

##### *Originator:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington.

*Publication\_Date:* 201304

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: South Florida: MGT\_FISH (Fishery Management Area Polygons)

*Edition:* Second

*Geospatial\_Data\_Presentation\_Form:* vector digital data

##### *Series\_Information:*

*Series\_Name:* South Florida

*Issue\_Identification:* South Florida

##### *Publication\_Information:*

*Publication\_Place:* Seattle, Washington

##### *Publisher:*

NOAA's Ocean Service, Office of Response and Restoration (OR&R), Emergency Response Division (ERD).

##### *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, Emergency Response Division, Seattle, Washington.  
*Online\_Linkage:* <<http://response.restoration.noaa.gov/esi>>

*Description:*

*Abstract:*

This data set contains commercial fisheries in South Florida. Vector polygons in this data set represent statistical reporting grids used to aggregate commercial fishing data. Species specific landings, catch per unit effort (CPUE), value, fishing seasons and fishery types are stored in a relational data table designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the ESI data for South Florida. ESI data characterize the marine and 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.

*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.

*Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1996

*Ending\_Date:* 2010

*Currentness\_Reference:*

The data were compiled during 2011-2013. The currentness dates for this data range from 1996 to 2010 and are documented in the Lineage section.

*Status:*

*Progress:* Complete

*Maintenance\_and\_Update\_Frequency:* None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -82.93300

*East\_Bounding\_Coordinate:* -80.00000

*North\_Bounding\_Coordinate:* 26.37500

*South\_Bounding\_Coordinate:* 24.50000

*Keywords:*

*Theme:*

*Theme\_Keyword\_Thesaurus:* ISO 19115 Topic Category

*Theme\_Keyword:* biota

*Theme\_Keyword:* environment

*Theme:*

*Theme\_Keyword\_Thesaurus:* None

*Theme\_Keyword:* Environmental Monitoring  
*Theme\_Keyword:* ESI  
*Theme\_Keyword:* Sensitivity maps  
*Theme\_Keyword:* Coastal resources  
*Theme\_Keyword:* Oil spill planning  
*Theme\_Keyword:* Coastal Zone Management  
*Theme\_Keyword:* Wildlife  
*Theme\_Keyword:* Management

*Place:*

*Place\_Keyword\_Thesaurus:* None  
*Place\_Keyword:* South Florida

*Access\_Constraints:* None

*Use\_Constraints:*

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* datafig.jpg

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and attribute data tables for the South Florida ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* datafig2.jpg

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and desktop data tables for the South Florida ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington, the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness Washington, D.C. and the Fish and Wildlife Research Institute (FWRI), Florida Fish and Wildlife Conservation Commission (FWC), St. Petersburg, Florida.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 10.0) and SQL SERVER(R) (version 2005). The hardware configuration is PC's with Windows Operating System 7.

The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export



format. The following files are included in the data set: benthic.e00, birds.e00, esil.e00, esip.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, mgt\_fish.e00, nests.e00, reptiles.e00, soecon.e00, and t\_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio\_lut.e00, biofile.e00, biores.e00, breed.e00, seasonal.e00, soc\_dat.e00, soc\_lut.e00, sources.e00, species.e00, status.e00, mgt\_fish\_lut.e00, and mgt\_fish.e00.

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## *Data\_Quality\_Information:*

### *Attribute\_Accuracy:*

#### *Attribute\_Accuracy\_Report:*

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

#### *Logical\_Consistency\_Report:*

A multi-stage error checking process, described in the above Attribute\_Accuracy\_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary node, etc.), and SQL SERVER(R) to ARC/INFO(R) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks.

#### *Completeness\_Report:*

These data represent information on commercial landings and fishing seasons based on the marine fisheries management database maintained by Florida Fish and Wildlife Conservation Commission (FWC). Please note that this information is based on fishing information and is meant to portray a socioeconomic dataset and not areas biologically important to a species.

#### *Positional\_Accuracy:*

##### *Horizontal\_Positional\_Accuracy:*

##### *Horizontal\_Positional\_Accuracy\_Report:*

Spatial components for the human-use data layers can come from expert interviews, hardcopy, or digital sources. Most of the spatial components of the human-use data layers are developed from pre-existing digital or hardcopy sources and reflect the positional accuracy of these original data. Some of the spatial components of the human-use data layers are compiled on hardcopy base maps with a scale of 1:24,000. See the Lineage and Process\_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

## *Lineage:*

### *Source\_Information:*

#### *Source\_Citation:*

#### *Citation\_Information:*

*Originator:*

BROWN, S. (FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI),  
FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION (FWC))

*Publication\_Date:* 2012

*Title:*

15-YEAR COMMERCIAL FISHERIES LANDINGS STATISTICS FOR  
SOUTH FLORIDA

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* MGT\_FISH INFORMATION

*Process\_Step:*

*Process\_Description:*

Statistical reporting areas were provided by FWC in the form of shapefiles and paper maps. Areas where fishing is prohibited were incorporated and are marked as 'NO HARVEST' for the species that cannot be caught in each location. These include the Florida Keys National Marine Sanctuary Special Protection Areas (SPAs), Ecological reserves and research only areas for fish, Biscayne Bay Lobster Sanctuary for spiny lobster, and Biscayne Bay National Park for marine life species. Information on these spatial datasets is found in the ESI management layer. The Tortugas shrimp sanctuary was not removed from the fishery layer, but falls in areas 1.9 and 2.8. Parts of these areas are seasonally or permanently closed to shrimp trawling. Average annual landings in pounds, effort in trips and monetary values in dollars from 1996-2010 were provided by Florida Fish and Wildlife Conservation Commission - Florida Wildlife Research Institute FWC FWRI). Catch-per-unit effort was calculated by dividing landings by trips. Information on seasonal closures was obtained from Florida Fish and Wildlife Conservation Commission's website. Regulations are current as of January 1, 2013, but could change at any time.

*Process\_Date:* 201304

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Person:* Jill Petersen

*Contact\_Address:*

*Address\_Type:* Physical address

*Address:* 7600 Sand Point Way, N.E.  
*City:* Seattle  
*State\_or\_Province:* Washington  
*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6944  
*Contact\_Facsimile\_Telephone:* (206) 526-6329  
*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

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*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:* Vector  
*Point\_and\_Vector\_Object\_Information:*

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* GT-polygon composed of chains  
*Point\_and\_Vector\_Object\_Count:* 1742

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Area point  
*Point\_and\_Vector\_Object\_Count:* 1741

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Complete chain  
*Point\_and\_Vector\_Object\_Count:* 3269

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Link  
*Point\_and\_Vector\_Object\_Count:* 424086

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Node, planar graph  
*Point\_and\_Vector\_Object\_Count:* 2832

---

*Spatial\_Reference\_Information:*

*Horizontal\_Coordinate\_System\_Definition:*

*Geographic:*

*Latitude\_Resolution:* 0.0000001  
*Longitude\_Resolution:* 0.0000001  
*Geographic\_Coordinate\_Units:* Decimal degrees

*Geodetic\_Model:*

*Horizontal\_Datum\_Name:* North American Datum of 1983  
*Ellipsoid\_Name:* Geodetic Reference System 80  
*Semi-major\_Axis:* 6378137.000000

*Entity\_and\_Attribute\_Information:*

*Overview\_Description:*

*Entity\_and\_Attribute\_Overview:*

In addition to the geographic data layers, two relational attribute or data tables, SOC\_DAT, and SOURCES, are used to store the complex socioeconomic data in the ESI data structure. The geographic data layer containing socioeconomic data resource information (in this case, MGT) is linked to the Socioeconomic Resources table (SOC\_DAT) using the unique ID and the lookup table SOC\_LUT, or it can be linked directly using HUNUM. HUNUM is a unique reference number concatenated with the atlas number (for South Florida, the number is 221). ID is a unique combination of the atlas number (221), an element specific number (MGT = 11), and a unique record number. SOC\_DAT and the other relational data tables are described below in detail. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

*Entity\_and\_Attribute\_Detail\_Citation:*

A complete description of entity types, attributes, and attribute values for ESI atlases can be found in the NOAA ESI Guidelines ([http://response.restoration.noaa.gov/esi\\_guidelines](http://response.restoration.noaa.gov/esi_guidelines)).

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* MGT\_FISH.PAT

*Entity\_Type\_Definition:*

The MGT\_FISH.PAT table contains attribute information for the vector polygons representing statistical reporting grids used to aggregate commercial fishing data. Note that all attribute information is stored in a series of relational files, described below. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* TYPE

*Attribute\_Definition:*

The human-use features depicted on the maps are those that could be impacted by an oil spill or could provide access for response operations.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* CH

*Enumerated\_Domain\_Value\_Definition:* Designated Critical Habitat

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* MA

*Enumerated\_Domain\_Value\_Definition:* Management Area  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* MR  
*Enumerated\_Domain\_Value\_Definition:*  
Multiple Records - Signifies that multiple types overlap in the polygon  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* MS  
*Enumerated\_Domain\_Value\_Definition:* Marine Sanctuary  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* NC  
*Enumerated\_Domain\_Value\_Definition:* Nature Conservancy  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* NP  
*Enumerated\_Domain\_Value\_Definition:* National Park  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* P  
*Enumerated\_Domain\_Value\_Definition:* Regional or State Park  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* WR  
*Enumerated\_Domain\_Value\_Definition:* Wildlife Refuge  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* ID  
*Attribute\_Definition:*

An identifier that links vector objects in the human-use data layers to records in the SOC\_LUT data table. ID is a concatenation of atlas number (221), element number (11), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Attribute:*

*Attribute\_Label:* HUNUM

*Attribute\_Definition:*

An identifier that links directly to the SOC\_DAT table. HUNUM values of 0 are holes in the polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SOC\_LUT

*Entity\_Type\_Definition:*

The data table SOC\_LUT is a lookup table that contains items necessary for linking vector objects in the human-use data layers with the SOC\_DAT data table. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* HUNUM

*Attribute\_Definition:*

An identifier that links records in the SOC\_LUT data table to records in the SOC\_DAT data table. HUNUM values of 0 are holes in the polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the human-use data layers to records in the SOC\_LUT data table. ID is a concatenation of atlas number (221), element number (11), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SOC\_DAT

*Entity\_Type\_Definition:*

The data table SOC\_DAT contains both human-use attribute data and items necessary for linking the human-use spatial data layers to the SOURCES data table. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* HUNUM

*Attribute\_Definition:*

An identifier that links records in the SOC\_DAT data table to records in the SOC\_LUT data table. HUNUM values of 0 are holes in the polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* TYPE

*Attribute\_Definition:*

The human-use features depicted on the maps are those that could be impacted by an oil spill or could provide access for response operations.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* ABANDONED VESSEL

*Enumerated\_Domain\_Value\_Definition:* Abandoned Vessel

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* ACCESS  
*Enumerated\_Domain\_Value\_Definition:* Access  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* AIRPORT  
*Enumerated\_Domain\_Value\_Definition:* Airport  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* AQUACULTURE  
*Enumerated\_Domain\_Value\_Definition:* Aquaculture  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* ARTIFICIAL REEF  
*Enumerated\_Domain\_Value\_Definition:* Artificial Reef  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BEACH  
*Enumerated\_Domain\_Value\_Definition:* Beach  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BOAT RAMP  
*Enumerated\_Domain\_Value\_Definition:* Boat Ramp  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* COAST GUARD  
*Enumerated\_Domain\_Value\_Definition:* Coast Guard  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*



*Enumerated\_Domain\_Value:* CRITICAL HABITAT  
*Enumerated\_Domain\_Value\_Definition:* Designated Critical Habitat  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FERRY  
*Enumerated\_Domain\_Value\_Definition:* Ferry  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HISTORICAL SITE  
*Enumerated\_Domain\_Value\_Definition:* Historical Site  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* MANAGEMENT AREA  
*Enumerated\_Domain\_Value\_Definition:* Management Area  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* MARINA  
*Enumerated\_Domain\_Value\_Definition:* Marina  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* MARINE SANCTUARY  
*Enumerated\_Domain\_Value\_Definition:* Marine Sanctuary  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* NATIONAL PARK  
*Enumerated\_Domain\_Value\_Definition:* National Park  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* NATURE CONSERVANCY  
*Enumerated\_Domain\_Value\_Definition:* Nature Conservancy  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* PARK  
*Enumerated\_Domain\_Value\_Definition:* Regional or State Park  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* PORT  
*Enumerated\_Domain\_Value\_Definition:* Port  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* RECREATIONAL FISHING  
*Enumerated\_Domain\_Value\_Definition:* Recreational Fishing  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* WATER INTAKE  
*Enumerated\_Domain\_Value\_Definition:* Water Intake  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* WILDLIFE REFUGE  
*Enumerated\_Domain\_Value\_Definition:* Wildlife Refuge  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* NAME  
*Attribute\_Definition:* The feature name.  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* CONTACT

*Attribute\_Definition:* Contact person or entity.  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PHONE  
*Attribute\_Definition:* Contact telephone number.  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Any character  
*Enumerated\_Domain\_Value\_Definition:* Free text  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* G\_SOURCE  
*Attribute\_Definition:*  
Geographic source identifier that links records in the SOC\_DAT data table to records in the SOURCES data table.  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1  
*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* A\_SOURCE  
*Attribute\_Definition:*  
Attribute source identifier that links records in the SOC\_DAT data table to records in the SOURCES data table.  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1  
*Range\_Domain\_Maximum:* N

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SOURCES  
*Entity\_Type\_Definition:*  
The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way

this table relates to other attribute tables in the ESI data structure.  
*Entity\_Type\_Definition\_Source*: NOAA ESI Guidelines

*Attribute*:

*Attribute\_Label*: SOURCE\_ID

*Attribute\_Definition*:

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table; G\_SOURCE and S\_SOURCE in the BIORRES table; and SOURCE\_ID and ESI\_Source in the ESI and HYDRO data layers.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1

*Range\_Domain\_Maximum*: N

*Attribute*:

*Attribute\_Label*: ORIGINATOR

*Attribute\_Definition*: Author or developer of source material or data set.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label*: DATE\_PUB

*Attribute\_Definition*:

Date of source material, publication, or date of personal communication with expert source.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: YYYYMM

*Enumerated\_Domain\_Value\_Definition*: YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute*:

*Attribute\_Label*: TITLE

*Attribute\_Definition*: Title of source material or data.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label*: DATA\_FORMAT

*Attribute\_Definition*: The format of the source material.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUB\_PLACE

*Attribute\_Definition:* Publication place.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUBLISHER

*Attribute\_Definition:* Publisher.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUBLICATION

*Attribute\_Definition:* Additional citation information.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* ONLINE\_LINK

*Attribute\_Definition:* Online computer resource URL.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* SCALE

*Attribute\_Definition:* Description of the source scale.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* TIME\_PERIOD

*Attribute\_Definition:*

Date(s) of data collection that the source material is based upon.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

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*Distribution\_Information*:

*Distributor*:

*Contact\_Information*:

*Contact\_Person\_Primary*:

*Contact\_Person*: John Kaperick

*Contact\_Organization*: NOAA, Office of Response and Restoration

*Contact\_Address*:

*Address\_Type*: Physical Address

*Address*: 7600 Sand Point Way N.E.

*City*: Seattle

*State\_or\_Province*: Washington

*Postal\_Code*: 98115-6349

*Contact\_Voice\_Telephone*: (206) 526-6400

*Contact\_Facsimile\_Telephone*: (206) 526-6329

*Resource\_Description*: Downloadable Data

*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.

*Custom\_Order\_Process*:

Contact NOAA for distribution options (see Distributor). 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 distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

---

*Metadata\_Reference\_Information*:

*Metadata\_Date*: 201304

*Metadata\_Review\_Date*: 201304

*Metadata\_Contact*:

*Contact\_Information*:

*Contact\_Person\_Primary*:

*Contact\_Person*: Jill Petersen

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Position:* GIS Manager

*Contact\_Address:*

*Address\_Type:* Physical Address

*Address:* 7600 Sand Point Way, N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6944

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

*Metadata\_Standard\_Name:* Content Standards for Digital Geospatial Metadata

*Metadata\_Standard\_Version:* FGDC-STD-001-1998

# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: South Florida: NESTS (Nest Points)

Metadata also available as - [[Parseable text](#)] - [[SGML](#)] - [[XML](#)]

## Metadata:

- [Identification Information](#)
  - [Data Quality Information](#)
  - [Spatial Data Organization Information](#)
  - [Spatial Reference Information](#)
  - [Entity and Attribute Information](#)
  - [Distribution Information](#)
  - [Metadata Reference Information](#)
- 

### *Identification\_Information:*

#### *Citation:*

#### *Citation\_Information:*

#### *Originator:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington.

*Publication\_Date:* 201304

#### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: South Florida: NESTS (Nest Points)

*Edition:* Second

*Geospatial\_Data\_Presentation\_Form:* vector digital data

#### *Series\_Information:*

*Series\_Name:* South Florida

*Issue\_Identification:* South Florida

#### *Publication\_Information:*

*Publication\_Place:* Seattle, Washington

#### *Publisher:*

NOAA's Ocean Service, Office of Response and Restoration (OR&R), Emergency Response Division (ERD).

#### *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, Emergency Response Division, Seattle, Washington.

*Online\_Linkage:* <<http://response.restoration.noaa.gov/esi>>



*Description:*

*Abstract:*

This data set contains sensitive biological resource data for diving birds, gulls, terns, passerine birds, pelagic birds, raptors, shorebirds, wading birds, and waterfowl in [for] South Florida. Vector points in this data set represent bird nesting and wintering sites. Species specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the ESI data for South Florida. ESI data characterize the marine and 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. See also the BIRDS data layer, part of the larger South Florida ESI database, for additional bird information.

*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.

*Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1999

*Ending\_Date:* 2013

*Currentness\_Reference:*

The data were compiled during 2011-2013. The currentness dates for this data range from 1999 to 2013 and are documented in the Lineage section.

*Status:*

*Progress:* Complete

*Maintenance\_and\_Update\_Frequency:* None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -82.93300

*East\_Bounding\_Coordinate:* -80.00000

*North\_Bounding\_Coordinate:* 26.37500

*South\_Bounding\_Coordinate:* 24.50000

*Keywords:*

*Theme:*

*Theme\_Keyword\_Thesaurus:* ISO 19115 Topic Category

*Theme\_Keyword:* biota

*Theme\_Keyword:* environment

*Theme:*

*Theme\_Keyword\_Thesaurus:* None

*Theme\_Keyword:* Environmental Monitoring  
*Theme\_Keyword:* ESI  
*Theme\_Keyword:* Sensitivity maps  
*Theme\_Keyword:* Coastal resources  
*Theme\_Keyword:* Oil spill planning  
*Theme\_Keyword:* Coastal Zone Management  
*Theme\_Keyword:* Wildlife  
*Theme\_Keyword:* Nest  
*Theme\_Keyword:* Bird

*Place:*

*Place\_Keyword\_Thesaurus:* None  
*Place\_Keyword:* South Florida

*Access\_Constraints:* None

*Use\_Constraints:*

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* datafig.jpg

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and attribute data tables for the South Florida ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* datafig2.jpg

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and desktop data tables for the South Florida ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington, the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness Washington, D.C. and the Fish and Wildlife Research Institute (FWRI), Florida Fish and Wildlife Conservation Commission (FWC), St. Petersburg, Florida.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 10.0) and SQL SERVER(R) (version 2005). The hardware configuration is PC's with Windows Operating System 7.

The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in the data set: benthic.e00, birds.e00, esil.e00, esip.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, mgt\_fish.e00, nests.e00, reptiles.e00, socecon.e00, and t\_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio\_lut.e00, biofile.e00, biores.e00, breed.e00, seasonal.e00, soc\_dat.e00, soc\_lut.e00, sources.e00, species.e00, status.e00, mgt\_fish\_lut.e00, and mgt\_fish.e00.

---

## *Data\_Quality\_Information:*

### *Attribute\_Accuracy:*

#### *Attribute\_Accuracy\_Report:*

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

#### *Logical\_Consistency\_Report:*

A multi-stage error checking process, described in the above Attribute\_Accuracy\_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary node, etc.), and SQL SERVER(R) to ARC/INFO(R) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM 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 ID's and RARNUM's or HUNUM's are also generated. The new ID's 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 RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resources at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

#### *Completeness\_Report:*

These data represent a synthesis of expert knowledge, survey data, digital maps, published reports, peer-reviewed articles, and digital data on bird nesting sites. See also the BIRDS data layer, part of the larger South Florida ESI database, for additional bird information. These data do not necessarily represent all nest occurrences in South Florida. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name [n/a if not applicable]): 8, Double-crested cormorant, *Phalacrocorax auritus*; 54, Great blue heron, *Ardea herodias*; 76, Bald eagle, *Haliaeetus leucocephalus*; 77, Osprey, *Pandion haliaetus*; 79, Cormorant, *Phalacrocorax sp.*; 86, Least tern, *Sternula antillarum*; 87, Little blue heron, *Egretta caerulea*; 88, Great egret, *Ardea alba*; 89, Snowy egret, *Egretta thula*; 93, Cattle egret, *Bubulcus ibis*; 94, Tricolored heron, *Egretta tricolor*; 95, Roseate tern, *Sterna dougallii*; 115, White ibis, *Eudocimus albus*; 116, Roseate spoonbill, *Ajaia ajaja*; 117, Great white heron, *Ardea herodias*; 118, Brown pelican, *Pelecanus occidentalis*; 121, Anhinga, *Anhinga anhinga*; 132, Wood stork, *Mycteria americana*; 154, Wilson's plover, *Charadrius wilsonia*; 163, Reddish egret, *Egretta rufescens*; 283, Bridled tern, *Onychoprion anaethetus*; 1004, Wading birds, n/a.

#### *Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy\_Report:*

Spatial components for the biological data layers can come from expert interviews, hardcopy, or digital sources. Some of the spatial components of the biological data layers may have been developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy base maps with a scale of 1:24,000. Some of the spatial components of the biological data sets are developed from pre-existing digital or hardcopy sources and reflect the positional accuracy of these original data. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources. See the Lineage and Process\_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

2011 INTERNATIONAL WINTER PLOVER CENSUS, UNITED STATES  
FISH AND WILDLIFE SERVICE (USFWS), SOUTH FLORIDA  
ECOLOGICAL SERVICES OFFICE

*Publication\_Date:* 2011

*Title:* SOUTH FLORIDA INTERNATIONAL WINTER PLOVER CENSUS 2011

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* VERO BEACH, FL

*Publisher:*

UNITED STATES FISH AND WILDLIFE SERVICE (USFWS), SOUTH  
FLORIDA ECOLOGICAL SERVICES OFFICE

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2011

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* NESTS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* BRUSH, J. (FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION)  
*Publication\_Date:* 2013  
*Title:* ACTIVE BROWN PELICAN COLONIES 2013  
*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE  
*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* EMAIL  
*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2013

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* NESTS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*  
FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI), FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION (FWC)  
*Publication\_Date:* 1999  
*Title:* WADING BIRD ROOKERIES 1999  
*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA  
*Publication\_Information:*

*Publication\_Place:* 620 SOUTH MERIDIAN ST. TALLAHASSEE, FL 32344

*Publisher:* FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Type\_of\_Source\_Media:* ONLINE  
*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1999

*Ending\_Date:* 1999

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* NESTS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI), FLORIDA FISH  
AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Publication\_Date:* 2011

*Title:* BALD EAGLE NESTS FLORIDA 2011

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 2007

*Ending\_Date:* 2011

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* NESTS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION  
(FWC)

*Publication\_Date:* 2010

*Title:* BEACH NESTING BIRDS

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 2005

*Ending\_Date:* 2010

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* NESTS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Publication\_Date:* 2012

*Title:* BALD EAGLE NESTING TERRITORY DATA

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 2011

*Ending\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* NESTS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION (FWC) -  
DIVISION OF HABITAT AND SPECIES CONSERVATION

*Publication\_Date:* 2011

*Title:* FLORIDA SHOREBIRD DATABASE

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* LAKELAND, FL

*Publisher:*

FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI), FLORIDA  
FISH AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2011

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* NESTS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* FREZZA, P. (AUDUBON OF FLORIDA)

*Publication\_Date:* 2013

*Title:* BIRD DISTRIBUTION AND SEASONALITY IN FLORIDA BAY

*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2013

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* NESTS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* GREEN, C. (TEXAS STATE UNIVERSITY)

*Publication\_Date:* 2007

*Title:* REDDISH EGRET COLONIES

*Geospatial\_Data\_Presentation\_Form:* TABULAR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* SAN MARCOS, TX

*Publisher:* TEXAS STATE UNIVERSITY

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2007



*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* NESTS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* LORENZ, J. (AUDUBON OF FLORIDA)

*Publication\_Date:* 2012

*Title:* ROSEATE SPOONBILL COLONIES

*Geospatial\_Data\_Presentation\_Form:* TABULAR DIGITAL DATA

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* NESTS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* MAEHR, D. S. AND KALE, H. W. II

*Publication\_Date:* 2009

*Title:* FLORIDA'S BIRDS: A FIELD GUIDE AND REFERENCE

*Geospatial\_Data\_Presentation\_Form:* HARDCOPY TEXT

*Publication\_Information:*

*Publication\_Place:* SARASOTA, FL

*Publisher:* PINEAPPLE PRESS

*Other\_Citation\_Details:* 359 PP.

*Type\_of\_Source\_Media:* BOOK

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2009

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* NESTS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* NATIONAL PARK SERVICE (NPS) SOUTH FLORIDA/CARIBBEAN NETWORK

*Publication\_Date:* 2012

*Title:* BISCAYNE NATIONAL PARK BIRD COLONIES

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* PALMETTO BAY, FL

*Publisher:* NATIONAL PARK SERVICE (NPS) SOUTH FLORIDA/CARIBBEAN NETWORK

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* NESTS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

OBERHOFER, L. (NATIONAL PARK SERVICE (NPS), EVERGLADES NATIONAL PARK)

*Publication\_Date:* 2012

*Title:* EVERGLADES NATIONAL PARK BIRD COLONIES

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 2003

*Ending\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* NESTS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* UNITED STATES FISH AND WILDLIFE SERVICE (USFWS)

*Publication\_Date:* 2012

*Title:* WOOD STORK COLONIES

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 2001

*Ending\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* NESTS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

ZAMBRANO, R. (FLORIDA FISH AND WILDLIFE CONSERVATION  
COMMISSION (FWC))

*Publication\_Date:* 2012

*Title:* DISTRIBUTION AND SEASONALITY OF BIRDS AND REPTILES IN  
SOUTH FL

*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* NESTS INFORMATION

*Process\_Step:*

*Process\_Description:*

Three main sources of data were used to depict bird distribution and seasonality for this data layer: 1) personal interviews with resource experts from Florida Fish and Wildlife Conservation Commission (FWC), Audubon of Florida, National Park Service (NPS) - (Everglades National Park, Biscayne Bay National Park, Dry Tortugas National Park), and U.S. Fish and Wildlife Service (USFWS) - Florida Keys National Wildlife Refuges; 2) digital data sets (based on field surveys) provided by: Audubon of Florida, FWC, Texas State University, NPS-Everglades National Park, Biscayne Bay National Park, Dry Tortugas National Park and USFWS; and 3) literature provided by Audubon of Florida and NPS. Survey data on locations of breeding and wintering birds was provided via shapefiles for the following species and species groups: bald eagle, wading birds, beach nesting birds, reddish egret, roseate spoonbill, Everglades National Park and Biscayne Bay National Park breeding colonies, shorebirds, and wood stork. For species and data sets for which concentration information was available, if the data provided contained a single year of count data, that count was displayed in the concentration field. For data sets with multiple years of data the maximum value or most recent year recorded at a site over the months or years surveyed is displayed in the concentration field.

The above digital and/or hardcopy sources were compiled by the project biologist to create the NESTS data layer. Depending on the type of source data, three general approaches are used for compiling the data layer: 1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:24,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the NESTS data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:* 201304

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Person:* Jill Petersen

*Contact\_Address:*

*Address\_Type:* Physical address

*Address:* 7600 Sand Point Way, N.E.

*City:* Seattle  
*State\_or\_Province:* Washington  
*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6944  
*Contact\_Facsimile\_Telephone:* (206) 526-6329  
*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

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*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:* Vector  
*Point\_and\_Vector\_Object\_Information:*

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Area point  
*Point\_and\_Vector\_Object\_Count:* 160

---

*Spatial\_Reference\_Information:*

*Horizontal\_Coordinate\_System\_Definition:*

*Geographic:*

*Latitude\_Resolution:* 0.0000001  
*Longitude\_Resolution:* 0.0000001  
*Geographic\_Coordinate\_Units:* Decimal degrees

*Geodetic\_Model:*

*Horizontal\_Datum\_Name:* North American Datum of 1983  
*Ellipsoid\_Name:* Geodetic Reference System 80  
*Semi-major\_Axis:* 6378137.000000  
*Denominator\_of\_Flattening\_Ratio:* 298.257222

---

*Entity\_and\_Attribute\_Information:*

*Overview\_Description:*

*Entity\_and\_Attribute\_Overview:*

In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, NESTS) 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 the South Florida atlas, the number is 221), an element/layer 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. BIORES and the other relational data tables are described below in detail. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data

layers and other attribute tables in the ESI data structure. Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN\_SPEC, S, F, NHP, DATE\_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G\_SOURCE, S\_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED\_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed\_Description of the BREED data table. The link to the BIOFILE may be made through the BIO\_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED\_DT is an auxiliary support data table 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 table is SOURCES. This is the same as the source 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 data tables. The entity-relationship diagram describing relationships between attribute tables in the ESI data structure does NOT include the BIOFILE data table, and this data table is NOT described in detail below.

*Entity\_and\_Attribute\_Detail\_Citation:*

A complete description of entity types, attributes, and attribute values for ESI atlases can be found in the NOAA ESI Guidelines ([http://response.restoration.noaa.gov/esi\\_guidelines](http://response.restoration.noaa.gov/esi_guidelines)).

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* NESTS.PAT

*Entity\_Type\_Definition:*

The NESTS.PAT table contains attribute information for the vector points in this data set representing bird nesting and wintering sites. Note that all attribute information is stored in a series of relational files, described below. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (221), element number (5), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Attribute:*

*Attribute\_Label:* RARNUM

*Attribute\_Definition:*

An identifier that links directly to the BIORES table or the flat format BIOFILE table. RARNUM values of 0 are holes in the polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BIO\_LUT

*Entity\_Type\_Definition:*

The data table BIO\_LUT is a lookup table that contains items necessary for linking vector objects in the biological data layers with the BIORES data table. Note that all attribute information is stored in a series of relational files, described below. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* RARNUM

*Attribute\_Definition:*

An identifier that links records in the BIO\_LUT data table to records in the BIORES data table or the flat format BIOFILE data table. RARNUM values of 0 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (221), element number (5), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BIORES

*Entity\_Type\_Definition:*

The data table BIORES contains both biological attribute data and items necessary for linking vector objects in the biological data layers via the BIO\_LUT data table to other associated data tables. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* RARNUM

*Attribute\_Definition:*

An identifier that links records in the BIORES data table to records in the BIO\_LUT data table or the flat format BIOFILE data table.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* CONC

*Attribute\_Definition:*

The field CONC refers to "concentration," abundance, or density values, and may contain counts of individuals or nests or a term that describes relative abundance of birds at a particular site. The field may contain counts (XX BIRDS or NESTS or PAIRS or ADULTS) or a range of counts (X-XX BIRDS). In cases where no quantitative count data was available, the field may either be blank or contain descriptive terms such as "HIGH" or "LOW". Counts were derived from a variety of surveys, and may range in date (see lineage).

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.



*Attribute:*

*Attribute\_Label:* SEASON\_ID

*Attribute\_Definition:*

Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* G\_SOURCE

*Attribute\_Definition:*

Geographic source identifier that links records in the BIORES data table to records in the SOURCES data table.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* S\_SOURCE

*Attribute\_Definition:*

Seasonality source identifier that links records in the BIORES data table to records in the SOURCES data table.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and plants

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links records in the BIORES data table to records in the SPECIES and STATUS data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BIORES data table to records in the SEASONAL and BREED data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SPECIES

*Entity\_Type\_Definition:*

The data table SPECIES identifies all species in the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure. Refer to the Completeness Report for list of layer specific species.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* NAME

*Attribute\_Definition:* Species common name for the entire ESI data set.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* GEN\_SPEC

*Attribute\_Definition:* Species scientific name for the entire ESI data set.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and plants

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:* Marine Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE  
*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SUBELEMENT  
*Attribute\_Definition:* Element subgroup delineating a logical grouping of species.  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* algae  
*Enumerated\_Domain\_Value\_Definition:* Algae  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* alligator  
*Enumerated\_Domain\_Value\_Definition:* Alligator  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* coral  
*Enumerated\_Domain\_Value\_Definition:* Coral  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* crab  
*Enumerated\_Domain\_Value\_Definition:* Crab

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* diving

*Enumerated\_Domain\_Value\_Definition:* Diving bird

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* dolphin

*Enumerated\_Domain\_Value\_Definition:* Dolphin

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* e\_nursery

*Enumerated\_Domain\_Value\_Definition:* Estuarine nursery fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* e\_resident

*Enumerated\_Domain\_Value\_Definition:* Estuarine resident fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* echinoderm

*Enumerated\_Domain\_Value\_Definition:* Echinoderm

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* fish

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* gastropod

*Enumerated\_Domain\_Value\_Definition:* Gastropod

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* gull\_tern

*Enumerated\_Domain\_Value\_Definition:* Gull or tern

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* hardbottom

*Enumerated\_Domain\_Value\_Definition:* Hardbottom

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* insect

*Enumerated\_Domain\_Value\_Definition:* Insect

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* invert

*Enumerated\_Domain\_Value\_Definition:* Invertebrate

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* lizard

*Enumerated\_Domain\_Value\_Definition:* Lizard

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* lobster

*Enumerated\_Domain\_Value\_Definition:* Lobster

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* m\_benthic

*Enumerated\_Domain\_Value\_Definition:* Marine benthic fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* m\_pelagic

*Enumerated\_Domain\_Value\_Definition:* Marine pelagic fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* manatee

*Enumerated\_Domain\_Value\_Definition:* Manatee

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* passerine

*Enumerated\_Domain\_Value\_Definition:* Passerine bird

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* pelagic

*Enumerated\_Domain\_Value\_Definition:* Pelagic bird

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* plant

*Enumerated\_Domain\_Value\_Definition:* Plant

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* raptor

*Enumerated\_Domain\_Value\_Definition:* Raptor

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* reef

*Enumerated\_Domain\_Value\_Definition:* Reef



*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: sav*

*Enumerated\_Domain\_Value\_Definition: Submerged aquatic vegetation*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: shorebird*

*Enumerated\_Domain\_Value\_Definition: Shorebird*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: shrimp*

*Enumerated\_Domain\_Value\_Definition: Shrimp*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: sm\_mammal*

*Enumerated\_Domain\_Value\_Definition: Small mammal*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: snake*

*Enumerated\_Domain\_Value\_Definition: Snake*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: turtle*

*Enumerated\_Domain\_Value\_Definition: Turtle*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: ungulate*

*Enumerated\_Domain\_Value\_Definition: Ungulate*

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* upland

*Enumerated\_Domain\_Value\_Definition:* Upland vegetation

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* wading

*Enumerated\_Domain\_Value\_Definition:* Wading bird

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* waterfowl

*Enumerated\_Domain\_Value\_Definition:* Waterfowl

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* NHP

*Attribute\_Definition:* Natural Heritage Program global ranking.

*Attribute\_Definition\_Source:* Network of Natural Heritage Program

*Attribute\_Domain\_Values:*

*Codeset\_Domain:*

*Codeset\_Name:* NHP Global Conservation Status Rank

*Codeset\_Source:* Natural Heritage Program

*Attribute:*

*Attribute\_Label:* DATE\_PUB

*Attribute\_Definition:* Date of NHP listing.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 0

*Enumerated\_Domain\_Value\_Definition:* Date unspecified  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links records in the SPECIES data table to records in the BIORES and STATUS data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SEASONAL

*Entity\_Type\_Definition:*

The data table SEASONAL contains information on the seasonal presence of each species associated with each spatial vector object. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and plants

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* SEASON\_ID

*Attribute\_Definition:*

Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1

*Range\_Domain\_Maximum*: N

*Attribute*:

*Attribute\_Label*: JAN

*Attribute\_Definition*: January

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

*Enumerated\_Domain\_Value\_Definition*: Present in January

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute*:

*Attribute\_Label*: FEB

*Attribute\_Definition*: February

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

*Enumerated\_Domain\_Value\_Definition*: Present in February

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute*:

*Attribute\_Label*: MAR

*Attribute\_Definition*: March

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

*Enumerated\_Domain\_Value\_Definition*: Present in March

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute*:

*Attribute\_Label*: APR

*Attribute\_Definition*: April

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: X*

*Enumerated\_Domain\_Value\_Definition: Present in April*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute:*

*Attribute\_Label: MAY*

*Attribute\_Definition: May*

*Attribute\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: X*

*Enumerated\_Domain\_Value\_Definition: Present in May*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute:*

*Attribute\_Label: JUN*

*Attribute\_Definition: June*

*Attribute\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: X*

*Enumerated\_Domain\_Value\_Definition: Present in June*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute:*

*Attribute\_Label: JUL*

*Attribute\_Definition: July*

*Attribute\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: X*

*Enumerated\_Domain\_Value\_Definition: Present in July*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute:*

*Attribute\_Label: AUG*

*Attribute\_Definition: August*

*Attribute\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: X*

*Enumerated\_Domain\_Value\_Definition:* Present in August  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SEP  
*Attribute\_Definition:* September  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in September  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* OCT  
*Attribute\_Definition:* October  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in October  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* NOV  
*Attribute\_Definition:* November  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in November  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* DEC  
*Attribute\_Definition:* December  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in December  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the SEASONAL data table to records in the BIORES and BREED data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BREED

*Entity\_Type\_Definition:*

The data table BREED identifies the monthly presence of certain life-history stages or activities for each species at a given location.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BREED data table to records in the BIORES and SEASONAL data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* MONTH

*Attribute\_Definition:*

Two-digit calendar month. Each life history stage or activity type for a particular species can have up to 12 records to account for each month of the year.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*



*Range\_Domain\_Minimum:* 1  
*Range\_Domain\_Maximum:* 12

*Attribute:*

*Attribute\_Label:* BREED1

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED1 = nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning; if ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M\_MAMMAL" then BREED1 = mating. This attribute is not used for HABITAT or T\_MAMMAL.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* BREED2

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = migrating; if ELEMENT is "FISH" then BREED2 = eggs; if ELEMENT is "INVERT" then BREED2 = eggs; if ELEMENT is "REPTILE" then BREED2 = hatching; if ELEMENT is "M\_MAMMAL" then BREED2 = calving. This attribute is not used for HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* BREED3

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED3 = molting; if ELEMENT is "FISH" then BREED3 = larvae; if ELEMENT is "INVERT" then BREED3 = larvae; if ELEMENT is "REPTILE" then BREED3 = internesting; if ELEMENT is "M\_MAMMAL" then BREED3 = pupping. This attribute is not used for HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* BREED4

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "FISH" then BREED4 = juveniles; if ELEMENT is "INVERT" then BREED4 = juveniles; if ELEMENT is "REPTILE" then BREED4 = juveniles; if ELEMENT is "M\_MAMMAL" then BREED4 = molting. This attribute is not used for BIRD, HABITAT, or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* BREED5

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 = adults; if ELEMENT is "INVERT" then BREED5 = adults; if ELEMENT is "REPTILE" then BREED5 = adults. This attribute is not used for BIRD, M\_MAMMAL, HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* STATUS

*Entity\_Type\_Definition:*

The data table STATUS identifies the species that are listed as either threatened or endangered by a state, federal, or international authority. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* STATE

*Attribute\_Definition:* Two-letter state abbreviation.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* COUNTRY

*Attribute\_Definition:* Three-letter country abbreviation.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* S

*Attribute\_Definition:* State threatened or endangered status.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

*Enumerated\_Domain\_Value\_Definition:* Endangered on state list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T

*Enumerated\_Domain\_Value\_Definition:* Threatened on state list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* C

*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* F

*Attribute\_Definition:* Federal threatened or endangered status.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

*Enumerated\_Domain\_Value\_Definition:* Endangered on federal list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T

*Enumerated\_Domain\_Value\_Definition:* Threatened on federal list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* C

*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* I

*Attribute\_Definition:* International threatened or endangered status.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

*Enumerated\_Domain\_Value\_Definition:* Endangered on international list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T

*Enumerated\_Domain\_Value\_Definition:* Threatened on international list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* C

*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* S\_DATE

*Attribute\_Definition:*

Publication date of source material used to assign state status values for each species, if used.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* F\_DATE

*Attribute\_Definition:*

Publication date of source material used to assign federal status values for each species, if used.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* I\_DATE

*Attribute\_Definition:*

Publication date of source material used to assign international status values for each species, if used.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links the STATUS data table to the BIORES and SPECIES data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SOURCES

*Entity\_Type\_Definition:*

The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines



*Attribute:*

*Attribute\_Label:* SOURCE\_ID

*Attribute\_Definition:*

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table; G\_SOURCE and S\_SOURCE in the BIORRES table; and SOURCE\_ID and ESI\_Source in the ESI and HYDRO data layers.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* ORIGINATOR

*Attribute\_Definition:* Author or developer of source material or data set.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* DATE\_PUB

*Attribute\_Definition:*

Date of source material, publication, or date of personal communication with expert source.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* TITLE

*Attribute\_Definition:* Title of source material or data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* DATA\_FORMAT

*Attribute\_Definition:* The format of the source material.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUB\_PLACE

*Attribute\_Definition:* Publication place.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUBLISHER

*Attribute\_Definition:* Publisher.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUBLICATION

*Attribute\_Definition:* Additional citation information.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* ONLINE\_LINK

*Attribute\_Definition:* Online computer resource URL.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* SCALE

*Attribute\_Definition:* Description of the source scale.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* TIME\_PERIOD

*Attribute\_Definition:*

Date(s) of data collection that the source material is based upon.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

---

*Distribution\_Information:*

*Distributor:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:* John Kaperick

*Contact\_Organization:* NOAA, Office of Response and Restoration

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*Address\_Type:* Physical Address

*Address:* 7600 Sand Point Way N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6400

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Resource\_Description:* Downloadable Data

*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.

*Custom\_Order\_Process:*

Contact NOAA for distribution options (see Distributor). 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 distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

---

*Metadata\_Reference\_Information:*

*Metadata\_Date:* 201304

*Metadata\_Review\_Date:* 201304

*Metadata\_Contact:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:* Jill Petersen

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Position:* GIS Manager

*Contact\_Address:*

*Address\_Type*: Physical Address  
*Address*: 7600 Sand Point Way, N.E.  
*City*: Seattle  
*State\_or\_Province*: Washington  
*Postal\_Code*: 98115-6349

*Contact\_Voice\_Telephone*: (206) 526-6944  
*Contact\_Facsimile\_Telephone*: (206) 526-6329  
*Contact\_Electronic\_Mail\_Address*: Jill.Petersen@noaa.gov

*Metadata\_Standard\_Name*: Content Standards for Digital Geospatial Metadata  
*Metadata\_Standard\_Version*: FGDC-STD-001-1998

# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: South Florida: REPTILES (Reptile Polygons)

Metadata also available as - [[Parseable text](#)] - [[SGML](#)] - [[XML](#)]

## Metadata:

- [Identification Information](#)
  - [Data Quality Information](#)
  - [Spatial Data Organization Information](#)
  - [Spatial Reference Information](#)
  - [Entity and Attribute Information](#)
  - [Distribution Information](#)
  - [Metadata Reference Information](#)
- 

### *Identification\_Information:*

#### *Citation:*

##### *Citation\_Information:*

##### *Originator:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington.

*Publication\_Date:* 201304

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: South Florida: REPTILES (Reptile Polygons)

*Edition:* Second

*Geospatial\_Data\_Presentation\_Form:* vector digital data

##### *Series\_Information:*

*Series\_Name:* South Florida

*Issue\_Identification:* South Florida

##### *Publication\_Information:*

*Publication\_Place:* Seattle, Washington

##### *Publisher:*

NOAA's Ocean Service, Office of Response and Restoration (OR&R), Emergency Response Division (ERD).

##### *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

*Description:*

*Abstract:*

This data set contains sensitive biological resource data for sea turtles, crocodiles, mangrove terrapins, and other rare species in [for] South Florida. Vector polygons in this data set represent reptile distribution and nesting areas. Species specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the ESI data for South Florida. ESI data characterize the marine and 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.

*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.

*Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1996

*Ending\_Date:* 2013

*Currentness\_Reference:*

The data were compiled during 2011-2013. The currentness dates for this data range from 1996 to 2013 and are documented in the Lineage section.

*Status:*

*Progress:* Complete

*Maintenance\_and\_Update\_Frequency:* None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -82.93300

*East\_Bounding\_Coordinate:* -80.00000

*North\_Bounding\_Coordinate:* 26.37500

*South\_Bounding\_Coordinate:* 24.50000

*Keywords:*

*Theme:*

*Theme\_Keyword\_Thesaurus:* ISO 19115 Topic Category

*Theme\_Keyword:* biota

*Theme\_Keyword:* environment

*Theme:*

*Theme\_Keyword\_Thesaurus:* None  
*Theme\_Keyword:* Environmental Monitoring  
*Theme\_Keyword:* ESI  
*Theme\_Keyword:* Sensitivity maps  
*Theme\_Keyword:* Coastal resources  
*Theme\_Keyword:* Oil spill planning  
*Theme\_Keyword:* Coastal Zone Management  
*Theme\_Keyword:* Wildlife  
*Theme\_Keyword:* Reptile

*Place:*

*Place\_Keyword\_Thesaurus:* None  
*Place\_Keyword:* South Florida

*Access\_Constraints:* None

*Use\_Constraints:*

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* datafig.jpg

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and attribute data tables for the South Florida ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* datafig2.jpg

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and desktop data tables for the South Florida ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington, the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness Washington, D.C. and the Fish and Wildlife Research Institute (FWRI), Florida Fish and Wildlife Conservation Commission (FWC), St. Petersburg, Florida.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 10.0) and SQL SERVER(R) (version 2005). The hardware configuration is PC's with Windows Operating System 7.

The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in the data set: benthic.e00, birds.e00, esil.e00, esip.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, mgt\_fish.e00, nests.e00, reptiles.e00, socecon.e00, and t\_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio\_lut.e00, biofile.e00, biores.e00, breed.e00, seasonal.e00, soc\_dat.e00, soc\_lut.e00, sources.e00, species.e00, status.e00, mgt\_fish\_lut.e00, and mgt\_fish.e00.

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## *Data\_Quality\_Information:*

### *Attribute\_Accuracy:*

#### *Attribute\_Accuracy\_Report:*

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

#### *Logical\_Consistency\_Report:*

A multi-stage error checking process, described in the above Attribute\_Accuracy\_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary node, etc.), and SQL SERVER(R) to ARC/INFO(R) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM 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 ID's and RARNUM's or HUNUM's are also generated. The new ID's 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 RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resources at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

#### *Completeness\_Report:*

These data represent a synthesis of expert knowledge, available hardcopy documents, survey data, maps, and digital data on reptile distribution and nesting areas. These data do not necessarily represent all reptile occurrences in South Florida. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name [n/a if not applicable]): 1, American crocodile, *Crocodylus acutus*; 2, Green sea turtle, *Chelonia mydas*; 4, Kemp's ridley sea turtle, *Lepidochelys kempii*; 5, Leatherback sea turtle, *Dermochelys coriacea*; 6, Loggerhead sea turtle, *Caretta caretta*; 9, Hawksbill sea turtle, *Eretmochelys imbricata*; 20, Mangrove terrapin, *Malaclemys terrapin rhizophorarum*; 21, Gopher tortoise, *Gopherus polyphemus*; 205, Florida Keys mole skink, *Plestiodon egregius egregius*; 206, Key ringneck snake, *Diadophis punctatus acricus*; 207, Eastern ribbon snake, *Thamnophis sauritus*; 208, Eastern corn snake, *Pantherophis guttatus*; 209, Rim rock crowned snake, *Tantilla oolitica*.

#### *Positional\_Accuracy:*

##### *Horizontal\_Positional\_Accuracy:*



*Horizontal\_Positional\_Accuracy\_Report:*

Spatial components for the biological data layers can come from expert interviews, hardcopy, or digital sources. Some of the spatial components of the biological data layers may have been developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy base maps with a scale of 1:24,000. Some of the spatial components of the biological data sets are developed from pre-existing digital or hardcopy sources and reflect the positional accuracy of these original data. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources. See the Lineage and Process\_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* CHERKISS M.S., S.S. ROMANICH, F.J. MAZZOTTI

*Publication\_Date:* 2011

*Title:* THE AMERICAN CROCODILE IN BISCAYNE BAY, FLORIDA

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* PORT REPUBLIC, MD

*Publisher:* COASTAL AND ESTUARINE RESEARCH FOUNDATION

*Other\_Citation\_Details:* ESTUARIES AND COASTS, 34:529-535

*Type\_of\_Source\_Media:* PAPER

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1996

*Ending\_Date:* 2005

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* REPTILES INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION  
(FWC)

*Publication\_Date:* 2012

*Title:* GOPHER TORTOISE SPECIES PROFILE  
*Geospatial\_Data\_Presentation\_Form:* WEBSITE  
*Publication\_Information:*

*Publication\_Place:* TALLAHASSEE, FLORIDA  
*Publisher:* FLORIDA FISH AND WILDLIFE CONSERVATION  
COMMISSION (FWC)

*Online\_Linkage:*  
[<http://myfwc.com/wildlifehabitats/profiles/reptiles-and-amphibians/reptiles/gopher-tortoise/>](http://myfwc.com/wildlifehabitats/profiles/reptiles-and-amphibians/reptiles/gopher-tortoise/)

*Type\_of\_Source\_Media:* ONLINE  
*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* REPTILES INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION  
(FWC)  
*Publication\_Date:* 2012  
*Title:* KEY RINGNECK SNAKE  
*Geospatial\_Data\_Presentation\_Form:* DOCUMENT  
*Publication\_Information:*

*Publication\_Place:* TALLAHASSEE, FL  
*Publisher:* FLORIDA FISH AND WILDLIFE CONSERVATION  
COMMISSION (FWC)

*Online\_Linkage:* myfwc.com/media/2212156/Key-Ringneck-Snake.pdf

*Type\_of\_Source\_Media:* ONLINE  
*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* REPTILES INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION (FWC)  
FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI)

*Publication\_Date:* 2013

*Title:* FWC SEA TURTLE NESTING DENSITY, 2007-2011

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 2007

*Ending\_Date:* 2011

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* REPTILES INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* FLORIDA NATURAL AREAS INVENTORY (FNAI)

*Publication\_Date:* 2011

*Title:* FLORIDA NATURAL AREAS INVENTORY, FLORIDA ELEMENT  
OCCURRENCE

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* TALLAHASSEE, FL

*Publisher:* FLORIDA NATURAL AREAS INVENTORY (FNAI)

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2011

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* REPTILES INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

HARDY, R. (FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI),  
FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION (FWC))

*Publication\_Date:* 2013

*Title:* SEA TURTLE DISTRIBUTION AND SEASONALITY IN SOUTH FLORIDA

*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE

*Type\_of\_Source\_Media:* PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2013

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* REPTILES INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

HARDY, R. (FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI),  
FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION (FWC))-  
MARINE TURTLE RESEARCH PROGRAM)

*Publication\_Date:* 2012

*Title:* SEA TURTLE SEASONALITY

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* REPTILES INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

HEINRICH, G. L., T. J. WALSH, J. A. BUTLER; FLORIDA TURTLE  
CONSERVATION TRUST, TAMPA BAY ESTUARY, UNIVERSITY OF  
NORTH FLORIDA, HEINRICH ECOLOGICAL SERVICES

*Publication\_Date:* 2010

*Title:* DIAMONDBACK TERRAPINS OF TAMPA BAY: AN EDUCATOR'S GUIDE

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* ST. PETERSBURG, FLORIDA

*Publisher:* FLORIDA TURTLE CONSERVATION TRUST (FCTC)

*Online\_Linkage:*

[http://www.tbep.org/pdfs/Diamondback\\_Terrapin\\_Educators\\_Guide.pdf](http://www.tbep.org/pdfs/Diamondback_Terrapin_Educators_Guide.pdf)

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2010

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* REPTILES INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* HINES, K.N.

*Publication\_Date:* 2011

*Title:*

STATUS AND DISTRIBUTION OF THE RIM ROCK CROWNED SNAKE,  
TANTILLA OOLITICA

*Geospatial\_Data\_Presentation\_Form:* HARDCOPY TEXT

*Publication\_Information:*

*Publication\_Place:* CLOVIS, CA

*Publisher:* SOCIETY FOR THE STUDY OF AMPHIBIANS AND REPTILES

*Other\_Citation\_Details:* HERPETOLOGICAL REVIEW, 2011, 42(3), 352-356.

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2011

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* REPTILES INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

M. J. BRESSETTE, B. E. WITHERINGTON, R. M. HERREN, D. A. BAGLEY, J. C. GORHAM, S. L. TRAXLER, C. K. CRADY, R. HARDY

*Publication\_Date:* 2010

*Title:*

SIZE-CLASS PARTITIONING AND HERDING IN A FORAGING GROUP OF GREEN TURTLES CHELONIA MYDAS

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* LUNEBURG, GERMANY

*Publisher:* INTER-RESEARCH

*Other\_Citation\_Details:* ENDANGERED SPECIES RESEARCH, VOL. 9: 105-116

*Type\_of\_Source\_Media:* PAPER

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2010

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* REPTILES INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

NATIONAL PARK SERVICE (NPS) AND FLORIDA FISH AND WILDLIFE  
CONSERVATION COMMISSION (FWC)

*Publication\_Date:* 2012

*Title:*

IMPLEMENTING THE DRY TORTUGAS NATIONAL PARK: RESEARCH  
NATURAL AREA SCIENCE PLAN, THE 5-YEAR REPORT

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* HOMESTEAD, FL

*Publisher:*

SOUTH FLORIDA NATURAL RESOURCES CENTER (SFNRC),  
EVERGLADES AND DRY TORTUGAS NATIONAL PARKS, FLORIDA  
FISH AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Other\_Citation\_Details:*

INFORMATION TAKEN FROM CHAPTER 5: USE OF DRY TORTUGAS  
NATIONAL PARK BY THREATENED AND ENDANGERED MARINE  
TURTLES

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* REPTILES INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* NATIONAL PARK SERVICE (NPS), EVERGLADES NATIONAL PARK

*Publication\_Date:* 2013

*Title:* EVERGLADES NATIONAL PARK RESOURCES

*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2013

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* REPTILES INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* PARRY, M. (NATIONAL PARK SERVICE)

*Publication\_Date:* 2012

*Title:*

DISTRIBUTION AND ABUNDANCE OF CROCODILES AND MANGROVE  
TERRAPINS IN SOUTH FLORIDA

*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* REPTILES INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* PATTERSON, J. (NATIONAL PARK SERVICE/CARIBBEAN  
NETWORK)

*Publication\_Date:* 2013

*Title:* NATIONAL PARK SERVICE RESOURCES

*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* PAPER

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*



*Calendar\_Date:* 2013

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* REPTILES INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* RICE, K.G. ET AL (EDITORS)

*Publication\_Date:* 2008

*Title:*

2008 ANNUAL ASSESSMENT UPDATE: AMERICAN ALLIGATOR  
DISTRIBUTION, SIZE, AND HOLE OCCUPANCY AND AMERICAN  
CROCODILE JUVENILE GROWTH AND SURVIVAL

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Other\_Citation\_Details:* UNPUBLISHED: YEARLY REPORT

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 2008

*Ending\_Date:* 2008

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* REPTILES INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

WILMERS, T. (UNITED STATES FISH AND WILDLIFE SERVICE (USFWS),  
FLORIDA KEYS NATIONAL WILDLIFE REFUGES)

*Publication\_Date:* 2012

*Title:*

DISTRIBUTION AND SEASONALITY OF BIRDS AND REPTILES IN  
SOUTH FLORIDA

*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* REPTILES INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* WRUBLIK, J.M. (U.S. FISH AND WILDLIFE SERVICE)

*Publication\_Date:* 2013

*Title:*

AMERICAN CROCODILE NESTING DATA FOR SOUTH FLORIDA,  
CROCODILE NESTING AT MATHESON HAMMOCKS

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* DISC

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 2007

*Ending\_Date:* 2007

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* REPTILES INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

ZAMBRANO, R. (FLORIDA FISH AND WILDLIFE CONSERVATION  
COMMISSION (FWC))

*Publication\_Date:* 2012

*Title:* DISTRIBUTION AND SEASONALITY OF BIRDS AND REPTILES IN  
SOUTH FL

*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* REPTILES INFORMATION

*Process\_Step:*

*Process\_Description:*

Three main sources of data were used to depict reptile distribution and seasonality for this data layer: 1) personal interviews with resource experts from Florida Fish and Wildlife Conservation Commission - Fish and Wildlife Research Institute (FWC-FWRI), U.S. Geological Survey (USGS), U.S. Fish and Wildlife Service (USFWS), and National Park Service (NPS) - Everglades National Park, Biscayne Bay National Park, and Dry Tortugas National Park; 2) digital data (based on surveys) provided by FWC-FWRI for sea turtle nesting, Florida Natural Areas Inventory (FNAI) data for rare species; and 3) peer-reviewed journal articles provided by USGS, FWRI, and NPS. The sea turtle nesting data summarized here describe the most recent five years of monitoring (2007-2011) by the Statewide Nesting Beach Survey Program. For each of the three more common nesting species (loggerhead, green turtle and leatherback), the earliest and latest recorded nesting month during the last five years is included in the seasonality table. Species nesting densities were classified as "low", "medium" or "high" relative to the remainder of surveyed sea turtle nesting beaches in Florida. Kemp's ridley sea turtle have been observed at 2 beaches in the study area, and are listed as such.

The above digital and/or hardcopy sources were compiled by the project biologist to create the REPTILES data layer. Depending on the type of source data, three general approaches are used for compiling the data layer: 1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:24,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the REPTILES data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:* 201304

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Person:* Jill Petersen

*Contact\_Address:*

*Address\_Type*: Physical address  
*Address*: 7600 Sand Point Way, N.E.  
*City*: Seattle  
*State\_or\_Province*: Washington  
*Postal\_Code*: 98115-6349

*Contact\_Voice\_Telephone*: (206) 526-6944  
*Contact\_Facsimile\_Telephone*: (206) 526-6329  
*Contact\_Electronic\_Mail\_Address*: Jill.Petersen@noaa.gov

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*Spatial\_Data\_Organization\_Information*:

*Direct\_Spatial\_Reference\_Method*: Vector  
*Point\_and\_Vector\_Object\_Information*:

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: GT-polygon composed of chains  
*Point\_and\_Vector\_Object\_Count*: 31655

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: Area point  
*Point\_and\_Vector\_Object\_Count*: 31654

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: Complete chain  
*Point\_and\_Vector\_Object\_Count*: 60153

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: Link  
*Point\_and\_Vector\_Object\_Count*: 2157603

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: Node, planar graph  
*Point\_and\_Vector\_Object\_Count*: 45167

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*Spatial\_Reference\_Information*:

*Horizontal\_Coordinate\_System\_Definition*:

*Geographic*:

*Latitude\_Resolution*: 0.0000001  
*Longitude\_Resolution*: 0.0000001  
*Geographic\_Coordinate\_Units*: Decimal degrees

*Geodetic\_Model*:

*Horizontal\_Datum\_Name*: North American Datum of 1983  
*Ellipsoid\_Name*: Geodetic Reference System 80

*Entity\_and\_Attribute\_Information:*

*Overview\_Description:*

*Entity\_and\_Attribute\_Overview:*

In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, REPTILES) 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 the South Florida atlas, the number is 221), an element/layer 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. BIORES and the other relational data tables are described below in detail. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure. Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN\_SPEC, S, F, NHP, DATE\_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G\_SOURCE, S\_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED\_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed\_Description of the BREED data table. The link to the BIOFILE may be made through the BIO\_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED\_DT is an auxiliary support data table 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 table is SOURCES. This is the same as the source 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 data tables. The entity-relationship diagram describing relationships between attribute tables in the ESI data structure does NOT include the BIOFILE data table, and this data table is NOT described in detail below.

*Entity\_and\_Attribute\_Detail\_Citation:*

A complete description of entity types, attributes, and attribute values for ESI atlases can be found in the NOAA ESI Guidelines ([http://response.restoration.noaa.gov/esi\\_guidelines](http://response.restoration.noaa.gov/esi_guidelines)).

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* REPTILES.PAT

*Entity\_Type\_Definition:*

The REPTILES.PAT table contains attribute information for the vector polygons in this data

set representing reptile distribution and nesting areas. Note that all attribute information is stored in a series of relational files, described below. See the [Browse\\_Graphic](#) section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (221), element number (6), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Attribute:*

*Attribute\_Label:* RARNUM

*Attribute\_Definition:*

An identifier that links directly to the BIORES table or the flat format BIOFILE table. RARNUM values of 0 are holes in the polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BIO\_LUT

*Entity\_Type\_Definition:*

The data table BIO\_LUT is a lookup table that contains items necessary for linking vector objects in the biological data layers with the BIORES data table. Note that all attribute information is stored in a series of relational files, described below. See the [Browse\\_Graphic](#) section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* RARNUM

*Attribute\_Definition:*

An identifier that links records in the BIO\_LUT data table to records in the BIORES data table or the flat format BIOFILE data table. RARNUM values of 0 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA  
*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"  
*Range\_Domain\_Maximum:* "NEED TO ADD"

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (221), element number (6), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"  
*Range\_Domain\_Maximum:* "NEED TO ADD"

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BIORES

*Entity\_Type\_Definition:*

The data table BIORES contains both biological attribute data and items necessary for linking vector objects in the biological data layers via the BIO\_LUT data table to other associated data tables. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* RARNUM

*Attribute\_Definition:*

An identifier that links records in the BIORES data table to records in the BIO\_LUT data table or the flat format BIOFILE data table.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"  
*Range\_Domain\_Maximum:* "NEED TO ADD"

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1  
*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* CONC

*Attribute\_Definition:*

The field CONC refers to "concentration," abundance, or density values of a species at a particular location. In cases where no quantitative count data was available or appropriate, the field may either be blank or contain descriptive terms (used for sea turtles) such as "HIGH", "MEDIUM", "LOW", "PRESENT", or "RARE". Crocodile nest concentrations are categorical and roughly correspond to the nest numbers based on 2008 nesting data. LOW:less than 5, MED:5-15, HIGH:15-25, VERY HIGH: greater than 25. Concentrations have been adjusted based on expert opinion.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* SEASON\_ID

*Attribute\_Definition:*

Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1  
*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* G\_SOURCE

*Attribute\_Definition:*

Geographic source identifier that links records in the BIORES data table to records in the SOURCES data table.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1  
*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* S\_SOURCE



*Attribute\_Definition:*

Seasonality source identifier that links records in the BIORES data table to records in the SOURCES data table.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and plants

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links records in the BIORES data table to records in the SPECIES and STATUS data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BIORES data table to records in the SEASONAL and BREED data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SPECIES

*Entity\_Type\_Definition:*

The data table SPECIES identifies all species in the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure. Refer to the Completeness Report for list of layer specific species.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* NAME

*Attribute\_Definition:* Species common name for the entire ESI data set.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* GEN\_SPEC

*Attribute\_Definition:* Species scientific name for the entire ESI data set.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and plants

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SUBELEMENT

*Attribute\_Definition:* Element subgroup delineating a logical grouping of species.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* algae

*Enumerated\_Domain\_Value\_Definition: Algae*  
*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: alligator*  
*Enumerated\_Domain\_Value\_Definition: Alligator*  
*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: coral*  
*Enumerated\_Domain\_Value\_Definition: Coral*  
*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: crab*  
*Enumerated\_Domain\_Value\_Definition: Crab*  
*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: diving*  
*Enumerated\_Domain\_Value\_Definition: Diving bird*  
*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: dolphin*  
*Enumerated\_Domain\_Value\_Definition: Dolphin*  
*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: e\_nursery*  
*Enumerated\_Domain\_Value\_Definition: Estuarine nursery fish*  
*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: e\_resident*

*Enumerated\_Domain\_Value\_Definition:* Estuarine resident fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* echinoderm  
*Enumerated\_Domain\_Value\_Definition:* Echinoderm  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* fish  
*Enumerated\_Domain\_Value\_Definition:* Fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* gastropod  
*Enumerated\_Domain\_Value\_Definition:* Gastropod  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* gull\_tern  
*Enumerated\_Domain\_Value\_Definition:* Gull or tern  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* hardbottom  
*Enumerated\_Domain\_Value\_Definition:* Hardbottom  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* insect  
*Enumerated\_Domain\_Value\_Definition:* Insect  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* invert

*Enumerated\_Domain\_Value\_Definition:* Invertebrate  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* lizard  
*Enumerated\_Domain\_Value\_Definition:* Lizard  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* lobster  
*Enumerated\_Domain\_Value\_Definition:* Lobster  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* m\_benthic  
*Enumerated\_Domain\_Value\_Definition:* Marine benthic fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* m\_pelagic  
*Enumerated\_Domain\_Value\_Definition:* Marine pelagic fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* manatee  
*Enumerated\_Domain\_Value\_Definition:* Manatee  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* passerine  
*Enumerated\_Domain\_Value\_Definition:* Passerine bird  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* pelagic

*Enumerated\_Domain\_Value\_Definition:* Pelagic bird  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* plant  
*Enumerated\_Domain\_Value\_Definition:* Plant  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* raptor  
*Enumerated\_Domain\_Value\_Definition:* Raptor  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* reef  
*Enumerated\_Domain\_Value\_Definition:* Reef  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* sav  
*Enumerated\_Domain\_Value\_Definition:* Submerged aquatic vegetation  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* shorebird  
*Enumerated\_Domain\_Value\_Definition:* Shorebird  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* shrimp  
*Enumerated\_Domain\_Value\_Definition:* Shrimp  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* sm\_mammal



*Enumerated\_Domain\_Value\_Definition:* Small mammal  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* snake  
*Enumerated\_Domain\_Value\_Definition:* Snake  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* turtle  
*Enumerated\_Domain\_Value\_Definition:* Turtle  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* ungulate  
*Enumerated\_Domain\_Value\_Definition:* Ungulate  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* upland  
*Enumerated\_Domain\_Value\_Definition:* Upland vegetation  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* wading  
*Enumerated\_Domain\_Value\_Definition:* Wading bird  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* waterfowl  
*Enumerated\_Domain\_Value\_Definition:* Waterfowl  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* NHP  
*Attribute\_Definition:* Natural Heritage Program global ranking.  
*Attribute\_Definition\_Source:* Network of Natural Heritage Program

*Attribute\_Domain\_Values:*

*Codeset\_Domain:*

*Codeset\_Name:* NHP Global Conservation Status Rank

*Codeset\_Source:* Natural Heritage Program

*Attribute:*

*Attribute\_Label:* DATE\_PUB

*Attribute\_Definition:* Date of NHP listing.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 0

*Enumerated\_Domain\_Value\_Definition:* Date unspecified

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links records in the SPECIES data table to records in the BIORES and STATUS data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SEASONAL

*Entity\_Type\_Definition:*

The data table SEASONAL contains information on the seasonal presence of each species associated with each spatial vector object. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables

in the ESI data structure.

*Entity\_Type\_Definition\_Source*: NOAA ESI Guidelines

*Attribute*:

*Attribute\_Label*: ELEMENT

*Attribute\_Definition*: Major categories of biological data.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: BIRD

*Enumerated\_Domain\_Value\_Definition*: Birds

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: FISH

*Enumerated\_Domain\_Value\_Definition*: Fish

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: HABITAT

*Enumerated\_Domain\_Value\_Definition*: Habitats and plants

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: INVERT

*Enumerated\_Domain\_Value\_Definition*: Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition*: Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: REPTILE

*Enumerated\_Domain\_Value\_Definition*: Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* SEASON\_ID

*Attribute\_Definition:*

Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* JAN

*Attribute\_Definition:* January

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in January

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* FEB

*Attribute\_Definition:* February

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: X*

*Enumerated\_Domain\_Value\_Definition: Present in February*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute:*

*Attribute\_Label: MAR*

*Attribute\_Definition: March*

*Attribute\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: X*

*Enumerated\_Domain\_Value\_Definition: Present in March*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute:*

*Attribute\_Label: APR*

*Attribute\_Definition: April*

*Attribute\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: X*

*Enumerated\_Domain\_Value\_Definition: Present in April*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute:*

*Attribute\_Label: MAY*

*Attribute\_Definition: May*

*Attribute\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: X*

*Enumerated\_Domain\_Value\_Definition: Present in May*

*Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines*

*Attribute:*

*Attribute\_Label: JUN*

*Attribute\_Definition: June*

*Attribute\_Definition\_Source: NOAA ESI Guidelines*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: X*

*Enumerated\_Domain\_Value\_Definition:* Present in June  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* JUL  
*Attribute\_Definition:* July  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in July  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* AUG  
*Attribute\_Definition:* August  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in August  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SEP  
*Attribute\_Definition:* September  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in September  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* OCT  
*Attribute\_Definition:* October  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in October  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* NOV  
*Attribute\_Definition:* November  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in November  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* DEC  
*Attribute\_Definition:* December  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in December  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA  
*Attribute\_Definition:*  
Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the SEASONAL data table to records in the BIORES and BREED data tables.  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####  
*Enumerated\_Domain\_Value\_Definition:*  
Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BREED  
*Entity\_Type\_Definition:*  
The data table BREED identifies the monthly presence of certain life-history stages or activities for each species at a given location.  
*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BREED data table to records in the BIORES and SEASONAL data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* MONTH

*Attribute\_Definition:*

Two-digit calendar month. Each life history stage or activity type for a particular species can have up to 12 records to account for each month of the year.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* 12

*Attribute:*

*Attribute\_Label:* BREED1

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED1 = nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning; if ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M\_MAMMAL" then BREED1 = mating. This attribute is not used for HABITAT or T\_MAMMAL.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not reported



*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* BREED2

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = migrating; if ELEMENT is "FISH" then BREED2 = eggs; if ELEMENT is "INVERT" then BREED2 = eggs; if ELEMENT is "REPTILE" then BREED2 = hatching; if ELEMENT is "M\_MAMMAL" then BREED2 = calving. This attribute is not used for HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* BREED3

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED3 = molting; if ELEMENT is "FISH" then BREED3 = larvae; if ELEMENT is "INVERT" then BREED3 = larvae; if ELEMENT is "REPTILE" then BREED3 = internesting; if ELEMENT is "M\_MAMMAL" then BREED3 = pupping. This attribute is not used for HABITAT or

T\_MAMMAL elements.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: Y

*Enumerated\_Domain\_Value\_Definition*: Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: N

*Enumerated\_Domain\_Value\_Definition*: Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: -

*Enumerated\_Domain\_Value\_Definition*:

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute*:

*Attribute\_Label*: BREED4

*Attribute\_Definition*:

Life history stage or activity type, where: if ELEMENT is "FISH" then BREED4 = juveniles; if ELEMENT is "INVERT" then BREED4 = juveniles; if ELEMENT is "REPTILE" then BREED4 = juveniles; if ELEMENT is "M\_MAMMAL" then BREED4 = molting. This attribute is not used for BIRD, HABITAT, or T\_MAMMAL elements.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: Y

*Enumerated\_Domain\_Value\_Definition*: Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: N

*Enumerated\_Domain\_Value\_Definition*: Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* BREED5

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 = adults; if ELEMENT is "INVERT" then BREED5 = adults; if ELEMENT is "REPTILE" then BREED5 = adults. This attribute is not used for BIRD, M\_MAMMAL, HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* STATUS

*Entity\_Type\_Definition:*

The data table STATUS identifies the species that are listed as either threatened or endangered by a state, federal, or international authority. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* STATE

*Attribute\_Definition:* Two-letter state abbreviation.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* COUNTRY

*Attribute\_Definition:* Three-letter country abbreviation.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* S

*Attribute\_Definition:* State threatened or endangered status.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

*Enumerated\_Domain\_Value\_Definition:* Endangered on state list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T

*Enumerated\_Domain\_Value\_Definition:* Threatened on state list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* C

*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* F

*Attribute\_Definition:* Federal threatened or endangered status.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

*Enumerated\_Domain\_Value\_Definition:* Endangered on federal list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T

*Enumerated\_Domain\_Value\_Definition:* Threatened on federal list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* C

*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* I

*Attribute\_Definition:* International threatened or endangered status.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

*Enumerated\_Domain\_Value\_Definition:* Endangered on international list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T

*Enumerated\_Domain\_Value\_Definition:* Threatened on international list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* C

*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* S\_DATE

*Attribute\_Definition:*

Publication date of source material used to assign state status values for each species, if used.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* F\_DATE

*Attribute\_Definition:*

Publication date of source material used to assign federal status values for each species, if used.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* I\_DATE

*Attribute\_Definition:*

Publication date of source material used to assign international status values for each species, if used.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links the STATUS data table to the BIORES and SPECIES data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SOURCES

*Entity\_Type\_Definition:*

The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SOURCE\_ID

*Attribute\_Definition:*

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table; G\_SOURCE and S\_SOURCE in the BIORES table; and SOURCE\_ID and ESI\_Source in the ESI and HYDRO data layers.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* ORIGINATOR

*Attribute\_Definition:* Author or developer of source material or data set.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* DATE\_PUB

*Attribute\_Definition:*



Date of source material, publication, or date of personal communication with expert source.  
*Attribute\_Definition\_Source*: NOAA ESI Guidelines  
*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: YYYYMM  
*Enumerated\_Domain\_Value\_Definition*: YYYY for year and optionally MM for month  
*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute*:

*Attribute\_Label*: TITLE  
*Attribute\_Definition*: Title of source material or data.  
*Attribute\_Definition\_Source*: NOAA ESI Guidelines  
*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label*: DATA\_FORMAT  
*Attribute\_Definition*: The format of the source material.  
*Attribute\_Definition\_Source*: NOAA ESI Guidelines  
*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label*: PUB\_PLACE  
*Attribute\_Definition*: Publication place.  
*Attribute\_Definition\_Source*: NOAA ESI Guidelines  
*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label*: PUBLISHER  
*Attribute\_Definition*: Publisher.  
*Attribute\_Definition\_Source*: NOAA ESI Guidelines  
*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label*: PUBLICATION  
*Attribute\_Definition*: Additional citation information.  
*Attribute\_Definition\_Source*: NOAA ESI Guidelines  
*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label:* ONLINE\_LINK

*Attribute\_Definition:* Online computer resource URL.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* SCALE

*Attribute\_Definition:* Description of the source scale.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* TIME\_PERIOD

*Attribute\_Definition:*

Date(s) of data collection that the source material is based upon.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

---

*Distribution\_Information:*

*Distributor:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:* John Kaperick

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Address:*

*Address\_Type:* Physical Address

*Address:* 7600 Sand Point Way N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6400

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Resource\_Description:* Downloadable Data

*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.

*Custom\_Order\_Process:*

Contact NOAA for distribution options (see Distributor). 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 distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

---

*Metadata\_Reference\_Information:*

*Metadata\_Date:* 201304

*Metadata\_Review\_Date:* 201304

*Metadata\_Contact:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:* Jill Petersen

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Position:* GIS Manager

*Contact\_Address:*

*Address\_Type:* Physical Address

*Address:* 7600 Sand Point Way, N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6944

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

*Metadata\_Standard\_Name:* Content Standards for Digital Geospatial Metadata

*Metadata\_Standard\_Version:* FGDC-STD-001-1998

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# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: South Florida: SOCECON (Socioeconomic Resource Points and Lines)

Metadata also available as - [[Parseable text](#)] - [[SGML](#)] - [[XML](#)]

## Metadata:

- [Identification Information](#)
  - [Data Quality Information](#)
  - [Spatial Data Organization Information](#)
  - [Spatial Reference Information](#)
  - [Entity and Attribute Information](#)
  - [Distribution Information](#)
  - [Metadata Reference Information](#)
- 

### *Identification\_Information:*

#### *Citation:*

##### *Citation\_Information:*

##### *Originator:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington.

*Publication\_Date:* 201304

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: South Florida: SOCECON (Socioeconomic Resource Points and Lines)

*Edition:* Second

*Geospatial\_Data\_Presentation\_Form:* vector digital data

##### *Series\_Information:*

*Series\_Name:* South Florida

*Issue\_Identification:* South Florida

##### *Publication\_Information:*

*Publication\_Place:* Seattle, Washington

##### *Publisher:*

NOAA's Ocean Service, Office of Response and Restoration (OR&R), Emergency Response Division (ERD).

##### *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, Emergency Response Division, Seattle, Washington.  
*Online\_Linkage:* <<http://response.restoration.noaa.gov/esi>>

*Description:*

*Abstract:*

This data set contains human-use resource data for abandoned vessels, access points, airports, aquaculture sites, beaches, boat ramps, coast guard stations, ferries, historical sites, marinas, parks, ports, recreational fishing, and water intakes in [for] South Florida. Vector points and lines in this data set represent human-use site locations. Location specific type and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the ESI data for South Florida. ESI data characterize the marine and 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. See also the MGT data layer, part of the larger South Florida ESI database, for additional human-use information.

*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.

*Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 2000

*Ending\_Date:* 2012

*Currentness\_Reference:*

The data were compiled during 2011-2013. The currentness dates for this data range from 2000 to 2012 and are documented in the Lineage section.

*Status:*

*Progress:* Complete

*Maintenance\_and\_Update\_Frequency:* None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -82.93300

*East\_Bounding\_Coordinate:* -80.00000

*North\_Bounding\_Coordinate:* 26.37500

*South\_Bounding\_Coordinate:* 24.50000

*Keywords:*

*Theme:*

*Theme\_Keyword\_Thesaurus:* ISO 19115 Topic Category

*Theme\_Keyword:* biota

*Theme\_Keyword:* environment

*Theme:*

*Theme\_Keyword\_Thesaurus:* None  
*Theme\_Keyword:* Environmental Monitoring  
*Theme\_Keyword:* ESI  
*Theme\_Keyword:* Sensitivity maps  
*Theme\_Keyword:* Coastal resources  
*Theme\_Keyword:* Oil spill planning  
*Theme\_Keyword:* Coastal Zone Management  
*Theme\_Keyword:* Wildlife  
*Theme\_Keyword:* Socioeconomic

*Place:*

*Place\_Keyword\_Thesaurus:* None  
*Place\_Keyword:* South Florida

*Access\_Constraints:* None

*Use\_Constraints:*

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* datafig.jpg  
*Browse\_Graphic\_File\_Description:*  
Depicts the relationships between spatial data layers and attribute data tables for the South Florida ESI data.  
*Browse\_Graphic\_File\_Type:* JPEG

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* datafig2.jpg  
*Browse\_Graphic\_File\_Description:*  
Depicts the relationships between spatial data layers and desktop data tables for the South Florida ESI data.  
*Browse\_Graphic\_File\_Type:* JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington, the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness Washington, D.C. and the Fish and Wildlife Research Institute (FWRI), Florida Fish and Wildlife Conservation Commission (FWC), St. Petersburg, Florida.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's

ARC/INFO(R) (version 10.0) and SQL SERVER(R) (version 2005). The hardware configuration is PC's with Windows Operating System 7.

The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in the data set: benthic.e00, birds.e00, esil.e00, esip.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, mgt\_fish.e00, nests.e00, reptiles.e00, socecon.e00, and t\_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio\_lut.e00, biofile.e00, biores.e00, breed.e00, seasonal.e00, soc\_dat.e00, soc\_lut.e00, sources.e00, species.e00, status.e00, mgt\_fish\_lut.e00, and mgt\_fish.e00.

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### *Data\_Quality\_Information:*

#### *Attribute\_Accuracy:*

##### *Attribute\_Accuracy\_Report:*

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

##### *Logical\_Consistency\_Report:*

A multi-stage error checking process, described in the above Attribute\_Accuracy\_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary node, etc.), and SQL SERVER(R) to ARC/INFO(R) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM 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 ID's and RARNUM's or HUNUM's are also generated. The new ID's 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 RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resources at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

##### *Completeness\_Report:*

These data represent a synthesis of digital data on socioeconomic resources. See also the MGT data layer, part of the larger South Florida ESI database, for additional human-use information. These data do not necessarily represent all human-use sites in South Florida.

##### *Positional\_Accuracy:*

##### *Horizontal\_Positional\_Accuracy:*

##### *Horizontal\_Positional\_Accuracy\_Report:*

Spatial components for the human-use data layers can come from expert interviews, hardcopy, or digital sources. Most of the spatial components of the human-use data layers are developed from pre-existing digital or hardcopy sources and reflect the positional accuracy of these original data. Some of the spatial components of the human-use data layers are compiled on

hardcopy base maps with a scale of 1:24,000. See the Lineage and Process\_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI), FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Publication\_Date:* 2001

*Title:* ESI SOCIO-ECONOMIC POINT FEATURES-WATER INTAKES

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* ST. PETERSBURG, FL

*Publisher:*

FLORIDA MARINE RESEARCH INSTITUTE (FMRI), FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2001

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* SOCECON INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI), FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Publication\_Date:* 2009

*Title:* BOAT RAMP INVENTORY FLORIDA

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* ST PETERSBURG, FLORIDA

*Publisher:*

FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI), FLORIDA



FISH AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2009

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* SOCECON INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI), FLORIDA FISH  
AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Publication\_Date:* 2009

*Title:* FISHING PIERS, JETTIES AND BEACHES FLORIDA

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* 100 EIGHTH AVENUE SOUTHEAST, ST. PETERSBURG,  
FL 33701

*Publisher:*

FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI), FLORIDA  
FISH AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Type\_of\_Source\_Media:* FTP SITE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2009

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* SOCECON INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI), FLORIDA FISH  
AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Publication\_Date:* 2007

*Title:* UNDERWATER ARCHAEOLOGICAL PRESERVES FLORIDA

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* 100 EIGHTH AVENUE SOUTHEAST, ST. PETERSBURG,  
FL 33701

*Publisher:*

FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI), FLORIDA  
FISH AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Online\_Linkage:* <<http://dhr.dos.state.fl.us/archaeology/underwater/preserves/>>

*Type\_of\_Source\_Media:* FTP SITE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2007

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* SOCECON INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI), FLORIDA FISH  
AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Publication\_Date:* 2001

*Title:* ESI SOCIO-ECONOMIC POINT FEATURES-RECREATIONAL BEACH

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* ST. PETERSBURG, FL

*Publisher:*

FLORIDA MARINE RESEARCH INSTITUTE (FMRI), FLORIDA FISH  
AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2001

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* SOCECON INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI), FLORIDA FISH  
AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Publication\_Date:* 2011

*Title:* ARTIFICIAL REEFS FLORIDA

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* TALLAHASSEE, FL

*Publisher:*

FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION  
(FWC) DIVISION OF MARINE FISHERIES

*Type\_of\_Source\_Media:* FTP SITE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2011

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* SOCECON INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI), FLORIDA FISH  
AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Publication\_Date:* 2001

*Title:* ESI SOCIO-ECONOMIC POINT FEATURES-AQUACULTURE LOCATIONS

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* ST. PETERSBURG, FL

*Publisher:*

FLORIDA MARINE RESEARCH INSTITUTE (FMRI), FLORIDA FISH  
AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Type\_of\_Source\_Media:* EMAIL  
*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2001

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* SOCECON INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*  
FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI), FLORIDA FISH  
AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Publication\_Date:* 2007

*Title:* BEACH ACCESS LOCATIONS

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* FTP SITE  
*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2007

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* SOCECON INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*  
FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI), FLORIDA FISH  
AND WILDLIFE CONSERVATION COMMISSION (FWC), INFORMATION  
SCIENCE AND MANAGEMENT, CENTER FOR SPATIAL ANALYSIS

*Publication\_Date:* 2005

*Title:* USCG STATIONS 2005  
*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA  
*Publication\_Information:*

*Publication\_Place:* ST. PETERSBURG, FL  
*Publisher:*

FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI), FLORIDA  
FISH AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* FTP SITE  
*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2005

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* SOCECON INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*  
FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI), FLORIDA FISH  
AND WILDLIFE CONSERVATION COMMISSION (FWC), RESEARCH  
PLANNING, INC.

*Publication\_Date:* 2012

*Title:* ESI SOCIO-ECONOMIC POINT FEATURES - WATER INTAKES

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* ST. PETERSBURG, FL  
*Publisher:*

FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI), FLORIDA  
FISH AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Source\_Scale\_Denominator:* 24000  
*Type\_of\_Source\_Media:* EMAIL  
*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2001

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* SOCECON INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI), FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION (FWC), RESEARCH PLANNING, INC.

*Publication\_Date:* 2012

*Title:* ESI SOCIO-ECONOMIC POINT FEATURES - MARINAS

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* ST. PETERSBURG, FL

*Publisher:*

FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI), FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Source\_Scale\_Denominator:* 24000

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2001

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* SOCECON INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* FLORIDA STATE HISTORIC PRESERVATION OFFICE

*Publication\_Date:* 2011

*Title:* FLORIDA HISTORIC PROPERTIES

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* ST. PETERSBURG, FL

*Publisher:* FLORIDA STATE HISTORIC PRESERVATION OFFICE

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2011

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* SOCECON INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

NATIONAL ATLAS OF THE UNITED STATES AND THE UNITED STATES  
GEOLOGICAL SURVEY

*Publication\_Date:* 2005

*Title:* U.S. NATIONAL ATLAS AIRPORTS

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* REDLANDS, CA

*Publisher:* ENVIRONMENTAL SYSTEMS RESEARCH INSTITUTE (ESRI)

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2005

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* SOCECON INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION (NOAA)  
OFFICE OF COAST SURVEY

*Publication\_Date:* 2010

*Title:*

SHIPWRECKS AND OBSTRUCTIONS COASTAL WATERS SOUTHEAST  
UNITED STATES

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA  
*Publication\_Information:*

*Publication\_Place:* 100 EIGHTH AVENUE SOUTHEAST, ST. PETERSBURG,  
FL 33701

*Publisher:*

FISH AND WILDLIFE RESEARCH INSTITUTE (FWRI), FLORIDA  
FISH AND WILDLIFE CONSERVATION COMMISSION (FWC)

*Type\_of\_Source\_Media:* FTP SITE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2010

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* SOCECON INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

VANDERBILT ENGINEERING CENTER FOR TRANSPORTATION  
OPERATIONS AND RESEARCH, VANDERBILT UNIVERSITY

*Publication\_Date:* 2000

*Title:* COMMERCIAL PORTS

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* NEW ORLEANS, LA

*Publisher:* U.S. ARMY CORPS OF ENGINEERS (USACE) NAVIGATION  
DATA CENTER

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2000

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* SOCECON INFORMATION

*Process\_Step:*



*Process\_Description:*

The main sources of data used to depict human-use resources for this data layer were digital data sets provided by: Florida Fish and Wildlife Conservation Commission - Fish and Wildlife Research Institute (FWC-FWRI), NOAA Office of Coast Survey, and Florida State Historic Preservation Office (SHPO).

The above digital and/or hardcopy sources were compiled by the project biologist to create the SOCECON data layer. Depending on the type of source data, three general approaches are used for compiling the data layer: 1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:24,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the SOCECON data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:* 201304

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Person:* Jill Petersen

*Contact\_Address:*

*Address\_Type:* Physical address

*Address:* 7600 Sand Point Way, N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6944

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

---

*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:* Vector

*Point\_and\_Vector\_Object\_Information:*

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Area point

*Point\_and\_Vector\_Object\_Count:* 2155

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Complete chain

*Point\_and\_Vector\_Object\_Count:* 638

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Link  
*Point\_and\_Vector\_Object\_Count:* 899

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Node, planar graph  
*Point\_and\_Vector\_Object\_Count:* 1267

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*Spatial\_Reference\_Information:*

*Horizontal\_Coordinate\_System\_Definition:*

*Geographic:*

*Latitude\_Resolution:* 0.0000001  
*Longitude\_Resolution:* 0.0000001  
*Geographic\_Coordinate\_Units:* Decimal degrees

*Geodetic\_Model:*

*Horizontal\_Datum\_Name:* North American Datum of 1983  
*Ellipsoid\_Name:* Geodetic Reference System 80  
*Semi-major\_Axis:* 6378137.000000  
*Denominator\_of\_Flattening\_Ratio:* 298.257222

---

*Entity\_and\_Attribute\_Information:*

*Overview\_Description:*

*Entity\_and\_Attribute\_Overview:*

In addition to the geographic data layers, two relational attribute or data tables, SOC\_DAT, and SOURCES, are used to store the complex socioeconomic data in the ESI data structure. The geographic data layer containing socioeconomic data resource information (in this case, SOCECON) is linked to the Socioeconomic Resources table (SOC\_DAT) using the unique ID and the lookup table SOC\_LUT, or it can be linked directly using HUNUM. HUNUM is a unique reference number concatenated with the atlas number (for South Florida, the number is 221). ID is a unique combination of the atlas number (221), an element specific number (SOCECON = 10), and a unique record number. SOC\_DAT and the other relational data tables are described below in detail. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

*Entity\_and\_Attribute\_Detail\_Citation:*

A complete description of entity types, attributes, and attribute values for ESI atlases can be found in the NOAA ESI Guidelines ([http://response.restoration.noaa.gov/esi\\_guidelines](http://response.restoration.noaa.gov/esi_guidelines)).

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SOCECON.AAT

*Entity\_Type\_Definition:*

The SOCECON.AAT table contains attribute information for the vector lines representing

roads.

*Entity\_Type\_Definition\_Source*: NOAA ESI Guidelines

*Attribute*:

*Attribute\_Label*: TYPE

*Attribute\_Definition*:

The human-use features depicted on the maps are those that could be impacted by an oil spill or could provide access for response operations.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: R

*Enumerated\_Domain\_Value\_Definition*: Road, Transportation, or Bridge

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Detailed\_Description*:

*Entity\_Type*:

*Entity\_Type\_Label*: SOCECON.PAT

*Entity\_Type\_Definition*:

The SOCECON.PAT table contains attribute information for the vector points representing airports, access areas, aquaculture sites, artificial reefs, abandoned vessels, beaches, boat ramps, coast guard stations, ferry staging areas, historical sites, marinas, ports, recreational fishing areas, and water intakes. Note that all attribute information is stored in a series of relational files, described below. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source*: NOAA ESI Guidelines

*Attribute*:

*Attribute\_Label*: TYPE

*Attribute\_Definition*:

The human-use features depicted on the maps are those that could be impacted by an oil spill or could provide access for response operations.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: A

*Enumerated\_Domain\_Value\_Definition*: Airport

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: A2

*Enumerated\_Domain\_Value\_Definition*: Access

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* AQ

*Enumerated\_Domain\_Value\_Definition:* Aquaculture

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* AR

*Enumerated\_Domain\_Value\_Definition:* Artificial Reef

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* AV

*Enumerated\_Domain\_Value\_Definition:* Abandoned Vessel

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* B

*Enumerated\_Domain\_Value\_Definition:* Beach

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BR

*Enumerated\_Domain\_Value\_Definition:* Boat Ramp

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* CG

*Enumerated\_Domain\_Value\_Definition:* Coast Guard

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* F

*Enumerated\_Domain\_Value\_Definition:* Ferry

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HS

*Enumerated\_Domain\_Value\_Definition:* Historical Site

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M

*Enumerated\_Domain\_Value\_Definition:* Marina

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* PT

*Enumerated\_Domain\_Value\_Definition:* Port

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* RF

*Enumerated\_Domain\_Value\_Definition:* Recreational Fishing

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* WI

*Enumerated\_Domain\_Value\_Definition:* Water Intake

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the human-use data layers to records in the SOC\_LUT data table. ID is a concatenation of atlas number (221), element number (10), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Attribute:*

*Attribute\_Label:* HUNUM

*Attribute\_Definition:*

An identifier that links directly to the SOC\_DAT table. HUNUM values of 0 are holes in the polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SOC\_LUT

*Entity\_Type\_Definition:*

The data table SOC\_LUT is a lookup table that contains items necessary for linking vector objects in the human-use data layers with the SOC\_DAT data table. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* HUNUM

*Attribute\_Definition:*

An identifier that links records in the SOC\_LUT data table to records in the SOC\_DAT data table. HUNUM values of 0 are holes in the polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the human-use data layers to records in the SOC\_LUT data table. ID is a concatenation of atlas number (221), element number (10), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SOC\_DAT

*Entity\_Type\_Definition:*

The data table SOC\_DAT contains both human-use attribute data and items necessary for linking the human-use spatial data layers to the SOURCES data table. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* HUNUM

*Attribute\_Definition:*

An identifier that links records in the SOC\_DAT data table to records in the SOC\_LUT data table. HUNUM values of 0 are holes in the polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* TYPE

*Attribute\_Definition:*

The human-use features depicted on the maps are those that could be impacted by an oil spill or could provide access for response operations.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* ABANDONED VESSEL

*Enumerated\_Domain\_Value\_Definition:* Abandoned Vessel

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* ACCESS

*Enumerated\_Domain\_Value\_Definition:* Access

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* AIRPORT

*Enumerated\_Domain\_Value\_Definition:* Airport

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* AQUACULTURE

*Enumerated\_Domain\_Value\_Definition:* Aquaculture

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* ARTIFICIAL REEF

*Enumerated\_Domain\_Value\_Definition:* Artificial Reef

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BEACH

*Enumerated\_Domain\_Value\_Definition:* Beach

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BOAT RAMP

*Enumerated\_Domain\_Value\_Definition:* Boat Ramp

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* COAST GUARD

*Enumerated\_Domain\_Value\_Definition:* Coast Guard

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* CRITICAL HABITAT

*Enumerated\_Domain\_Value\_Definition:* Designated Critical Habitat

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FERRY

*Enumerated\_Domain\_Value\_Definition:* Ferry

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines



*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HISTORICAL SITE

*Enumerated\_Domain\_Value\_Definition:* Historical Site

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* MANAGEMENT AREA

*Enumerated\_Domain\_Value\_Definition:* Management Area

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* MARINA

*Enumerated\_Domain\_Value\_Definition:* Marina

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* MARINE SANCTUARY

*Enumerated\_Domain\_Value\_Definition:* Marine Sanctuary

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* NATIONAL PARK

*Enumerated\_Domain\_Value\_Definition:* National Park

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* NATURE CONSERVANCY

*Enumerated\_Domain\_Value\_Definition:* Nature Conservancy

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* PARK

*Enumerated\_Domain\_Value\_Definition:* Regional or State Park

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* PORT

*Enumerated\_Domain\_Value\_Definition:* Port

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* RECREATIONAL FISHING

*Enumerated\_Domain\_Value\_Definition:* Recreational Fishing

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* WATER INTAKE

*Enumerated\_Domain\_Value\_Definition:* Water Intake

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* WILDLIFE REFUGE

*Enumerated\_Domain\_Value\_Definition:* Wildlife Refuge

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* NAME

*Attribute\_Definition:* The feature name.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* CONTACT

*Attribute\_Definition:* Contact person or entity.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PHONE

*Attribute\_Definition:* Contact telephone number.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Any character

*Enumerated\_Domain\_Value\_Definition:* Free text

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* G\_SOURCE

*Attribute\_Definition:*

Geographic source identifier that links records in the SOC\_DAT data table to records in the SOURCES data table.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* A\_SOURCE

*Attribute\_Definition:*

Attribute source identifier that links records in the SOC\_DAT data table to records in the SOURCES data table.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SOURCES

*Entity\_Type\_Definition:*

The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SOURCE\_ID

*Attribute\_Definition:*

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table; G\_SOURCE and S\_SOURCE in the BIORRES table; and SOURCE\_ID and ESI\_Source in the ESI and HYDRO data layers.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* ORIGINATOR

*Attribute\_Definition:* Author or developer of source material or data set.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* DATE\_PUB

*Attribute\_Definition:*

Date of source material, publication, or date of personal communication with expert source.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* TITLE

*Attribute\_Definition:* Title of source material or data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* DATA\_FORMAT

*Attribute\_Definition:* The format of the source material.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUB\_PLACE

*Attribute\_Definition:* Publication place.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUBLISHER  
*Attribute\_Definition:* Publisher.  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUBLICATION  
*Attribute\_Definition:* Additional citation information.  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* ONLINE\_LINK  
*Attribute\_Definition:* Online computer resource URL.  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* SCALE  
*Attribute\_Definition:* Description of the source scale.  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* TIME\_PERIOD  
*Attribute\_Definition:*  
Date(s) of data collection that the source material is based upon.  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

---

*Distribution\_Information:*

*Distributor:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:* John Kaperick  
*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Address:*

*Address\_Type:* Physical Address  
*Address:* 7600 Sand Point Way N.E.  
*City:* Seattle  
*State\_or\_Province:* Washington  
*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6400  
*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Resource\_Description:* Downloadable Data

*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.

*Custom\_Order\_Process:*

Contact NOAA for distribution options (see Distributor). 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 distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

---

*Metadata\_Reference\_Information:*

*Metadata\_Date:* 201304  
*Metadata\_Review\_Date:* 201304  
*Metadata\_Contact:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:* Jill Petersen  
*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Position:* GIS Manager

*Contact\_Address:*

*Address\_Type:* Physical Address  
*Address:* 7600 Sand Point Way, N.E.  
*City:* Seattle  
*State\_or\_Province:* Washington  
*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6944  
*Contact\_Facsimile\_Telephone:* (206) 526-6329  
*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

*Metadata\_Standard\_Name:* Content Standards for Digital Geospatial Metadata

*Metadata\_Standard\_Version:* FGDC-STD-001-1998

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Generated by [mp](#) version 2.9.20 on Thu Apr 25 13:50:47 2013

# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: South Florida: T\_MAMMAL (Terrestrial Mammal Polygons)

Metadata also available as - [[Parseable text](#)] - [[SGML](#)] - [[XML](#)]

## Metadata:

- [Identification Information](#)
  - [Data Quality Information](#)
  - [Spatial Data Organization Information](#)
  - [Spatial Reference Information](#)
  - [Entity and Attribute Information](#)
  - [Distribution Information](#)
  - [Metadata Reference Information](#)
- 

### *Identification\_Information:*

#### *Citation:*

##### *Citation\_Information:*

##### *Originator:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington.

*Publication\_Date:* 201304

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: South Florida: T\_MAMMAL (Terrestrial Mammal Polygons)

*Edition:* Second

*Geospatial\_Data\_Presentation\_Form:* vector digital data

##### *Series\_Information:*

*Series\_Name:* South Florida

*Issue\_Identification:* South Florida

##### *Publication\_Information:*

*Publication\_Place:* Seattle, Washington

##### *Publisher:*

NOAA's Ocean Service, Office of Response and Restoration (OR&R), Emergency Response Division (ERD).

##### *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, Emergency Response Division, Seattle, Washington.  
*Online\_Linkage:* <<http://response.restoration.noaa.gov/esi>>

*Description:*

*Abstract:*

This data set contains sensitive biological resource data for State and Federally threatened and endangered terrestrial mammals in [for] South Florida. Vector polygons in this data set represent State and Federally threatened and endangered terrestrial mammal distribution. Species specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the ESI data for South Florida. ESI data characterize the marine and 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.

*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.

*Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1999

*Ending\_Date:* 2009

*Currentness\_Reference:*

The data were compiled during 2011-2013. The currentness dates for this data range from 1999 to 2009 and are documented in the Lineage section.

*Status:*

*Progress:* Complete

*Maintenance\_and\_Update\_Frequency:* None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -82.93300

*East\_Bounding\_Coordinate:* -80.00000

*North\_Bounding\_Coordinate:* 26.37500

*South\_Bounding\_Coordinate:* 24.50000

*Keywords:*

*Theme:*

*Theme\_Keyword\_Thesaurus:* ISO 19115 Topic Category

*Theme\_Keyword:* biota

*Theme\_Keyword:* environment

*Theme:*

*Theme\_Keyword\_Thesaurus:* None  
*Theme\_Keyword:* Environmental Monitoring  
*Theme\_Keyword:* ESI  
*Theme\_Keyword:* Sensitivity maps  
*Theme\_Keyword:* Coastal resources  
*Theme\_Keyword:* Oil spill planning  
*Theme\_Keyword:* Coastal Zone Management  
*Theme\_Keyword:* Wildlife  
*Theme\_Keyword:* Terrestrial Mammal

*Place:*

*Place\_Keyword\_Thesaurus:* None  
*Place\_Keyword:* South Florida

*Access\_Constraints:* None

*Use\_Constraints:*

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* datafig.jpg

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and attribute data tables for the South Florida ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* datafig2.jpg

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and desktop data tables for the South Florida ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington, the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness Washington, D.C. and the Fish and Wildlife Research Institute (FWRI), Florida Fish and Wildlife Conservation Commission (FWC), St. Petersburg, Florida.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 10.0) and SQL SERVER(R) (version 2005). The hardware configuration is PC's with Windows Operating System 7.

The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in the data set: benthic.e00, birds.e00, esil.e00, esip.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, mgt\_fish.e00, nests.e00, reptiles.e00, socecon.e00, and t\_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio\_lut.e00, biofile.e00, biores.e00, breed.e00, seasonal.e00, soc\_dat.e00, soc\_lut.e00, sources.e00, species.e00, status.e00, mgt\_fish\_lut.e00, and mgt\_fish.e00.

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## *Data\_Quality\_Information:*

### *Attribute\_Accuracy:*

#### *Attribute\_Accuracy\_Report:*

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

#### *Logical\_Consistency\_Report:*

A multi-stage error checking process, described in the above Attribute\_Accuracy\_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary node, etc.), and SQL SERVER(R) to ARC/INFO(R) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM 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 ID's and RARNUM's or HUNUM's are also generated. The new ID's 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 RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resources at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

#### *Completeness\_Report:*

These data represent a synthesis of digital data on terrestrial mammal distribution. These data do not necessarily represent all terrestrial mammal occurrences in South Florida. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name [n/a if not applicable]): 25, Florida key deer, *Odocoileus virginianus clavium*; 71, Key Largo cotton mouse, *Peromyscus gossypinus allapaticola*; 72, Key Largo woodrat, *Neotoma floridana smalli*; 73, Lower Keys marsh rabbit, *Sylvilagus palustris hefneri*; 77, Silver rice rat, *Oryzomys palustris natator*.

#### *Positional\_Accuracy:*

##### *Horizontal\_Positional\_Accuracy:*

###### *Horizontal\_Positional\_Accuracy\_Report:*

Spatial components for the biological data layers can come from expert interviews, hardcopy, or digital sources. Some of the spatial components of the biological data layers may have been developed using regional experts who estimate concentration areas. It is difficult to estimate

the positional accuracy of such data, except to state that they are compiled on hardcopy base maps with a scale of 1:24,000. Some of the spatial components of the biological data sets are developed from pre-existing digital or hardcopy sources and reflect the positional accuracy of these original data. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources. See the Lineage and Process\_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* UNITED STATES FISH AND WILDLIFE SERVICE (USFWS)

*Publication\_Date:* 1999

*Title:* SOUTH FLORIDA MULTI-SPECIES RECOVERY PLAN

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* ATLANTA, GA

*Publisher:* UNITED STATES FISH AND WILDLIFE SERVICE (USFWS)

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 1999

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* T\_MAMMAL INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* UNITED STATES FISH AND WILDLIFE SERVICE (USFWS)

*Publication\_Date:* 2009

*Title:* COTTON MOUSE FOCUS AREA

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* VERO BEACH, FLORIDA

*Publisher:*

UNITED STATES FISH AND WILDLIFE SERVICE (USFWS), SOUTH  
FLORIDA FIELD OFFICE

*Type\_of\_Source\_Media:* EMAIL  
*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2009

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* T\_MAMMAL INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* UNITED STATES FISH AND WILDLIFE SERVICE (USFWS)

*Publication\_Date:* 2009

*Title:* KEY DEER FOCUS AREA

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* VERO BEACH, FL

*Publisher:*

UNITED STATES FISH AND WILDLIFE SERVICE (USFWS), SOUTH  
FLORIDA FIELD OFFICE

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2009

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* T\_MAMMAL INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* UNITED STATES FISH AND WILDLIFE SERVICE (USFWS)

*Publication\_Date:* 2009

*Title:* SILVER RICE RAT FOCUS AREA

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* VERO BEACH, FL

*Publisher:*

UNITED STATES FISH AND WILDLIFE SERVICE (USFWS), SOUTH  
FLORIDA FIELD OFFICE

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2009

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* T\_MAMMAL INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* UNITED STATES FISH AND WILDLIFE SERVICE (USFWS)

*Publication\_Date:* 2009

*Title:* WOODRAT FOCUS AREA

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* VERO BEACH, FL

*Publisher:*

UNITED STATES FISH AND WILDLIFE SERVICE (USFWS), SOUTH  
FLORIDA FIELD OFFICE

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2009

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* T\_MAMMAL INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* UNITED STATES FISH AND WILDLIFE SERVICE (USFWS)

*Publication\_Date:* 2010

*Title:* LOWER KEYS MARSH RABBIT FOCUS AREA

*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Publication\_Information:*

*Publication\_Place:* VERO BEACH, FLORIDA

*Publisher:*

UNITED STATES FISH AND WILDLIFE SERVICE (USFWS), SOUTH  
FLORIDA FIELD OFFICE

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2006

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* T\_MAMMAL INFORMATION

*Process\_Step:*

*Process\_Description:*

The main source of data used to depict terrestrial mammal distribution for this data layer were digital data sets provided by U.S. Fish and Wildlife Service (USFWS) for threatened and endangered (T/E/) species: cotton mouse, key deer, marsh rabbit, silver rice rat, and woodrat. Florida Natural Areas Inventory (FNAI) provided additional occurrence information for T/E species.

The above digital and/or hardcopy sources were compiled by the project biologist to create the T\_MAMMAL data layer. Depending on the type of source data, three general approaches are used for compiling the data layer: 1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:24,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the T\_MAMMAL data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:* 201304

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Person:* Jill Petersen

*Contact\_Address:*

*Address\_Type:* Physical address

*Address:* 7600 Sand Point Way, N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6944

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

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*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:* Vector

*Point\_and\_Vector\_Object\_Information:*

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* GT-polygon composed of chains

*Point\_and\_Vector\_Object\_Count:* 6823

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Area point

*Point\_and\_Vector\_Object\_Count:* 6822

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Complete chain

*Point\_and\_Vector\_Object\_Count:* 12543

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Link

*Point\_and\_Vector\_Object\_Count:* 530189

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Node, planar graph

*Point\_and\_Vector\_Object\_Count:* 8850

---

*Spatial\_Reference\_Information:*

*Horizontal\_Coordinate\_System\_Definition:*

*Geographic:*

*Latitude\_Resolution:* 0.0000001

*Longitude\_Resolution:* 0.0000001

*Geographic\_Coordinate\_Units:* Decimal degrees



## *Geodetic\_Model:*

*Horizontal\_Datum\_Name:* North American Datum of 1983

*Ellipsoid\_Name:* Geodetic Reference System 80

*Semi-major\_Axis:* 6378137.000000

*Denominator\_of\_Flattening\_Ratio:* 298.257222

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## *Entity\_and\_Attribute\_Information:*

### *Overview\_Description:*

#### *Entity\_and\_Attribute\_Overview:*

In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, T\_MAMMAL) 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 the South Florida atlas, the number is 221), an element/layer 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. BIORES and the other relational data tables are described below in detail. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure. Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN\_SPEC, S, F, NHP, DATE\_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G\_SOURCE, S\_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED\_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed\_Description of the BREED data table. The link to the BIOFILE may be made through the BIO\_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED\_DT is an auxiliary support data table 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 table is SOURCES. This is the same as the source 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 data tables. The entity-relationship diagram describing relationships between attribute tables in the ESI data structure does NOT include the BIOFILE data table, and this data table is NOT described in detail below.

#### *Entity\_and\_Attribute\_Detail\_Citation:*

A complete description of entity types, attributes, and attribute values for ESI atlases can be found in the NOAA ESI Guidelines ([http://response.restoration.noaa.gov/esi\\_guidelines](http://response.restoration.noaa.gov/esi_guidelines)).

### *Detailed\_Description:*

#### *Entity\_Type:*

*Entity\_Type\_Label:* T\_MAMMAL.PAT

*Entity\_Type\_Definition:*

The T\_MAMMAL.PAT table contains attribute information for the vector polygons in this data set representing State and Federally threatened and endangered terrestrial mammal distribution. Note that all attribute information is stored in a series of relational files, described below. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (221), element number (9), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Attribute:*

*Attribute\_Label:* RARNUM

*Attribute\_Definition:*

An identifier that links directly to the BIORES table or the flat format BIOFILE table. RARNUM values of 0 are holes in the polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BIO\_LUT

*Entity\_Type\_Definition:*

The data table BIO\_LUT is a lookup table that contains items necessary for linking vector objects in the biological data layers with the BIORES data table. Note that all attribute information is stored in a series of relational files, described below. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* RARNUM

*Attribute\_Definition:*

An identifier that links records in the BIO\_LUT data table to records in the BIORES data table or the flat format BIOFILE data table. RARNUM values of 0 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (221), element number (9), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BIORES

*Entity\_Type\_Definition:*

The data table BIORES contains both biological attribute data and items necessary for linking vector objects in the biological data layers via the BIO\_LUT data table to other associated data tables. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* RARNUM

*Attribute\_Definition:*

An identifier that links records in the BIORES data table to records in the BIO\_LUT data table or the flat format BIOFILE data table.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* "NEED TO ADD"

*Range\_Domain\_Maximum:* "NEED TO ADD"

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* CONC

*Attribute\_Definition:*

The field CONC refers to "concentration," abundance, or density values. No concentration data was available, so the field is blank.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* SEASON\_ID

*Attribute\_Definition:*

Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* G\_SOURCE

*Attribute\_Definition:*

Geographic source identifier that links records in the BIORES data table to records in the SOURCES data table.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* S\_SOURCE

*Attribute\_Definition:*

Seasonality source identifier that links records in the BIORES data table to records in the

SOURCES data table.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1

*Range\_Domain\_Maximum*: N

*Attribute*:

*Attribute\_Label*: ELEMENT

*Attribute\_Definition*: Major categories of biological data.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: BIRD

*Enumerated\_Domain\_Value\_Definition*: Birds

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: FISH

*Enumerated\_Domain\_Value\_Definition*: Fish

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: HABITAT

*Enumerated\_Domain\_Value\_Definition*: Habitats and plants

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: INVERT

*Enumerated\_Domain\_Value\_Definition*: Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition*: Marine mammals

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links records in the BIORES data table to records in the SPECIES and STATUS data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BIORES data table to records in the SEASONAL and BREED data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SPECIES

*Entity\_Type\_Definition:*

The data table SPECIES identifies all species in the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure. Refer to the Completeness Report for list of layer specific species.

*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* NAME

*Attribute\_Definition:* Species common name for the entire ESI data set.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* GEN\_SPEC

*Attribute\_Definition:* Species scientific name for the entire ESI data set.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH  
*Enumerated\_Domain\_Value\_Definition:* Fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT  
*Enumerated\_Domain\_Value\_Definition:* Habitats and plants  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT  
*Enumerated\_Domain\_Value\_Definition:* Invertebrates  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:* Marine Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE  
*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SUBELEMENT  
*Attribute\_Definition:* Element subgroup delineating a logical grouping of species.  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* algae  
*Enumerated\_Domain\_Value\_Definition:* Algae  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines



*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* alligator  
*Enumerated\_Domain\_Value\_Definition:* Alligator  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* coral  
*Enumerated\_Domain\_Value\_Definition:* Coral  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* crab  
*Enumerated\_Domain\_Value\_Definition:* Crab  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* diving  
*Enumerated\_Domain\_Value\_Definition:* Diving bird  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* dolphin  
*Enumerated\_Domain\_Value\_Definition:* Dolphin  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* e\_nursery  
*Enumerated\_Domain\_Value\_Definition:* Estuarine nursery fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* e\_resident  
*Enumerated\_Domain\_Value\_Definition:* Estuarine resident fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* echinoderm  
*Enumerated\_Domain\_Value\_Definition:* Echinoderm  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* fish  
*Enumerated\_Domain\_Value\_Definition:* Fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* gastropod  
*Enumerated\_Domain\_Value\_Definition:* Gastropod  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* gull\_tern  
*Enumerated\_Domain\_Value\_Definition:* Gull or tern  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* hardbottom  
*Enumerated\_Domain\_Value\_Definition:* Hardbottom  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* insect  
*Enumerated\_Domain\_Value\_Definition:* Insect  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* invert  
*Enumerated\_Domain\_Value\_Definition:* Invertebrate  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* lizard

*Enumerated\_Domain\_Value\_Definition:* Lizard

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* lobster

*Enumerated\_Domain\_Value\_Definition:* Lobster

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* m\_benthic

*Enumerated\_Domain\_Value\_Definition:* Marine benthic fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* m\_pelagic

*Enumerated\_Domain\_Value\_Definition:* Marine pelagic fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* manatee

*Enumerated\_Domain\_Value\_Definition:* Manatee

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* passerine

*Enumerated\_Domain\_Value\_Definition:* Passerine bird

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* pelagic

*Enumerated\_Domain\_Value\_Definition:* Pelagic bird

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* plant

*Enumerated\_Domain\_Value\_Definition:* Plant

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* raptor

*Enumerated\_Domain\_Value\_Definition:* Raptor

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* reef

*Enumerated\_Domain\_Value\_Definition:* Reef

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* sav

*Enumerated\_Domain\_Value\_Definition:* Submerged aquatic vegetation

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* shorebird

*Enumerated\_Domain\_Value\_Definition:* Shorebird

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* shrimp

*Enumerated\_Domain\_Value\_Definition:* Shrimp

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* sm\_mammal

*Enumerated\_Domain\_Value\_Definition:* Small mammal

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* snake

*Enumerated\_Domain\_Value\_Definition:* Snake

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* turtle

*Enumerated\_Domain\_Value\_Definition:* Turtle

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* ungulate

*Enumerated\_Domain\_Value\_Definition:* Ungulate

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* upland

*Enumerated\_Domain\_Value\_Definition:* Upland vegetation

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* wading

*Enumerated\_Domain\_Value\_Definition:* Wading bird

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* waterfowl

*Enumerated\_Domain\_Value\_Definition:* Waterfowl

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* NHP

*Attribute\_Definition:* Natural Heritage Program global ranking.

*Attribute\_Definition\_Source:* Network of Natural Heritage Program

*Attribute\_Domain\_Values:*

*Codeset\_Domain:*

*Codeset\_Name:* NHP Global Conservation Status Rank  
*Codeset\_Source:* Natural Heritage Program

*Attribute:*

*Attribute\_Label:* DATE\_PUB  
*Attribute\_Definition:* Date of NHP listing.  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM  
*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 0  
*Enumerated\_Domain\_Value\_Definition:* Date unspecified  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE  
*Attribute\_Definition:*  
Concatenation of ELEMENT and SPECIES\_ID. This item links records in the SPECIES data table to records in the BIORES and STATUS data tables.  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####  
*Enumerated\_Domain\_Value\_Definition:*  
Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SEASONAL  
*Entity\_Type\_Definition:*  
The data table SEASONAL contains information on the seasonal presence of each species associated with each spatial vector object. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.  
*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and plants

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* SEASON\_ID

*Attribute\_Definition:*

Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* JAN

*Attribute\_Definition:* January

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in January

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* FEB

*Attribute\_Definition:* February

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X



*Enumerated\_Domain\_Value\_Definition:* Present in February  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* MAR  
*Attribute\_Definition:* March  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in March  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* APR  
*Attribute\_Definition:* April  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in April  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* MAY  
*Attribute\_Definition:* May  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in May  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* JUN  
*Attribute\_Definition:* June  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in June  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* JUL  
*Attribute\_Definition:* July  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in July  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* AUG  
*Attribute\_Definition:* August  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in August  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* SEP  
*Attribute\_Definition:* September  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in September  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* OCT  
*Attribute\_Definition:* October  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in October  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* NOV  
*Attribute\_Definition:* November

*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in November  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* DEC  
*Attribute\_Definition:* December  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in December  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA  
*Attribute\_Definition:*  
Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the SEASONAL data table to records in the BIORES and BREED data tables.  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####  
*Enumerated\_Domain\_Value\_Definition:*  
Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BREED  
*Entity\_Type\_Definition:*  
The data table BREED identifies the monthly presence of certain life-history stages or activities for each species at a given location.  
*Entity\_Type\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA  
*Attribute\_Definition:*  
Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the

BREED data table to records in the BIORES and SEASONAL data tables.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* MONTH

*Attribute\_Definition:*

Two-digit calendar month. Each life history stage or activity type for a particular species can have up to 12 records to account for each month of the year.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* 12

*Attribute:*

*Attribute\_Label:* BREED1

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED1 = nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning; if ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M\_MAMMAL" then BREED1 = mating. This attribute is not used for HABITAT or T\_MAMMAL.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* BREED2

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = migrating; if ELEMENT is "FISH" then BREED2 = eggs; if ELEMENT is "INVERT" then BREED2 = eggs; if ELEMENT is "REPTILE" then BREED2 = hatching; if ELEMENT is "M\_MAMMAL" then BREED2 = calving. This attribute is not used for HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* BREED3

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED3 = molting; if ELEMENT is "FISH" then BREED3 = larvae; if ELEMENT is "INVERT" then BREED3 = larvae; if ELEMENT is "REPTILE" then BREED3 = internesting; if ELEMENT is "M\_MAMMAL" then BREED3 = pupping. This attribute is not used for HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* BREED4

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "FISH" then BREED4 = juveniles; if ELEMENT is "INVERT" then BREED4 = juveniles; if ELEMENT is "REPTILE" then BREED4 = juveniles; if ELEMENT is "M\_MAMMAL" then BREED4 = molting. This attribute is not used for BIRD, HABITAT, or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question  
*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute*:

*Attribute\_Label*: BREED5

*Attribute\_Definition*:

Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 = adults; if ELEMENT is "INVERT" then BREED5 = adults; if ELEMENT is "REPTILE" then BREED5 = adults. This attribute is not used for BIRD, M\_MAMMAL, HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: Y

*Enumerated\_Domain\_Value\_Definition*: Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: N

*Enumerated\_Domain\_Value\_Definition*: Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: -

*Enumerated\_Domain\_Value\_Definition*:

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Detailed\_Description*:

*Entity\_Type*:

*Entity\_Type\_Label*: STATUS

*Entity\_Type\_Definition*:

The data table STATUS identifies the species that are listed as either threatened or endangered by a state, federal, or international authority. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source*: NOAA ESI Guidelines

*Attribute*:

*Attribute\_Label*: ELEMENT

*Attribute\_Definition*: Major categories of biological data.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines



*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* STATE

*Attribute\_Definition:* Two-letter state abbreviation.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* COUNTRY

*Attribute\_Definition:* Three-letter country abbreviation.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* S

*Attribute\_Definition:* State threatened or endangered status.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

*Enumerated\_Domain\_Value\_Definition:* Endangered on state list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T

*Enumerated\_Domain\_Value\_Definition:* Threatened on state list

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* C  
*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* F  
*Attribute\_Definition:* Federal threatened or endangered status.  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E  
*Enumerated\_Domain\_Value\_Definition:* Endangered on federal list  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T  
*Enumerated\_Domain\_Value\_Definition:* Threatened on federal list  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* C  
*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* I  
*Attribute\_Definition:* International threatened or endangered status.  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E  
*Enumerated\_Domain\_Value\_Definition:* Endangered on international list  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T  
*Enumerated\_Domain\_Value\_Definition:* Threatened on international list  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* C

*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* S\_DATE

*Attribute\_Definition:*

Publication date of source material used to assign state status values for each species, if used.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* F\_DATE

*Attribute\_Definition:*

Publication date of source material used to assign federal status values for each species, if used.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* I\_DATE

*Attribute\_Definition:*

Publication date of source material used to assign international status values for each species, if used.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links the STATUS data table to the

BIORES and SPECIES data tables.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: E#####

*Enumerated\_Domain\_Value\_Definition*:

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Detailed\_Description*:

*Entity\_Type*:

*Entity\_Type\_Label*: SOURCES

*Entity\_Type\_Definition*:

The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source*: NOAA ESI Guidelines

*Attribute*:

*Attribute\_Label*: SOURCE\_ID

*Attribute\_Definition*:

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table; G\_SOURCE and S\_SOURCE in the BIORES table; and SOURCE\_ID and ESI\_Source in the ESI and HYDRO data layers.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1

*Range\_Domain\_Maximum*: N

*Attribute*:

*Attribute\_Label*: ORIGINATOR

*Attribute\_Definition*: Author or developer of source material or data set.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label*: DATE\_PUB

*Attribute\_Definition*:

Date of source material, publication, or date of personal communication with expert source.

*Attribute\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:* TITLE

*Attribute\_Definition:* Title of source material or data.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* DATA\_FORMAT

*Attribute\_Definition:* The format of the source material.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUB\_PLACE

*Attribute\_Definition:* Publication place.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUBLISHER

*Attribute\_Definition:* Publisher.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUBLICATION

*Attribute\_Definition:* Additional citation information.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* ONLINE\_LINK

*Attribute\_Definition:* Online computer resource URL.

*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* SCALE  
*Attribute\_Definition:* Description of the source scale.  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* TIME\_PERIOD  
*Attribute\_Definition:*  
Date(s) of data collection that the source material is based upon.  
*Attribute\_Definition\_Source:* NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

---

*Distribution\_Information:*

*Distributor:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:* John Kaperick  
*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Address:*

*Address\_Type:* Physical Address  
*Address:* 7600 Sand Point Way N.E.  
*City:* Seattle  
*State\_or\_Province:* Washington  
*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6400  
*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Resource\_Description:* Downloadable Data

*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.

*Custom\_Order\_Process:*

Contact NOAA for distribution options (see Distributor). 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 distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

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*Metadata\_Reference\_Information:*

*Metadata\_Date:* 201304

*Metadata\_Review\_Date:* 201304

*Metadata\_Contact:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:* Jill Petersen

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Position:* GIS Manager

*Contact\_Address:*

*Address\_Type:* Physical Address

*Address:* 7600 Sand Point Way, N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6944

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

*Metadata\_Standard\_Name:* Content Standards for Digital Geospatial Metadata

*Metadata\_Standard\_Version:* FGDC-STD-001-1998

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