

# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Upper Texas Coast: BENTHIC (Habitat polygons)

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

## Metadata:

- [Identification Information](#)
  - [Data Quality Information](#)
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  - [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:* 201307

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Upper Texas Coast: BENTHIC (Habitat polygons)

*Edition:* Second

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

##### *Series\_Information:*

*Series\_Name:* None

*Issue\_Identification:* Upper Texas Coast

##### *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 known locations of patchy and continuous seagrass and oyster reef habitat for the Upper Texas Coast benthic habitat data. This data set comprises a portion of the ESI data for Upper Texas Coast. 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 2012-2013. 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:* -96.12500

*East\_Bounding\_Coordinate:* -93.62500

*North\_Bounding\_Coordinate:* 30.12500

*South\_Bounding\_Coordinate:* 28.50000

*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:* 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:* Upper Texas Coast

*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 Upper Texas Coast 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 Upper Texas Coast 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, and Texas General Land Office (TGLO), Austin, Texas.

*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, 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, breed\_dt.e00, seasonal.e00, soc\_dat.e00, soc\_lut.e00, sources.e00, species.e00, and status.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 expert knowledge and digital data on the known locations of benthic habitats.

#### *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:* TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD)  
*Publication\_Date:* 2013  
*Title:* BOAT-ACCESS SITE LIST FOR HIGH-USE AREA 2013 - GALVESTON BAY  
*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:* 2013

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

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

*Process\_Step:*

*Process\_Description:*

The main sources of data used to depict habitat distribution, seasonality, and concentrations for seagrass include: 1) personal interview with Texas Parks and Wildlife Department (TPWD), 2) digital data on seagrass distribution from TPWD, and 3) digital data from the Harte Research Institute (HRI). Eastern oyster reef distributions, seasonality, and concentrations were acquired from a variety of sources including: 1) digital data from HRI, 2) Matagorda Bay oyster reef digital data from the Texas General Land Office (TGLO) and Biowest, Inc. et al., and 3) Sabine Lake and Galveston Bay digital data from TPWD. TPWD seagrass polygons were provided as a shapefile of surveys dating from 1998-2007. All seagrass within the study area was used. Additional information was provided from the HRI wetlands layer, from which all habitats containing 'AB3' were selected and mapped as seagrass. Anecdotal information from TPWD indicated that additional areas in West Bay support areas of patchy seagrass that have been expanding in recent years; these areas were drawn based on information from TPWD. Oyster reef habitat is included in the benthic layer as "REEF". Polygons were used as provided in the source data sets for all areas except the Galveston Bay system. In the Galveston Bay area, polygons were smoothed and areas that no longer support oyster populations areas were removed based on anecdotal and sampling information from TPWD. Additional unmapped reef areas were identified by TPWD and incorporated into the benthic layer.

*Process\_Date:* 201307

*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*: 1765

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: Area point  
*Point\_and\_Vector\_Object\_Count*: 1764

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: Complete chain  
*Point\_and\_Vector\_Object\_Count*: 2183

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: Link  
*Point\_and\_Vector\_Object\_Count*: 303665

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: Node, planar graph  
*Point\_and\_Vector\_Object\_Count*: 2088

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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, 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 Upper Texas Coast atlas, the number is 213), 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 habitats. 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 (213), 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 (213), 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 for each species present at a particular nesting or wintering site, or a term that describes relative abundance of birds at a particular site. The field may contain counts of individuals (XX INDIV, NESTS, OR PAIRS) or counts binned in orders of magnitude (10S, 100S, 1000S, 10,000S). In cases where no quantitative count data was available, the field may either be blank or contain descriptive terms such as "UNCOMMON", "RARE", "PRESENT", "POTENTIAL", "OCCASIONAL", "HIGH", "COMMON", or "COMMON-ABUNDANT". 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:* alligator

*Enumerated\_Domain\_Value\_Definition:* Alligator

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* amphibian

*Enumerated\_Domain\_Value\_Definition:* Amphibian

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* bivalve

*Enumerated\_Domain\_Value\_Definition:* Bivalve

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* cephalopod

*Enumerated\_Domain\_Value\_Definition:* Cephalopod

*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:* diadromous

*Enumerated\_Domain\_Value\_Definition:* Diadromous fish

*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:* freshwater

*Enumerated\_Domain\_Value\_Definition:* Freshwater 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:* invert

*Enumerated\_Domain\_Value\_Definition:* Invertebrate

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

*Attribute\_Domain\_Values:*



*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* landfowl

*Enumerated\_Domain\_Value\_Definition:* Landfowl

*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:* 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:* 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:* 201307  
*Metadata\_Review\_Date:* 201307  
*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: Upper Texas Coast: 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:* 201307

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Upper Texas Coast: BIRDS (Bird Polygons)

*Edition:* Second

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

##### *Series\_Information:*

*Series\_Name:* None

*Issue\_Identification:* Upper Texas Coast

##### *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, waterfowl, and landfowl for the Upper Texas Coast. Vector polygons in this data set represent bird nesting, migratory staging, 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 Upper Texas Coast. 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 Upper Texas Coast 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:* 1995

*Ending\_Date:* 2013

*Currentness\_Reference:*

The data were compiled during 2012-2013. The currentness dates for this data range from 1995 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:* -96.12500

*East\_Bounding\_Coordinate:* -93.62500

*North\_Bounding\_Coordinate:* 30.12500

*South\_Bounding\_Coordinate:* 28.50000

*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:* Upper Texas Coast

*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 Upper Texas Coast 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 Upper Texas Coast 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, and Texas General Land Office (TGLO), Austin, Texas.

### *Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's 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, 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, breed\_dt.e00, seasonal.e00, soc\_dat.e00, soc\_lut.e00, sources.e00, species.e00, and status.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, available hardcopy documents, survey data, digital and hardcopy maps, and vector digital data on bird nesting, migratory staging, wintering, and other spatial/temporal concentration areas. See also the NESTS data layer, part of the larger Upper Texas Coast ESI database, for additional bird information. These data do not necessarily represent all bird occurrences in Upper Texas Coast. 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*; 12, Canada goose, *Branta canadensis*; 14, Greater white-fronted goose, *Anser albifrons*; 15, Snow goose, *Chen caerulescens*; 16, Mallard, *Anas platyrhynchos*; 17, Northern pintail, *Anas acuta*; 18, Green-winged teal, *Anas crecca*; 20, Northern shoveler, *Anas clypeata*; 21, Canvasback, *Aythya valisineria*; 22, Greater scaup, *Aythya marila*; 23, Lesser scaup, *Aythya affinis*; 24, Common goldeneye, *Bucephala clangula*; 26, Bufflehead, *Bucephala albeola*; 34, American coot, *Fulica americana*; 54, Great blue heron, *Ardea herodias*; 55, Whimbrel, *Numenius phaeopus*; 60, Red knot, *Calidris canutus*; 63, Dunlin, *Calidris alpina*; 64, Short-billed dowitcher, *Limnodromus griseus*; 66, Western sandpiper, *Calidris mauri*; 67, Sanderling, *Calidris alba*; 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*; 98, Laughing gull, *Larus atricilla*; 107, Peregrine falcon, *Falco peregrinus*; 115, White ibis, *Eudocimus albus*; 116, Roseate spoonbill, *Ajaia ajaja*; 118, Brown pelican, *Pelecanus occidentalis*; 119, Magnificent frigatebird, *Fregata magnificens*; 121, Anhinga, *Anhinga anhinga*; 124, Redhead, *Aythya americana*; 125, Clapper rail, *Rallus longirostris*; 128, Masked booby, *Sula dactylatra*; 131, White-tailed kite, *Elanus leucurus*; 132, Wood stork, *Mycteria americana*; 133, Black skimmer, *Rynchops niger*; 137, Royal tern, *Thalasseus maximus*; 138, Forster's tern, *Sterna forsteri*; 139, Snowy plover, *Charadrius alexandrinus*; 141, American avocet, *Recurvirostra americana*; 142, Black-necked stilt, *Himantopus mexicanus*; 148, Ruddy duck, *Oxyura jamaicensis*; 149, White-faced ibis, *Plegadis chihi*; 150, Black rail, *Laterallus jamaicensis*; 152, American oystercatcher, *Haematopus palliatus*; 153, Piping plover, *Charadrius melodus*; 154, Wilson's plover, *Charadrius wilsonia*; 155, Willet, *Catoptrophorus semipalmatus*; 162,



Gadwall, *Anas strepera*; 163, Reddish egret, *Egretta rufescens*; 167, Northern gannet, *Morus bassanus*; 169, American wigeon, *Anas americana*; 172, Sandhill crane, *Grus canadensis*; 173, American white pelican, *Pelecanus erythrorhynchos*; 180, Ring-necked duck, *Aythya collaris*; 181, Northern harrier, *Circus cyaneus*; 184, King rail, *Rallus elegans*; 185, American bittern, *Botaurus lentiginosus*; 188, Sora, *Porzana carolina*; 189, Yellow rail, *Coturnicops noveboracensis*; 190, Blue-winged teal, *Anas discors*; 191, Wood duck, *Aix sponsa*; 192, Common moorhen, *Gallinula chloropus*; 209, Long-billed curlew, *Numenius americanus*; 210, Marbled godwit, *Limosa fedoa*; 211, Mottled duck, *Anas fulvigula*; 212, Purple gallinule, *Porphyryla martinica*; 220, Merlin, *Falco columbarius*; 229, Swamp sparrow, *Melospiza georgiana*; 267, Fulvous whistling-duck, *Dendrocygna bicolor*; 271, Rails, n/a; 273, Geese, n/a; 276, Attwater's greater prairie chicken, *Tympanuchus cupido attwateri*; 277, Seaside sparrow, *Ammodramus maritimus*; 286, Dowitchers, *Limnodromus* spp.; 293, Yellowlegs, *Tringa* spp.; 299, Scaup, *Aythya* spp.; 302, Scoters, *Melanitta* spp.; 345, Storm-petrels, *Oceanodroma* spp.; 369, Aplomado falcon, *Falco femoralis*; 394, Plovers, *Charadrius* spp.; 462, Loons, *Gavia* spp.; 857, Ross's goose, *Chen rossii*; 1001, Gulls, n/a; 1002, Shorebirds, n/a; 1003, Waterfowl, n/a; 1004, Wading birds, n/a; 1005, Raptors, n/a; 1006, Diving birds, n/a; 1008, Terns, n/a; 1009, Shearwaters, n/a; 1011, Migratory songbirds, n/a; 1013, Dabbling ducks, n/a; 1014, Diving ducks, n/a; 1015, Egrets, n/a; 1016, Herons, n/a; 1021, Ducks, n/a; 1026, Grebes, n/a; 1035, Pelicans, *Pelecanus* spp.; 1037, Cormorants, *Phalacrocorax* spp.; 1040, Marsh 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:* AUDUBON AND CORNELL LAB OF ORNITHOLOGY

*Publication\_Date:* 2013

*Title:* EBIRD: AN ONLINE DATABASE OF BIRD DISTRIBUTION AND ABUNDANCE

*Geospatial\_Data\_Presentation\_Form:* WEB APPLICATION

*Publication\_Information:*

*Publication\_Place:* ITHACA, NY

*Publisher:* CORNELL LAB OF ORNITHOLOGY

*Online\_Linkage:* <<http://ebird.org>>

*Type\_of\_Source\_Media:* ONLINE

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2013

*Source\_Currentness\_Reference:* DATE OF ACCESS

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* EUBANKS, T.L., R. A. BEHRSTOCK, AND R.J. WEEKS

*Publication\_Date:* 2006

*Title:* BIRDLIFE OF HOUSTON, GALVESTON, AND THE UPPER TEXAS COAST  
*Geospatial\_Data\_Presentation\_Form:* HARDCOPY TEXT  
*Publication\_Information:*

*Publication\_Place:* COLLEGE STATION, TEXAS  
*Publisher:* TEXAS A&M UNIVERSITY PRESS

*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:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* GULF COAST BIRD OBSERVATORY  
*Publication\_Date:* 2009  
*Title:* PIPING PLOVER MONTHLY OBSERVATION POINT DATA - JAN2008-JAN2009  
*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

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

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 2008  
*Ending\_Date:* 2009

*Source\_Currentness\_Reference:* DATE OF SURVEY

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

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* NATURESERVE  
*Publication\_Date:* 2012  
*Title:* NATURESERVE EXPLORER  
*Geospatial\_Data\_Presentation\_Form:* DOCUMENT  
*Publication\_Information:*

*Publication\_Place:* ARLINGTON, VA  
*Publisher:* NATURESERVE

*Online\_Linkage:* <<http://www.natureserve.org/explorer/index.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:* NOAA AND TEXAS GENERAL LAND OFFICE (TGLO)

*Publication\_Date:* 1996

*Title:* UPPER COAST OF TEXAS: OIL SPILL PLANNING AND RESPONSE ATLAS

*Geospatial\_Data\_Presentation\_Form:* ATLAS

*Publication\_Information:*

*Publication\_Place:* SEATTLE, WA

*Publisher:* TEXAS GENERAL LAND OFFICE

*Source\_Scale\_Denominator:* 48000

*Type\_of\_Source\_Media:* PAPER

*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:* ORTEGO, B. - TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD)

*Publication\_Date:* 2006

*Title:* DATA FROM THE 2006 INTERNATIONAL PIPING PLOVER CENSUS

*Geospatial\_Data\_Presentation\_Form:* MAP

*Other\_Citation\_Details:*

DATA TAKEN FROM: ELLIOTT-SMITH, E., S.M. HAIG, AND B.M. POWERS. 2009. DATA FROM THE 2006 INTERNATIONAL PIPING PLOVER CENSUS: UNITED STATES GEOLOGICAL SURVEY DATA SERIES 426, 332 PP.

*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:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* ORTEGO, B. - TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD)

*Publication\_Date:* 2011

*Title:*

DATA FROM THE 2011 INTERNATIONAL PIPING PLOVER CENSUS, CENTRAL TEXAS COAST

*Geospatial\_Data\_Presentation\_Form:* MAP

*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:* 2011

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* ORTEGO, B. - TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD)

*Publication\_Date:* 2013

*Title:*

DISTRIBUTION OF BIRDS, REPTILES, AND T\_MAMMALS ON THE UPPER TEXAS COAST

*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:* 2013

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* ORTEGO, B. AND M. EALY

*Publication\_Date:* 2010

*Title:* 2009 WINTER TEXAS GULF COAST AERIAL SHOREBIRD SURVEY

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* BULLETIN OF THE TEXAS ORNITHOLOGICAL SOCIETY VOL. 43 NO. 1-2

*Publisher:* TEXAS ORNITHOLOGICAL SOCIETY

*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:* REZSUTEK, M. - TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD)

*Publication\_Date:* 2012

*Title:*

DISTRIBUTION AND SEASONALITY OF BIRDS AND T\_MAMMALS ON THE UPPER TEXAS COAST

*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:* 2013

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

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

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

TEXAS GENERAL LAND OFFICE (TGLO) AND TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD)

*Publication\_Date:* 1995

*Title:* PRIORITY PROTECTION AREAS

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

*Publication\_Information:*

*Publication\_Place:* AUSTIN, TX

*Publisher:* TEXAS GENERAL LAND OFFICE

*Type\_of\_Source\_Media:* DISC

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

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1995

*Ending\_Date:* 1995

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

TEXAS GENERAL LAND OFFICE (TGLO), UNITED STATES FISH & WILDLIFE SERVICE (USFWS),  
AUDUBON, TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD)

*Publication\_Date:* 2013

*Title:*

DISTRIBUTION OF BIRDS AND OTHER RESOURCES ON THE UPPER TEXAS COAST

*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:* 2013

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS NATURAL DIVERSITY DATABASE (TXNDD)

*Publication\_Date:* 2012

*Title:* TEXAS NATURAL DIVERSITY DATABASE

*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 COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD)

*Publication\_Date:* 2012

*Title:* ATTWATER'S PRAIRIE CHICKEN  
*Geospatial\_Data\_Presentation\_Form:* DOCUMENT  
*Publication\_Information:*

*Publication\_Place:* AUSTIN, TX  
*Publisher:* TEXAS PARKS AND WILDLIFE DEPARTMENT

*Online\_Linkage:*  
<[http://www.tpwd.state.tx.us/publications/pwdpubs/media/pwd\\_bk\\_w7000\\_0013\\_attwaters\\_prairie\\_chicken.pdf](http://www.tpwd.state.tx.us/publications/pwdpubs/media/pwd_bk_w7000_0013_attwaters_prairie_chicken.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 ACCESS

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

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD)  
*Publication\_Date:* 2012  
*Title:* BALD EAGLE (HALIAEETUS LEUCOCEPHALUS)  
*Geospatial\_Data\_Presentation\_Form:* DOCUMENT  
*Publication\_Information:*

*Publication\_Place:* AUSTIN, TX  
*Publisher:* TEXAS PARKS AND WILDLIFE DEPARTMENT

*Online\_Linkage:* <<http://www.tpwd.state.tx.us/huntwild/wild/species/baldeagle/>>

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF ACCESS

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

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD) - HARTKE, K.  
*Publication\_Date:* 2012  
*Title:* GOOSE SURVEY DATA, CENTRAL TEXAS COAST  
*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:* 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:* TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD) - ORTEGO, B.

*Publication\_Date:* 2011

*Title:* TEXAS PARKS AND WILDLIFE DEPARTMENT PIPING PLOVER BAY SURVEYS

*Geospatial\_Data\_Presentation\_Form:* MAP

*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:* 2011

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD) - REZSUTTEK, M.

*Publication\_Date:* 2011

*Title:* GOOSE SURVEY DATA, UPPER TEXAS COAST

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

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* DISC

*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:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*



*Citation\_Information:*

*Originator:* TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD) - REZSUTЕК, M.  
*Publication\_Date:* 2012  
*Title:* BU SITE 1 (TOM JACKSON MARSH)  
*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA  
*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* DISC  
*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:* TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD) - REZSUTЕК, M.  
*Publication\_Date:* 2012  
*Title:* MOTTLED DUCK SITE  
*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA  
*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* DISC  
*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:* UNITED STATES FISH AND WILDLIFE SERVICE (USFWS)  
*Publication\_Date:* 2009  
*Title:*  
2009 FINAL CRITICAL HABITAT FOR THE WINTERING PIPING PLOVER (CHARADRIUS  
MELODUS)  
*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA  
*Publication\_Information:*

*Publication\_Place:* ALBUQUERQUE, NM  
*Publisher:* U.S. FISH AND WILDLIFE SERVICE

*Other\_Citation\_Details:* FEDERAL REGISTER (74 FR 23476), MAY 19, 2009  
*Online\_Linkage:*

[http://criticalhabitat.fws.gov/docs/crithab/zip/fch\\_74fr23476\\_cmlo\\_2009.zip](http://criticalhabitat.fws.gov/docs/crithab/zip/fch_74fr23476_cmlo_2009.zip)

*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:* UNITED STATES FISH AND WILDLIFE SERVICE (USFWS) - ROETKER, F.  
*Publication\_Date:* 2010  
*Title:* GULF COAST REDHEAD SURVEY: JANUARY 2010  
*Geospatial\_Data\_Presentation\_Form:* DOCUMENT  
*Publication\_Information:*

*Publication\_Place:* LAFAYETTE, LA  
*Publisher:* UNITED STATES FISH AND WILDLIFE SERVICE

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

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 2010  
*Ending\_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) - WALTHER, P.  
*Publication\_Date:* 2006  
*Title:* TEXAS COASTAL DUCK SURVEY  
*Geospatial\_Data\_Presentation\_Form:* SPREADSHEET  
*Other\_Citation\_Details:* UNPUBLISHED

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

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 2000  
*Ending\_Date:* 2006

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* UNITED STATES FISH AND WILDLIFE SERVICE (USFWS) - WALTHER, P.

*Publication\_Date:* 2013

*Title:* TEXAS NATIONAL WILDLIFE REFUGE WATERFOWL SURVEY AREAS

*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 COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* WALTHER, P. - UNITED STATES FISH AND WILDLIFE DEPARTMENT

*Publication\_Date:* 2013

*Title:*

ABUNDANCE AND DISTRIBUTION OF BIRDS AND OTHER RESOURCES ON THE UPPER TEXAS COAST

*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:* WILSON, J. - UNITED STATES FISH AND WILDLIFE SERVICE (USFWS)

*Publication\_Date:* 2012

*Title:*

DISTRIBUTION OF BIRDS AND OTHER RESOURCES ON THE UPPER TEXAS COAST

*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:* 2013

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

WOODROW, J.O. - UNITED STATES FISH AND WILDLIFE SERVICE (USFWS)

*Publication\_Date:* 2013

*Title:* DISTRIBUTION AND SEASONALITY OF UPPER TEXAS COAST 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:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 2012

*Ending\_Date:* 2013

*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) interviews conducted at workshops and via phone and email with resource experts from: Texas Parks and Wildlife Department (TPWD), U.S. Fish and Wildlife Service (USFWS), Texas Natural Diversity Database (TXNDD), Texas General Land Office (TGLO), Gulf Coast Bird Observatory (GCBO), Texas A and M University (TAMU), Texas State University (TSU), and Audubon Texas; 2) numerous published and unpublished reports and books, 3) survey data and vector digital data provided by: GCBO, TGLO, TPWD, TXNDD, TSU, and USFWS. Survey data on locations of breeding, wintering, and resident birds were provided via shapefiles and/or tabular digital data for the following species and species groups: bald eagle, wading birds, nesting birds, waterfowl, and piping and snowy plover. Polygon data was mostly displayed as it was received from the data providers. Processing methods for data sets that required additional processing are described in this Atlas' Introduction. Data sets were supplemented with information provided in hardcopy documents and by local resource experts.

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 ESI, biology, and human-use data are compiled into the standard ESI digital data format. A second set of interviews with participating resource experts are conducted to review the compiled data. 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:* 201307

*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:* 3403

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Area point  
*Point\_and\_Vector\_Object\_Count:* 3402

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Complete chain  
*Point\_and\_Vector\_Object\_Count:* 6844

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Link  
*Point\_and\_Vector\_Object\_Count:* 964536

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Node, planar graph  
*Point\_and\_Vector\_Object\_Count:* 5441

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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 Upper Texas Coast atlas, the number is 213), 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/esg\\_guidelines](http://response.restoration.noaa.gov/esg_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, 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 (213), 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 (213), 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 for each species present at a particular nesting or wintering site, or a term that describes relative abundance of birds at a particular site. The field may contain counts of individuals (XX INDIV, NESTS, OR PAIRS) or counts binned in orders of magnitude (10S, 100S, 1000S, 10,000S). In cases where no quantitative count data was available, the field may either be blank or contain descriptive terms such as "UNCOMMON", "RARE", "PRESENT", "POTENTIAL", "OCCASIONAL", "HIGH", "COMMON", or "COMMON-ABUNDANT". 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:* alligator

*Enumerated\_Domain\_Value\_Definition:* Alligator

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* amphibian

*Enumerated\_Domain\_Value\_Definition:* Amphibian

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* bivalve

*Enumerated\_Domain\_Value\_Definition:* Bivalve

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* cephalopod

*Enumerated\_Domain\_Value\_Definition:* Cephalopod

*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:* diadromous

*Enumerated\_Domain\_Value\_Definition:* Diadromous fish

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* landfowl  
*Enumerated\_Domain\_Value\_Definition:* Landfowl  
*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:* 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:* 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 BIORRES 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:* 201307

*Metadata\_Review\_Date:* 201307

*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: Upper Texas Coast: 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:* 201307

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Upper Texas Coast: ESIL (Environmental Sensitivity Index Shoreline Types - Lines)

*Edition:* Second

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

##### *Series\_Information:*

*Series\_Name:* None

*Issue\_Identification:* Upper Texas Coast

##### *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 lines representing the shoreline and coastal habitats of the Upper Texas Coast classified according to the Environmental Sensitivity Index (ESI) classification system. This data set comprises a portion of the ESI data for Upper Texas Coast. 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 Upper Texas Coast 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:* 1979

*Ending\_Date:* 2012

*Currentness\_Reference:*

The data were compiled during 2012-2013. The currentness dates for this data range from 1979 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:* -96.12500

*East\_Bounding\_Coordinate:* -93.62500

*North\_Bounding\_Coordinate:* 30.12500

*South\_Bounding\_Coordinate:* 28.50000

*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:* Upper Texas Coast

*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 Upper Texas Coast 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 Upper Texas Coast 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, and Texas General Land Office (TGLO), Austin, Texas.

*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, 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, breed\_dt.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 Upper Texas Coast 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:* ESRI BING IMAGERY

*Publication\_Date:* 2012

*Title:* BING MAPS IMAGERY BASE LAYER FOR ARCVIEW 10

*Geospatial\_Data\_Presentation\_Form:* REMOTE-SENSING IMAGE  
*Publication\_Information:*

*Publication\_Place:* REDLANDS, CA  
*Publisher:* ESRI

*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:* ESIL INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* HARTE RESEARCH INSTITUTE (HRI)- JAMES GIBEAUT  
*Publication\_Date:* 2011  
*Title:* ESI\_SHORELINETYPE\_UPPERTEXASCOAST\_2011  
*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA  
*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* CD-ROM  
*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2011

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

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

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* HARTE RESEARCH INSTITUTE (HRI)- JAMES GIBEAUT  
*Publication\_Date:* 2011  
*Title:* NWI\_UPPER\_TEXAS\_COAST\_WETLANDS  
*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* CD-ROM

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

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1979

*Ending\_Date:* 2011

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* ESIL INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* HARTE RESEARCH INSTITUTE (HRI)- JAMES GIBEAUT

*Publication\_Date:* 2011

*Title:* UPPER\_TEXAS\_COAST\_BARRIER\_WETLANDS

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

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* CD-ROM

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

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1979

*Ending\_Date:* 2011

*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:* 2012

*Title:* INDEX AND DIGITAL DATA EXTENT

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

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* DIGITAL  
*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:*

ALLIGATOR HOLE MARSH, TEX. (1979); ANAHUAC, TEX (1974); BACLIFF, TEX. (1993); BEAUMONT EAST, TEX. (1974); BIG HILL BAYOU, TEX. (1974); BROWN CEDAR CUT, TEX. (1973); CAPLEN, TEX. (1974); CEDAR LAKES EAST, TEX. (1974); CEDAR LAKES WEST, TEX. (1972); CHRISTMAS POINT OE S, TEX. (1977); CHRISTMAS POINT, TEX. (1974); CLAM LAKE, TEX. (1970); COVE, TEX. (1974); DRESSING POINT, TEX. (1973); FLAKE, TEX. (1974); FREEPORT, TEX. (1964); FROZEN POINT, TEX. (1974); GALVESTON OE S, TEX. (1977); GALVESTON, TEX. (1974); HIGH ISLAND, TEX. (1974); HIGHLANDS, TEX. (1982); HITCHCOCK, TEX. (1974); HOSKINS MOUND, TEX. (1974); JACINTO, TEX. (1982); JONES CREEK, TEX. (1963); LA PORTE, TEX. (1982); LAKE AUSTIN, TEX. (1977); LAKE COMO, TEX. (1974); LAKE STEPHENSON, TEX. (1974); LEAGUE CITY, TEX. (1982); MATAGODA SW, TEX. (1973); MATAGORDA, TEX. (1977); MORGANS POINT, TEX. (1982); MUD LAKE, TEX. (1974); OAK ISLAND, TEX. (1974); ORANGE, LA.-TEX. (1975); ORANGEFIELD, TEX.-LA. (1974); OYSTER CREEK, TEX. (1977); PALACIOS NE, TEX. (1978); PALACIOS SE, TEX. (1973); PARK PLACE, TEX. (1982); PASADENA, TEX. (1982); PORT ACRES, TEX. (1979); PORT ARTHUR NORTH, TEX. (1993); PORT ARTHUR SOUTH, TEX.-LA. (1993); PORT BOLIVAR, TEX. (1974); SABINE PASS, TEX.-LA. (1993); SARGENT, TEX. (1972); SEA ISLE, TEX. (1974); SEA ISLE, TEX. (1974); SETTEGAST, TEX. (1982); SMITH POINT, TEX. (1974); SOUTH OF STAR LAKE, TEX. (1974); STAR LAKE, TEX. (1974); TERRY, TEX. (1974); TEXAS CITY, TEX. (1974); TEXAS POINT, TEX.-LA. (1993); THE JETTIES, TEX. (1974); UMBRELLA POINT, TEX. (1974); VIRGINIA POINT, TEX. (1974); WEST OF GREENS BAYOU, TEX.-LA. (1993); WEST OF JOHNSONS BAYOU, LA.-TEX. (1959); WHITES RANCH, TEX. (1974).

*Process\_Step:*

*Process\_Description:*

This ESI shoreline was produced by the Coastal and Marine Geospatial Lab at the Harte Research Institute (HRI) for Gulf of Mexico Studies at Texas A and M University - Corpus Christi. The linear shoreline and polygonal data from HRI were integrated to create a completed shoreline product by Research Planning, Inc (RPI). Areas where dangles existed were extended out to the edges of the study area using ArcGIS basemap imagery at a scale of 1:6,000.

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 ESI, biology, and human-use data are compiled into the standard ESI digital data format. A second set of interviews with participating resource experts are conducted to review the compiled data. 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:* 201307

*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:* Complete chain

*Point\_and\_Vector\_Object\_Count:* 16357

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Link

*Point\_and\_Vector\_Object\_Count:* 1019031

*SDTS\_Terms\_Description:*

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

*Point\_and\_Vector\_Object\_Count:* 16404

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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:* ESIL.AAT

*Entity\_Type\_Definition:*

The ESIL.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:* 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:* 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:* 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:* 6A

*Enumerated\_Domain\_Value\_Definition:* 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:* 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:* 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*: ESIP.PAT

*Entity\_Type\_Definition*:

The ESIP.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:* 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:*

*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:*

*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 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:* 201307  
*Metadata\_Review\_Date:* 201307  
*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: Upper Texas Coast: ESIP (Environmental Sensitivity Index Shoreline Types - 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:* 201307

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Upper Texas Coast: ESIP (Environmental Sensitivity Index Shoreline Types - Polygons)

*Edition:* Second

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

##### *Series\_Information:*

*Series\_Name:* None

*Issue\_Identification:* Upper Texas Coast

##### *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 polygons representing the shoreline and coastal habitats of the Upper Texas Coast classified according to the Environmental Sensitivity Index (ESI) classification system. This data set comprises a portion of the ESI data for Upper Texas Coast. 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 Upper Texas Coast 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:* 1979

*Ending\_Date:* 2012

*Currentness\_Reference:*

The data were compiled during 2012-2013. The currentness dates for this data range from 1979 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:* -96.12500

*East\_Bounding\_Coordinate:* -93.62500

*North\_Bounding\_Coordinate:* 30.12500

*South\_Bounding\_Coordinate:* 28.50000

*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:* Upper Texas Coast

*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 Upper Texas Coast 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 Upper Texas Coast 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, and Texas General Land Office (TGLO), Austin, Texas.

*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, 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, breed\_dt.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 Upper Texas Coast 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:* ESRI BING IMAGERY

*Publication\_Date:* 2012

*Title:* BING MAPS IMAGERY BASE LAYER FOR ARCVIEW 10

*Geospatial\_Data\_Presentation\_Form:* REMOTE-SENSING IMAGE  
*Publication\_Information:*

*Publication\_Place:* REDLANDS, CA  
*Publisher:* ESRI

*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:* ESIP INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* HARTE RESEARCH INSTITUTE (HRI)- JAMES GIBEAUT  
*Publication\_Date:* 2011  
*Title:* ESI\_SHORELINETYPE\_UPPERTEXASCOAST\_2011  
*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA  
*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* CD-ROM  
*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2011

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

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

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* HARTE RESEARCH INSTITUTE (HRI)- JAMES GIBEAUT  
*Publication\_Date:* 2011  
*Title:* NWI\_UPPER\_TEXAS\_COAST\_WETLANDS  
*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* CD-ROM

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

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1979

*Ending\_Date:* 2011

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* ESIP INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* HARTE RESEARCH INSTITUTE (HRI)- JAMES GIBEAUT

*Publication\_Date:* 2011

*Title:* UPPER\_TEXAS\_COAST\_BARRIER\_WETLANDS

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

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* CD-ROM

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

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1979

*Ending\_Date:* 2011

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* ESIP INFORMATION

*Process\_Step:*

*Process\_Description:*

This ESI shoreline was produced by the Coastal and Marine Geospatial Lab at the Harte Research Institute (HRI) for Gulf of Mexico Studies at Texas A and M University - Corpus Christi. The linear shoreline and polygonal data from HRI were integrated to create a completed shoreline product by Research Planning, Inc (RPI). Areas where dangles existed were extended out to the edges of the study area using ArcGIS basemap imagery at a scale of 1:6,000.

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 ESI, biology, and human-use data are compiled into the standard ESI digital data format. A second set of interviews with participating resource experts are conducted to review the compiled data. 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:* 201307

*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:* 31049

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Area point

*Point\_and\_Vector\_Object\_Count:* 31048

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Complete chain

*Point\_and\_Vector\_Object\_Count:* 43180

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type*: Link  
*Point\_and\_Vector\_Object\_Count*: 2334518

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: Node, planar graph  
*Point\_and\_Vector\_Object\_Count*: 39097

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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*: ESIL.AAT

*Entity\_Type\_Definition*:

The ESIL.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:* 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:* 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: 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: 6A*  
*Enumerated\_Domain\_Value\_Definition: 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:* 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:* 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:* ESIP.PAT

*Entity\_Type\_Definition:*

The ESIP.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:* 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:*

*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:*

*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 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:* 201307

*Metadata\_Review\_Date:* 201307

*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: Upper Texas Coast: 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:* 201307

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Upper Texas Coast: FISH (Fish Polygons)

*Edition:* Second

*Geospatial Data Presentation Form:* vector digital data

##### *Series Information:*

*Series Name:* None

*Issue Identification:* Upper Texas Coast

##### *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, estuarine, and freshwater fish species for the Upper Texas Coast. 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 Upper Texas Coast. 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:* 1973

*Ending\_Date:* 2013

*Currentness\_Reference:*

The data were compiled during 2012-2013. The currentness dates for this data range from 1973 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:* -96.12500

*East\_Bounding\_Coordinate:* -93.62500

*North\_Bounding\_Coordinate:* 30.12500

*South\_Bounding\_Coordinate:* 28.50000

*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:* Upper Texas Coast

*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 Upper Texas Coast 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 Upper Texas Coast 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, and Texas General Land Office (TGLO), Austin, Texas.

*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, 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, breed\_dt.e00, seasonal.e00, soc\_dat.e00, soc\_lut.e00, sources.e00, species.e00, and status.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 on fish distribution, concentration areas, nursery areas, and spawning areas. These data do not necessarily represent all fish occurrences in Upper Texas Coast. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name [n/a if not applicable]): 76, Alligator gar, *Lepisosteus spatula*; 104, Striped bass, *Morone saxatilis*; 107, Spotted seatrout, *Cynoscion nebulosus*; 109, Red drum, *Sciaenops ocellatus*; 111, Southern flounder, *Paralichthys lethostigma*; 113, Bay anchovy, *Anchoa mitchilli*; 114, Florida pompano, *Trachinotus carolinus*; 116, Striped mullet, *Mugil cephalus*; 117, Pinfish, *Lagodon rhomboides*; 119, Silver perch, *Bairdiella chrysoura*; 121, Spot, *Leiostomus xanthurus*; 122, Black drum, *Pogonias cromis*; 123, Atlantic croaker, *Micropogonias undulatus*; 124, Southern kingfish, *Menticirrhus americanus*; 126, King mackerel, *Scomberomorus cavalla*; 127, Spanish mackerel, *Scomberomorus maculatus*; 134, Cobia, *Rachycentron canadum*; 137, Sheepshead, *Archosargus probatocephalus*; 141, Common snook, *Centropomus undecimalis*; 142, Crevalle jack, *Caranx hippos*; 143, Tarpon, *Megalops atlanticus*; 163, Gizzard shad, *Dorosoma cepedianum*; 173, White mullet, *Mugil curema*; 200, Blue catfish, *Ictalurus furcatus*; 213, Gulf menhaden, *Brevoortia patronus*; 215, Sand seatrout, *Cynoscion arenarius*; 217, Gafftopsail catfish, *Bagre marinus*; 268, Silver seatrout, *Cynoscion nothus*; 269, Gulf killifish, *Fundulus grandis*; 273, Star drum, *Stellifer lanceolatus*; 287, Hardhead catfish, *Arius felis*; 288, Atlantic tripletail, *Lobotes surinamensis*; 299, Rainwater killifish, *Lucania parva*; 300, Sailfin molly, *Poecilia latipinna*; 305, Red snapper, *Lutjanus campechanus*; 306, Gray snapper, *Lutjanus griseus*; 307, Lane snapper, *Lutjanus synagris*; 309, Spotfin mojarra, *Eucinostomus argenteus*; 310, Atlantic spadefish, *Chaetodipterus faber*; 313, Gulf butterfish, *Peprilus burti*; 315, Blacktip shark, *Carcharhinus limbatus*; 316, Spinner shark, *Carcharhinus brevipinna*; 317, Bull shark, *Carcharhinus leucas*; 318, Atlantic sharpnose shark, *Rhizoprionodon terraenovae*; 320, Atlantic bumper, *Chloroscombrus chrysurus*; 326, Bonnethead shark, *Sphyrna tiburo*; 327, Dwarf seahorse, *Hippocampus zosterae*; 334, Finetooth shark, *Carcharhinus isodon*; 335, Silversides, n/a; 356, Greater amberjack, *Seriola dumerili*; 375, Bay whiff, *Citharichthys spilopterus*; 464, Longnose gar, *Lepisosteus osseus*; 470, Smallmouth buffalo, *Ictiobus bubalus*; 472, Spotted gar, *Lepisosteus oculatus*; 495, Gray triggerfish, *Balistes capriscus*; 835, Blackfin tuna, *Thunnus atlanticus*; 1001, Blennies, n/a; 1097, Banded drum, *Larimus fasciatus*.

#### *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:* BUCKMEIER D.L., N.G. SMITH, AND D.J. DAUGHERTY

*Publication\_Date:* 2011

*Title:*

ALLIGATOR GAR MOVEMENT AND MICROHABITAT USE IN THE LOWER TRINITY RIVER, TEXAS (DRAFT REPORT)

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* MOUNTAIN HOME, TEXAS

*Publisher:*

TEXAS PARKS AND WILDLIFE DEPARTMENT (HEART OF THE HILLS FISHERIES SCIENCE CENTER)

*Type\_of\_Source\_Media:* EMAIL

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

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 2008

*Ending\_Date:* 2010

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* CARPENTER, K.E. (ED.)

*Publication\_Date:* 2002

*Title:*

THE LIVING MARINE RESOURCES OF THE WESTERN CENTRAL ATLANTIC VOLUME 3: BONY FISHES PART 2, SEA TURTLES AND MARINE MAMMALS

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* ROME, ITALY

*Publisher:* FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

*Other\_Citation\_Details:*

FAO SPECIES IDENTIFICATION GUIDE FOR FISHERY PURPOSES AND AMERICAN SOCIETY OF ICTHYOLOGISTS AND HERPETOLOGISTS SPECIAL PUBLICATION NO. 5

*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:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* GRABOWSKI, T. B. (HONORS THESIS)

*Publication\_Date:* 2002

*Title:*

TEMPORAL AND SPATIAL VARIABILITY OF BLENNY (PERCIFORMES: LABRISOMIDAE AND BLENNIIDAE) ASSEMBLAGES ON TEXAS JETTIES

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* COLLEGE STATION, TEXAS

*Publisher:* TEXAS A&M UNIVERSITY

*Type\_of\_Source\_Media:* DISC

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

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 2000

*Ending\_Date:* 2001

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* GULF OF MEXICO FISHERY MANAGEMENT COUNCIL

*Publication\_Date:* 2011

*Title:*

SEDAR 9 STOCK ASSESSMENT UPDATE REPORT: GULF OF MEXICO GREATER AMBERJACK

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* NORTH CHARLESTON, SC

*Publisher:* SEDAR (SOUTHEAST DATA, ASSESSMENT AND REVIEW)

*Online\_Linkage:*

<http://www.sefsc.noaa.gov/sedar/download/SEDAR%202010%20GAJ%20Stock%20Assessment%20Update%20Including%20Appendices%20I-III.pdf?id=DOCUMENT>

*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:* GULF STATES MARINE FISHERIES COMMISSION

*Publication\_Date:* 2011

*Title:*

THE SAND AND SILVER SEATROUT FISHERY OF THE GULF OF MEXICO, UNITED STATES: A FISHERIES PROFILE

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* OCEAN SPRINGS, MS

*Publisher:* GULF STATES MARINE FISHERIES COMMISSION

*Online\_Linkage:* <<http://www.gsmfc.org/publications/GSMFC%20Number%20197.pdf>>

*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:* HANISKO D., J. RESTER, H. BROWN AND L. SICELOFF

*Publication\_Date:* 2013

*Title:* Spanish Mackerel In Gulf of Mexico Data Atlas [Internet]

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

*Publication\_Information:*

*Publication\_Place:* STENNIS SPACE CENTER (MS)

*Publisher:* NATIONAL COASTAL DATA DEVELOPMENT CENTER

*Online\_Linkage:* <<http://gulfatlas.noaa.gov/>>

*Type\_of\_Source\_Media:* ONLINE

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2013

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

HIGHLY MIGRATORY SPECIES MANAGEMENT DIVISION, OFFICE OF SUSTAINABLE FISHERIES, NMFS

*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:* HUETER, R. E. AND J.P. TYMINSKI

*Publication\_Date:* 2007

*Title:*

SPECIES-SPECIFIC DISTRIBUTION AND HABITAT CHARACTERISTICS OF SHARK NURSERIES IN GULF OF MEXICO WATERS  
OFF PENINSULAR FLORIDA AND TEXAS

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* BETHESDA, MD

*Publisher:* AMERICAN FISHERIES SOCIETY SYMPOSIUM

*Other\_Citation\_Details:* AMERICAN FISHERIES SOCIETY SYMPOSIUM 50:193-223

*Type\_of\_Source\_Media:* PAPER

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

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1991

*Ending\_Date:* 2004

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* JOHN FROESCHKE (PH.D. DISSERTATION)

*Publication\_Date:* 2010

*Title:*

DEFINING ESSENTIAL FISH HABITAT: THE INFLUENCE OF LIFE HISTORY, BIOTIC, AND ABIOTIC FACTORS

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* CORPUS CHRISTI, TX

*Publisher:* TEXAS A&M UNIVERSITY

*Online\_Linkage:*

[http://fisheries.tamucc.edu/people\\_files/Froeschke%20Dissertation.pdf](http://fisheries.tamucc.edu/people_files/Froeschke%20Dissertation.pdf)

*Type\_of\_Source\_Media:* EMAIL

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

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1973

*Ending\_Date:* 2009

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* NOAA CENTER FOR COASTAL MONITORING AND ASSESSMENT

*Publication\_Date:* 2000

*Title:* NOAA'S ESTUARINE LIVING MARINE RESOURCES (ELMR) DATA BASE

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

*Publication\_Information:*

*Publication\_Place:* SILVER SPRING, MD

*Publisher:*

NOAA's Ocean Service, National Centers for Coastal Ocean Science (NCCOS)

*Online\_Linkage:* <<http://ccma.nos.noaa.gov/ecosystems/estuaries/elmr.aspx>>

*Type\_of\_Source\_Media:* ONLINE

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

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1985

*Ending\_Date:* 2000

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* NOAA FISHERIES OFFICE OF SUSTAINABLE FISHERIES (OSF)

*Publication\_Date:* 2009

*Title:* ATLANTIC SHARPNOSE SHARK ESSENTIAL FISH HABITAT

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

*Publication\_Information:*

*Publication\_Place:* SILVER SPRING, MD

*Publisher:* NOAA FISHERIES OFFICE OF SUSTAINABLE FISHERIES

*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:* NOAA FISHERIES OFFICE OF SUSTAINABLE FISHERIES (OSF)

*Publication\_Date:* 2009

*Title:* BLACKTIP SHARK ESSENTIAL FISH HABITAT

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

*Publication\_Information:*

*Publication\_Place:* SILVER SPRING, MD

*Publisher:* NOAA FISHERIES OFFICE OF SUSTAINABLE FISHERIES

*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:* NOAA FISHERIES OFFICE OF SUSTAINABLE FISHERIES (OSF)

*Publication\_Date:* 2009

*Title:* BONNETHEAD SHARK ESSENTIAL FISH HABITAT

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

*Publication\_Information:*

*Publication\_Place:* SILVER SPRING, MD

*Publisher:* NOAA FISHERIES OFFICE OF SUSTAINABLE FISHERIES

*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:* NOAA FISHERIES OFFICE OF SUSTAINABLE FISHERIES (OSF)

*Publication\_Date:* 2009

*Title:* BULL SHARK ESSENTIAL FISH HABITAT

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

*Publication\_Information:*

*Publication\_Place:* SILVER SPRING, MD

*Publisher:* NOAA FISHERIES OFFICE OF SUSTAINABLE FISHERIES

*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:* NOAA FISHERIES OFFICE OF SUSTAINABLE FISHERIES (OSF)

*Publication\_Date:* 2009

*Title:* SPINNER SHARK ESSENTIAL FISH HABITAT

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

*Publication\_Information:*

*Publication\_Place:* SILVER SPRING, MD  
*Publisher:* NOAA FISHERIES OFFICE OF SUSTAINABLE FISHERIES

*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:* PATTILLO, M.E., T.E. CZALPA, D.M. NELSON, AND M.E. MONACO

*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:* HARDCOPY TEXT

*Publication\_Information:*

*Publication\_Place:* SILVER SPRING, MD

*Publisher:* NOAA/NOS STRATEGIC ENVIRONMENTAL ASSESSMENT DIVISION

*Other\_Citation\_Details:* ELMR REP. NO. 11

*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:* SMITHSONIAN MARINE STATION AT FT PIERCE  
*Publication\_Date:* 2013  
*Title:* INDIAN RIVER LAGOON SPECIES INVENTORY  
*Geospatial\_Data\_Presentation\_Form:* DOCUMENT  
*Publication\_Information:*

*Publication\_Place:* FT PIERCE, FL  
*Publisher:* SMITHSONIAN INSTITUTION

*Other\_Citation\_Details:* ACCESSED JANUARY 2013  
*Online\_Linkage:* <<http://www.sms.si.edu/irlspec/>>

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2013

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

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

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS GENERAL LAND OFFICE (TGLO) - ANDY TIRPAK  
*Publication\_Date:* 2012  
*Title:* FISH AND INVERT SEASONALITIES FOR OIL SPILLS  
*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:* TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD)

*Publication\_Date:* 2010

*Title:* COASTAL FISHERIES: RED DRUM IN TEXAS

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* AUSTIN, TEXAS

*Publisher:* TEXAS PARKS AND WILDLIFE DEPARTMENT

*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:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD)

*Publication\_Date:* 2010

*Title:* COASTAL FISHERIES: RED SNAPPER IN TEXAS

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* AUSTIN, TEXAS

*Publisher:* TEXAS PARKS AND WILDLIFE DPEARTMENT

*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:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD)

*Publication\_Date:* 2013

*Title:* DISTRIBUTION AND ABUNDANCE OF MARINE RESOURCES IN COASTAL TEXAS

*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:* 2013

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD)

*Publication\_Date:* 2013

*Title:* WILDLIFE FACT SHEETS

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* AUSTIN, TX

*Publisher:* TEXAS PARKS AND WILDLIFE DEPARTMENT

*Online\_Linkage:* <<http://www.tpwd.state.tx.us/huntwild/wild/species/>>

*Type\_of\_Source\_Media:* ONLINE

*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:* TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD) - ART MORRIS

*Publication\_Date:* 2012

*Title:* TARPON DISTRIBUTION AND ABUNDANCE

*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:*

TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD) - DAVID BUCKMEIER AND BRIAN VANZEE

*Publication\_Date:* 2012

*Title:* ALLIGATOR GAR AND STRIPED BASS DISTRIBUTION AND SEASONALITY

*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:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD) - JERRY MAMBRETTI AND TERRY STELLY

*Publication\_Date:* 2013

*Title:*

DISTRIBUTION AND ABUNDANCE OF FISH AND INVERTEBRATES IN THE SABINE LAKE ECOSYSTEM

*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:* TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD) - JIM TOLAN

*Publication\_Date:* 2013

*Title:* FISH AND INVERTEBRATE DISTRIBUTION AND ABUNDANCE

*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:* TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD) - MARK FISHER

*Publication\_Date:* 1995

*Title:* BEACH SEINE SAMPLING DATA

*Geospatial\_Data\_Presentation\_Form:* TABULAR 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:* 1988

*Ending\_Date:* 1995

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD) - MARK FISHER

*Publication\_Date:* 1995

*Title:* INTRACOASTAL WATERWAY TRAWL SURVEY DATA

*Geospatial\_Data\_Presentation\_Form:* TABULAR 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:* 1992

*Ending\_Date:* 1995

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD) - MARK FISHER

*Publication\_Date:* 2012

*Title:*

FISHERY INDEPENDENT SAMPLING DATABASE - BAG SEINE, TRAWL AND GILL NET SAMPLING DATA

*Geospatial\_Data\_Presentation\_Form:* TABULAR 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:* 1975

*Ending\_Date:* 2011

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD) - MARK FISHER

*Publication\_Date:* 2012

*Title:* GULF OF MEXICO TRAWL SAMPLING DATA

*Geospatial\_Data\_Presentation\_Form:* TABULAR 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:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS STATE UNIVERSITY - SAN MARCOS

*Publication\_Date:* 2013  
*Title:* TEXAS FRESHWATER FISHES  
*Geospatial\_Data\_Presentation\_Form:* DOCUMENT  
*Publication\_Information:*

*Publication\_Place:* SAN MARCOS, TX  
*Publisher:* TEXAS STATE UNIVERSITY

*Online\_Linkage:* <<http://txstate.fishesoftexas.org/>>

*Type\_of\_Source\_Media:* ONLINE  
*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:* TOLAN, JAMES M. AND MARK FISHER  
*Publication\_Date:* 2009  
*Title:*

BIOLOGICAL RESPONSE TO CHANGES IN CLIMATE PATTERNS: POPULATION INCREASES OF GRAY SNAPPER (LUTJANUS GRISEUS) IN TEXAS BAYS AND ESTUARIES

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT  
*Publication\_Information:*

*Publication\_Place:* SEATTLE, WASHINGTON  
*Publisher:* FISHERY BULLETIN

*Other\_Citation\_Details:* FISHERY BULLETIN, 107:36-44

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

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1978  
*Ending\_Date:* 2006

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

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 Texas Parks and Wildlife Department (TPWD), 2) fishery independent sampling data provided by TPWD, 3) Estuarine Living Marine Resources (ELMR) database, 4) National Marine Fisheries Service (NMFS) essential fish habitat (EFH) shapefiles, and 5) published literature and reports. Fishery independent sampling data was provided as point samples with associated location, date, and catch per unit effort (CPUE) for each species. Samples were aggregated by water body to create a categorical abundance (based on the CPUE) and seasonality (based on occurrence rates). ELMR data was used to supplement this dataset and provide seasonality information as needed. NMFS EFH shapefiles were used to provide guidance for mapping shark species within the study area. Published literature and reports were used to add additional areas of high concentration for mapped species and to refine the distributions of certain species. See the atlas introductory pages for more detail.

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 ESI, biology, and human-use data are compiled into the standard ESI digital data format. A second set of interviews with participating resource experts are conducted to review the compiled data. 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: 201307

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: 4574

SDTS\_Terms\_Description:



*SDTS\_Point\_and\_Vector\_Object\_Type*: Area point  
*Point\_and\_Vector\_Object\_Count*: 4573

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: Complete chain  
*Point\_and\_Vector\_Object\_Count*: 8589

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: Link  
*Point\_and\_Vector\_Object\_Count*: 1155022

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: Node, planar graph  
*Point\_and\_Vector\_Object\_Count*: 7458

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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, BIORRES, 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 (BIORRES) 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 Upper Texas Coast atlas, the number is 213), 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. BIORRES 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 (213), 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 (213), 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. Categorical concentrations derived from fishery independent data, expert interviews, and the ELMR are, "RARE", "COMMON", "ABUNDANT", or "HIGHLY ABUNDANT", in order of increasing abundance. In special cases, "VERY RARE" or "HIGH" are used. Records in which the CONC field is blank can be interpreted as presence.

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



*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* amphibian

*Enumerated\_Domain\_Value\_Definition:* Amphibian

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* bivalve

*Enumerated\_Domain\_Value\_Definition:* Bivalve

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* cephalopod

*Enumerated\_Domain\_Value\_Definition:* Cephalopod

*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:* diadromous

*Enumerated\_Domain\_Value\_Definition:* Diadromous fish

*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:* freshwater

*Enumerated\_Domain\_Value\_Definition:* Freshwater 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:* invert

*Enumerated\_Domain\_Value\_Definition:* Invertebrate

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* landfowl

*Enumerated\_Domain\_Value\_Definition:* Landfowl

*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:* 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:* 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').

*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



*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:* 201307

*Metadata\_Review\_Date*: 201307

*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: Upper Texas Coast: 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:* 201307

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Upper Texas Coast:  
HABITATS (Habitat Polygons)

*Edition:* Second

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

##### *Series\_Information:*

*Series\_Name:* None

*Issue\_Identification:* Upper Texas Coast

##### *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 endangered plants for the Upper Texas Coast. Vector polygons in this data set represent occurrence data for endangered plants. 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 Upper Texas Coast. 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 2012-2013. 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:* -96.12500

*East\_Bounding\_Coordinate:* -93.62500

*North\_Bounding\_Coordinate:* 30.12500

*South\_Bounding\_Coordinate:* 28.50000

*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:* Upper Texas Coast

*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 Upper Texas Coast 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 Upper Texas Coast 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, and Texas General Land Office (TGLO), Austin, Texas.

*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, 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, breed\_dt.e00, seasonal.e00, soc\_dat.e00, soc\_lut.e00, sources.e00, species.e00, and status.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 occurrence data for endangered plants. These data do not necessarily represent all habitat occurrences in Upper Texas Coast. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name [n/a if not applicable]): 1172, Prairiedawn, Hymenoxys texana.

#### *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:* TEXAS NATURAL DIVERSITY DATABASE (TXNDD)

*Publication\_Date:* 2012

*Title:* TEXAS NATURAL DIVERSITY DATABASE

*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 COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* HABITATS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD)

*Publication\_Date:* 2012

*Title:* TEXAS PRAIRIE DAWN (HYMENOXYYS TEXANA)

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* AUSTIN, TX

*Publisher:* TEXAS PARKS AND WILDLIFE DEPARTMENT

*Online\_Linkage:* <<http://www.tpwd.state.tx.us/huntwild/wild/species/txpr dawn/>>

*Type\_of\_Source\_Media:* ONLINE

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF ACCESS

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* HABITATS INFORMATION

*Process\_Step:*

*Process\_Description:*

One source of data was used to depict habitat distribution and seasonality for this data layer: Texas Natural Diversity Database (TXNDD) occurrence data for endangered plants. 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 ESI, biology, and human-use data are compiled into the standard ESI digital data format. A second set of interviews with participating resource experts are conducted to review the compiled data. 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:* 201307

*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: 2*

*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: 1*

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type: Link*  
*Point\_and\_Vector\_Object\_Count: 56*

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type: Node, planar graph*  
*Point\_and\_Vector\_Object\_Count: 1*

---

*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, 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 Upper Texas Coast atlas, the number is 213), 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 occurrence data for endangered plants. 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 (213), 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 (213), 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 value of a habitat at a particular location. No quantitative or qualitative information on concentrations of endangered plants were available; therefore, this 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:* alligator

*Enumerated\_Domain\_Value\_Definition:* Alligator

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* amphibian

*Enumerated\_Domain\_Value\_Definition:* Amphibian

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* bivalve

*Enumerated\_Domain\_Value\_Definition:* Bivalve

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value*: cephalopod  
*Enumerated\_Domain\_Value\_Definition*: Cephalopod  
*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*: diadromous  
*Enumerated\_Domain\_Value\_Definition*: Diadromous fish  
*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*: freshwater  
*Enumerated\_Domain\_Value\_Definition*: Freshwater 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*: invert  
*Enumerated\_Domain\_Value\_Definition*: Invertebrate  
*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: landfowl  
*Enumerated\_Domain\_Value\_Definition*: Landfowl  
*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:* 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:* 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.

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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:* 201307

*Metadata\_Review\_Date:* 201307

*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: Upper Texas Coast: 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:* 201307

#### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Upper Texas Coast: HYDRO (Hydrography Lines and Polygons)

*Edition:* Second

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

#### *Series\_Information:*

*Series\_Name:* None

*Issue\_Identification:* Upper Texas Coast

#### *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) for the Upper Texas Coast. The Hydro data layer contains all annotation used in producing the atlas. The annotation features are categorized into three subclasses in order to simplify the mapping and quality control procedures: SOC for socioeconomic features, HYDRO for water features, and GEOG for geographic features. This data set comprises a portion of the ESI data for Upper Texas Coast. 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 Upper Texas Coast 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:* 1979  
*Ending\_Date:* 2012

*Currentness\_Reference:*

The data were compiled during 2012-2013. The currentness dates for this data range from 1979 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:* -96.12500  
*East\_Bounding\_Coordinate:* -93.62500  
*North\_Bounding\_Coordinate:* 30.12500  
*South\_Bounding\_Coordinate:* 28.50000

*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:* Upper Texas Coast

*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 Upper Texas Coast 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 Upper Texas Coast 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, and Texas General Land Office (TGLO), Austin, Texas.

*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, 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, breed\_dt.e00, seasonal.e00, soc\_dat.e00, soc\_lut.e00, sources.e00, species.e00, and status.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 linear and polygonal hydrography for the Upper Texas Coast. See also the ESIL and ESIP data layers, part of the larger Upper Texas Coast 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:* ESRI BING IMAGERY

*Publication\_Date:* 2012

*Title:* BING MAPS IMAGERY BASE LAYER FOR ARCVIEW 10

*Geospatial\_Data\_Presentation\_Form:* REMOTE-SENSING IMAGE  
*Publication\_Information:*

*Publication\_Place:* REDLANDS, CA  
*Publisher:* ESRI

*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:* HYDRO INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* HARTE RESEARCH INSTITUTE (HRI)- JAMES GIBEAUT  
*Publication\_Date:* 2011  
*Title:* ESI\_SHORELINETYPE\_UPPERTEXASCOAST\_2011  
*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA  
*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* CD-ROM  
*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2011

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

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

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* HARTE RESEARCH INSTITUTE (HRI)- JAMES GIBEAUT  
*Publication\_Date:* 2011  
*Title:* NWI\_UPPER\_TEXAS\_COAST\_WETLANDS  
*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA



*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* CD-ROM

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

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1979

*Ending\_Date:* 2011

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* HYDRO INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* HARTE RESEARCH INSTITUTE (HRI)- JAMES GIBEAUT

*Publication\_Date:* 2011

*Title:* UPPER\_TEXAS\_COAST\_BARRIER\_WETLANDS

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

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* CD-ROM

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

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1979

*Ending\_Date:* 2011

*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:* 2012

*Title:* INDEX AND DIGITAL DATA EXTENT

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

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* DIGITAL  
*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:*

ALLIGATOR HOLE MARSH, TEX. (1979); ANAHUAC, TEX (1974); BACLIFF, TEX. (1993); BEAUMONT EAST, TEX. (1974); BIG HILL BAYOU, TEX. (1974); BROWN CEDAR CUT, TEX. (1973); CAPLEN, TEX. (1974); CEDAR LAKES EAST, TEX. (1974); CEDAR LAKES WEST, TEX. (1972); CHRISTMAS POINT OE S, TEX. (1977); CHRISTMAS POINT, TEX. (1974); CLAM LAKE, TEX. (1970); COVE, TEX. (1974); DRESSING POINT, TEX. (1973); FLAKE, TEX. (1974); FREEPORT, TEX. (1964); FROZEN POINT, TEX. (1974); GALVESTON OE S, TEX. (1977); GALVESTON, TEX. (1974); HIGH ISLAND, TEX. (1974); HIGHLANDS, TEX. (1982); HITCHCOCK, TEX. (1974); HOSKINS MOUND, TEX. (1974); JACINTO, TEX. (1982); JONES CREEK, TEX. (1963); LA PORTE, TEX. (1982); LAKE AUSTIN, TEX. (1977); LAKE COMO, TEX. (1974); LAKE STEPHENSON, TEX. (1974); LEAGUE CITY, TEX. (1982); MATAGODA SW, TEX. (1973); MATAGORDA, TEX. (1977); MORGANS POINT, TEX. (1982); MUD LAKE, TEX. (1974); OAK ISLAND, TEX. (1974); ORANGE, LA.-TEX. (1975); ORANGEFIELD, TEX.-LA. (1974); OYSTER CREEK, TEX. (1977); PALACIOS NE, TEX. (1978); PALACIOS SE, TEX. (1973); PARK PLACE, TEX. (1982); PASADENA, TEX. (1982); PORT ACRES, TEX. (1979); PORT ARTHUR NORTH, TEX. (1993); PORT ARTHUR SOUTH, TEX.-LA. (1993); PORT BOLIVAR, TEX. (1974); SABINE PASS, TEX.-LA. (1993); SARGENT, TEX. (1972); SEA ISLE, TEX. (1974); SEA ISLE, TEX. (1974); SETTEGAST, TEX. (1982); SMITH POINT, TEX. (1974); SOUTH OF STAR LAKE, TEX. (1974); STAR LAKE, TEX. (1974); TERRY, TEX. (1974); TEXAS CITY, TEX. (1974); TEXAS POINT, TEX.-LA. (1993); THE JETTIES, TEX. (1974); UMBRELLA POINT, TEX. (1974); VIRGINIA POINT, TEX. (1974); WEST OF GREENS BAYOU, TEX.-LA. (1993); WEST OF JOHNSONS BAYOU, LA.-TEX. (1959); WHITES RANCH, TEX. (1974).

*Process\_Step:*

*Process\_Description:*

This ESI shoreline was produced by the Coastal and Marine Geospatial Lab at the Harte Research Institute (HRI) for Gulf of Mexico Studies at Texas A and M University - Corpus Christi. The linear shoreline and polygonal data from HRI were integrated to create a completed shoreline product by Research Planning, Inc (RPI). Areas where dangles existed were extended out to the edges of the study area using ArcGIS basemap imagery at a scale of 1:6,000. The study area boundary polygon was incorporated with the ESI polygonal data to create a land/water interface.

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 ESI, biology, and human-use data are compiled into the standard ESI digital data format. A second set of interviews with participating resource experts are conducted to review the compiled data. 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:* 201307

*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:* 4020

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Area point

*Point\_and\_Vector\_Object\_Count:* 4019

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Complete chain

*Point\_and\_Vector\_Object\_Count:* 9824

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Link

*Point\_and\_Vector\_Object\_Count:* 1038061

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Label Point

*Point\_and\_Vector\_Object\_Count:* 149

*SDTS\_Terms\_Description:*

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

*Point\_and\_Vector\_Object\_Count:* 9742

---

*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, 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:* H  
*Enumerated\_Domain\_Value\_Definition:* Hydrography  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* I  
*Enumerated\_Domain\_Value\_Definition:* Index  
*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 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.

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*Metadata\_Reference\_Information:*

*Metadata\_Date:* 201307

*Metadata\_Review\_Date:* 201307

*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: Upper Texas Coast: 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:* 201307

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Upper Texas Coast: INDEX (Index Polygons)

*Edition:* Second

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

##### *Series\_Information:*

*Series\_Name:* None

*Issue\_Identification:* Upper Texas Coast

##### *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 vector polygons representing the boundaries of all hardcopy cartographic products produced as part of the Environmental Sensitivity Index (ESI) for the Upper Texas Coast. This data set comprises a portion of the ESI data for Upper Texas Coast. 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:* 1959

*Ending\_Date:* 2012

*Currentness\_Reference:*

The data were compiled during 2012-2013. The currentness dates for this data range from 1959 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:* -96.12500

*East\_Bounding\_Coordinate:* -93.62500

*North\_Bounding\_Coordinate:* 30.12500

*South\_Bounding\_Coordinate:* 28.50000

*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:* Upper Texas Coast

*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 Upper Texas Coast 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 Upper Texas Coast 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, and Texas General Land Office (TGLO), Austin, Texas.

*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, 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, breed\_dt.e00, seasonal.e00, soc\_dat.e00, soc\_lut.e00, sources.e00, species.e00, and status.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 the boundaries of all hardcopy cartographic products and digital data extents produced as part of the Upper Texas Coast 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:* RESEARCH PLANNING, INC. (RPI)

*Publication\_Date:* 2012

*Title:* INDEX AND DIGITAL DATA EXTENT

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

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* DIGITAL

*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:*

ALLIGATOR HOLE MARSH, TEX. (1979); ANAHUAC, TEX (1974); BACLIFF, TEX. (1993); BEAUMONT EAST, TEX. (1974); BIG HILL BAYOU, TEX. (1974); BROWN CEDAR CUT, TEX. (1973); CAPLEN, TEX. (1974); CEDAR LAKES EAST, TEX. (1974); CEDAR LAKES WEST, TEX. (1972); CHRISTMAS POINT OE S, TEX. (1977); CHRISTMAS POINT, TEX. (1974); CLAM LAKE, TEX. (1970); COVE, TEX. (1974); DRESSING POINT, TEX. (1973); FLAKE, TEX. (1974); FREEPORT, TEX. (1964); FROZEN POINT, TEX. (1974); GALVESTON OE S, TEX. (1977); GALVESTON, TEX. (1974); HIGH ISLAND, TEX. (1974); HIGHLANDS, TEX. (1982); HITCHCOCK, TEX. (1974); HOSKINS MOUND, TEX. (1974); JACINTO, TEX. (1982); JONES CREEK, TEX. (1963); LA PORTE, TEX. (1982); LAKE AUSTIN, TEX. (1977); LAKE COMO, TEX. (1974); LAKE STEPHENSON, TEX. (1974); LEAGUE CITY, TEX. (1982); MATAGODA SW, TEX. (1973); MATAGORDA, TEX. (1977); MORGANS POINT, TEX. (1982); MUD LAKE, TEX. (1974); OAK ISLAND, TEX. (1974); ORANGE, LA.-TEX. (1975); ORANGEFIELD, TEX.-LA. (1974); OYSTER CREEK, TEX. (1977); PALACIOS NE, TEX. (1978); PALACIOS SE, TEX. (1973); PARK PLACE, TEX. (1982); PASADENA, TEX. (1982); PORT ACRES, TEX. (1979); PORT ARTHUR NORTH, TEX. (1993); PORT ARTHUR SOUTH, TEX.-LA. (1993); PORT BOLIVAR, TEX. (1974); SABINE PASS, TEX.-LA. (1993); SARGENT, TEX. (1972); SEA ISLE, TEX. (1974); SEA ISLE, TEX. (1974); SETTEGAST, TEX. (1982); SMITH POINT, TEX. (1974); SOUTH OF STAR LAKE, TEX. (1974); STAR LAKE, TEX. (1974); TERRY, TEX. (1974); TEXAS CITY, TEX. (1974); TEXAS POINT, TEX.-LA. (1993); THE JETTIES, TEX. (1974); UMBRELLA POINT, TEX. (1974); VIRGINIA POINT, TEX. (1974); WEST OF GREENS BAYOU, TEX.-LA. (1993); WEST OF JOHNSONS BAYOU, LA.-TEX. (1959); WHITES RANCH, TEX. (1974).

*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:* 201307

*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*: 64

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: Area point  
*Point\_and\_Vector\_Object\_Count*: 63

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: Complete chain  
*Point\_and\_Vector\_Object\_Count*: 165

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: Link  
*Point\_and\_Vector\_Object\_Count*: 165

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: Node, planar graph  
*Point\_and\_Vector\_Object\_Count*: 103

---

*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:* 63

*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*: 0.3450

*Range\_Domain\_Maximum*: 1.4750

*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:* 201307  
*Metadata\_Review\_Date:* 201307  
*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: Upper Texas Coast: 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:* 201307

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Upper Texas Coast: INVERT (Invertebrate Polygons)

*Edition:* Second

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

##### *Series\_Information:*

*Series\_Name:* None

*Issue\_Identification:* Upper Texas Coast

##### *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 invertebrate species for the Upper Texas Coast. 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 Upper Texas Coast. 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:* 1975

*Ending\_Date:* 2013

*Currentness\_Reference:*

The data were compiled during 2012-2013. The currentness dates for this data range from 1975 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:* -96.12500

*East\_Bounding\_Coordinate:* -93.62500

*North\_Bounding\_Coordinate:* 30.12500

*South\_Bounding\_Coordinate:* 28.50000

*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:* Upper Texas Coast

*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 Upper Texas Coast 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 Upper Texas Coast 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, and Texas General Land Office (TGLO), Austin, Texas.

*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, 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, breed\_dt.e00, seasonal.e00, soc\_dat.e00, soc\_lut.e00, sources.e00, species.e00, and status.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 Upper Texas Coast. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name [n/a if not applicable]): 43, Eastern oyster, *Crassostrea virginica*; 49, Blue crab, *Callinectes sapidus*; 50, White shrimp, *Litopenaeus setiferus*; 51, Brown shrimp, *Farfantepenaeus aztecus*; 82, Atlantic rangia, *Rangia cuneata*; 96, Atlantic ghost crab, *Ocypode quadrata*; 97, Grass shrimp, *Palaemonetes* spp.; 99, Speckled swimming crab, *Arenaeus cribrarius*; 119, Atlantic brief squid, *Lolliguncula brevis*; 120, Gulf stone crab, *Menippe adina*; 121, Lesser blue crab, *Callinectes similis*; 287, Atlantic surfclam, *Spisula solidissima*; 436, Atlantic seabob shrimp, *Xiphopenaeus kroyeri*; 628, Lettered olive, *Oliva sayana*; 629, Puerto Rican sand crab, *Emerita portoricensis*.

#### *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:*

BIOWEST, INC., PBS&J, TEXAS PARKS AND WILDLIFE DEPARTMENT,  
LOWER COLORADO RIVER AUTHORITY, SAN ANTONIO WATER  
SYSTEM

*Publication\_Date:* 2007

*Title:*

MATAGORDA BAY OYSTERS FROM NATIONAL COASTAL DATA  
DEVELOPMENT CENTER

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

*Publication\_Information:*

*Publication\_Place:* TEXAS, USA

*Publisher:*

BIOWEST, INC & LOWER COLORADO RIVER AUTHORITY AND  
SAN ANTONIO WATER SYSTEM

*Online\_Linkage:* <<http://www.ncddc.noaa.gov/website/DataAtlas/atlas.htm>>

*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:* INVERT INFORMATION

*Source\_Information:*

*Source\_Citation:*



*Citation\_Information:*

*Originator:* HARTE RESEARCH INSTITUTE (HRI)- JAMES GIBEAUT  
*Publication\_Date:* 2011  
*Title:* UPPER TEXAS COAST WETLANDS  
*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA  
*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* CD-ROM

*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:* NOAA CENTER FOR COASTAL MONITORING AND ASSESSMENT  
*Publication\_Date:* 2000  
*Title:* NOAA'S ESTUARINE LIVING MARINE RESOURCES (ELMR) DATA BASE  
*Geospatial\_Data\_Presentation\_Form:* TABULAR DIGITAL DATA  
*Publication\_Information:*

*Publication\_Place:* SILVER SPRING, MD

*Publisher:*

NOAA's Ocean Service, National Centers for Coastal Ocean Science  
(NCCOS)

*Online\_Linkage:* <<http://ccma.nos.noaa.gov/ecosystems/estuaries/elmr.aspx>>

*Type\_of\_Source\_Media:* ONLINE

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

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1985

*Ending\_Date:* 2000

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* INVERT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* ROTHCHILD, SUSAN B.

*Publication\_Date:* 2004

*Title:* BEACHCOMBERS GUIDE TO GULF COAST MARINE LIFE

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

*Publication\_Information:*

*Publication\_Place:* LANHAM, MARYLAND

*Publisher:* TAYLOR TRADE PUBLISHING

*Type\_of\_Source\_Media:* PAPER

*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:* INVERT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* SMITHSONIAN MARINE STATION AT FT PIERCE

*Publication\_Date:* 2013

*Title:* INDIAN RIVER LAGOON SPECIES INVENTORY

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* FT PIERCE, FL

*Publisher:* SMITHSONIAN INSTITUTION

*Other\_Citation\_Details:* ACCESSED JANUARY 2013

*Online\_Linkage:* <<http://www.sms.si.edu/irlspec/>>

*Type\_of\_Source\_Media:* ONLINE

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2013

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* INVERT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

TEXAS A&M UNIVERSITY-CORPUS CHRISTI, DEPARTMENT OF LIFE SCIENCES

*Publication\_Date:* 2011

*Title:* TEXAS\_OYSTERS\_2011

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

*Publication\_Information:*

*Publication\_Place:* TEXAS, USA

*Publisher:* NATIONAL COASTAL DATA DEVELOPMENT CENTER

*Online\_Linkage:* <<http://gulfatlas.noaa.gov/>>

*Type\_of\_Source\_Media:* ONLINE

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

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1996

*Ending\_Date:* 2009

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* INVERT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS GENERAL LAND OFFICE (TGLO)

*Publication\_Date:* 2004

*Title:*

OYSTERS, CORPUS CHRISTI-MATAGORDA BAY FROM NATIONAL COASTAL DATA DEVELOPMENT CENTER

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

*Publication\_Information:*

*Publication\_Place:* TEXAS

*Publisher:* TEXAS GENERAL LAND OFFICE

*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:* INVERT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS GENERAL LAND OFFICE (TGLO) - ANDY TIRPAK

*Publication\_Date:* 2012

*Title:* FISH AND INVERT SEASONALITIES FOR OIL SPILLS

*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:* INVERT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD)

*Publication\_Date:* 2008

*Title:* SABINE LAKE OYSTER REEF AND UNCONSOLIDATED OYSTER AREAS

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

*Publication\_Information:*

*Publication\_Place:* TEXAS

*Publisher:* TEXAS PARKS AND WILDLIFE DEPARTMENT

*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:* INVERT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD)

*Publication\_Date:* 2012

*Title:* OYSTER DREDGE SAMPLING DATA

*Geospatial\_Data\_Presentation\_Form:* TABULAR 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:* 1985

*Ending\_Date:* 2011

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* INVERT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD)

*Publication\_Date:* 2013

*Title:* DISTRIBUTION AND ABUNDANCE OF MARINE RESOURCES IN  
COASTAL TEXAS

*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:* 2013

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* INVERT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD)

*Publication\_Date:* 2013

*Title:* DISTRIBUTION AND ABUNDANCE OF OYSTERS IN GALVESTON BAY

*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:* 1996

*Ending\_Date:* 2013

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* INVERT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD) - JERRY  
MAMBRETTI AND TERRY STELLY

*Publication\_Date:* 2013

*Title:*

DISTRIBUTION AND ABUNDANCE OF FISH AND INVERTEBRATES IN  
THE SABINE LAKE ECOSYSTEM

*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:* INVERT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD) - MARK FISHER

*Publication\_Date:* 1995

*Title:* INTRACOASTAL WATERWAY TRAWL SURVEY DATA

*Geospatial\_Data\_Presentation\_Form:* TABULAR 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:* 1992

*Ending\_Date:* 1995

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* INVERT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD) - MARK FISHER

*Publication\_Date:* 2012

*Title:*

FISHERY INDEPENDENT SAMPLING DATABASE - BAG SEINE, TRAWL AND GILL NET SAMPLING DATA

*Geospatial\_Data\_Presentation\_Form:* TABULAR 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:* 1975  
*Ending\_Date:* 2011

*Source\_Currentness\_Reference:* DATE OF SURVEY

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

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD) - MARK FISHER  
*Publication\_Date:* 2012  
*Title:* GULF OF MEXICO TRAWL SAMPLING DATA  
*Geospatial\_Data\_Presentation\_Form:* TABULAR 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:* INVERT INFORMATION

*Process\_Step:*

*Process\_Description:*

Main sources of data used to depict invertebrate distribution and seasonality for this data layer include: 1) personal interviews with Texas Parks and Wildlife Department (TPWD), 2) fishery independent sampling data provided by TPWD, 3) NOAA's Estuarine Living Marine Resources (ELMR) database, and 4) published literature and reports. Oyster distribution was mapped using a combination of dredge sampling data provided by TPWD, consolidated and unconsolidated oyster reef polygons from the USGS, Biowest et al., TPWD, and TGLO, and expert opinion from TPWD. TPWD sampling data was provided as point samples with associated location, date, and CPUE for shrimp, crab, and squid species. Samples were aggregated by water body to create a categorical abundance (based on CPUE) and seasonality (based on months occurring in greater than 10% of the samples). ELMR data was used to



supplement this dataset and provide seasonality information as needed. Other species were mapped to appropriate habitats based on expert information and published literature. Polygonal reef and unconsolidated oyster areas were used as provided for areas outside of Galveston Bay. In the Galveston Bay area, polygons were smoothed and areas that no longer support oyster populations were removed from the layer based on anecdotal and sampling information from TPWD. Geographically distinct groups of high and low catches in the dredge sampling data and anecdotal information from TPWD were used to add other oyster areas. See the atlas introductory pages for more detailed information.

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 ESI, biology, and human-use data are compiled into the standard ESI digital data format. A second set of interviews with participating resource experts are conducted to review the compiled data. 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:* 201307

*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:* 5220

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type*: Area point  
*Point\_and\_Vector\_Object\_Count*: 5219

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: Complete chain  
*Point\_and\_Vector\_Object\_Count*: 8994

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: Link  
*Point\_and\_Vector\_Object\_Count*: 1277626

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: Node, planar graph  
*Point\_and\_Vector\_Object\_Count*: 7956

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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, 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 Upper Texas Coast atlas, the number is 213), 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 (213), 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 (213), 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 of a species. Categorical concentrations derived from TPWD sampling data, expert interviews, and the ELMR are "RARE", "COMMON", "ABUNDANT", or "HIGHLY ABUNDANT", in order of increasing abundance. Oyster concentrations include "REEF" (consolidated and permanent oyster reef), "UNCONSOLIDATED" (patchy but significant settlements of oyster communities), "HIGH" (high dredge catch without known reef structure), "LOW" (positive dredge catch without known reef structure), and "PRESENT" (unmapped areas with known oyster populations).

*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:* alligator

*Enumerated\_Domain\_Value\_Definition:* Alligator

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* amphibian

*Enumerated\_Domain\_Value\_Definition:* Amphibian

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* bivalve

*Enumerated\_Domain\_Value\_Definition:* Bivalve

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value*: cephalopod  
*Enumerated\_Domain\_Value\_Definition*: Cephalopod  
*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*: diadromous  
*Enumerated\_Domain\_Value\_Definition*: Diadromous fish  
*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*: freshwater  
*Enumerated\_Domain\_Value\_Definition*: Freshwater 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*: invert  
*Enumerated\_Domain\_Value\_Definition*: Invertebrate  
*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: landfowl  
*Enumerated\_Domain\_Value\_Definition*: Landfowl  
*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*: 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:* 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:* 201307

*Metadata\_Review\_Date:* 201307

*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: Upper Texas Coast: 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:* 201307

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Upper Texas Coast: M\_MAMMAL (Marine Mammal Polygons)

*Edition:* Second

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

##### *Series\_Information:*

*Series\_Name:* None

*Issue\_Identification:* Upper Texas Coast

##### *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 dolphins and manatees for the Upper Texas Coast. Vector polygons in this data set represent marine 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 Upper Texas Coast. 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:* 2001

*Ending\_Date:* 2013

*Currentness\_Reference:*

The data were compiled during 2012-2013. 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:* -96.12500

*East\_Bounding\_Coordinate:* -93.62500

*North\_Bounding\_Coordinate:* 30.12500

*South\_Bounding\_Coordinate:* 28.50000

*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:* Upper Texas Coast

*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 Upper Texas Coast 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 Upper Texas Coast 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, and Texas General Land Office (TGLO), Austin, Texas.

*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, 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, breed\_dt.e00, seasonal.e00, soc\_dat.e00, soc\_lut.e00, sources.e00, species.e00, and status.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 and available hardcopy documents on marine mammal distribution. These data do not necessarily represent all marine mammal occurrences in Upper Texas Coast. 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:* BERND WURSIG

*Publication\_Date:* 2012

*Title:* BOTTLENOSE DOLPHIN DISTRIBUTION IN TEXAS

*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:* M\_MAMMAL INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* HENDERSON, E.E. (M.S. THESIS)

*Publication\_Date:* 2004

*Title:*

BEHAVIOR, ASSOCIATION PATTERNS AND HABITAT USE OF A SMALL  
COMMUNITY OF BOTTLENOSE DOLPHINS IN SAN LUIS PASS, TEXAS

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* COLLEGE STATION, TX

*Publisher:* TEXAS A&M UNIVERSITY

*Type\_of\_Source\_Media:* PAPER

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

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 2002

*Ending\_Date:* 2003

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* M\_MAMMAL INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* MORENO, M.P.T. (PH.D. DISSERTATION)

*Publication\_Date:* 2005

*Title:*

ENVIRONMENTAL PREDICTORS OF BOTTLENOSE DOLPHIN  
DISTRIBUTION AND CORE FEEDING DENSITIES IN GALVESTON BAY,  
TEXAS

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* COLLEGE STATION, TX

*Publisher:* TEXAS A&M UNIVERSITY

*Type\_of\_Source\_Media:* PAPER

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

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 2001

*Ending\_Date:* 2002

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* M\_MAMMAL INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD)

*Publication\_Date:* 2013

*Title:* DISTRIBUTION AND ABUNDANCE OF MARINE RESOURCES IN  
COASTAL TEXAS

*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:* 2013

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* M\_MAMMAL INFORMATION

*Process\_Step:*

*Process\_Description:*

Two main sources of data were used to depict marine mammal distribution and seasonality for this data layer: 1) personal interviews with resource experts from Texas Parks and Wildlife Department (TPWD) and Texas A and M University (TAMU) and 2) published and unpublished reports.

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 ESI, biology, and human-use data are compiled into the standard ESI digital data format. A second set of interviews with participating resource experts are conducted to review the compiled data. 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:* 201307

*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:* 3636

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Area point

*Point\_and\_Vector\_Object\_Count:* 3635

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Complete chain

*Point\_and\_Vector\_Object\_Count:* 6156

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Link

*Point\_and\_Vector\_Object\_Count:* 1039788

*SDTS\_Terms\_Description:*

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

*Point\_and\_Vector\_Object\_Count:* 5857

---

*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 Upper Texas Coast atlas, the number is 213), 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 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 (213), 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 (213), 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 and may either be blank or contain descriptive terms such as "HIGH" or "VERY RARE".

*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:* alligator

*Enumerated\_Domain\_Value\_Definition:* Alligator

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* amphibian

*Enumerated\_Domain\_Value\_Definition:* Amphibian

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*



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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: cephalopod  
*Enumerated\_Domain\_Value\_Definition*: Cephalopod  
*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*: diadromous  
*Enumerated\_Domain\_Value\_Definition*: Diadromous fish  
*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*: freshwater  
*Enumerated\_Domain\_Value\_Definition*: Freshwater 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*: invert  
*Enumerated\_Domain\_Value\_Definition*: Invertebrate  
*Enumerated\_Domain\_Value\_Definition\_Source*: NOAA ESI Guidelines

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: landfowl  
*Enumerated\_Domain\_Value\_Definition*: Landfowl  
*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*: 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*: 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:* 201307

*Metadata\_Review\_Date:* 201307

*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: Upper Texas Coast: 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:* 201307

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Upper Texas Coast: MGT (Management Area Polygons)

*Edition:* Second

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

##### *Series\_Information:*

*Series\_Name:* None

*Issue\_Identification:* Upper Texas Coast

##### *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 human-use data for aquaculture sites, Designated Critical Habitats, management areas, Nature Conservancy properties, parks, and National Wildlife Refuges for the Upper Texas Coast. 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 Upper Texas Coast. 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 Upper Texas Coast 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:* 1993

*Ending\_Date:* 2013

*Currentness\_Reference:*

The data were compiled during 2012-2013. The currentness dates for this data range from 1993 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:* -96.12500

*East\_Bounding\_Coordinate:* -93.62500

*North\_Bounding\_Coordinate:* 30.12500

*South\_Bounding\_Coordinate:* 28.50000

*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:* Upper Texas Coast

*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 Upper Texas Coast 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 Upper Texas Coast 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, and Texas General Land Office (TGLO), Austin, Texas.

*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, 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, breed\_dt.e00, seasonal.e00, soc\_dat.e00, soc\_lut.e00, sources.e00, species.e00, and status.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 Upper Texas Coast ESI database, for additional human-use information. These data do not necessarily represent all management areas in Upper Texas Coast.

#### *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:*

TEXAS DEPARTMENT OF TRANSPORTATION/TEXAS GENERAL LAND  
OFFICE (TXDOT/TGLO)

*Publication\_Date:* 1994

*Title:* COUNTY PARKS

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

*Publication\_Information:*

*Publication\_Place:* AUSTIN, TX

*Publisher:* TEXAS GENERAL LANDS OFFICE

*Source\_Scale\_Denominator:* 24000

*Type\_of\_Source\_Media:* DISC

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 1994

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* MGT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS GENERAL LAND OFFICE (TGLO)

*Publication\_Date:* 1993

*Title:* COASTAL PRESERVES

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

*Publication\_Information:*

*Publication\_Place:* AUSTIN, TEXAS

*Publisher:* TEXAS GENERAL LAND OFFICE

*Source\_Scale\_Denominator:* 24000

*Type\_of\_Source\_Media:* DISC

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 1993

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* MGT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS GENERAL LAND OFFICE (TGLO)

*Publication\_Date:* 1997

*Title:* AUDUBON PRESERVES

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

*Publication\_Information:*

*Publication\_Place:* AUSTIN, TEXAS

*Publisher:* TEXAS GENERAL LAND OFFICE

*Type\_of\_Source\_Media:* DISC

*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:* MGT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS GENERAL LAND OFFICE (TGLO)

*Publication\_Date:* 2006

*Title:* TEXAS OYSTER LEASE LOCATIONS

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

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* DISC

*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:* TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD)

*Publication\_Date:* 2012

*Title:* STATE PARKS AND WILDLIFE MANAGEMENT AREAS

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

*Publication\_Information:*

*Publication\_Place:* AUSTIN, TX

*Publisher:* TEXAS PARKS AND WILDLIFE DEPARTMENT

*Source\_Scale\_Denominator:* 24000

*Type\_of\_Source\_Media:* DISC

*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:* MGT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD) - LANCE  
ROBINSON

*Publication\_Date:* 2012

*Title:* COLD WATER GAME FISH CLOSURES

*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:* MGT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD) GIS LAB -  
DAUGHERTY, P.

*Publication\_Date:* 2013

*Title:* TEXAS WILDLIFE MANAGEMENT AREAS

*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:* THE NATURE CONSERVANCY OF TEXAS

*Publication\_Date:* 1999

*Title:* THE NATURE CONSERVANCY PRESERVES

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

*Publication\_Information:*

*Publication\_Place:* TEXAS

*Publisher:* The Nature Conservancy of Texas

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* DISC

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

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1997

*Ending\_Date:* 1999

*Source\_Currentness\_Reference:* DATE OF SURVEY

*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 (50 CFR PART 17)

*Publisher:* Department of Interior

*Other\_Citation\_Details:* FEDERAL REGISTER VOL. 65, NO. 130, PG. 41782, JULY 6, 2000

*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:* 2009

*Title:*

2009 FINAL CRITICAL HABITAT FOR THE WINTERING PIPING PLOVER  
(CHARADRIUS MELODUS)

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

*Publication\_Place:* ALBUQUERQUE, NM  
*Publisher:* U.S. FISH AND WILDLIFE SERVICE

*Other\_Citation\_Details:* FEDERAL REGISTER (74 FR 23476), MAY 19, 2009

*Online\_Linkage:*

[http://criticalhabitat.fws.gov/docs/crithab/zip/fch\\_74fr23476\\_cmlo\\_2009.zip](http://criticalhabitat.fws.gov/docs/crithab/zip/fch_74fr23476_cmlo_2009.zip)

*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:*

UNITED STATES FISH AND WILDLIFE SERVICE (USFWS) CADASTRAL  
DATABASE

*Publication\_Date:* 2012

*Title:* NATIONAL WILDLIFE REFUGE BOUNDARIES

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

*Publication\_Information:*

*Publication\_Place:* ARLINGTON, VA

*Publisher:* US FISH AND WILDLIFE SERVICE

*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:* MGT INFORMATION

*Process\_Step:*



*Process\_Description:*

Numerous digital coverages were used to depict management areas for this data layer: the boundaries of oyster leases, coastal preserves, and Audubon preserves provided by the Texas General Land Office (TGLO); the locations of preserves owned by the Nature Conservancy; critical habitat areas for Piping Plover and National Wildlife Refuges from the United States Fish and Wildlife Service (USFWS); and the boundaries of thermal game refuges, wildlife management areas, and state parks from the Texas Parks and Wildlife Department (TPWD). Expert knowledge from TPWD staff supplemented the digital data.

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 ESI, biology, and human-use data are compiled into the standard ESI digital data format. A second set of interviews with participating resource experts are conducted to review the compiled data. 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:* 201307

*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:* 229

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type*: Area point  
*Point\_and\_Vector\_Object\_Count*: 228

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: Complete chain  
*Point\_and\_Vector\_Object\_Count*: 406

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: Link  
*Point\_and\_Vector\_Object\_Count*: 25223

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: Node, planar graph  
*Point\_and\_Vector\_Object\_Count*: 301

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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, 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 Upper Texas Coast, the number is 213). ID is a unique combination of the atlas number (213), 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, nature conservancy properties, 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:* NC

*Enumerated\_Domain\_Value\_Definition:* Nature Conservancy

*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 (213), 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 (213), 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:* 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:* 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:* HELIPORT

*Enumerated\_Domain\_Value\_Definition:* Heliport

*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:* LOCK AND DAM

*Enumerated\_Domain\_Value\_Definition:* Lock and Dam

*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:* 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:* 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.

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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:* 201307

*Metadata\_Review\_Date:* 201307

*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: Upper Texas Coast: 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:* 201307

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Upper Texas Coast: NESTS (Nest Points)

*Edition:* Second

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

##### *Series\_Information:*

*Series\_Name:* None

*Issue\_Identification:* Upper Texas Coast

##### *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 shorebirds, diving birds, raptors, waterfowl, wading birds, terns, and gulls for the Upper Texas Coast. Vector points in this data set represent bird nests and roosts. 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 Upper Texas Coast. 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 Upper Texas Coast 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:* 1996

*Ending\_Date:* 2013

*Currentness\_Reference:*

The data were compiled during 2012-2013. 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:* -96.12500

*East\_Bounding\_Coordinate:* -93.62500

*North\_Bounding\_Coordinate:* 30.12500

*South\_Bounding\_Coordinate:* 28.50000

*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:* Upper Texas Coast

*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 Upper Texas Coast 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 Upper Texas Coast 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, and Texas General Land Office (TGLO), Austin, Texas.

*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, 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, breed\_dt.e00, seasonal.e00, soc\_dat.e00, soc\_lut.e00, sources.e00, species.e00, and status.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, maps, and digital data on bird nests and roosts. See also the BIRDS data layer, part of the larger Upper Texas Coast ESI database, for additional bird information. These data do not necessarily represent all nest occurrences in Upper Texas Coast. 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*; 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*; 97, Green heron, *Butorides virescens*; 98, Laughing gull, *Larus atricilla*; 115, White ibis, *Eudocimus albus*; 116, Roseate spoonbill, *Ajaia ajaja*; 118, Brown pelican, *Pelecanus occidentalis*; 120, Yellow-crowned night-heron, *Nyctanassa violacea*; 121, Anhinga, *Anhinga anhinga*; 133, Black skimmer, *Rynchops niger*; 134, Gull-billed tern, *Gelochelidon nilotica*; 135, Sandwich tern, *Thalasseus sandvicensis*; 136, Caspian tern, *Hydroprogne caspia*; 137, Royal tern, *Thalasseus maximus*; 138, Forster's tern, *Sterna forsteri*; 149, White-faced ibis, *Plegadis chihi*; 152, American oystercatcher, *Haematopus palliatus*; 163, Reddish egret, *Egretta rufescens*; 173, American white pelican, *Pelecanus erythrorhynchos*; 266, Black-bellied whistling-duck, *Dendrocygna autumnalis*; 267, Fulvous whistling-duck, *Dendrocygna bicolor*; 325, Neotropic cormorant, *Phalacrocorax brasilianus*; 352, White-tailed hawk, *Buteo albicaudatus*; 864, Reddish egret (white morph),



*Egretta rufescens.*

*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:* EUBANKS, T.L., R. A. BEHRSTOCK, AND R.J. WEEKS

*Publication\_Date:* 2006

*Title:* BIRDLIFE OF HOUSTON, GALVESTON, AND THE UPPER TEXAS COAST

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

*Publication\_Information:*

*Publication\_Place:* COLLEGE STATION, TEXAS

*Publisher:* TEXAS A&M UNIVERSITY PRESS

*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:* NESTS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* FARQUHAR, C.

*Publication\_Date:* 2009  
*Title:* WHITE-TAILED HAWK (BUTEO ALBICAUDATUS)  
*Geospatial\_Data\_Presentation\_Form:* DOCUMENT  
*Publication\_Information:*

*Publication\_Place:* ITHACA, NY  
*Publisher:* CORNELL LAB OF ORNITHOLOGY

*Other\_Citation\_Details:* IN: THE BIRDS OF NORTH AMERICA ONLINE (A. POOLE, ED.)  
*Online\_Linkage:* <<http://bna.birds.cornell.edu/bna/species/030>>

*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:* NESTS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* GREEN, C. - TEXAS STATE UNIVERSITY  
*Publication\_Date:* 2013  
*Title:* ABUNDANCE AND DISTRIBUTION OF BIRDS ON THE UPPER TEXAS COAST  
*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:* NATURESERVE  
*Publication\_Date:* 2012  
*Title:* NATURESERVE EXPLORER  
*Geospatial\_Data\_Presentation\_Form:* DOCUMENT  
*Publication\_Information:*

*Publication\_Place:* ARLINGTON, VA  
*Publisher:* NATURESERVE

*Online\_Linkage:* <<http://www.natureserve.org/explorer/index.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:* NESTS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* NOAA AND TEXAS GENERAL LAND OFFICE (TGLO)  
*Publication\_Date:* 1996  
*Title:* UPPER COAST OF TEXAS: OIL SPILL PLANNING AND RESPONSE  
ATLAS  
*Geospatial\_Data\_Presentation\_Form:* ATLAS  
*Publication\_Information:*

*Publication\_Place:* AUSTIN, TX  
*Publisher:* TEXAS GENERAL LAND OFFICE

*Source\_Scale\_Denominator:* 48000  
*Type\_of\_Source\_Media:* PAPER  
*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:* NESTS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* ORTEGO, B. - TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD)

*Publication\_Date:* 2013

*Title:*

DISTRIBUTION OF BIRDS, REPTILES, AND T\_MAMMALS ON THE UPPER TEXAS COAST

*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:* 2013

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* NESTS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

TEXAS COLONIAL WATERBIRD SOCIETY AND UNITED STATES FISH AND WILDLIFE SERVICE (USFWS)

*Publication\_Date:* 2012

*Title:* TEXAS COLONIAL WATERBIRD SURVEY

*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:* 2002

*Ending\_Date:* 2011

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* NESTS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD)

*Publication\_Date:* 2012

*Title:* AMERICAN OYSTERCATCHER (HAEMATOPUS PALLIATUS)

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* AUSTIN, TX

*Publisher:* TEXAS PARKS AND WILDLIFE DEPARTMENT

*Online\_Linkage:*

<http://www.tpwd.state.tx.us/huntwild/wild/species/oystercatcher/>

*Type\_of\_Source\_Media:* ONLINE

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF ACCESS

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* NESTS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD)

*Publication\_Date:* 2012

*Title:* BALD EAGLE (HALIAEETUS LEUCOCEPHALUS)

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* AUSTIN, TX

*Publisher:* TEXAS PARKS AND WILDLIFE DEPARTMENT

*Online\_Linkage:* <http://www.tpwd.state.tx.us/huntwild/wild/species/baldeagle/>

*Type\_of\_Source\_Media:* ONLINE

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2012

*Source\_Currentness\_Reference:* DATE OF ACCESS

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* NESTS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD) - ORTEGO,  
B.

*Publication\_Date:* 2012

*Title:* LOCATIONS OF UPPER TEXAS BALD EAGLE NESTS

*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:* 2012

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* NESTS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS STATE UNIVERSITY - GREEN, C.

*Publication\_Date:* 2012

*Title:* AMERICAN OYSTERCATCHER NEST LOCATIONS, 2011 AND 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:* 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:* WALTHER, P. - UNITED STATES FISH AND WILDLIFE  
DEPARTMENT

*Publication\_Date:* 2013

*Title:*

ABUNDANCE AND DISTRIBUTION OF BIRDS AND OTHER RESOURCES  
ON THE UPPER TEXAS COAST

*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:* WILSON, J. - UNITED STATES FISH AND WILDLIFE SERVICE  
(USFWS)

*Publication\_Date:* 2012

*Title:*

DISTRIBUTION OF BIRDS AND OTHER RESOURCES ON THE UPPER  
TEXAS COAST

*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:* 2013

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* NESTS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

WOODROW, J.O. - UNITED STATES FISH AND WILDLIFE SERVICE  
(USFWS)

*Publication\_Date:* 2013

*Title:* DISTRIBUTION AND SEASONALITY OF UPPER TEXAS COAST  
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:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 2012

*Ending\_Date:* 2013

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* NESTS INFORMATION

*Process\_Step:*

*Process\_Description:*

Two main sources of data were used to depict nest distribution and seasonality for this data layer: 1) personal interviews with resource experts from Texas Parks and Wildlife Department (TPWD) and U.S. Fish and Wildlife Service (USFWS); and 2) digital maps and survey data of nesting locations provided by TPWD, USFWS, and Texas State University. Survey data on locations of breeding and resident birds were provided via shapefiles and/or tabular digital data for the following species and species group: bald eagle, breeding colonies, and American oystercatcher. Point data was mostly displayed as it was received from the data providers. Processing methods for data sets that required additional processing are described in this Atlas' Introduction. Data sets were supplemented with information provided in hardcopy



documents and by local resource experts.

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 ESI, biology, and human-use data are compiled into the standard ESI digital data format. A second set of interviews with participating resource experts are conducted to review the compiled data. 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:* 201307

*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:* 200

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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, 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 Upper Texas Coast atlas, the number is 213), 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 nests and roosts. 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 (213), 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 (213), 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 for each species present at a particular nest or roost site, or a term that describes relative abundance of birds at a particular site. The field may contain counts of individuals (XX INDIV, PAIRS, or NESTS). In cases where no quantitative count data was available, the field may be blank. 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:* alligator

*Enumerated\_Domain\_Value\_Definition:* Alligator

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* amphibian

*Enumerated\_Domain\_Value\_Definition:* Amphibian

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* bivalve

*Enumerated\_Domain\_Value\_Definition:* Bivalve

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* cephalopod

*Enumerated\_Domain\_Value\_Definition:* Cephalopod

*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:* diadromous

*Enumerated\_Domain\_Value\_Definition:* Diadromous fish

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* landfowl

*Enumerated\_Domain\_Value\_Definition:* Landfowl

*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:* 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:* 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.

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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:* 201307  
*Metadata\_Review\_Date:* 201307  
*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 Jul 11 23:00:42 2013



# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Upper Texas Coast: 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](#)

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### *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:* 201307

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Upper Texas Coast: REPTILES (Reptile Polygons)

*Edition:* Second

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

##### *Series\_Information:*

*Series\_Name:* None

*Issue\_Identification:* Upper Texas Coast

##### *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 sea turtles, estuarine reptiles, and terrestrial endangered species occurrences for the Upper Texas Coast. Vector polygons in this data set represent turtle, snake, and amphibian 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 Upper Texas Coast. 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:* 1995

*Ending\_Date:* 2013

*Currentness\_Reference:*

The data were compiled during 2012-2013. The currentness dates for this data range from 1995 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:* -96.12500

*East\_Bounding\_Coordinate:* -93.62500

*North\_Bounding\_Coordinate:* 30.12500

*South\_Bounding\_Coordinate:* 28.50000

*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:* Upper Texas Coast

*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 Upper Texas Coast 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 Upper Texas Coast 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, and Texas General Land Office (TGLO), Austin, Texas.

*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, 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, breed\_dt.e00, seasonal.e00, soc\_dat.e00, soc\_lut.e00, sources.e00, species.e00, and status.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, and digital maps and data on turtle, snake, and amphibian distribution and nesting areas. These data do not necessarily represent all reptile occurrences in Upper Texas Coast. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name [n/a if not applicable]): 2, Green sea turtle, *Chelonia mydas*; 4, Kemp's ridley sea turtle, *Lepidochelys kempii*; 6, Loggerhead sea turtle, *Caretta caretta*; 7, Diamondback terrapin, *Malaclemys terrapin*; 9, Hawksbill sea turtle, *Eretmochelys imbricata*; 12, Gulf salt marsh snake, *Nerodia clarkii clarkii*; 210, Houston toad, *Anaxyrus houstonensis*.

*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:* LANDRY, A. - TEXAS A&M UNIVERSITY  
*Publication\_Date:* 2012

*Title:* SEA TURTLE DISTRIBUTION AND SEASONALITY ON THE UPPER TEXAS COAST  
*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:* 2013

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

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

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* NATIONAL PARK SERVICE (NPS) - SHAVER, D.

*Publication\_Date:* 2012

*Title:* SEA TURTLE NESTS TEXAS COAST 2011-2012

*Geospatial\_Data\_Presentation\_Form:* MAP

*Other\_Citation\_Details:* UNPUBLISHED

*Online\_Linkage:*

<http://maps.google.com/maps/ms?ie=UTF8&oe=UTF8&msa=0&msid=117539767615412895228.00046c2c885e141ffef6e>

*Type\_of\_Source\_Media:* ONLINE  
*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:* REPTILES INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* NATURESERVE

*Publication\_Date:* 2012  
*Title:* NATURESERVE EXPLORER  
*Geospatial\_Data\_Presentation\_Form:* DOCUMENT  
*Publication\_Information:*

*Publication\_Place:* ARLINGTON, VA  
*Publisher:* NATURESERVE

*Online\_Linkage:* <<http://www.natureserve.org/explorer/index.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:* REPTILES INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* ORTEGO, B. - TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD)  
*Publication\_Date:* 2013  
*Title:*  
DISTRIBUTION OF BIRDS, REPTILES, AND T\_MAMMALS ON THE UPPER  
TEXAS COAST  
*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:* 2013

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

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

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* SENEY, E.E., A.M. LANDRY JR.  
*Publication\_Date:* 2011  
*Title:* MOVEMENT PATTERNS OF IMMATURE AND ADULT FEMALE KEMP'S  
RIDLEY  
*Geospatial\_Data\_Presentation\_Form:* HARDCOPY TEXT  
*Publication\_Information:*

*Publication\_Place:* OLDENDORF/LUHE, GERMANY  
*Publisher:* MARINE ECOLOGY PROGRESS SERIES

*Other\_Citation\_Details:* VOL. 440:241-254, 2011

*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:* REPTILES INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* SHAVER, D. - NATIONAL PARK SERVICE

*Publication\_Date:* 2013

*Title:*

DISTRIBUTION AND ABUNDANCE OF SEA TURTLES ON THE UPPER TEXAS  
COAST

*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:*

TEXAS GENERAL LAND OFFICE (TGLO) AND TEXAS PARKS AND WILDLIFE  
DEPARTMENT (TPWD)

*Publication\_Date:* 1995

*Title:* PRIORITY PROTECTION AREAS

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

*Publication\_Information:*

*Publication\_Place:* AUSTIN, TX

*Publisher:* TEXAS GENERAL LAND OFFICE

*Type\_of\_Source\_Media:* DISC

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

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1995

*Ending\_Date:* 1995

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* REPTILES INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

TEXAS GENERAL LAND OFFICE (TGLO), UNITED STATES FISH & WILDLIFE  
SERVICE (USFWS), AUDUBON, TEXAS PARKS AND WILDLIFE  
DEPARTMENT (TPWD)

*Publication\_Date:* 2013

*Title:*

DISTRIBUTION OF BIRDS AND OTHER RESOURCES ON THE UPPER TEXAS  
COAST

*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:* 2013

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE



*Source\_Contribution:* REPTILES INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS NATURAL DIVERSITY DATABASE (TXNDD)

*Publication\_Date:* 2012

*Title:* TEXAS NATURAL DIVERSITY DATABASE

*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 COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* REPTILES INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD)

*Publication\_Date:* 2013

*Title:* DISTRIBUTION AND ABUNDANCE OF MARINE RESOURCES IN COASTAL TEXAS

*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:* 2013

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* REPTILES INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD)

*Publication\_Date:* 2013

*Title:* GULF SALT MARSH SNAKE (NERODIA CLARKII)

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Online\_Linkage:* <<http://www.tpwd.state.tx.us/huntwild/wild/species/gulfsnake/>>

*Type\_of\_Source\_Media:* ONLINE

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2013

*Source\_Currentness\_Reference:* DATE OF ACCESS

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* REPTILES INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* WILSON, J. - UNITED STATES FISH AND WILDLIFE SERVICE (USFWS)

*Publication\_Date:* 2012

*Title:*

DISTRIBUTION OF BIRDS AND OTHER RESOURCES ON THE UPPER TEXAS  
COAST

*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:* 2013

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* REPTILES INFORMATION

*Process\_Step:*

*Process\_Description:*

Two main sources of data were used to depict reptile distribution and seasonality for this data layer:  
1) workshops and interviews via phone and email with resource experts from Texas Parks and  
Wildlife Department (TPWD) and Texas A and M University and 2) digital maps and data provided

by Texas Natural Diversity Database (TXNDD) and National Park Service (NPS). 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 ESI, biology, and human-use data are compiled into the standard ESI digital data format. A second set of interviews with participating resource experts are conducted to review the compiled data. 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:* 201307

*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:* 1345

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Area point

*Point\_and\_Vector\_Object\_Count:* 1344

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Complete chain

*Point\_and\_Vector\_Object\_Count:* 2935

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Link

*Point\_and\_Vector\_Object\_Count: 549229*

*SDTS\_Terms\_Description:*

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

*Point\_and\_Vector\_Object\_Count: 2559*

---

*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, 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 Upper Texas Coast atlas, the number is 213), 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 turtle, snake, and amphibian 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 (213), 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 (213), 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 and may contain counts of individuals for each sea turtle species present at a particular nesting site, or a term that describes relative abundance of turtles or terrapins in-water. The field may contain ranges of counts of nests (X-XX NESTS). In cases where no quantitative count data was available, the field may either be blank or contain descriptive terms such as "OCCASIONAL", "HIGH", or "COMMON". Counts were derived from a variety of sources and may range in date (see lineage). No count or concentration information was available for the other non-turtle/terrapin reptile/amphibian species mapped.

*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:* alligator

*Enumerated\_Domain\_Value\_Definition:* Alligator

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* amphibian

*Enumerated\_Domain\_Value\_Definition:* Amphibian

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* bivalve

*Enumerated\_Domain\_Value\_Definition:* Bivalve

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* cephalopod

*Enumerated\_Domain\_Value\_Definition:* Cephalopod

*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:* diadromous

*Enumerated\_Domain\_Value\_Definition:* Diadromous fish

*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:* freshwater

*Enumerated\_Domain\_Value\_Definition:* Freshwater 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:* invert

*Enumerated\_Domain\_Value\_Definition:* Invertebrate

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* landfowl

*Enumerated\_Domain\_Value\_Definition:* Landfowl

*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:* 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:* 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:* 201307

*Metadata\_Review\_Date:* 201307

*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: Upper Texas Coast: 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:* 201307

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Upper Texas Coast: SOCECON (Socioeconomic Resource Points and Lines)

*Edition:* Second

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

##### *Series\_Information:*

*Series\_Name:* None

*Issue\_Identification:* Upper Texas Coast

##### *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 access points, aquaculture sites, airports, artificial reefs, boat ramps, coast guard stations, heliports, historical sites, lock and dam sites, marinas, and water intakes for the Upper Texas Coast. 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 Upper Texas Coast. 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 Upper Texas Coast 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:* 1993  
*Ending\_Date:* 2013

*Currentness\_Reference:*

The data were compiled during 2012-2013. The currentness dates for this data range from 1993 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:* -96.12500  
*East\_Bounding\_Coordinate:* -93.62500  
*North\_Bounding\_Coordinate:* 30.12500  
*South\_Bounding\_Coordinate:* 28.50000

*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:* Upper Texas Coast

*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 Upper Texas Coast 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 Upper Texas Coast 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, and Texas General Land Office (TGLO), Austin, Texas.

*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, 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, breed\_dt.e00, seasonal.e00, soc\_dat.e00, soc\_lut.e00, sources.e00, species.e00, and status.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 and available hardcopy reports and digital data on socioeconomic resources. See also the MGT data layer, part of the larger Upper Texas Coast ESI database, for additional human-use information. These data do not necessarily represent all human-use sites in Upper Texas Coast.

#### *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:*

FEDERAL AVIATION ADMINISTRATION (AERONAUTICAL  
INFORMATION SERVICES, ATA-100)

*Publication\_Date:* 2011

*Title:* NATIONAL TRANSPORTATION ATLAS DATABASES - AIRPORTS

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

*Publication\_Information:*

*Publication\_Place:* Washington, DC

*Publisher:*

Research and Innovative Technology Administration's Bureau of  
Transportation Statistics (RITA/BTS)

*Online\_Linkage:* <[http://www.bts.gov/programs/geographic\\_information\\_services/](http://www.bts.gov/programs/geographic_information_services/)>

*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:* GOOGLE, INC.

*Publication\_Date:* 2013

*Title:* GOOGLE MAPS

*Geospatial\_Data\_Presentation\_Form:* MAP

*Publication\_Information:*

*Publication\_Place:* MOUNTAIN VIEW, CA

*Publisher:* GOOGLE, INC

*Online\_Linkage:* maps.google.com

*Type\_of\_Source\_Media:* ONLINE  
*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:* SOCECON INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* HOOK-N-LINE, INC.

*Publication\_Date:* 2009

*Title:*

F102 Boat Fishing Electronic GPS SD Card for the Galveston Bay Area

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

*Publication\_Information:*

*Publication\_Place:* HOUSTON, TX

*Publisher:* HOOK-N-LINE, INC

*Online\_Linkage:* <<http://www.hooknline.com/>>

*Type\_of\_Source\_Media:* DISC

*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:* TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ)

*Publication\_Date:* 2012

*Title:* PUBLIC WATER SUPPLY SURFACE INTAKES

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

*Publication\_Information:*

*Publication\_Place:* AUSTIN, TEXAS

*Publisher:* TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*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:* SOCECON INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS GENERAL LAND OFFICE (TGLO)

*Publication\_Date:* 1993

*Title:* ARTIFICIAL REEFS

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

*Publication\_Information:*

*Publication\_Place:* AUSTIN, TX

*Publisher:* TEXAS GENERAL LAND OFFICE

*Type\_of\_Source\_Media:* DISC

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 1993

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* SOCECON INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS GENERAL LAND OFFICE (TGLO)

*Publication\_Date:* 1994

*Title:* U.S. COAST GUARD (USCG) STATIONS IN TEXAS COASTAL COUNTIES  
*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA  
*Publication\_Information:*

*Publication\_Place:* AUSTIN  
*Publisher:* TEXAS GENERAL LAND OFFICE

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 1994

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

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

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS GENERAL LAND OFFICE (TGLO)  
*Publication\_Date:* 2008  
*Title:* BEACH ACCESS POINTS  
*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA  
*Publication\_Information:*

*Publication\_Place:* AUSTIN, TX  
*Publisher:* TEXAS GENERAL LAND OFFICE

*Source\_Scale\_Denominator:* 24000  
*Type\_of\_Source\_Media:* DISC  
*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:* SOCECON INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*



*Originator:* TEXAS GENERAL LAND OFFICE (TGLO)  
*Publication\_Date:* 2008  
*Title:* MARINAS  
*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA  
*Publication\_Information:*

*Publication\_Place:* AUSTIN, TX  
*Publisher:* TEXAS GENERAL LAND OFFICE

*Source\_Scale\_Denominator:* 24000  
*Type\_of\_Source\_Media:* DISC  
*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1997  
*Ending\_Date:* 2008

*Source\_Currentness\_Reference:* DATE OF SURVEY

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

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS GENERAL LAND OFFICE (TGLO)  
*Publication\_Date:* 2011  
*Title:* BOAT RAMPS  
*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA  
*Publication\_Information:*

*Publication\_Place:* AUSTIN, TX  
*Publisher:* TEXAS GENERAL LAND OFFICE

*Source\_Scale\_Denominator:* 24000  
*Type\_of\_Source\_Media:* DISC  
*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1996  
*Ending\_Date:* 2011

*Source\_Currentness\_Reference:* DATE OF SURVEY

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

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

TEXAS GENERAL LAND OFFICE/TEXAS DEPARTMENT OF  
AGRICULTURE (TGLO)/(TDA)

*Publication\_Date:* 2005

*Title:* AQUACULTURE SITES

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

*Publication\_Information:*

*Publication\_Place:* AUSTIN, TX

*Publisher:* TEXAS GENERAL LAND OFFICE

*Source\_Scale\_Denominator:* 24000

*Type\_of\_Source\_Media:* DISC

*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:* TEXAS HISTORICAL COMMISSION (THC)

*Publication\_Date:* 2008

*Title:* STATE HISTORIC SITES

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

*Publication\_Information:*

*Publication\_Place:* Austin, TX

*Publisher:* TEXAS HISTORICAL COMMISSION

*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:* SOCECON INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS HISTORICAL COMMISSION (THC)

*Publication\_Date:* 2009

*Title:* NATIONAL REGISTER PROPERTIES

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

*Publication\_Information:*

*Publication\_Place:* TEXAS HISTORICAL COMMISSION

*Publisher:* AUSTIN, TX

*Online\_Linkage:* [<ftp://ftp.thc.state.tx.us/GIS/National\\_Register/Properties/>](ftp://ftp.thc.state.tx.us/GIS/National_Register/Properties/)

*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:* SOCECON INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD)

*Publication\_Date:* 2013

*Title:* BOAT-ACCESS SITE LIST FOR HIGH-USE AREA 2013 - GALVESTON BAY

*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:* 2013

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* SOCECON INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD)

*Publication\_Date:* 2013

*Title:* BOAT-ACCESS SITE LIST FOR HIGH-USE AREA 2013 - MATAGORDA BAY

*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:* 2013

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* SOCECON INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* UNITED STATES ARMY CORPS OF ENGINEERS (USACE)

*Publication\_Date:* 2012

*Title:* TEXAS LOCKS AND DAMS

*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:* SOCECON INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* UNITED STATES GEOLOGICAL SURVEY (USGS)  
*Publication\_Date:* 2012  
*Title:* NATIONAL HYDROGRAPHY DATASET  
*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA  
*Publication\_Information:*

*Publication\_Place:* Reston, Virginia  
*Publisher:* U.S. Geological Survey

*Online\_Linkage:* <<http://nhd.usgs.gov/data.html>>

*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:* SOCECON INFORMATION

*Process\_Step:*

*Process\_Description:*

Three main sources of data were used to depict human-use resources for this data layer: 1) personal interviews with resource experts from the United States Army Corps of Engineers (USACE) and the Texas Parks and Wildlife Department (TPWD); 2) numerous published and unpublished reports from TPWD; and 3) digital data sets provided by Texas General Land Office (TGLO), Texas Department of Agriculture (TDA), Federal Aviation Administration (FAA), TPWD, United States Geological Survey (USGS), Texas Historical Commission (THC), Hook-N-Line, Inc., Google, Inc., and the Texas Commission on Environmental Quality (TCEQ).

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 ESI, biology, and human-use data are compiled into the standard ESI digital data format. A second set of interviews with participating resource experts are conducted to review the compiled data. 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:* 201307

*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:* 447

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Complete chain

*Point\_and\_Vector\_Object\_Count:* 1

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Link

*Point\_and\_Vector\_Object\_Count:* 280

*SDTS\_Terms\_Description:*

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

*Point\_and\_Vector\_Object\_Count:* 14

---

*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 Upper Texas Coast, the number is 213). ID is a unique combination of the atlas number (213), 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 state borders.

*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:* SB

*Enumerated\_Domain\_Value\_Definition:* State Border

*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 access points, aquaculture sites, airports, artificial reefs, boat ramps, coast guard stations, heliports, historical sites, lock and dam sites, marinas, 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:* 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:* HP

*Enumerated\_Domain\_Value\_Definition:* Heliport

*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:* LD

*Enumerated\_Domain\_Value\_Definition:* Lock and Dam

*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:* 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 (213), 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 (213), 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:* 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:* 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:* HELIPORT

*Enumerated\_Domain\_Value\_Definition:* Heliport

*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:* LOCK AND DAM

*Enumerated\_Domain\_Value\_Definition:* Lock and Dam

*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:* 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:* 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:* 201307

*Metadata\_Review\_Date:* 201307

*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: Upper Texas Coast: 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:* 201307

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Upper Texas Coast: T\_MAMMAL (Terrestrial Mammal Polygons)

*Edition:* Second

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

##### *Series\_Information:*

*Series\_Name:* None

*Issue\_Identification:* Upper Texas Coast

##### *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 terrestrial mammals for the Upper Texas Coast. Vector polygons in this data set represent 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 Upper Texas Coast. 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:* 1995

*Ending\_Date:* 2013

*Currentness\_Reference:*

The data were compiled during 2012-2013. The currentness dates for this data range from 1995 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:* -96.12500

*East\_Bounding\_Coordinate:* -93.62500

*North\_Bounding\_Coordinate:* 30.12500

*South\_Bounding\_Coordinate:* 28.50000

*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:* Upper Texas Coast

*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 Upper Texas Coast 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 Upper Texas Coast 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, and Texas General Land Office (TGLO), Austin, Texas.

*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, 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, breed\_dt.e00, seasonal.e00, soc\_dat.e00, soc\_lut.e00, sources.e00, species.e00, and status.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 and vector digital data on terrestrial mammal distribution. These data do not necessarily represent all terrestrial mammal occurrences in Upper Texas Coast. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name [n/a if not applicable]): 8, Northern river otter, *Lontra canadensis*; 37, Muskrat, *Ondatra zibethicus*; 278, Swamp rabbit, *Sylvilagus aquaticus*.

#### *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:* ANDERSON, D. - UNITED STATES FISH AND WILDLIFE SERVICE (USFWS)

*Publication\_Date:* 2013

*Title:*

DISTRIBUTION AND ABUNDANCE OF BIRDS AND OTHER RESOURCES OF THE UPPER TEXAS COAST

*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:* T\_MAMMAL INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* NATURESERVE

*Publication\_Date:* 2012

*Title:* NATURESERVE EXPLORER

*Geospatial\_Data\_Presentation\_Form:* DOCUMENT

*Publication\_Information:*

*Publication\_Place:* ARLINGTON, VA

*Publisher:* NATURESERVE

*Online\_Linkage:* <<http://www.natureserve.org/explorer/index.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:* T\_MAMMAL INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* REZSUTEK, M. - TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD)

*Publication\_Date:* 2012

*Title:*

DISTRIBUTION AND SEASONALITY OF BIRDS AND T\_MAMMALS ON THE UPPER TEXAS COAST

*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:* 2013

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* T\_MAMMAL INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

TEXAS GENERAL LAND OFFICE (TGLO) AND TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD)

*Publication\_Date:* 1995

*Title:* PRIORITY PROTECTION AREAS

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

*Publication\_Information:*

*Publication\_Place:* AUSTIN, TX



*Publisher:* TEXAS GENERAL LAND OFFICE

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

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1995  
*Ending\_Date:* 1995

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* T\_MAMMAL INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TEXAS PARKS AND WILDLIFE DEPARTMENT (TPWD) -  
REZSUTEK, M.  
*Publication\_Date:* 2012  
*Title:* BU SITE 1 (TOM JACKSON MARSH)  
*Geospatial\_Data\_Presentation\_Form:* VECTOR DIGITAL DATA  
*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* DISC  
*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:* T\_MAMMAL INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TIRPAK, A.  
*Publication\_Date:* 2013  
*Title:* DISTRIBUTION AND SEASONALITY OF UPPER TEXAS COAST  
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:* T\_MAMMAL INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* WALTHER, P. - UNITED STATES FISH AND WILDLIFE  
DEPARTMENT

*Publication\_Date:* 2013

*Title:*

ABUNDANCE AND DISTRIBUTION OF BIRDS AND OTHER RESOURCES  
ON THE UPPER TEXAS COAST

*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:* T\_MAMMAL INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* WILSON, J. - UNITED STATES FISH AND WILDLIFE SERVICE  
(USFWS)

*Publication\_Date:* 2012

*Title:*

DISTRIBUTION OF BIRDS AND OTHER RESOURCES ON THE UPPER  
TEXAS COAST

*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:* 2013

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* T\_MAMMAL INFORMATION

*Process\_Step:*

*Process\_Description:*

Two main sources of data were used to depict terrestrial mammal distribution and seasonality for this data layer: 1) workshops and interviews with resource experts from Texas Parks and Wildlife Department (TPWD) and U.S. Fish and Wildlife Service (USFWS) and 2) digital spatial data provided by TPWD and Texas General Land Office (TGLO). 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 ESI, biology, and human-use data are compiled into the standard ESI digital data format. A second set of interviews with participating resource experts are conducted to review the compiled data. 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:* 201307

*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:* 669

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Area point

*Point\_and\_Vector\_Object\_Count:* 668

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Complete chain

*Point\_and\_Vector\_Object\_Count:* 1139

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Link

*Point\_and\_Vector\_Object\_Count:* 225088

*SDTS\_Terms\_Description:*

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

*Point\_and\_Vector\_Object\_Count:* 1133

---

*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, 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 Upper Texas Coast atlas, the number is 213), 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 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 (213), 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 (213), 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:* alligator  
*Enumerated\_Domain\_Value\_Definition:* Alligator  
*Enumerated\_Domain\_Value\_Definition\_Source:* NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* cephalopod  
*Enumerated\_Domain\_Value\_Definition:* Cephalopod  
*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:* diadromous  
*Enumerated\_Domain\_Value\_Definition:* Diadromous fish  
*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:* freshwater

*Enumerated\_Domain\_Value\_Definition:* Freshwater 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:* invert

*Enumerated\_Domain\_Value\_Definition:* Invertebrate

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* landfowl

*Enumerated\_Domain\_Value\_Definition:* Landfowl

*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:* 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:* 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:* 201307

*Metadata\_Review\_Date:* 201307

*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