

# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Mississippi: HYDRO (Hydrography Lines and Polygons)

## Metadata:

- [Identification 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)

##### *Originator:*

Department of Homeland Security (DHS)

##### *Originator:*

United States Coast Guard (USCG)

##### *Originator:*

Office of Incident Management and Preparedness (CG-533), Washington, D.C.

##### *Publication\_Date:*

200912

##### *Title:*

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

##### *Edition:*

Second

##### *Geospatial\_Data\_Presentation\_Form:*

vector digital data

##### *Series\_Information:*

##### *Series\_Name:*

None

##### *Issue\_Identification:*

Mississippi

##### *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 and the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness (CG-533), Washington, D.C.

*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 Mississippi. 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: GEOG for geographic features, SOC for socioeconomic features, and HYDRO for water features. This data set comprises a portion of the ESI data for Mississippi. 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:*

1986

*Ending\_Date:*

2008

*Currentness\_Reference:*

The data were compiled during 2008 - 2009. The currentness dates for this data range from 1986 to 2008 and are documented in the Lineage section.

*Status:**Progress:*

Complete

*Maintenance\_and\_Update\_Frequency:*

None Scheduled

*Spatial\_Domain:**Bounding\_Coordinates:**West\_Bounding\_Coordinate:*

-89.75000

*East\_Bounding\_Coordinate:*

-88.37500

*North\_Bounding\_Coordinate:*

30.50000

*South\_Bounding\_Coordinate:*

30.12500

*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

*Theme:*

*Theme\_Keyword\_Thesaurus:*

NOS Data Explorer Topic Category

*Theme\_Keyword:*

Environmental Monitoring

*Place:*

*Place\_Keyword\_Thesaurus:*

None

*Place\_Keyword:*

Mississippi

*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 Mississippi 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 Mississippi 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 the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness (CG-533), Washington, D.C.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 9.3) and SQL SERVER(R) (version 2000). The hardware configuration is PC's with Windows Operating System (2000/XP/2003). 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: birds.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, t\_mammal.e00, and wetlands.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.

*Program\_Affiliation:*

*Program\_Name:*

National Ocean Service Data Explorer

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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 Mississippi.

*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:*

MISSISSIPPI DEPARTMENT OF INFORMATION  
TECHNOLOGY SERVICES

*Publication\_Date:*

2007

*Title:*

NATURAL COLOR PHOTOGRAPHY

*Geospatial\_Data\_Presentation\_Form:*

PHOTOGRAPHY

*Other\_Citation\_Details:*

UNPUBLISHED

*Type\_of\_Source\_Media:*

disc

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

*Time\_Period\_Information:*  
    *Single\_Date/Time:*  
        *Calendar\_Date:*  
            2007  
    *Source\_Currentness\_Reference:*  
        DATE OF SURVEY  
*Source\_Citation\_Abbreviation:*  
    NONE  
*Source\_Contribution:*  
    HYDRO INFORMATION  
*Source\_Information:*  
    *Source\_Citation:*  
        *Citation\_Information:*  
            *Originator:*  
                MISSISSIPPI OFFICE OF GEOLOGY: COASTAL  
                GEOLOGY SECTION: MISSISSIPPI DEPARTMENT OF  
                ENVIRONMENTAL QUALITY  
            *Publication\_Date:*  
                2002  
            *Title:*  
                UPDATED SHORELINE  
            *Geospatial\_Data\_Presentation\_Form:*  
                vector digital data  
            *Online\_Linkage:*  
                <http://geology.deq.state.ms.us/coastal/Shorelines-updated.htm>  
    *Type\_of\_Source\_Media:*  
        online  
    *Source\_Time\_Period\_of\_Content:*  
        *Time\_Period\_Information:*  
            *Range\_of\_Dates/Times:*  
                *Beginning\_Date:*  
                    1986  
                *Ending\_Date:*  
                    2002  
        *Source\_Currentness\_Reference:*  
            DATE OF PUBLICATION  
    *Source\_Citation\_Abbreviation:*  
        NONE  
    *Source\_Contribution:*  
        HYDRO INFORMATION  
*Source\_Information:*  
    *Source\_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)

*Publication\_Date:*

1995

*Title:*

SENSITIVITY OF COASTAL ENVIRONMENTS AND  
WILDLIFE TO SPILLED OIL: MISSISSIPPI: ESI: HYDRO

*Geospatial\_Data\_Presentation\_Form:*

vector digital data

*Publication\_Information:*

*Publication\_Place:*

SEATTLE, WA

*Publisher:*

NOAA

*Other\_Citation\_Details:*

7600 SAND POINT WAY, SEATTLE, WA 98115-6349

*Online\_Linkage:*

<http://response.restoration.noaa.gov/esi>

*Source\_Scale\_Denominator:*

24000

*Type\_of\_Source\_Media:*

CD-ROM

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:*

1995

*Source\_Currentness\_Reference:*

DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

HYDRO INFORMATION

*Source\_Information:*

*Source\_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)

*Publication\_Date:*

1995

*Title:*

SENSITIVITY OF COASTAL ENVIRONMENTS AND  
WILDLIFE TO SPILLED OIL: MISSISSIPPI: ESIP

*Geospatial\_Data\_Presentation\_Form:*

vector digital data

*Publication\_Information:*

*Publication\_Place:*

SEATTLE, WA  
*Publisher:*  
 NOAA  
*Other\_Citation\_Details:*  
 7600 SAND POINT WAY, SEATTLE, WA 98115-6349  
*Online\_Linkage:*  
<http://response.restoration.noaa.gov/esi>  
*Source\_Scale\_Denominator:*  
 24000  
*Type\_of\_Source\_Media:*  
 CD-ROM  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
 1995  
*Source\_Currentness\_Reference:*  
 DATE OF PUBLICATION  
*Source\_Citation\_Abbreviation:*  
 NONE  
*Source\_Contribution:*  
 HYDRO INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 RESEARCH PLANNING, INC.  
*Publication\_Date:*  
 2008  
*Title:*  
 ESI INDEX  
*Geospatial\_Data\_Presentation\_Form:*  
 vector digital data  
*Other\_Citation\_Details:*  
 UNPUBLISHED  
*Source\_Scale\_Denominator:*  
 24000  
*Type\_of\_Source\_Media:*  
 DIGITAL  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
 2008  
*Source\_Currentness\_Reference:*  
 DATE OF PUBLICATION  
*Source\_Citation\_Abbreviation:*  
 NONE  
*Source\_Contribution:*



## HYDRO INFORMATION

*Source\_Information:**Source\_Citation:**Citation\_Information:**Originator:*

RESEARCH PLANNING, INC.

*Publication\_Date:*

200801

*Title:*

OVERFLIGHT OBLIQUES

*Geospatial\_Data\_Presentation\_Form:*

PHOTOGRAPHS

*Other\_Citation\_Details:*

UNPUBLISHED

*Type\_of\_Source\_Media:*

DIGITAL PHOTO

*Source\_Time\_Period\_of\_Content:**Time\_Period\_Information:**Single\_Date/Time:**Calendar\_Date:*

200801

*Source\_Currentness\_Reference:*

DATE OF SURVEY

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

HYDRO INFORMATION

*Process\_Step:**Process\_Description:*

The shoreline was derived primarily from digital data originating from the 1995 Mississippi Environmental Sensitivity Index (ESI) atlas HYDRO and ESIP data sets. In addition to the 1995 HYDRO data set, updated 2002 shoreline data from the Mississippi Office of Geology was used in areas of significant shoreline change, particularly along the barrier islands. Shoreline changes were digitized using heads-up digitization of 2007 Mississippi Department of Information Technology Services vertical aerial photography and 2008 RPI oblique aerial photography and integrated with the previously mentioned data sets. The above digital and/or hardcopy sources were compiled to create the HYDRO data layer. Depending on the type of source data, four general approaches are used for compiling the data layer: 1) hardcopy maps are digitized at their source scale; 2) digital data layers are evaluated and used "as is" or integrated with the other data sources; 3) overflight classifications are digitized from the scanned and registered hardcopy field maps; and/or 4) classifications are interpreted from oblique gps referenced photography or video taken during the overflights. After the initial shoreline classification, these data are edgematched and checked for logical consistency errors. Review maps are plotted at 1:24,000 scale for verification of polygonal and linear attributes. See the Lineage section for additional information on the type of source

data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the HYDRO data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:*

200912

*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:*

2927

*SDTS\_Terms\_Description:*

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

Area point

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

2927

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:*  
 Complete chain  
*Point\_and\_Vector\_Object\_Count:*  
 15778  
*SDTS\_Terms\_Description:*  
*SDTS\_Point\_and\_Vector\_Object\_Type:*  
 Link  
*Point\_and\_Vector\_Object\_Count:*  
 250113  
*SDTS\_Terms\_Description:*  
*SDTS\_Point\_and\_Vector\_Object\_Type:*  
 Label point  
*Point\_and\_Vector\_Object\_Count:*  
 265  
*SDTS\_Terms\_Description:*  
*SDTS\_Point\_and\_Vector\_Object\_Type:*  
 Node,planar graph  
*Point\_and\_Vector\_Object\_Count:*  
 15489

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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:*  
 298.257221

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*Entity\_and\_Attribute\_Information:*  
*Detailed\_Description:*  
*Entity\_Type:*  
*Entity\_Type\_Label:*  
 HYDRO.AAT  
*Entity\_Type\_Definition:*  
 The HYDRO.AAT table contains attribute information for the vector lines representing linear hydrography features in the HYDRO data layer.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

LINE

*Attribute\_Definition:*

Type of geographic feature.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

B

*Enumerated\_Domain\_Value\_Definition:*

Breakwater

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

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 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 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

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:*

HYDRO.PAT

*Entity\_Type\_Definition:*

The HYDRO.PAT table contains attribute information for the vector polygons representing polygonal hydrography features in the HYDRO data layer.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

WATER\_CODE

*Attribute\_Definition:*

Specifies a polygon as either water or land.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

L

*Enumerated\_Domain\_Value\_Definition:*

Land

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

W

*Enumerated\_Domain\_Value\_Definition:*

Water

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:*

ANNO.GEOG

*Entity\_Type\_Definition:*

The spatial data layer HYDRO contains label points representing annotation for geographic features.

*Entity\_Type\_Definition\_Source:*

## NOAA ESI Guidelines

*Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:*

ANNO.HYDRO

*Entity\_Type\_Definition:*

The spatial data layer HYDRO contains label points representing annotation for water features.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:*

ANNO.SOC

*Entity\_Type\_Definition:*

The spatial data layer HYDRO contains label points representing annotation for socioeconomic features.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:*

SOURCES

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

SOURCE\_ID

*Attribute\_Definition:*

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

*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)).

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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 the widest community of GIS/mapping users. Distribution formats include Geodatabase; ARC export, MOSS, and Shape files; and MARPLOT map folders. An ArcMap .mxd file, an ArcView 3.x ESI project, and an ESI\_Viewer product for use with the MARPLOT data are also included on the distribution CDs/DVDs 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:*

20100512

*Metadata\_Review\_Date:*

20100512

*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

*Metadata\_Extensions:*

*Online\_Linkage:*

[http://www.ncddc.noaa.gov/metadataresource/metadata-references/files/ncddcmdprofile\\_v2.pdf](http://www.ncddc.noaa.gov/metadataresource/metadata-references/files/ncddcmdprofile_v2.pdf)

*Profile\_Name:*

Content Specification for Metadata in the National Coastal Data Development Center's Data Catalog Version 2.0

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# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Mississippi: ESI (Environmental Sensitivity Index Shoreline Types - Lines and Polygons)

## 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)

##### *Originator:*

Department of Homeland Security (DHS)

##### *Originator:*

United States Coast Guard (USCG)

##### *Originator:*

Office of Incident Management and Preparedness (CG-533), Washington, D.C.

##### *Publication\_Date:*

200912

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Mississippi: ESI (Environmental Sensitivity Index Shoreline Types - Lines and Polygons)

##### *Edition:*

Second

##### *Geospatial\_Data\_Presentation\_Form:*

vector digital data

##### *Series\_Information:*

##### *Series\_Name:*

None

##### *Issue\_Identification:*

Mississippi

##### *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 and the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness (CG-533), Washington, D.C.

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

This data set contains vector lines and polygons representing the shoreline and coastal habitats for Mississippi classified according to the Environmental Sensitivity Index (ESI) classification system. This data set comprises a portion of the ESI data for Mississippi. 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 WETLANDS data layer, part of the larger Mississippi 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:*

1986

*Ending\_Date:*

2009

*Currentness\_Reference:*

The data were compiled during 2008 - 2009. The currentness dates for this data range from 1986 to 2009 and are documented in the Lineage section.

*Status:**Progress:*

Complete

*Maintenance\_and\_Update\_Frequency:*

None Scheduled

*Spatial\_Domain:**Bounding\_Coordinates:**West\_Bounding\_Coordinate:*

-89.75000

*East\_Bounding\_Coordinate:*

-88.37500

*North\_Bounding\_Coordinate:*

30.50000

*South\_Bounding\_Coordinate:*

30.12500

*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:*

*Theme\_Keyword\_Thesaurus:*

NOS Data Explorer Topic Category

*Theme\_Keyword:*

Environmental Monitoring

*Place:*

*Place\_Keyword\_Thesaurus:*

None

*Place\_Keyword:*

Mississippi

*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 Mississippi 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 Mississippi 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 the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness (CG-533), Washington, D.C.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 9.3) and SQL SERVER(R) (version 2000). The hardware configuration is PC's with Windows Operating System (2000/XP/2003). 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: birds.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, t\_mammal.e00, and wetlands.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.

*Program\_Affiliation:*

*Program\_Name:*

National Ocean Service Data Explorer

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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 coastal shorelines and habitats classified according to the Environmental Sensitivity Index (ESI) classification system. See also the WETLANDS data layer, part of the larger Mississippi 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:*

G.HOPKINS, NATIONAL PARK SERVICE

*Publication\_Date:*

2009

*Title:*

DISTRIBUTION AND ABUNDANCE OF BIOLOGICAL  
AND HUMAN USE RESOURCES ON GULF ISLANDS

*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:*  
2009

*Source\_Currentness\_Reference:*  
DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:*  
NONE

*Source\_Contribution:*  
ESI INFORMATION

*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
MISSISSIPPI DEPARTMENT OF INFORMATION  
TECHNOLOGY SERVICES

*Publication\_Date:*  
2007

*Title:*  
NATURAL COLOR PHOTOGRAPHY

*Geospatial\_Data\_Presentation\_Form:*  
PHOTOGRAPHY

*Other\_Citation\_Details:*  
UNPUBLISHED

*Type\_of\_Source\_Media:*  
disc

*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
2007

*Source\_Currentness\_Reference:*  
DATE OF SURVEY

*Source\_Citation\_Abbreviation:*  
NONE

*Source\_Contribution:*  
ESI INFORMATION

*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
MISSISSIPPI OFFICE OF GEOLOGY: COASTAL  
GEOLOGY SECTION: MISSISSIPPI DEPARTMENT OF  
ENVIRONMENTAL QUALITY

*Publication\_Date:*  
2002

*Title:*  
UPDATED SHORELINE

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

*Online\_Linkage:*  
<http://geology.deq.state.ms.us/coastal/Shorelines-updated.htm>

*Type\_of\_Source\_Media:*  
online

*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Range\_of\_Dates/Times:*  
*Beginning\_Date:*  
1986  
*Ending\_Date:*  
2002

*Source\_Currentness\_Reference:*  
DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:*  
NONE

*Source\_Contribution:*  
ESI INFORMATION

*Source\_Information:*  
*Source\_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)

*Publication\_Date:*  
1995

*Title:*  
SENSITIVITY OF COASTAL ENVIRONMENTS AND  
WILDLIFE TO SPILLED OIL: MISSISSIPPI: ESI: HYDRO

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

*Publication\_Information:*  
*Publication\_Place:*  
SEATTLE, WA

*Publisher:*  
NOAA

*Other\_Citation\_Details:*  
7600 SAND POINT WAY, SEATTLE, WA 98115-6349

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

*Source\_Scale\_Denominator:*

24000  
*Type\_of\_Source\_Media:*  
 CD-ROM  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
 1995  
*Source\_Currentness\_Reference:*  
 DATE OF PUBLICATION  
*Source\_Citation\_Abbreviation:*  
 NONE  
*Source\_Contribution:*  
 ESI INFORMATION  
*Source\_Information:*  
*Source\_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)  
*Publication\_Date:*  
 1995  
*Title:*  
 SENSITIVITY OF COASTAL ENVIRONMENTS AND  
 WILDLIFE TO SPILLED OIL: MISSISSIPPI: ESIP  
*Geospatial\_Data\_Presentation\_Form:*  
 vector digital data  
*Publication\_Information:*  
*Publication\_Place:*  
 SEATTLE, WA  
*Publisher:*  
 NOAA  
*Other\_Citation\_Details:*  
 7600 SAND POINT WAY, SEATTLE, WA 98115-6349  
*Online\_Linkage:*  
<http://response.restoration.noaa.gov/esi>  
*Source\_Scale\_Denominator:*  
 24000  
*Type\_of\_Source\_Media:*  
 CD-ROM  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
 1995  
*Source\_Currentness\_Reference:*

## DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

ESI INFORMATION

*Source\_Information:**Source\_Citation:**Citation\_Information:**Originator:*

RESEARCH PLANNING, INC.

*Publication\_Date:*

200801

*Title:*

OVERFLIGHT OBLIQUES

*Geospatial\_Data\_Presentation\_Form:*

PHOTOGRAPHS

*Other\_Citation\_Details:*

UNPUBLISHED

*Type\_of\_Source\_Media:*

DIGITAL PHOTO

*Source\_Time\_Period\_of\_Content:**Time\_Period\_Information:**Single\_Date/Time:**Calendar\_Date:*

200801

*Source\_Currentness\_Reference:*

DATE OF SURVEY

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

ESI INFORMATION

*Process\_Step:**Process\_Description:*

Original ESI maps, published in 1995, were re-examined and fully updated. The intertidal shoreline habitats of Mississippi were mapped via interpretation of a continuous, overlapping set of georeferenced oblique aerial photographs which were acquired in January 2008 during overflights. The overflights were conducted using fixed-wing aircraft operated by the USCG Auxillary, flying at altitudes of 400-600 feet and slow air speeds. All flights were planned to maximize time on site during the 2.5 hours preceding and the 2.5 hours following peak low tide. Where appropriate, revisions to the existing shoreline were made – most notably, along the barrier islands. Where necessary, multiple habitats were described for each shoreline segment. The above digital and/or hardcopy sources were compiled to create the ESI data layer. Depending on the type of source data, three general approaches are used for compiling the data layer: 1) hardcopy maps are digitized at their source scale; 2) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources; and 3) overflight changes are digitized from the scanned and registered

hardcopy field maps or aerial photography. After the initial shoreline classification, these data are edgematched and checked for logical consistency errors. Review maps are plotted at 1:24,000 scale for verification of polygonal and linear attributes. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the ESI data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:*

200912

*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:*

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*Postal\_Code:*

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*Contact\_Voice\_Telephone:*

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*Contact\_Facsimile\_Telephone:*

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*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:*

544

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:*  
 Area point  
*Point\_and\_Vector\_Object\_Count:*  
 544  
*SDTS\_Terms\_Description:*  
*SDTS\_Point\_and\_Vector\_Object\_Type:*  
 Complete chain  
*Point\_and\_Vector\_Object\_Count:*  
 8365  
*SDTS\_Terms\_Description:*  
*SDTS\_Point\_and\_Vector\_Object\_Type:*  
 Link  
*Point\_and\_Vector\_Object\_Count:*  
 205570  
*SDTS\_Terms\_Description:*  
*SDTS\_Point\_and\_Vector\_Object\_Type:*  
 Node,planar graph  
*Point\_and\_Vector\_Object\_Count:*  
 8399

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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:*  
*Detailed\_Description:*  
*Entity\_Type:*  
*Entity\_Type\_Label:*  
 ESI.AAT  
*Entity\_Type\_Definition:*  
 The ESI.AAT table contains attribute information for the vector lines representing linear shoreline features with ESI classification.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

ESI

*Attribute\_Definition:*

The item ESI contains values representing the ESI shoreline type. In many cases shorelines are ranked with multiple codes, such as "6B/3A" (listed landward to seaward from left to right). The first code, "6B", is the most landward shoreline type and the second code, "3A", is the shoreline type closest to the water. Singular shoreline types are listed below. No multiple codes are listed, but all multiple codes included in the data set can be assembled from the codes described. The ESI rankings progress from low to high susceptibility to oil spills. To determine the sensitivity of a particular intertidal shoreline habitat, the following factors are integrated: 1) Shoreline type (substrate, grain size, tidal elevation, origin); 2) Exposure to wave and tidal energy; 3) Biological productivity and sensitivity; 4) Ease of cleanup. Prediction of the behavior and persistence of oil in intertidal habitats is based on an understanding of the dynamics of the coastal environments, not just the substrate type and grain size. The intensity of energy expended upon a shoreline by wave action, tidal currents, and river currents directly affects the persistence of stranded oil. The need for shoreline cleanup activities is determined, in part, by the slowness of natural processes in removal of oil stranded on the shoreline. The potential for biological injury, and ease of cleanup of spilled oil are also important factors in the ESI ranking. Generally speaking, areas exposed to high levels of physical energy, such as wave action and tidal currents, and low biological activity rank low on the scale, whereas sheltered areas with associated high biological activity have the highest ranking.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

1B

*Enumerated\_Domain\_Value\_Definition:*

Exposed, Solid Man-made Structures

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

2A

*Enumerated\_Domain\_Value\_Definition:*

Exposed Wave-cut Platforms in Mud or Clay

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*  
 2B  
*Enumerated\_Domain\_Value\_Definition:*  
 Exposed Scarps and Steep Slopes in Clay  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 3A  
*Enumerated\_Domain\_Value\_Definition:*  
 Fine- to Medium-grained Sand Beaches  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 3B  
*Enumerated\_Domain\_Value\_Definition:*  
 Scarps and Steep Slopes in Sand  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 5  
*Enumerated\_Domain\_Value\_Definition:*  
 Mixed Sand and Gravel Beaches  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 6B  
*Enumerated\_Domain\_Value\_Definition:*  
 Riprap  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 7  
*Enumerated\_Domain\_Value\_Definition:*  
 Exposed Tidal Flats  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*



8A

*Enumerated\_Domain\_Value\_Definition:*

Sheltered Scarps in 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:*

Sheltered, 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:*  
 B  
*Enumerated\_Domain\_Value\_Definition:*  
 Breakwater  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 F  
*Enumerated\_Domain\_Value\_Definition:*  
 Flat

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

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

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 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 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 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:*  
 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

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:*

ESI.PAT

*Entity\_Type\_Definition:*

The ESI.PAT table contains attribute information for the vector polygons representing polygonal features with ESI classification.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

ESI

*Attribute\_Definition:*

The item ESI contains values representing the ESI polygon type.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

7

*Enumerated\_Domain\_Value\_Definition:*

Exposed Tidal Flats

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

9A

*Enumerated\_Domain\_Value\_Definition:*

Sheltered Tidal Flats

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

10A

*Enumerated\_Domain\_Value\_Definition:*

Salt- and Brackish-water Marshes

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:**Enumerated\_Domain\_Value:*

10B

*Enumerated\_Domain\_Value\_Definition:*

Freshwater Marshes

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

10C

*Enumerated\_Domain\_Value\_Definition:*

Swamps

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

10D

*Enumerated\_Domain\_Value\_Definition:*

Scrub-shrub Wetlands

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

U

*Enumerated\_Domain\_Value\_Definition:*

Unranked

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

WATER\_CODE

*Attribute\_Definition:*

Specifies a polygon as either water or land.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

L

*Enumerated\_Domain\_Value\_Definition:*

Land

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

W

*Enumerated\_Domain\_Value\_Definition:*

Water

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

ENVIR

*Attribute\_Definition:*

Type of regional environment.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

E

*Enumerated\_Domain\_Value\_Definition:*

Estuarine

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

U

*Enumerated\_Domain\_Value\_Definition:*

Unclassified

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*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 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.

*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)).

[Back To Index](#)*Distribution\_Information:**Distributor:**Contact\_Information:**Contact\_Person\_Primary:**Contact\_Person:*

John Kaperick

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NOAA, Office of Response and Restoration

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*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 the widest community of GIS/mapping users. Distribution formats include Geodatabase; ARC export, MOSS, and Shape files; and MARPLOT map folders. An ArcMap .mxd file, an ArcView 3.x ESI project, and an ESI\_Viewer product for use with the MARPLOT data are also included on the distribution CDs/DVDs 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:*

20100512

*Metadata\_Review\_Date:*

20100512

*Metadata\_Contact:**Contact\_Information:**Contact\_Person\_Primary:**Contact\_Person:*

Jill Petersen

*Contact\_Organization:*

NOAA, Office of Response and Restoration

*Contact\_Position:*

GIS Manager

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*State\_or\_Province:*

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*Postal\_Code:*

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*Contact\_Facsimile\_Telephone:*

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*Contact\_Electronic\_Mail\_Address:*

Jill.Petersen@noaa.gov

*Metadata\_Standard\_Name:*

Content Standards for Digital Geospatial Metadata

*Metadata\_Standard\_Version:*

FGDC-STD-001-1998

*Metadata\_Extensions:*

*Online\_Linkage:*

[http://www.ncddc.noaa.gov/metadatarresource/metadata-references/files/ncddcmdprofile\\_v2.pdf](http://www.ncddc.noaa.gov/metadatarresource/metadata-references/files/ncddcmdprofile_v2.pdf)

*Profile\_Name:*

Content Specification for Metadata in the National Coastal Data Development Center's Data Catalog Version 2.0

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# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Mississippi: WETLANDS (Wetland Polygons)

## 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)

##### *Originator:*

Department of Homeland Security (DHS)

##### *Originator:*

United States Coast Guard (USCG)

##### *Originator:*

Office of Incident Management and Preparedness (CG-533), Washington, D.C.

##### *Publication\_Date:*

200912

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Mississippi: WETLANDS (Wetland Polygons)

##### *Edition:*

Second

##### *Geospatial\_Data\_Presentation\_Form:*

vector digital data

##### *Series\_Information:*

##### *Series\_Name:*

None

##### *Issue\_Identification:*

Mississippi

##### *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 and the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness (CG-533), Washington, D.C.

*Online\_Linkage:*

<http://response.restoration.noaa.gov/esi>

*Description:**Abstract:*

This data set contains vector polygons representing coastal wetlands classified according to the Environmental Sensitivity Index (ESI) classification system for Mississippi. This data set comprises a portion of the ESI data for Mississippi. 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 ESI data layer, part of the larger Mississippi 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:**Single\_Date/Time:**Calendar\_Date:*

1996

*Currentness\_Reference:*

The data were compiled during 2008 - 2009. The currentness date for this data is 1996 and is documented in the Lineage section.

*Status:**Progress:*

Complete

*Maintenance\_and\_Update\_Frequency:*

None Scheduled

*Spatial\_Domain:**Bounding\_Coordinates:**West\_Bounding\_Coordinate:*

-89.75000

*East\_Bounding\_Coordinate:*

-88.37500

*North\_Bounding\_Coordinate:*

30.50000

*South\_Bounding\_Coordinate:*

30.12500

*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:*

Wetlands

*Theme:**Theme\_Keyword\_Thesaurus:*

NOS Data Explorer Topic Category

*Theme\_Keyword:*

Environmental Monitoring

*Place:**Place\_Keyword\_Thesaurus:*

None

*Place\_Keyword:*

Mississippi

*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 Mississippi 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 Mississippi 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 the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness (CG-533), Washington, D.C.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 9.3) and SQL SERVER(R) (version 2000). The hardware configuration is PC's with Windows Operating System (2000/XP/2003). 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: birds.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, t\_mammal.e00, and wetlands.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.

*Program\_Affiliation:*

*Program\_Name:*

National Ocean Service Data Explorer

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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 polygons representing coastal wetland habitats classified according to the Environmental Sensitivity Index (ESI) classification system. See also the ESI data layer, part of the larger Mississippi 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. 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:*

U.S. FISH AND WILDLIFE SERVICE

*Publication\_Date:*

1996

*Title:*

NATIONAL WETLANDS INVENTORY

*Geospatial\_Data\_Presentation\_Form:*

vector digital data

*Online\_Linkage:*

<http://www.fws.gov/wetlands/>

*Type\_of\_Source\_Media:*

online

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

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:*

1988



*Ending\_Date:*

1996

*Source\_Currentness\_Reference:*

DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

WETLANDS INFORMATION

*Process\_Step:**Process\_Description:*

1996 National Wetlands Inventory (NWI) data were used in the classification of polygonal wetlands. The polygonal wetlands were spatially modified based on the 2006 georeferenced oblique aerial photographs, 2007 Mississippi Department of Information technology Services (MDITS) vertical aerial photography, and 1995 Mississippi ESI atlas HYDRO data. Spatial revisions to the tidal flats from the 1995 atlas, where appropriate, were integrated using the oblique aerial photographs and MDITS vertical aerial photography.

*Process\_Date:*

200912

*Process\_Contact:**Contact\_Information:**Contact\_Organization\_Primary:**Contact\_Organization:*

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Jill Petersen

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*State\_or\_Province:*

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*Postal\_Code:*

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*Contact\_Electronic\_Mail\_Address:*

Jill.Petersen@noaa.gov

[Back To Index](#)*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:*

7030

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Area point

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

7029

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Complete chain

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

10852

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Link

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

694996

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Node, planar graph

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

8790

[Back To Index](#)*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

[Back To Index](#)*Entity\_and\_Attribute\_Information:*

*Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:*

WETLANDS.PAT

*Entity\_Type\_Definition:*

The WETLANDS.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:*

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:*

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

*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 (WETLANDS) 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)).

[Back To Index](#)

---

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*Postal\_Code:*

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*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 the widest community of GIS/mapping users. Distribution formats include Geodatabase; ARC export, MOSS, and Shape files; and MARPLOT map folders. An ArcMap .mxd file, an ArcView 3.x ESI project, and an ESI\_Viewer product for use with the MARPLOT data are also included on the distribution CDs/DVDs 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:*

20100512

*Metadata\_Review\_Date:*

20100512

*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

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7600 Sand Point Way, N.E.

*City:*

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*State\_or\_Province:*

Washington

*Postal\_Code:*

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*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

*Metadata\_Extensions:*

*Online\_Linkage:*

[http://www.ncddc.noaa.gov/metadatasource/metadata-references/files/ncddcmdprofile\\_v2.pdf](http://www.ncddc.noaa.gov/metadatasource/metadata-references/files/ncddcmdprofile_v2.pdf)

*Profile\_Name:*

Content Specification for Metadata in the National Coastal Data Development Center's Data Catalog Version 2.0

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# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Mississippi: INDEX (Index Polygons)

## 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)

##### *Originator:*

Department of Homeland Security (DHS)

##### *Originator:*

United States Coast Guard (USCG)

##### *Originator:*

Office of Incident Management and Preparedness (CG-533), Washington, D.C.

##### *Publication\_Date:*

200912

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Mississippi: INDEX (Index Polygons)

##### *Edition:*

Second

##### *Geospatial\_Data\_Presentation\_Form:*

vector digital data

##### *Series\_Information:*

##### *Series\_Name:*

None

##### *Issue\_Identification:*

Mississippi

##### *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 and the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness (CG-533), Washington, D.C.

*Online\_Linkage:*

<http://response.restoration.noaa.gov/esi>

*Description:**Abstract:*

This data set contains vector polygons representing the boundaries of all hardcopy cartographic products produced as part of the Environmental Sensitivity Index (ESI) for Mississippi. This data set comprises a portion of the ESI data for Mississippi. 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:**Single\_Date/Time:**Calendar\_Date:*

2009

*Currentness\_Reference:*

The data were compiled during 2008 - 2009. The currentness date for this data is 2009 and is documented in the Lineage section.

*Status:**Progress:*

Complete

*Maintenance\_and\_Update\_Frequency:*

None Scheduled

*Spatial\_Domain:**Bounding\_Coordinates:**West\_Bounding\_Coordinate:*

-89.75000

*East\_Bounding\_Coordinate:*

-88.37500

*North\_Bounding\_Coordinate:*

30.50000

*South\_Bounding\_Coordinate:*

30.12500

*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:**Theme\_Keyword\_Thesaurus:*

NOS Data Explorer Topic Category

*Theme\_Keyword:*

Environmental Monitoring

*Place:**Place\_Keyword\_Thesaurus:*

None

*Place\_Keyword:*

Mississippi

*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 Mississippi 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 Mississippi 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 the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness (CG-533), Washington, D.C.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 9.3) and SQL SERVER(R) (version 2000). The hardware configuration is PC's with Windows Operating System (2000/XP/2003). 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: birds.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, t\_mammal.e00, and wetlands.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.

*Program\_Affiliation:*

*Program\_Name:*

National Ocean Service Data Explorer

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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 Mississippi 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.

*Publication\_Date:*

2008

*Title:*

ESI INDEX

*Geospatial\_Data\_Presentation\_Form:*

vector digital data

*Other\_Citation\_Details:*

UNPUBLISHED

*Source\_Scale\_Denominator:*

24000

*Type\_of\_Source\_Media:*

DIGITAL

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:*

2008

*Source\_Currentness\_Reference:*  
 DATE OF PUBLICATION  
*Source\_Citation\_Abbreviation:*  
 NONE  
*Source\_Contribution:*  
 INDEX INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 U.S. GEOLOGICAL SURVEY  
*Publication\_Date:*  
 2008  
*Title:*  
 SCANNED TOPOGRAPHIC MAPS  
*Geospatial\_Data\_Presentation\_Form:*  
 raster digital data  
*Online\_Linkage:*  
<http://libremap.org/data/state/mississippi/drg/>  
*Source\_Scale\_Denominator:*  
 24000  
*Type\_of\_Source\_Media:*  
 online  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Range\_of\_Dates/Times:*  
*Beginning\_Date:*  
 1970  
*Ending\_Date:*  
 1994  
*Source\_Currentness\_Reference:*  
 DATE OF PUBLICATION  
*Source\_Citation\_Abbreviation:*  
 NONE  
*Source\_Contribution:*  
 BAY ST. LOUIS, MISS.(1976); BILOXI, MISS.(1976); CAT ISLAND, MISS.-LA.(1994); DEER ISLAND, MISS.(1970); DOG KEYS PASS, MISS.(1970); ENGLISH LOOKOUT, LA.-MISS.(1976); GAUTIER NORTH, MISS.(1982); GAUTIER SOUTH, MISS.(1982); GRAND BAY SW, MISS.-ALA.(1977); GRAND ISLAND PASS, MISS.-LA.(1976); GULFPORT NORTH, MISS.(1985); GULFPORT NW, MISS.(1985); GULFPORT SOUTH, MISS.(1994); HAASWOOD, LA.-MISS.(1976); HORN ISLAND EAST, MISS.(1982); HORN ISLAND WEST, MISS.(1982); ISLE AU PITRE, LA.-MISS.(1994); KREOLE, MISS.-ALA.(1986); LOGTOWN, MISS.(1976); OCEAN SPRINGS, MISS.(1987); PASCAGOULA NORTH, MISS.(1982); PASCAGOULA SOUTH, MISS.(1982); PASS CHRISTIAN, MISS.(1994); PETIT BOIS ISLAND, MISS.-ALA.(1982); SHIP ISLAND, MISS.(1970); VIDALIA, MISS.(1976); WAVELAND, MISS.(1976)

*Process\_Step:**Process\_Description:*

Primarily, 1:24,000 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:*

200912

*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:*

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*Contact\_Facsimile\_Telephone:*

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*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:*

29

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Area point

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

29

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:*  
 Complete chain  
*Point\_and\_Vector\_Object\_Count:*  
 72  
*SDTS\_Terms\_Description:*  
*SDTS\_Point\_and\_Vector\_Object\_Type:*  
 Link  
*Point\_and\_Vector\_Object\_Count:*  
 72  
*SDTS\_Terms\_Description:*  
*SDTS\_Point\_and\_Vector\_Object\_Type:*  
 Node, planar graph  
*Point\_and\_Vector\_Object\_Count:*  
 44

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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:*  
*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:*

29

*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:*

0.7250

*Range\_Domain\_Maximum:*

1.3600

*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

*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)).

[Back To Index](#)*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

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7600 Sand Point Way N.E.

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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 the widest community of GIS/mapping users. Distribution formats include Geodatabase; ARC export, MOSS, and Shape files; and MARPLOT map folders. An ArcMap .mxd file, an ArcView 3.x ESI project, and an ESI\_Viewer product for use with the MARPLOT data are also included on the distribution CDs/DVDs 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:*

20100512

*Metadata\_Review\_Date:*

20100512

*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

*Metadata\_Extensions:*

*Online\_Linkage:*

[http://www.ncddc.noaa.gov/metadatarresource/metadatarreferences/files/ncddcmdprofile\\_v2.pdf](http://www.ncddc.noaa.gov/metadatarresource/metadatarreferences/files/ncddcmdprofile_v2.pdf)

*Profile\_Name:*

Content Specification for Metadata in the National Coastal Data Development Center's Data Catalog Version 2.0

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# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Mississippi: MGT (Management Area Polygons)

## 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)

##### *Originator:*

Department of Homeland Security (DHS)

##### *Originator:*

United States Coast Guard (USCG)

##### *Originator:*

Office of Incident Management and Preparedness (CG-533), Washington, D.C.

##### *Publication\_Date:*

200912

##### *Title:*

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

##### *Edition:*

Second

##### *Geospatial\_Data\_Presentation\_Form:*

vector digital data

##### *Series\_Information:*

##### *Series\_Name:*

None

##### *Issue\_Identification:*

Mississippi

##### *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 and the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness (CG-533), Washington, D.C.

*Online\_Linkage:*

<http://response.restoration.noaa.gov/esi>

*Description:**Abstract:*

This data set contains sensitive human-use data for artificial reefs, National Park Service properties, Wildlife Management Areas, National Wildlife Refuges, and Indian Reservations in Mississippi. 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 Mississippi. 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 Mississippi 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:*

1972

*Ending\_Date:*

2009

*Currentness\_Reference:*

The data were compiled during 2008 - 2009. The currentness dates for this data range from 1972 to 2009 and are documented in the Lineage section.

*Status:**Progress:*

Complete

*Maintenance\_and\_Update\_Frequency:*

None Scheduled

*Spatial\_Domain:**Bounding\_Coordinates:**West\_Bounding\_Coordinate:*

-89.75000

*East\_Bounding\_Coordinate:*

-88.37500

*North\_Bounding\_Coordinate:*

30.50000

*South\_Bounding\_Coordinate:*

30.12500

*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

*Theme:*

*Theme\_Keyword\_Thesaurus:*

NOS Data Explorer Topic Category

*Theme\_Keyword:*

Environmental Monitoring

*Place:*

*Place\_Keyword\_Thesaurus:*

None

*Place\_Keyword:*

Mississippi

*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 Mississippi 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 Mississippi 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 the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness (CG-533), Washington, D.C.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 9.3) and SQL SERVER(R) (version 2000). The hardware configuration is PC's with Windows Operating System (2000/XP/2003). 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: birds.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, t\_mammal.e00, and wetlands.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.

*Program\_Affiliation:*

*Program\_Name:*

National Ocean Service Data Explorer

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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 Mississippi ESI database, for additional human-use information. These data do not necessarily represent all management areas in Mississippi.

*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:*  
 G.HOPKINS, NATIONAL PARK SERVICE  
*Publication\_Date:*  
 2009  
*Title:*  
 DISTRIBUTION AND ABUNDANCE OF BIOLOGICAL  
 AND HUMAN USE RESOURCES ON GULF ISLANDS  
*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:*  
 2009  
*Source\_Currentness\_Reference:*  
 DATE OF COMMUNICATION  
*Source\_Citation\_Abbreviation:*  
 NONE  
*Source\_Contribution:*  
 MGT INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 J. CLARK, MISSISSIPPI DEPARTMENT OF MARINE  
 RESOURCES  
*Publication\_Date:*  
 2009  
*Title:*  
 MISSISSIPPI COASTAL PRESERVE BOUNDARY DATA  
*Geospatial\_Data\_Presentation\_Form:*  
 vector digital data  
*Other\_Citation\_Details:*  
 UNPUBLISHED  
*Type\_of\_Source\_Media:*  
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*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
 2009  
*Source\_Currentness\_Reference:*  
 DATE OF COMMUNICATION



*Source\_Citation\_Abbreviation:*  
NONE

*Source\_Contribution:*  
MGT INFORMATION

*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
MISSISSIPPI DEPARTMENT OF MARINE RESOURCES

*Publication\_Date:*  
2003

*Title:*  
OFFSHORE ARTIFICIAL REEFS

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

*Publication\_Information:*  
*Publication\_Place:*  
BILOXI, MISSISSIPPI

*Publisher:*  
MISSISSIPPI DEPARTMENT OF MARINE  
RESOURCES

*Online\_Linkage:*  
<http://www.dmr.state.ms.us/Fisheries/Reefs/artificial-reefs.htm>

*Type\_of\_Source\_Media:*  
EMAIL

*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
2003

*Source\_Currentness\_Reference:*  
DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:*  
NONE

*Source\_Contribution:*  
MGT INFORMATION

*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
MISSISSIPPI DEPARTMENT OF WILDLIFE, FISHERIES,  
AND PARKS

*Publication\_Date:*  
1997

*Title:*  
BOUNDRIES OF STATE PARKS IN MISSISSIPPI

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

*Online\_Linkage:*

<ftp://www.maris.state.ms.us/statewide/mstm/av/sparks.exe>

*Source\_Scale\_Denominator:*

24000

*Type\_of\_Source\_Media:*

online

*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:*

MISSISSIPPI DEPARTMENT OF WILDLIFE, FISHERIES,  
AND PARKS

*Publication\_Date:*

20070601

*Title:*

MDWFP WMA'S

*Geospatial\_Data\_Presentation\_Form:*

vector digital data

*Online\_Linkage:*

<http://www.maris.state.ms.us/HTM/DownloadData/Statewide-Alpha.html>

*Source\_Scale\_Denominator:*

24000

*Type\_of\_Source\_Media:*

online

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

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:*

20070607

*Ending\_Date:*

20070807

*Source\_Currentness\_Reference:*

DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

MGT INFORMATION

*Source\_Information:*

*Source\_Citation:**Citation\_Information:**Originator:*

NATIONAL ATLAS OF THE U.S. AND THE  
U.S.GEOLOGICAL SURVEY

*Publication\_Date:*

20061001

*Title:*

NATIVE AMERICAN LANDS

*Geospatial\_Data\_Presentation\_Form:*

vector digital data

*Online\_Linkage:*

[http://www.gis.ms.gov/Portal  
/dataDownload.do?dxLayer=GIS.NativeAmericanArea\\_dbprod](http://www.gis.ms.gov/Portal/dataDownload.do?dxLayer=GIS.NativeAmericanArea_dbprod)

*Type\_of\_Source\_Media:*

online

*Source\_Time\_Period\_of\_Content:**Time\_Period\_Information:**Range\_of\_Dates/Times:**Beginning\_Date:*

1972

*Ending\_Date:*

2004

*Source\_Currentness\_Reference:*

DATE OF SURVEY

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

MGT INFORMATION

*Source\_Information:**Source\_Citation:**Citation\_Information:**Originator:*

National Park Service

*Publication\_Date:*

20090511

*Title:*

nps\_boundary

*Geospatial\_Data\_Presentation\_Form:*

vector digital data

*Online\_Linkage:*

[http://nrddata.nps.gov/programs/lands/nps\\_boundary.zip](http://nrddata.nps.gov/programs/lands/nps_boundary.zip)

*Source\_Scale\_Denominator:*

24000

*Type\_of\_Source\_Media:*

online

*Source\_Time\_Period\_of\_Content:**Time\_Period\_Information:**Range\_of\_Dates/Times:*

*Beginning\_Date:*  
 20020201  
*Ending\_Date:*  
 20090511  
*Source\_Currentness\_Reference:*  
 DATE OF PUBLICATION  
*Source\_Citation\_Abbreviation:*  
 NONE  
*Source\_Contribution:*  
 MGT INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 U.S.FISH AND WILDLIFE SERVICE, Region 9, Information  
 Technology Management, Branch of Data and Systems  
 Services  
*Publication\_Date:*  
 200110  
*Title:*  
 U.S. FISH AND WILDLIFE SERVICE, Revised Refuge  
 Boundaries  
*Geospatial\_Data\_Presentation\_Form:*  
 vector digital data  
*Online\_Linkage:* Contact the site webmaster if this URL is no longer active.  
[http://www.fws.gov/data/r4gis/r4bnd\\_ims.zip](http://www.fws.gov/data/r4gis/r4bnd_ims.zip)  
*Source\_Scale\_Denominator:*  
 24000  
*Type\_of\_Source\_Media:*  
 online  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
 200110  
*Source\_Currentness\_Reference:*  
 DATE OF PUBLICATION  
*Source\_Citation\_Abbreviation:*  
 NONE  
*Source\_Contribution:*  
 MGT INFORMATION  
*Process\_Step:*  
*Process\_Description:*  
 Four main sources were used to depict management areas for this data  
 layer: 1) digital data on National lands and Indian Reservations provided by  
 Mississippi Geospatial Clearinghouse, 2) digital data on National Wildlife  
 Refuges and Wildlife Management Areas provided by Mississippi  
 Department of Wildlife, Fisheries, and Parks, 3) digital data on National  
 and state parks provided by Mississippi Automated Resource Information

System, and 4) digital data on management areas and artificial reefs provided by Mississippi Department of Marine Resources. The above digital and/or hardcopy sources were compiled by the project biologist to create the MGT data layer. Depending on the type of source data, three general approaches are used for compiling the data layer: 1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:24,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the MGT data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:*

200912

*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:*  
 113  
*SDTS\_Terms\_Description:*  
*SDTS\_Point\_and\_Vector\_Object\_Type:*  
 Area point  
*Point\_and\_Vector\_Object\_Count:*  
 113  
*SDTS\_Terms\_Description:*  
*SDTS\_Point\_and\_Vector\_Object\_Type:*  
 Complete chain  
*Point\_and\_Vector\_Object\_Count:*  
 268  
*SDTS\_Terms\_Description:*  
*SDTS\_Point\_and\_Vector\_Object\_Type:*  
 Link  
*Point\_and\_Vector\_Object\_Count:*  
 37798  
*SDTS\_Terms\_Description:*  
*SDTS\_Point\_and\_Vector\_Object\_Type:*  
 Node,planar graph  
*Point\_and\_Vector\_Object\_Count:*  
 188

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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:*  
*Detailed\_Description:*  
*Entity\_Type:*

*Entity\_Type\_Label:*

MGT.PAT

*Entity\_Type\_Definition:*

The MGT.PAT table contains attribute information for the vector polygons representing artificial reefs, National Park Service properties, management areas, Wildlife Refuges, and Indian reservations. 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:*

AR

*Enumerated\_Domain\_Value\_Definition:*

Artificial Reef

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

IR

*Enumerated\_Domain\_Value\_Definition:*

Indian Reservation

*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:*

NP

*Enumerated\_Domain\_Value\_Definition:*

National Park

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

P

*Enumerated\_Domain\_Value\_Definition:*

Regional or State Park

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

WR

*Enumerated\_Domain\_Value\_Definition:*

Wildlife Refuge

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

ID

*Attribute\_Definition:*

An identifier that links vector objects in the human-use data layers to records in the SOC\_LUT data table. ID is a concatenation of atlas number (232), 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:*

2321100002

*Range\_Domain\_Maximum:*

2321100132

*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:*

232000014

*Range\_Domain\_Maximum:*

232000333

*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:*

232000001

*Range\_Domain\_Maximum:*

232000333

*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 (232), 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:*

2321000001

*Range\_Domain\_Maximum:*

2321100132

*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:*

232000001

*Range\_Domain\_Maximum:*

232000333

*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:*

ARCHAEOLOGICAL SITE

*Enumerated\_Domain\_Value\_Definition:*

Archaeological Site

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

ARTIFICIAL REEF

*Enumerated\_Domain\_Value\_Definition:*

Artificial Reef

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

BEACH

*Enumerated\_Domain\_Value\_Definition:*

Beach

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

BOAT RAMP

*Enumerated\_Domain\_Value\_Definition:*

Boat Ramp

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

CAMPGROUND

*Enumerated\_Domain\_Value\_Definition:*

Campground

*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:*  
 FERRY  
*Enumerated\_Domain\_Value\_Definition:*  
 Ferry  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 FIELD STATION  
*Enumerated\_Domain\_Value\_Definition:*  
 Field Station  
*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:*  
 INDIAN RESERVATION  
*Enumerated\_Domain\_Value\_Definition:*  
 Indian Reservation  
*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:*  
NATIONAL PARK

*Enumerated\_Domain\_Value\_Definition:*  
National Park

*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:*  
RECREATIONAL FISHING

*Enumerated\_Domain\_Value\_Definition:*  
Recreational Fishing

*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 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.

*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 Mississippi, the number is 232). ID is a unique combination of the atlas number (232), 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)).

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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 the widest community of GIS/mapping users. Distribution formats include Geodatabase; ARC export, MOSS, and Shape files; and MARPLOT map folders. An ArcMap .mxd file, an ArcView 3.x ESI project, and an ESI\_Viewer product for use with the MARPLOT data are also included on the distribution CDs/DVDs 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:*

20100512

*Metadata\_Review\_Date:*

20100512

*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

*Metadata\_Extensions:*

*Online\_Linkage:*

[http://www.ncddc.noaa.gov/metadataresource/metadata-references/files/ncddcmdprofile\\_v2.pdf](http://www.ncddc.noaa.gov/metadataresource/metadata-references/files/ncddcmdprofile_v2.pdf)

*Profile\_Name:*

Content Specification for Metadata in the National Coastal Data Development Center's Data Catalog Version 2.0

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# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Mississippi: SOCECON (Socioeconomic Resource Points and Lines)

## 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)

##### *Originator:*

Department of Homeland Security (DHS)

##### *Originator:*

United States Coast Guard (USCG)

##### *Originator:*

Office of Incident Management and Preparedness (CG-533), Washington, D.C.

##### *Publication\_Date:*

200912

##### *Title:*

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

##### *Edition:*

Second

##### *Geospatial\_Data\_Presentation\_Form:*

vector digital data

##### *Series\_Information:*

##### *Series\_Name:*

None

##### *Issue\_Identification:*

Mississippi

##### *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 and the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness (CG-533), Washington, D.C.

*Online\_Linkage:*

<http://response.restoration.noaa.gov/esi>

*Description:**Abstract:*

This data set contains human-use resource data for access, airports, archaeological sites, artificial reefs, boat ramps, camping sites, Coast Guard stations, ferries, historical sites, marinas, NPS ranger stations, recreational beaches, and recreational fishing in Mississippi. 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 Mississippi. 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 Mississippi 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:*

1995

*Ending\_Date:*

2009

*Currentness\_Reference:*

The data were compiled during 2008 - 2009. The currentness dates for this data range from 1995 to 2009 and are documented in the Lineage section.

*Status:**Progress:*

Complete

*Maintenance\_and\_Update\_Frequency:*

None Scheduled

*Spatial\_Domain:**Bounding\_Coordinates:**West\_Bounding\_Coordinate:*

-89.75000

*East\_Bounding\_Coordinate:*

-88.37500

*North\_Bounding\_Coordinate:*

30.50000

*South\_Bounding\_Coordinate:*

30.12500

*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

*Theme:*

*Theme\_Keyword\_Thesaurus:*

NOS Data Explorer Topic Category

*Theme\_Keyword:*

Environmental Monitoring

*Place:*

*Place\_Keyword\_Thesaurus:*

None

*Place\_Keyword:*

Mississippi

*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 Mississippi 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 Mississippi 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 the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness (CG-533), Washington, D.C.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 9.3) and SQL SERVER(R) (version 2000). The hardware configuration is PC's with Windows Operating System (2000/XP/2003). 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: birds.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, t\_mammal.e00, and wetlands.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.

*Program\_Affiliation:*

*Program\_Name:*

National Ocean Service Data Explorer

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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 reports, and digital data on socioeconomic resources. See also the MGT data layer, part of the larger Mississippi ESI database, for additional human-use information. These data do not necessarily represent all human-use sites in Mississippi.

*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:*

CHARLIE WELCH, GIS SPECIALIST, MISSISSIPPI  
DEPARTMENT OF WILDLIFE, FISHERIES, AND PARKS

*Publication\_Date:*

20090401

*Title:*

BOAT RAMPS

*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:*

20090401

*Source\_Currentness\_Reference:*

DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

SOCECON INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

G.HOPKINS, NATIONAL PARK SERVICE

*Publication\_Date:*

2009

*Title:*

DISTRIBUTION AND ABUNDANCE OF BIOLOGICAL  
AND HUMAN USE RESOURCES ON GULF ISLANDS

*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:*

2009

*Source\_Currentness\_Reference:*

DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

SOCECON INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

J. CLARK, MISSISSIPPI DEPARTMENT OF MARINE  
RESOURCES

*Publication\_Date:*

2009

*Title:*

ABUNDANCE AND DISTRIBUTION DATA FOR  
WILDLIFE 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:*

2009

*Source\_Currentness\_Reference:*

DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

SOCECON INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

J. CLARK, MISSISSIPPI DEPARTMENT OF MARINE  
RESOURCES

*Publication\_Date:*

2009

*Title:*

MISSISSIPPI COASTAL PRESERVE BOUNDARY DATA

*Geospatial\_Data\_Presentation\_Form:*

vector digital data

*Other\_Citation\_Details:*

UNPUBLISHED

*Type\_of\_Source\_Media:*

EMAIL

*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
2009  
*Source\_Currentness\_Reference:*  
DATE OF COMMUNICATION  
*Source\_Citation\_Abbreviation:*  
NONE  
*Source\_Contribution:*  
SOCECON INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
MISSISSIPPI AUTOMATED RESOURCE INFORMATION  
SYSTEM (MARIS)  
*Publication\_Date:*  
1998  
*Title:*  
NATIONAL HISTORIC REGISRTY SITES IN MISSISSIPPI  
(MSTM)(1998)[NATREG]  
*Geospatial\_Data\_Presentation\_Form:*  
vector digital data  
*Online\_Linkage:*  
<http://www.maris.state.ms.us/HTM/DownloadData/Statewide-Alpha.html>  
*Type\_of\_Source\_Media:*  
online  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
1998  
*Source\_Currentness\_Reference:*  
DATE OF PUBLICATION  
*Source\_Citation\_Abbreviation:*  
NONE  
*Source\_Contribution:*  
SOCECON INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
MISSISSIPPI DEPARTMENT OF MARINE RESOURCES  
*Publication\_Date:*  
2008  
*Title:*  
INSHORE ARTIFICIAL REEFS

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

*Publication\_Information:*  
*Publication\_Place:*  
BILOXI, MISSISSIPPI

*Publisher:*  
MISSISSIPPI DEPARTMENT OF MARINE  
RESOURCES

*Online\_Linkage:*  
<http://www.dmr.state.ms.us/Fisheries/Reefs/artificial-reefs.htm>

*Type\_of\_Source\_Media:*  
EMAIL

*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Range\_of\_Dates/Times:*  
*Beginning\_Date:*  
2008  
*Ending\_Date:*  
2008

*Source\_Currentness\_Reference:*  
DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:*  
NONE

*Source\_Contribution:*  
SOCECON INFORMATION

*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
MISSISSIPPI DEPARTMENT OF WILDLIFE, FISHERIES,  
AND PARKS  
*Publication\_Date:*  
200507  
*Title:*  
RECREATIONAL FACILITIES

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

*Online\_Linkage:*  
<http://www.maris.state.ms.us/HTM/DownloadData/Statewide-Alpha.html>

*Type\_of\_Source\_Media:*  
online

*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
200507

*Source\_Currentness\_Reference:*  
DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:*  
NONE

*Source\_Contribution:*  
SOCECON INFORMATION

*Source\_Information:*  
*Source\_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)

*Publication\_Date:*  
1995

*Title:*  
SENSITIVITY OF COASTAL ENVIRONMENTS AND  
WILDLIFE TO SPILLED OIL: MISSISSIPPI: SOCECON

*Geospatial\_Data\_Presentation\_Form:*  
map

*Publication\_Information:*  
*Publication\_Place:*  
SEATTLE, WA

*Publisher:*  
NOAA

*Other\_Citation\_Details:*  
7600 SAND POINT WAY, SEATTLE, WA 98115-6349

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

*Source\_Scale\_Denominator:*  
24000

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

*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
1995

*Source\_Currentness\_Reference:*  
DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:*  
NONE

*Source\_Contribution:*  
SOCECON INFORMATION

*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
US COAST GUARD TENANT COMMANDS

*Publication\_Date:*  
2009

*Title:*

US COAST GUARD TENANT COMMANDS

*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:*

2009

*Source\_Currentness\_Reference:*

DATE OF COMMUNICATION

*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 National Park Service, U.S. Fish and Wildlife Service (USFWS), Mississippi Department of Marine Resources (MDMR), and the Mississippi Department of Wildlife, Fisheries, and Parks, 2) numerous published and unpublished reports, and 3) MDMR digital inshore and offshore artificial reef layers. The attributes of the RECREATIONAL FACILITIES dataset provided by MS DEPT. OF WILDLIFE, FISHERIES, AND PARKS (SOURCE\_ID 95) were edited to reflect the 1997 area code change to 228. The above digital and/or hardcopy sources were compiled by the project biologist to create the SOCECON data layer. Depending on the type of source data, three general approaches are used for compiling the data layer: 1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:24,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the SOCECON data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:*

200912

*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

[Back To Index](#)*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:*

3

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Link

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

599

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Entity point

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

303

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Node, planar graph

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

5

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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

[Back To Index](#)

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*Entity\_and\_Attribute\_Information:**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 boundaries.

*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, airports, archaeological sites, artificial reefs, boat ramps, camping sites, Coast Guard stations, ferries, historical sites, marinas, NPS ranger stations, recreational beaches, and recreational fishing. 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:*

AR

*Enumerated\_Domain\_Value\_Definition:*

Artificial Reef

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

AS

*Enumerated\_Domain\_Value\_Definition:*  
 Archaeological Site  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 B  
*Enumerated\_Domain\_Value\_Definition:*  
 Beach  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 BR  
*Enumerated\_Domain\_Value\_Definition:*  
 Boat Ramp  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 C  
*Enumerated\_Domain\_Value\_Definition:*  
 Campground  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 CG  
*Enumerated\_Domain\_Value\_Definition:*  
 Coast Guard  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 F  
*Enumerated\_Domain\_Value\_Definition:*  
 Ferry  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 FS  
*Enumerated\_Domain\_Value\_Definition:*

## Field Station

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

HS

*Enumerated\_Domain\_Value\_Definition:*

Historical Site

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

M

*Enumerated\_Domain\_Value\_Definition:*

Marina

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

RF

*Enumerated\_Domain\_Value\_Definition:*

Recreational Fishing

*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 (232), 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:*

2321000001

*Range\_Domain\_Maximum:*

2321000303

*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:*

232000001

*Range\_Domain\_Maximum:*

232000318

*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:*

232000001

*Range\_Domain\_Maximum:*

232000333

*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 (232), 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:*

2321000001

*Range\_Domain\_Maximum:*

2321100132

*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:*

232000001

*Range\_Domain\_Maximum:*

232000333

*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:*

ARCHAEOLOGICAL SITE

*Enumerated\_Domain\_Value\_Definition:*

Archaeological Site

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

ARTIFICIAL REEF

*Enumerated\_Domain\_Value\_Definition:*

Artificial Reef

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

BEACH

*Enumerated\_Domain\_Value\_Definition:*

Beach

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

BOAT RAMP

*Enumerated\_Domain\_Value\_Definition:*

Boat Ramp

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

CAMPGROUND

*Enumerated\_Domain\_Value\_Definition:*

Campground

*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:*

FERRY

*Enumerated\_Domain\_Value\_Definition:*

Ferry

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

FIELD STATION

*Enumerated\_Domain\_Value\_Definition:*

Field Station

*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:*

INDIAN RESERVATION

*Enumerated\_Domain\_Value\_Definition:*

Indian Reservation

*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:*  
 NATIONAL PARK  
*Enumerated\_Domain\_Value\_Definition:*  
 National Park  
*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:*  
 RECREATIONAL FISHING  
*Enumerated\_Domain\_Value\_Definition:*  
 Recreational Fishing  
*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 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.

*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 Mississippi, the number is 232). ID is a unique combination of the atlas number (232), 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)).

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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 the widest community of GIS/mapping users. Distribution formats include Geodatabase; ARC export, MOSS, and Shape files; and MARPLOT map folders. An ArcMap .mxd file, an ArcView 3.x ESI project, and an ESI\_Viewer product for use with the MARPLOT data are also included on the distribution CDs/DVDs 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:*

20100512

*Metadata\_Review\_Date:*

20100512

*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

*Metadata\_Extensions:*

*Online\_Linkage:*

[http://www.ncddc.noaa.gov/metadatarresource/metadatarreferences/files/ncddcmdprofile\\_v2.pdf](http://www.ncddc.noaa.gov/metadatarresource/metadatarreferences/files/ncddcmdprofile_v2.pdf)

*Profile\_Name:*

Content Specification for Metadata in the National Coastal Data Development Center's Data Catalog Version 2.0

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

## 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)

##### *Originator:*

Department of Homeland Security (DHS)

##### *Originator:*

United States Coast Guard (USCG)

##### *Originator:*

Office of Incident Management and Preparedness (CG-533), Washington, D.C.

##### *Publication\_Date:*

200912

##### *Title:*

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

##### *Edition:*

Second

##### *Geospatial\_Data\_Presentation\_Form:*

vector digital data

##### *Series\_Information:*

##### *Series\_Name:*

None

##### *Issue\_Identification:*

Mississippi

##### *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 and the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness (CG-533), Washington, D.C.

*Online\_Linkage:*

<http://response.restoration.noaa.gov/esi>

*Description:**Abstract:*

This data set contains sensitive biological resource data for wading birds, shorebirds, waterfowl, raptors, diving birds, seabirds, passerine birds, and gulls and terns in Mississippi. Vector polygons in this data set represent bird nesting, migratory, 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 Mississippi. 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 Mississippi 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:*

2006

*Ending\_Date:*

2009

*Currentness\_Reference:*

The data were compiled during 2008 - 2009. The currentness dates for this data range from 2006 to 2009 and are documented in the Lineage section.

*Status:**Progress:*

Complete

*Maintenance\_and\_Update\_Frequency:*

None Scheduled

*Spatial\_Domain:**Bounding\_Coordinates:**West\_Bounding\_Coordinate:*

-89.75000



*East\_Bounding\_Coordinate:*

-88.37500

*North\_Bounding\_Coordinate:*

30.50000

*South\_Bounding\_Coordinate:*

30.12500

*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

*Theme:*

*Theme\_Keyword\_Thesaurus:*

NOS Data Explorer Topic Category

*Theme\_Keyword:*

Environmental Monitoring

*Place:*

*Place\_Keyword\_Thesaurus:*

None

*Place\_Keyword:*

Mississippi

*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 Mississippi 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 Mississippi 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 the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness (CG-533), Washington, D.C.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 9.3) and SQL SERVER(R) (version 2000). The hardware configuration is PC's with Windows Operating System (2000/XP/2003). 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: birds.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, t\_mammal.e00, and wetlands.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.

*Program\_Affiliation:*

*Program\_Name:*

National Ocean Service Data Explorer

[Back To Index](#)

*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, and digital data on bird nesting, wintering, migratory staging and other spatial/temporal concentration areas. See also the NESTS data layer, part of the larger Mississippi ESI database, for additional bird information. These data do not necessarily represent all bird occurrences in Mississippi. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name [n/a if not applicable]): 1, Common loon, *Gavia immer*; 5, Horned grebe, *Podiceps auritus*; 8, Double-crested cormorant, *Phalacrocorax auritus*; 12, Canada goose, *Branta canadensis*; 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*; 27, Long-tailed duck, *Clangula hyemalis*; 33, Red-breasted merganser, *Mergus serrator*; 34, American coot, *Fulica americana*; 38, Herring gull, *Larus argentatus*; 40, Ring-billed gull, *Larus delawarensis*; 42, Bonaparte's gull, *Larus philadelphia*; 54, Great blue heron, *Ardea herodias*; 56, Spotted sandpiper, *Actitis macularia*; 58, Greater yellowlegs, *Tringa melanoleuca*; 59, Lesser yellowlegs, *Tringa flavipes*; 60, Red knot, *Calidris canutus*; 62,

Least sandpiper, *Calidris minutilla*; 63, Dunlin, *Calidris alpina*; 66, Western sandpiper, *Calidris mauri*; 67, Sanderling, *Calidris alba*; 69, Semipalmated plover, *Charadrius semipalmatus*; 70, Killdeer, *Charadrius vociferus*; 71, Black-bellied plover, *Pluvialis squatarola*; 73, Ruddy turnstone, *Arenaria interpres*; 76, Bald eagle, *Haliaeetus leucocephalus*; 77, Osprey, *Pandion haliaetus*; 86, Least tern, *Sternula antillarum*; 87, Little blue heron, *Egretta caerulea*; 88, Great egret, *Ardea alba*; 89, Snowy egret, *Egretta thula*; 90, Black-crowned night-heron, *Nycticorax nycticorax*; 93, Cattle egret, *Bubulcus ibis*; 94, Tricolored heron, *Egretta tricolor*; 97, Green heron, *Butorides virescens*; 98, Laughing gull, *Larus atricilla*; 107, Peregrine falcon, *Falco peregrinus*; 115, White ibis, *Eudocimus albus*; 116, Roseate spoonbill, *Ajaia ajaja*; 118, Brown pelican, *Pelecanus occidentalis*; 119, Magnificent frigatebird, *Fregata magnificens*; 120, Yellow-crowned night-heron, *Nyctanassa violacea*; 124, Redhead, *Aythya americana*; 125, Clapper rail, *Rallus longirostris*; 128, Masked (blue-faced) booby, *Sula dactylatra*; 133, Black skimmer, *Rynchops niger*; 134, Gull-billed tern, *Gelochelidon nilotica*; 135, Sandwich tern, *Thalasseus sandvicensis*; 137, Royal tern, *Thalasseus maximus*; 139, Snowy plover, *Charadrius alexandrinus*; 148, Ruddy duck, *Oxyura jamaicensis*; 152, American oystercatcher, *Haematopus palliatus*; 153, Piping plover, *Charadrius melodus*; 154, Wilson's plover, *Charadrius wilsonia*; 155, Willet, *Catoptrophorus semipalmatus*; 156, Semipalmated sandpiper, *Calidris pusilla*; 162, Gadwall, *Anas strepera*; 163, Reddish egret, *Egretta rufescens*; 167, Northern gannet, *Morus bassanus*; 169, American wigeon, *Anas americana*; 173, American white pelican, *Pelecanus erythrorhynchos*; 178, Least bittern, *Ixobrychus exilis*; 179, Pied-billed grebe, *Podilymbus podiceps*; 180, Ring-necked duck, *Aythya collaris*; 184, King rail, *Rallus elegans*; 185, American bittern, *Botaurus lentiginosus*; 187, Virginia rail, *Rallus limicola*; 188, Sora, *Porzana carolina*; 190, Blue-winged teal, *Anas discors*; 191, Wood duck, *Aix sponsa*; 192, Common moorhen, *Gallinula chloropus*; 198, Hooded merganser, *Lophodytes cucullatus*; 211, Mottled duck, *Anas fulvigula*; 224, Sedge wren, *Cistothorus platensis*; 225, Marsh wren, *Cistothorus palustris*; 261, Brown booby, *Sula leucogaster*; 277, Seaside sparrow, *Ammodramus maritimus*; 286, Dowitchers, *Limnodromus* spp.; 298, Mississippi sandhill crane, *Grus canadensis pulla*; 734, Nelson's sharp-tailed sparrow, *Ammodramus nelsoni*; 736, Henslow's sparrow, *Ammodramus henslowii*; 1002, Shorebirds, n/a; 1008, Terns, n/a; 1011, Migratory songbirds, n/a; 1013, Dabbling ducks, 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:*

G.HOPKINS, NATIONAL PARK SERVICE

*Publication\_Date:*

2009

*Title:*

DISTRIBUTION AND ABUNDANCE OF BIOLOGICAL  
AND HUMAN USE RESOURCES ON GULF ISLANDS

*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:*

2009

*Source\_Currentness\_Reference:*

DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

J. CLARK, MISSISSIPPI DEPARTMENT OF MARINE  
RESOURCES

*Publication\_Date:*

2009

*Title:*

ABUNDANCE AND DISTRIBUTION DATA FOR  
WILDLIFE RESOURCES

*Geospatial\_Data\_Presentation\_Form:*

EXPERT KNOWLEDGE

*Other\_Citation\_Details:*

UNPUBLISHED

*Type\_of\_Source\_Media:*

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

*Time\_Period\_Information:*

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2009

*Source\_Currentness\_Reference:*  
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*Source\_Citation\_Abbreviation:*  
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*Source\_Contribution:*  
BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*  
J. CLARK, MISSISSIPPI DEPARTMENT OF MARINE  
RESOURCES

*Publication\_Date:*  
2009

*Title:*  
BIRDS OF THE HANCOCK COUNTY MARSH COASTAL  
PRESERVE

*Geospatial\_Data\_Presentation\_Form:*  
document

*Other\_Citation\_Details:*  
UNPUBLISHED

*Type\_of\_Source\_Media:*  
EMAIL

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

*Time\_Period\_Information:*

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*Calendar\_Date:*  
2009

*Source\_Currentness\_Reference:*  
DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:*  
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*Source\_Contribution:*  
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*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*  
K. BRUNKE, MISSISSIPPI DEPARTMENT OF WILDLIFE  
FISHERIES AND PARKS

*Publication\_Date:*  
2009

*Title:*  
ABUNDANCE AND DISTRIBUTION DATA FOR  
WATERFOWL

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

*Other\_Citation\_Details:*  
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*Type\_of\_Source\_Media:*  
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*Source\_Time\_Period\_of\_Content:*  
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*Calendar\_Date:*  
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*Source\_Currentness\_Reference:*  
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*Source\_Contribution:*  
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*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 L.LACLAIRE, U.S. FISH AND WILDLIFE SERVICE  
*Publication\_Date:*  
 2009  
*Title:*  
 DISTRIBUTION OF THREATENED AND ENDANGERED  
 SPECIES IN MISSISSIPPI  
*Geospatial\_Data\_Presentation\_Form:*  
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*Citation\_Information:*  
*Originator:*  
 M. WOODREY, MISSISSIPPI STATE UNIVERSITY  
*Publication\_Date:*  
 2009

*Title:*  
 DISTRIBUTION AND ABUNDANCE OF COASTAL  
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*Originator:*  
 MISSISSIPPI DEPARTMENT OF WILDLIFE FISHERIES  
 AND PARKS  
*Publication\_Date:*  
 2008  
*Title:*  
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*Geospatial\_Data\_Presentation\_Form:*  
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*Other\_Citation\_Details:*  
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*Type\_of\_Source\_Media:*  
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*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Range\_of\_Dates/Times:*  
*Beginning\_Date:*  
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*Ending\_Date:*  
 2008  
*Source\_Currentness\_Reference:*  
 DATE OF SURVEY  
*Source\_Citation\_Abbreviation:*  
 NONE  
*Source\_Contribution:*  
 BIRDS INFORMATION



*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

MISSISSIPPI DEPARTMENT OF WILDLIFE FISHERIES  
AND PARKS

*Publication\_Date:*

2009

*Title:*

MS\_NOAA\_BAEA\_NEST\_DATA.XLSX

*Geospatial\_Data\_Presentation\_Form:*

spreadsheet

*Other\_Citation\_Details:*

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*Type\_of\_Source\_Media:*

EMAIL

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:*

2009

*Source\_Currentness\_Reference:*

DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:*

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*Source\_Contribution:*

BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

N. WINSTEAD, MISSISSIPPI DEPARTMENT OF  
WILDLIFE FISHERIES AND PARKS

*Publication\_Date:*

2009

*Title:*

DISTRIBUTION AND ABUNDANCE DATA FOR BIRDS

*Geospatial\_Data\_Presentation\_Form:*

EXPERT KNOWLEDGE

*Other\_Citation\_Details:*

UNPUBLISHED

*Type\_of\_Source\_Media:*

PERSONAL COMMUNICATION

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:*

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*Source\_Currentness\_Reference:*

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*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

BIRDS INFORMATION

*Source\_Information:**Source\_Citation:**Citation\_Information:**Originator:*

NATIONAL PARK SERVICE

*Publication\_Date:*

2006

*Title:*

GULF ISLANDS BIRD CHECK LIST

*Geospatial\_Data\_Presentation\_Form:*

HARDCOPY TEXT

*Publication\_Information:**Publication\_Place:*

OCEAN SPRINGS, MISSISSIPPI

*Publisher:*

GULF ISLANDS NATIONAL SEASHORE

*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:*

U.S. FISH AND WILDLIFE SERVICE

*Publication\_Date:*

2008

*Title:*

BIRDS OF GRAND BAY NATIONAL WILDLIFE REFUGE

*Geospatial\_Data\_Presentation\_Form:*

tabular digital data

*Online\_Linkage:*<http://www.fws.gov/grandbay/birds.html>*Type\_of\_Source\_Media:*

online

*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
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*Source\_Currentness\_Reference:*  
 DATE OF PUBLICATION  
*Source\_Citation\_Abbreviation:*  
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*Source\_Contribution:*  
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*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 U.S. FISH AND WILDLIFE SERVICE  
*Publication\_Date:*  
 2009  
*Title:*  
 MISSISSIPPI SANDHILL CRANES - THEIR UNIQUE  
 BIOLOGY  
*Geospatial\_Data\_Presentation\_Form:*  
 tabular digital data  
*Online\_Linkage:*  
<http://www.fws.gov/grandbay/herps.html>  
*Type\_of\_Source\_Media:*  
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*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
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*Source\_Currentness\_Reference:*  
 DATE OF PUBLICATION  
*Source\_Citation\_Abbreviation:*  
 NONE  
*Source\_Contribution:*  
 BIRDS INFORMATION  
*Process\_Step:*  
*Process\_Description:*  
 Three main sources of data were used to depict bird distribution and seasonality for this data layer: 1) personal interviews with resource experts from Mississippi State University (MSU), National Park Service-Gulf Islands National Seashore (GINS), Mississippi Department of Wildlife, Fisheries, and Parks (MDWFP), U.S. Fish and Wildlife Service (USFWS), and Mississippi Department of Marine Resources (MDMR), 2) digital point data from Mississippi Museum of Natural Science (MMNS) on bald eagle and piping plover locations, and 3) numerous published and unpublished reports. The above digital and/or hardcopy sources were compiled by the

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

*Process\_Date:*

200912

*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:*

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*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:*

4011

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Area point

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

4011

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Complete chain

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

7818

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Link

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

429320

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Node,planar graph

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

5483

[Back To Index](#)*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

[Back To Index](#)*Entity\_and\_Attribute\_Information:**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, 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 (232), 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:*

232010002

*Range\_Domain\_Maximum:*

2320104391

*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:*

232000001

*Range\_Domain\_Maximum:*

232000105

*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:*

232000001

*Range\_Domain\_Maximum:*

232000219

*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 (232), 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:*

2320100002

*Range\_Domain\_Maximum:*

2320902443

*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:*

232000001

*Range\_Domain\_Maximum:*

232000219

*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 CONC field refers to "concentration," abundance, or density values of a species at a particular location. No quantitative data were available for birds, so the concentration field may contain descriptive terms such as "COMMON" or "HIGH", or a range of individuals (XX-XXX BIRDS). If no concentration information was available from any source, the field is populated with "-".

*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:*

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*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:*

bat

*Enumerated\_Domain\_Value\_Definition:*

Bat

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

bear

*Enumerated\_Domain\_Value\_Definition:*

Bear

*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:*

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:*  
 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:*  
 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:*  
 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 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.

*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 Mississippi atlas, the number is 232), 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)).

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*Distribution\_Information:*

*Distributor:*

*Contact\_Information:*

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*Contact\_Person:*

John Kaperick

*Contact\_Organization:*

NOAA, Office of Response and Restoration

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*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 the widest community of GIS/mapping users. Distribution formats include Geodatabase; ARC export, MOSS, and Shape files; and MARPLOT map folders. An ArcMap .mxd file, an ArcView 3.x ESI project, and an ESI\_Viewer product for use with the MARPLOT data are also included on the distribution CDs/DVDs 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.

[Back To Index](#)*Metadata\_Reference\_Information:**Metadata\_Date:*

20100512

*Metadata\_Review\_Date:*

20100512

*Metadata\_Contact:**Contact\_Information:**Contact\_Person\_Primary:**Contact\_Person:*

Jill Petersen

*Contact\_Organization:*

NOAA, Office of Response and Restoration

*Contact\_Position:*

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*Contact\_Address:*

*Address\_Type:*

Physical Address

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*State\_or\_Province:*

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*Contact\_Electronic\_Mail\_Address:*

Jill.Petersen@noaa.gov

*Metadata\_Standard\_Name:*

Content Standards for Digital Geospatial Metadata

*Metadata\_Standard\_Version:*

FGDC-STD-001-1998

*Metadata\_Extensions:*

*Online\_Linkage:*

[http://www.ncddc.noaa.gov/metadataresource/metadata-references/files/ncddcmdprofile\\_v2.pdf](http://www.ncddc.noaa.gov/metadataresource/metadata-references/files/ncddcmdprofile_v2.pdf)

*Profile\_Name:*

Content Specification for Metadata in the National Coastal Data Development Center's Data Catalog Version 2.0

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# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Mississippi: NESTS (Nest Points)

## 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)

##### *Originator:*

Department of Homeland Security (DHS)

##### *Originator:*

United States Coast Guard (USCG)

##### *Originator:*

Office of Incident Management and Preparedness (CG-533), Washington, D.C.

##### *Publication\_Date:*

200912

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Mississippi: NESTS (Nest Points)

##### *Edition:*

Second

##### *Geospatial\_Data\_Presentation\_Form:*

vector digital data

##### *Series\_Information:*

##### *Series\_Name:*

None

##### *Issue\_Identification:*

Mississippi

##### *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 and the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness (CG-533), Washington, D.C.

*Online\_Linkage:*

<http://response.restoration.noaa.gov/esi>

*Description:**Abstract:*

This data set contains sensitive biological resource data for gulls and terns in Mississippi. Vector points in this data set represent bird nesting 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 Mississippi. 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 Mississippi 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:**Single\_Date/Time:**Calendar\_Date:*

2009

*Currentness\_Reference:*

The data were compiled during 2008 - 2009. The currentness date for this data is 2009 and is documented in the Lineage section.

*Status:**Progress:*

Complete

*Maintenance\_and\_Update\_Frequency:*

None Scheduled

*Spatial\_Domain:**Bounding\_Coordinates:**West\_Bounding\_Coordinate:*

-89.75000

*East\_Bounding\_Coordinate:*

-88.37500

*North\_Bounding\_Coordinate:*

30.50000

*South\_Bounding\_Coordinate:*

30.12500

*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

*Theme:**Theme\_Keyword\_Thesaurus:*

NOS Data Explorer Topic Category

*Theme\_Keyword:*

Environmental Monitoring

*Place:**Place\_Keyword\_Thesaurus:*

None

*Place\_Keyword:*

Mississippi

*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 Mississippi 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 Mississippi 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 the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness (CG-533), Washington, D.C.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 9.3) and SQL SERVER(R) (version 2000). The hardware configuration is PC's with Windows Operating System (2000/XP/2003). 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: birds.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, t\_mammal.e00, and wetlands.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. Program\_Affiliation: Program\_Name: National Ocean Service Data Explorer

*Program\_Affiliation:*

*Program\_Name:*

National Ocean Service Data Explorer

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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, and maps on bird nesting and other spatial/temporal concentration areas. See also the BIRDS data layer, part of the larger Mississippi ESI database, for additional bird information. These data do not necessarily represent all nest occurrences in Mississippi. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name [n/a if not applicable]): 86, Least tern, *Sternula antillarum*; 133, Black skimmer, *Rynchops niger*; 134, Gull-billed tern, *Gelochelidon nilotica*; 135, Sandwich tern, *Thalasseus sandvicensis*; 137, Royal tern, *Thalasseus maximus*.

*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:*

G.HOPKINS, NATIONAL PARK SERVICE

*Publication\_Date:*

2009

*Title:*

DISTRIBUTION AND ABUNDANCE OF BIOLOGICAL  
AND HUMAN USE RESOURCES ON GULF ISLANDS

*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:*

2009

*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 the National Park Service - Gulf Islands National Seashore (GINS) and 2) numerous published and unpublished reports. The above digital and/or hardcopy sources were compiled by the project biologist to create the NESTS data layer. Depending on the type of source data, three general approaches are used for compiling the data layer: 1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:24,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to

the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the NESTS data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:*

200912

*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

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7600 Sand Point Way, N.E.

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*State\_or\_Province:*

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*Postal\_Code:*

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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:*

3

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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:*

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:*

NESTS.PAT

*Entity\_Type\_Definition:*

The NESTS.PAT table contains attribute information for the vector points in this data set representing bird nesting 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 (232), 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:*

2320500001

*Range\_Domain\_Maximum:*

2320500003

*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:*

232000015

*Range\_Domain\_Maximum:*

232000016

*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:*

232000001

*Range\_Domain\_Maximum:*

232000219

*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 (232), 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:*

2320100002

*Range\_Domain\_Maximum:*

2320902443

*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:*

232000001

*Range\_Domain\_Maximum:*

232000219

*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 a species at a particular location. No quantitative or qualitative information on concentrations of bird nests was available, so this field is populated with "-".

*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:*

bat

*Enumerated\_Domain\_Value\_Definition:*

Bat

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

bear

*Enumerated\_Domain\_Value\_Definition:*

Bear

*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:*

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:*  
 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:*  
 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:*  
 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 BİORES 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 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.

*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 Mississippi atlas, the number is 232), 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)).

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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 the widest community of GIS/mapping users. Distribution formats include Geodatabase; ARC export, MOSS, and Shape files; and MARPLOT map folders. An ArcMap .mxd file, an ArcView 3.x ESI project, and an ESI\_Viewer product for use with the MARPLOT data are also included on the distribution CDs/DVDs 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:*

20100512

*Metadata\_Review\_Date:*

20100512

*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

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(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

*Metadata\_Extensions:*

*Online\_Linkage:*

[http://www.ncddc.noaa.gov/metadataresource/metadata-references/files/ncddcmdprofile\\_v2.pdf](http://www.ncddc.noaa.gov/metadataresource/metadata-references/files/ncddcmdprofile_v2.pdf)

*Profile\_Name:*

Content Specification for Metadata in the National Coastal Data Development Center's Data Catalog Version 2.0

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# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Mississippi: FISH (Fish Polygons)

## 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)

##### *Originator:*

Department of Homeland Security (DHS)

##### *Originator:*

United States Coast Guard (USCG)

##### *Originator:*

Office of Incident Management and Preparedness (CG-533), Washington, D.C.

##### *Publication\_Date:*

200912

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Mississippi: FISH (Fish Polygons)

##### *Edition:*

Second

##### *Geospatial\_Data\_Presentation\_Form:*

vector digital data

##### *Series\_Information:*

##### *Series\_Name:*

None

##### *Issue\_Identification:*

Mississippi

##### *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 and the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness (CG-533), Washington, D.C.

*Online\_Linkage:*

<http://response.restoration.noaa.gov/esl>

*Description:**Abstract:*

This data set contains sensitive biological resource data for marine, estuarine, anadromous, and brackish water fish species in Mississippi. Vector polygons in this data set represent fish distribution and nursery 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 Mississippi. 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:*

1997

*Ending\_Date:*

2009

*Currentness\_Reference:*

The data were compiled during 2008 - 2009. The currentness dates for this data range from 1997 to 2009 and are documented in the Lineage section.

*Status:**Progress:*

Complete

*Maintenance\_and\_Update\_Frequency:*

None Scheduled

*Spatial\_Domain:**Bounding\_Coordinates:**West\_Bounding\_Coordinate:*

-89.75000

*East\_Bounding\_Coordinate:*

-88.37500

*North\_Bounding\_Coordinate:*

30.50000

*South\_Bounding\_Coordinate:*  
30.12500

*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

*Theme:*

*Theme\_Keyword\_Thesaurus:*  
NOS Data Explorer Topic Category

*Theme\_Keyword:*  
Environmental Monitoring

*Place:*

*Place\_Keyword\_Thesaurus:*  
None

*Place\_Keyword:*  
Mississippi

*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 Mississippi 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 Mississippi 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 the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness (CG-533), Washington, D.C.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 9.3) and SQL SERVER(R) (version 2000). The hardware configuration is PC's with Windows Operating System (2000/XP/2003). 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: birds.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, t\_mammal.e00, and wetlands.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.

*Program\_Affiliation:*

*Program\_Name:*

National Ocean Service Data Explorer

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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, and hardcopy reports for fish distribution and nursery areas. These data do not necessarily represent all fish occurrences in Mississippi. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name [n/a if not applicable]): 65, Bluefish, *Pomatomus saltatrix*; 76, Alligator gar, *Lepisosteus spatula*; 102, Atlantic sturgeon, *Acipenser oxyrinchus*; 103, Threadfin shad, *Dorosoma petenense*; 104, Striped bass, *Morone saxatilis*; 107, Spotted seatrout, *Cynoscion nebulosus*; 109, Red drum, *Sciaenops ocellatus*; 111, Southern flounder, *Paralichthys lethostigma*; 112, Gulf flounder, *Paralichthys albigutta*; 113, Bay anchovy, *Anchoa mitchilli*; 114, Florida pompano, *Trachinotus carolinus*; 116, Striped mullet, *Mugil cephalus*; 117, Pinfish, *Lagodon rhomboides*; 119, Silver perch, *Bairdiella chrysoura*; 120, Pigfish, *Orthopristis chrysoptera*; 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*; 128, Blue runner, *Caranx crysos*; 129, Atlantic thread herring, *Opisthonema oglinum*; 130, Scaled sardine, *Harengula jaguana*; 134, Cobia, *Rachycentron canadum*; 137, Sheepshead, *Archosargus probatocephalus*; 140, Ladyfish, *Elops saurus*; 142, Crevalle jack, *Caranx hippos*; 143, Tarpon, *Megalops atlanticus*; 153, Northern kingfish, *Menticirrhus saxatilis*; 163, Gizzard shad, *Dorosoma cepedianum*; 173, White mullet, *Mugil curema*; 179, Largemouth bass, *Micropterus salmoides*; 182, Bluegill, *Lepomis macrochirus*; 200, Blue catfish, *Ictalurus furcatus*;

201, Channel catfish, *Ictalurus punctatus*; 204, Redear sunfish, *Lepomis microlophus*; 206, Spotted sunfish, *Lepomis punctatus*; 213, Gulf menhaden, *Brevoortia patronus*; 214, Gulf kingfish, *Menticirrhus littoralis*; 215, Sand seatrout, *Cynoscion arenarius*; 217, Gafftopsail catfish, *Bagre marinus*; 243, Longear sunfish, *Lepomis megalotis*; 268, Silver seatrout, *Cynoscion nothus*; 269, Gulf killifish, *Fundulus grandis*; 270, Longnose killifish, *Fundulus similis*; 271, Inland silverside, *Menidia beryllina*; 273, Star drum, *Stellifer lanceolatus*; 274, Sheepshead minnow, *Cyprinodon variegatus*; 278, Little tunny, *Euthynnus alletteratus*; 281, Seatrout, *Cynoscion* sp.; 287, Hardhead catfish, *Arius felis*; 289, Skipjack herring, *Alosa chrysochloris*; 290, Striped anchovy, *Anchoa hepsetus*; 291, Shiners, *Notropis* spp.; 293, Southern hake, *Urophycis floridana*; 294, Spotted hake, *Urophycis regia*; 295, Halfbeak, *Hyporhamphus unifasciatus*; 297, Marsh killifish, *Fundulus confluentus*; 298, Saltmarsh topminnow, *Fundulus jenkinsi*; 299, Rainwater killifish, *Lucania parva*; 300, Sailfin molly, *Poecilia latipinna*; 301, Rough silverside, *Membras martinica*; 302, Gag, *Mycteroperca microlepis*; 304, Rough scad, *Trachurus lathamii*; 305, Red snapper, *Lutjanus campechanus*; 306, Gray snapper, *Lutjanus griseus*; 307, Lane snapper, *Lutjanus synagris*; 308, Rock sea bass, *Centropristis philadelphia*; 309, Spotfin mojarra, *Eucinostomus argenteus*; 310, Atlantic spadefish, *Chaetodipterus faber*; 312, Harvestfish, *Peprilus alepidotus*; 313, Gulf butterflyfish, *Peprilus burti*; 315, Blacktip shark, *Carcharhinus limbatus*; 316, Spinner shark, *Carcharhinus brevipinna*; 317, Bull shark, *Carcharhinus leucas*; 318, Atlantic sharpnose shark, *Rhizoprionodon terraenovae*; 319, Gulf sturgeon, *Acipenser oxyrinchus desotoi*; 336, Pearl darter, *Percina aurora*; 1144, Blackmouth shiner, *Notropis melanostomus*.

*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:*

D. DRENNAN, U.S. FISH AND WILDLIFE SERVICE

*Publication\_Date:*

2009

*Title:*

ABUNDANCE AND DISTRIBUTION DATA FOR  
THREATENED AND ENDANGERED FISH

*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:*

2009

*Source\_Currentness\_Reference:*

DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

K. BRUNKE, MISSISSIPPI DEPARTMENT OF WILDLIFE  
FISHERIES AND PARKS

*Publication\_Date:*

2009

*Title:*

ABUNDANCE AND DISTRIBUTION DATA FOR  
WATERFOWL

*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:*

2009

*Source\_Currentness\_Reference:*

DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

M.BRAINARD, MISSISSIPPI DEPARTMENT OF MARINE  
RESOURCES

*Publication\_Date:*

2009

*Title:*

ABUNDANCE AND DISTRIBUTION DATA FOR FISH  
AND INVERTEBRATES IN MISSISSIPPI COASTAL  
WATERS

*Geospatial\_Data\_Presentation\_Form:*

EXPERT KNOWLEDGE

*Other\_Citation\_Details:*

UNPUBLISHED

*Type\_of\_Source\_Media:*

PERSONAL COMMUNICATION

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:*

2009

*Source\_Currentness\_Reference:*

DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

M.S. PETERSON, G.L. FULLING, AND C.M. WOODLEY

*Publication\_Date:*

2003

*Title:*

STATUS AND HABITAT CHARACTERISTICS OF THE  
SALTMARSH TOPMINNOW, FUNDULUS JENKINSI, IN  
EASTERN MISSISSIPPI AND WESTERN ALABAMA  
COASTAL BAYOUS

*Geospatial\_Data\_Presentation\_Form:*

HARDCOPY TEXT

*Publication\_Information:*

*Publication\_Place:*

JACKSON, MISSISSIPPI

*Publisher:*

UNIVERSITY OF SOUTHERN MISSISSIPPI

*Other\_Citation\_Details:*

GULF AND CARIBBEAN RESEARCH VOL 15, 51-59

*Type\_of\_Source\_Media:*

online  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
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*Source\_Currentness\_Reference:*  
 DATE OF PUBLICATION  
*Source\_Citation\_Abbreviation:*  
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*Source\_Contribution:*  
 FISH INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 NOAA  
*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, MARYLAND  
*Publisher:*  
 NOAA/NATIONAL OCEAN SERVICE STRATEGIC  
 ENVIRONMENTAL ASSESSMENT DIVISION  
*Other\_Citation\_Details:*  
 ELMR REPORT NO. 11, NOAA/NOS STRATEGIC  
 ENVIRONMENTAL ASSESSMENT DIVISION, SILVER  
 SPRING, MD  
*Type\_of\_Source\_Media:*  
 paper  
*Source\_Time\_Period\_of\_Content:*  
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 1997  
*Source\_Currentness\_Reference:*  
 DATE OF PUBLICATION  
*Source\_Citation\_Abbreviation:*  
 NONE  
*Source\_Contribution:*  
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*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

NOAA, NATIONAL MARINE FISHERIES SERVICE

*Publication\_Date:*

2009

*Title:*

SPECIES OF CONCERN: SALTMARSH TOPMINNOW

*Geospatial\_Data\_Presentation\_Form:*

document

*Publication\_Information:*

*Publication\_Place:*

SILVER SPRING, MARYLAND

*Publisher:*

NMFS

*Other\_Citation\_Details:*

NMFS, NOAA, U.S.DEPT OF COMMERCE

*Online\_Linkage:*

[http://www.nmfs.noaa.gov/pr/pdfs/species/saltmarshminnow\\_highlights.pdf](http://www.nmfs.noaa.gov/pr/pdfs/species/saltmarshminnow_highlights.pdf)

*Type\_of\_Source\_Media:*

online

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:*

2009

*Source\_Currentness\_Reference:*

DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

R.J. HEISE, W.T. SLACK, S.T. ROSS, M.A. DUGO

*Publication\_Date:*

2005

*Title:*

GULF STURGEON SUMMER HABITAT USE AND FALL  
MIGRATION IN THE PASCAGOULA RIVER, MISSISSIPPI,  
USA

*Geospatial\_Data\_Presentation\_Form:*

document

*Publication\_Information:*

*Publication\_Place:*

HOBOKEN, NEW JERSEY

*Publisher:*  
WILEY-BLACKWELL

*Other\_Citation\_Details:*  
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2005

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NONE

*Source\_Contribution:*  
FISH INFORMATION

*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
S.T.ROSS, W.T. SLACK, R.J. HEISE, M.A. DUGO, H.  
ROGILLIO, B.R. BOWEN, P. MICKLE, R.W. HEARD

*Publication\_Date:*  
2009

*Title:*  
ESTUARINE AND COASTAL HABITAT USE OF GULF  
STURGEON (ACIPENSER OXYRINCHUS DESOTOI) IN  
THE NORTH-CENTRAL GULF OF MEXICO

*Geospatial\_Data\_Presentation\_Form:*  
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*Publication\_Place:*  
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2009

*Source\_Currentness\_Reference:*  
DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:*  
 NONE  
*Source\_Contribution:*  
 FISH INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 T. MANN, MISSISSIPPI DEPARTMENT OF WILDLIFE  
 FISHERIES AND PARKS  
*Publication\_Date:*  
 2009  
*Title:*  
 DISTRIBUTION AND ABUNDANCE DATA FOR  
 REPTILES IN MISSISSIPPI  
*Geospatial\_Data\_Presentation\_Form:*  
 EXPERT KNOWLEDGE  
*Other\_Citation\_Details:*  
 UNPUBLISHED  
*Type\_of\_Source\_Media:*  
 PERSONAL COMMUNICATION  
*Source\_Time\_Period\_of\_Content:*  
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*Calendar\_Date:*  
 2009  
*Source\_Currentness\_Reference:*  
 DATE OF COMMUNICATION  
*Source\_Citation\_Abbreviation:*  
 NONE  
*Source\_Contribution:*  
 FISH INFORMATION  
*Process\_Step:*  
*Process\_Description:*  
 Two main sources of data were used to depict fish distribution and seasonality for this data layer: 1) personal interviews with resource experts from Mississippi Department of Marine Resources, National Park Service, and Mississippi Department of Wildlife, Fisheries, and Parks, and 2) numerous published and unpublished reports. The above digital and/or hardcopy sources were compiled by the project biologist to create the FISH data layer. Depending on the type of source data, three general approaches are used for compiling the data layer: 1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:24,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the



participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the FISH data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:*

200912

*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:*

667

*SDTS\_Terms\_Description:*

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

Area point

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

667

*SDTS\_Terms\_Description:*

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

Complete chain

*Point\_and\_Vector\_Object\_Count:*  
 1348  
*SDTS\_Terms\_Description:*  
*SDTS\_Point\_and\_Vector\_Object\_Type:*  
 Link  
*Point\_and\_Vector\_Object\_Count:*  
 229380  
*SDTS\_Terms\_Description:*  
*SDTS\_Point\_and\_Vector\_Object\_Type:*  
 Node,planar graph  
*Point\_and\_Vector\_Object\_Count:*  
 1189

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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:*  
*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 and nursery 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 (232), 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:*

2320200002

*Range\_Domain\_Maximum:*

2320200667

*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:*

232000107

*Range\_Domain\_Maximum:*

232000134

*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:*

232000001

*Range\_Domain\_Maximum:*

232000219

*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 (232), 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:*

2320100002

*Range\_Domain\_Maximum:*

2320902443

*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:*

232000001

*Range\_Domain\_Maximum:*

232000219

*Attribute:**Attribute\_Label:*

SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

CONC

*Attribute\_Definition:*

The field CONC refers to "concentration," abundance, or density values of a species at a particular location. No quantitative data was available for fish, so the concentration field may contain descriptive terms such as "COMMON". If no concentration information was available from any source, the field is populated with "-".

*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 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 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:*  
 bat  
*Enumerated\_Domain\_Value\_Definition:*  
 Bat  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
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*Enumerated\_Domain\_Value\_Definition:*  
 Bear  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
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 Bivalve  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
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*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:*

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:*  
 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:*

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 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.

*Overview\_Description:**Entity\_and\_Attribute\_Overview:*

In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, FISH) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO\_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (for the Mississippi atlas, the number is 232), 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)).

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*Distribution\_Information:*

*Distributor:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:*

John Kaperick

*Contact\_Organization:*

NOAA, Office of Response and Restoration

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*State\_or\_Province:*

Washington

*Postal\_Code:*

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*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 the widest community of GIS/mapping users. Distribution formats include Geodatabase; ARC export, MOSS, and Shape files; and MARPLOT map folders. An ArcMap .mxd file, an ArcView 3.x ESI project, and an ESI\_Viewer product for use with the MARPLOT data are also included on the distribution CDs/DVDs 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:*

20100512

*Metadata\_Review\_Date:*

20100512

*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:*

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(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

*Metadata\_Extensions:*

*Online\_Linkage:*

[http://www.ncddc.noaa.gov/metadataresource/metadata-references/files/ncddcmdprofile\\_v2.pdf](http://www.ncddc.noaa.gov/metadataresource/metadata-references/files/ncddcmdprofile_v2.pdf)

*Profile\_Name:*

Content Specification for Metadata in the National Coastal Data Development Center's Data Catalog Version 2.0

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# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Mississippi: INVERT (Invertebrate Polygons)

## 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)

##### *Originator:*

Department of Homeland Security (DHS)

##### *Originator:*

United States Coast Guard (USCG)

##### *Originator:*

Office of Incident Management and Preparedness (CG-533), Washington, D.C.

##### *Publication\_Date:*

200912

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Mississippi: INVERT (Invertebrate Polygons)

##### *Edition:*

Second

##### *Geospatial\_Data\_Presentation\_Form:*

vector digital data

##### *Series\_Information:*

##### *Series\_Name:*

None

##### *Issue\_Identification:*

Mississippi

##### *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 and the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness (CG-533), Washington, D.C.

*Online\_Linkage:*

<http://response.restoration.noaa.gov/esi>

*Description:**Abstract:*

This data set contains sensitive biological resource data for marine, estuarine, and brackish water invertebrate species in Mississippi. 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 Mississippi. 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:*

1997

*Ending\_Date:*

2009

*Currentness\_Reference:*

The data were compiled during 2008 - 2009. The currentness dates for this data range from 1997 to 2009 and are documented in the Lineage section.

*Status:**Progress:*

Complete

*Maintenance\_and\_Update\_Frequency:*

None Scheduled

*Spatial\_Domain:**Bounding\_Coordinates:**West\_Bounding\_Coordinate:*

-89.75000

*East\_Bounding\_Coordinate:*

-88.37500



*North\_Bounding\_Coordinate:*

30.50000

*South\_Bounding\_Coordinate:*

30.12500

*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

*Theme:*

*Theme\_Keyword\_Thesaurus:*

NOS Data Explorer Topic Category

*Theme\_Keyword:*

Environmental Monitoring

*Place:*

*Place\_Keyword\_Thesaurus:*

None

*Place\_Keyword:*

Mississippi

*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 Mississippi 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 Mississippi 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 the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness (CG-533), Washington, D.C.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 9.3) and SQL SERVER(R) (version 2000). The hardware configuration is PC's with Windows Operating System (2000/XP/2003). 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: birds.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, t\_mammal.e00, and wetlands.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.

*Program\_Affiliation:*

*Program\_Name:*

National Ocean Service Data Explorer

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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, and digital data on invertebrate distribution and concentration areas. These data do not necessarily represent all invertebrate occurrences in Mississippi. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name [n/a if not applicable]): 4, Pink shrimp, *Penaeus duorarum*; 43, Eastern oyster, *Crassostrea virginica*; 44, Horseshoe crab, *Limulus polyphemus*; 49, Blue crab, *Callinectes sapidus*; 50, White shrimp, *Penaeus setiferus*; 51, Brown shrimp, *Penaeus aztecus*; 74, Stone crab, *Menippe* spp.; 82, Atlantic rangia, *Rangia cuneata*; 600, Bristled river shrimp, *Macrobrachium olfersii*.

*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:*

G.HOPKINS, NATIONAL PARK SERVICE

*Publication\_Date:*

2009

*Title:*

DISTRIBUTION AND ABUNDANCE OF BIOLOGICAL  
AND HUMAN USE RESOURCES ON GULF ISLANDS

*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:*

2009

*Source\_Currentness\_Reference:*

DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

INVERT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

M. WOODREY, MISSISSIPPI STATE UNIVERSITY

*Publication\_Date:*

2009

*Title:*

DISTRIBUTION AND ABUNDANCE OF COASTAL  
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:*  
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*Calendar\_Date:*  
 2009  
*Source\_Currentness\_Reference:*  
 DATE OF COMMUNICATION  
*Source\_Citation\_Abbreviation:*  
 NONE  
*Source\_Contribution:*  
 INVERT INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 M.BRAINARD, MISSISSIPPI DEPARTMENT OF MARINE  
 RESOURCES  
*Publication\_Date:*  
 2009  
*Title:*  
 ABUNDANCE AND DISTRIBUTION DATA FOR FISH  
 AND INVERTEBRATES IN MISSISSIPPI COASTAL  
 WATERS  
*Geospatial\_Data\_Presentation\_Form:*  
 EXPERT KNOWLEDGE  
*Other\_Citation\_Details:*  
 UNPUBLISHED

*Type\_of\_Source\_Media:*  
 PERSONAL COMMUNICATION  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
 2009  
*Source\_Currentness\_Reference:*  
 DATE OF COMMUNICATION  
*Source\_Citation\_Abbreviation:*  
 NONE  
*Source\_Contribution:*  
 INVERT INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 MISSISSIPPI DEPARTMENT OF MARINE RESOURCES  
*Publication\_Date:*  
 2004

*Title:*  
 COMMERCIAL OYSTER BEDS  
*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:*  
 2004  
*Source\_Currentness\_Reference:*  
 DATE OF PUBLICATION  
*Source\_Citation\_Abbreviation:*  
 NONE  
*Source\_Contribution:*  
 INVERT INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 NOAA  
*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, MARYLAND  
*Publisher:*  
 NOAA/NATIONAL OCEAN SERVICE STRATEGIC  
 ENVIRONMENTAL ASSESSMENT DIVISION  
*Other\_Citation\_Details:*  
 ELMR REPORT NO. 11, NOAA/NOS STRATEGIC  
 ENVIRONMENTAL ASSESSMENT DIVISION, SILVER  
 SPRING, MD  
*Type\_of\_Source\_Media:*  
 paper  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
 1997

*Source\_Currentness\_Reference:*  
 DATE OF PUBLICATION  
*Source\_Citation\_Abbreviation:*  
 NONE  
*Source\_Contribution:*  
 INVERT INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 T. MANN, MISSISSIPPI DEPARTMENT OF WILDLIFE  
 FISHERIES AND PARKS  
*Publication\_Date:*  
 2009  
*Title:*  
 DISTRIBUTION AND ABUNDANCE DATA FOR  
 REPTILES IN MISSISSIPPI  
*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:*  
 2009  
*Source\_Currentness\_Reference:*  
 DATE OF COMMUNICATION  
*Source\_Citation\_Abbreviation:*  
 NONE  
*Source\_Contribution:*  
 INVERT INFORMATION  
*Process\_Step:*  
*Process\_Description:*  
 Three main sources of data were used to depict invertebrate distribution and seasonality for this data layer: 1) personal interviews with resource experts from the Mississippi Department of Marine Resources (MDMR) and 2) digital data on commercial oyster beds provided by MDMR, and 3) numerous published and unpublished reports. The above digital and/or hardcopy sources were compiled by the project biologist to create the INVERT data layer. Depending on the type of source data, three general approaches are used for compiling the data layer: 1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:24,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source

data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the INVERT data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:*

200912

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:*

NOAA, Office of Response and Restoration

*Contact\_Person:*

Jill Petersen

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*Address\_Type:*

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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:*

675

*SDTS\_Terms\_Description:*

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

Area point

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

675

*SDTS\_Terms\_Description:*



*SDTS\_Point\_and\_Vector\_Object\_Type:*  
 Complete chain  
*Point\_and\_Vector\_Object\_Count:*  
 1276  
*SDTS\_Terms\_Description:*  
*SDTS\_Point\_and\_Vector\_Object\_Type:*  
 Link  
*Point\_and\_Vector\_Object\_Count:*  
 234448  
*SDTS\_Terms\_Description:*  
*SDTS\_Point\_and\_Vector\_Object\_Type:*  
 Node,planar graph  
*Point\_and\_Vector\_Object\_Count:*  
 1161

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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:*  
*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 (232), 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:*

2320700002

*Range\_Domain\_Maximum:*

2320700681

*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:*

232000139

*Range\_Domain\_Maximum:*

232000152

*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:*

232000001

*Range\_Domain\_Maximum:*

232000219

*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 (232), 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:*

2320100002

*Range\_Domain\_Maximum:*

2320902443

*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:*

232000001

*Range\_Domain\_Maximum:*

232000219

*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 a species at a particular location. No quantitative or qualitative information on concentrations of invertebrates was available, so this field is populated with "-".

*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 BIORIS 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:*  
bat  
*Enumerated\_Domain\_Value\_Definition:*  
Bat  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
bear  
*Enumerated\_Domain\_Value\_Definition:*  
Bear  
*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:*  
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:*  
 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:*

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:*  
 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 BIORIS 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 BIORIS 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 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.

*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 Mississippi atlas, the number is 232), 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)).

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*Distribution\_Information:*

*Distributor:*

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*Contact\_Person\_Primary:*

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John Kaperick

*Contact\_Organization:*

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*State\_or\_Province:*

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*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 the widest community of GIS/mapping users. Distribution formats include Geodatabase; ARC export, MOSS, and Shape files; and MARPLOT map folders. An ArcMap .mxd file, an ArcView 3.x ESI project, and an ESI\_Viewer product for use with the MARPLOT data are also included on the distribution CDs/DVDs 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.

[Back To Index](#)*Metadata\_Reference\_Information:**Metadata\_Date:*

20100512

*Metadata\_Review\_Date:*

20100512

*Metadata\_Contact:**Contact\_Information:**Contact\_Person\_Primary:**Contact\_Person:*

Jill Petersen

*Contact\_Organization:*

NOAA, Office of Response and Restoration

*Contact\_Position:*

GIS Manager

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*State\_or\_Province:*

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*Postal\_Code:*

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Jill.Petersen@noaa.gov

*Metadata\_Standard\_Name:*

Content Standards for Digital Geospatial Metadata

*Metadata\_Standard\_Version:*

FGDC-STD-001-1998

*Metadata\_Extensions:*

*Online\_Linkage:*

[http://www.ncddc.noaa.gov/metadatarresource/metadata-references/files/ncddcmdprofile\\_v2.pdf](http://www.ncddc.noaa.gov/metadatarresource/metadata-references/files/ncddcmdprofile_v2.pdf)

*Profile\_Name:*

Content Specification for Metadata in the National Coastal Data Development Center's Data Catalog Version 2.0

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# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Mississippi: REPTILES (Reptile Polygons)

## 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)

##### *Originator:*

Department of Homeland Security (DHS)

##### *Originator:*

United States Coast Guard (USCG)

##### *Originator:*

Office of Incident Management and Preparedness (CG-533), Washington, D.C.

##### *Publication\_Date:*

200912

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Mississippi: REPTILES (Reptile Polygons)

##### *Edition:*

Second

##### *Geospatial\_Data\_Presentation\_Form:*

vector digital data

##### *Series\_Information:*

##### *Series\_Name:*

None

##### *Issue\_Identification:*

Mississippi

##### *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 and the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness (CG-533), Washington, D.C.

*Online\_Linkage:*

<http://response.restoration.noaa.gov/esi>

*Description:**Abstract:*

This data set contains sensitive biological resource data for sea turtles, estuarine turtles, and gopher tortoise in Mississippi. Vector polygons in this data set represent turtle distribution, nesting areas, and potential burrow locations. 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 Mississippi. 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:*

2005

*Ending\_Date:*

2009

*Currentness\_Reference:*

The data were compiled during 2008 - 2009. The currentness dates for this data range from 2005 to 2009 and are documented in the Lineage section.

*Status:**Progress:*

Complete

*Maintenance\_and\_Update\_Frequency:*

None Scheduled

*Spatial\_Domain:**Bounding\_Coordinates:**West\_Bounding\_Coordinate:*

-89.75000

*East\_Bounding\_Coordinate:*

-88.37500

*North\_Bounding\_Coordinate:*

30.50000

*South\_Bounding\_Coordinate:*

30.12500

*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

*Theme:*

*Theme\_Keyword\_Thesaurus:*

NOS Data Explorer Topic Category

*Theme\_Keyword:*

Environmental Monitoring

*Place:*

*Place\_Keyword\_Thesaurus:*

None

*Place\_Keyword:*

Mississippi

*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 Mississippi 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 Mississippi 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 the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness (CG-533), Washington, D.C.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 9.3) and SQL SERVER(R) (version 2000). The hardware configuration is PC's with Windows Operating System (2000/XP/2003). 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: birds.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, t\_mammal.e00, and wetlands.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.

*Program\_Affiliation:*

*Program\_Name:*

National Ocean Service Data Explorer

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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 turtle distribution, nesting areas, and burrow locations. These data do not necessarily represent all reptile occurrences in Mississippi. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name [n/a if not applicable]): 3, American alligator, *Alligator mississippiensis*; 4, Kemp's ridley sea turtle, *Lepidochelys kempii*; 5, Leatherback sea turtle, *Dermochelys coriacea*; 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*; 19, Alabama red-bellied turtle, *Pseudemys alabamensis*; 21, Gopher tortoise, *Gopherus polyphemus*; 22, Yellow-blotched map turtle, *Graptemys flavimaculata*; 180, Alligator snapping turtle, *Macrochelys temminckii*; 193, One-toed amphiuma, *Amphiuma pholeter*; 194, Ringed map turtle, *Graptemys oculifera*.

*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:*

G.HOPKINS, NATIONAL PARK SERVICE

*Publication\_Date:*

2009

*Title:*

DISTRIBUTION AND ABUNDANCE OF BIOLOGICAL  
AND HUMAN USE RESOURCES ON GULF ISLANDS

*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:*

2009

*Source\_Currentness\_Reference:*

DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

REPTILES INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

J. CLARK, MISSISSIPPI DEPARTMENT OF MARINE  
RESOURCES

*Publication\_Date:*

2009

*Title:*

ABUNDANCE AND DISTRIBUTION DATA FOR

WILDLIFE 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:*  
2009  
*Source\_Currentness\_Reference:*  
DATE OF COMMUNICATION  
*Source\_Citation\_Abbreviation:*  
NONE  
*Source\_Contribution:*  
REPTILES INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
L.LACLAIRE, U.S. FISH AND WILDLIFE SERVICE  
*Publication\_Date:*  
2009  
*Title:*  
DISTRIBUTION OF THREATENED AND ENDANGERED  
SPECIES IN MISSISSIPPI  
*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:*  
2009  
*Source\_Currentness\_Reference:*  
DATE OF COMMUNICATION  
*Source\_Citation\_Abbreviation:*  
NONE  
*Source\_Contribution:*  
REPTILES INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*

T. MANN, MISSISSIPPI DEPARTMENT OF WILDLIFE  
FISHERIES AND PARKS

*Publication\_Date:*

2009

*Title:*

DISTRIBUTION AND ABUNDANCE DATA FOR  
REPTILES IN MISSISSIPPI

*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:*

2009

*Source\_Currentness\_Reference:*

DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

REPTILES INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

U.S. FISH AND WILDLIFE SERVICE

*Publication\_Date:*

2008

*Title:*

HERPS OF GRAND BAY NATIONAL WILDLIFE REFUGE

*Geospatial\_Data\_Presentation\_Form:*

tabular digital data

*Online\_Linkage:*

<http://www.fws.gov/grandbay/herps.html>

*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:*

## REPTILES INFORMATION

*Source\_Information:**Source\_Citation:**Citation\_Information:**Originator:*

U.S. FISH AND WILDLIFE SERVICE

*Publication\_Date:*

2009

*Title:*

GOPHER TORTOISE SOIL CLASSIFICATION

*Geospatial\_Data\_Presentation\_Form:*

vector digital data

*Publication\_Information:**Publication\_Place:*

JACKSON, MISSISSIPPI

*Publisher:*

U.S. FISH AND WILDLIFE SERVICES

*Other\_Citation\_Details:*

USFWS, JACKSON FIELD OFFICE

*Type\_of\_Source\_Media:*

online

*Source\_Time\_Period\_of\_Content:**Time\_Period\_Information:**Single\_Date/Time:**Calendar\_Date:*

2005

*Source\_Currentness\_Reference:*

DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

REPTILES INFORMATION

*Process\_Step:**Process\_Description:*

Three main sources of data were used to depict reptile distribution and seasonality for this data layer: 1) personal interviews with resource experts from the U.S. Fish and Wildlife Service (USFWS) National Park Service - Gulf Islands National Seashore (GINS), Mississippi Department of Wildlife, Fisheries, and Parks (MDWFP), and Mississippi Department of Marine Resources (MDMR) 2) digital soils data provided by USFWS for gopher tortoise burrows, and 3) numerous published and unpublished reports. The above digital and/or hardcopy sources were compiled by the project biologist to create the REPTILES data layer. Depending on the type of source data, three general approaches are used for compiling the data layer: 1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:24,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional

information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the REPTILES data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:*

200912

*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:*

5331

*SDTS\_Terms\_Description:*

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

Area point

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

5331

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Complete chain

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

10525

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Link

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

667445

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Node, planar graph

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

8100

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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:**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 distribution, nesting areas, and potential burrow locations. 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 (232), 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:*

2320600002

*Range\_Domain\_Maximum:*

2320606006

*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:*

232000157

*Range\_Domain\_Maximum:*

232000212

*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:*

232000001

*Range\_Domain\_Maximum:*

232000219

*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 (232), 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:*

2320100002

*Range\_Domain\_Maximum:*

2320902443

*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:*

232000001

*Range\_Domain\_Maximum:*

232000219

*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 a species at a particular location. No quantitative count data were available for reptiles and amphibians, so the field may contain descriptive terms, such as "LOW", "LOW-PROBABILITY", or "MED-HIGH-PROBABILITY" to describe the relative abundance of particular species at specific locations. In cases where no concentration information was available from any source, the field is populated with "-".

*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:*

bat

*Enumerated\_Domain\_Value\_Definition:*

Bat

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

bear

*Enumerated\_Domain\_Value\_Definition:*

Bear

*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:*

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:*

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:*

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:*

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 BIORIS 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 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.

*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 Mississippi atlas, the number is 232), 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/esl\\_guidelines](http://response.restoration.noaa.gov/esl_guidelines)).

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*Distribution\_Information:*

*Distributor:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:*

John Kaperick

*Contact\_Organization:*

NOAA, Office of Response and Restoration

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*Address\_Type:*

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*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 the widest community of GIS/mapping users. Distribution formats include Geodatabase; ARC export, MOSS, and Shape files; and MARPLOT map folders. An ArcMap .mxd file, an ArcView 3.x ESI project, and an ESI\_Viewer product for use with the MARPLOT data are also included on the distribution CDs/DVDs 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:*

20100512

*Metadata\_Review\_Date:*

20100512

*Metadata\_Contact:**Contact\_Information:**Contact\_Person\_Primary:**Contact\_Person:*

Jill Petersen

*Contact\_Organization:*

NOAA, Office of Response and Restoration

*Contact\_Position:*

GIS Manager

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*State\_or\_Province:*

Washington

*Postal\_Code:*

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*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

*Metadata\_Extensions:*

*Online\_Linkage:*

[http://www.ncddc.noaa.gov/metadataresource/metadata-references/files/ncddcmdprofile\\_v2.pdf](http://www.ncddc.noaa.gov/metadataresource/metadata-references/files/ncddcmdprofile_v2.pdf)

*Profile\_Name:*

Content Specification for Metadata in the National Coastal Data Development Center's Data Catalog Version 2.0

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# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Mississippi: M\_MAMMAL (Marine Mammal Polygons)

## 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)

##### *Originator:*

Department of Homeland Security (DHS)

##### *Originator:*

United States Coast Guard (USCG)

##### *Originator:*

Office of Incident Management and Preparedness (CG-533), Washington, D.C.

##### *Publication\_Date:*

200912

##### *Title:*

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

##### *Edition:*

Second

##### *Geospatial\_Data\_Presentation\_Form:*

vector digital data

##### *Series\_Information:*

##### *Series\_Name:*

None

##### *Issue\_Identification:*

Mississippi

##### *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 and the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness (CG-533), Washington, D.C.

*Online\_Linkage:*

<http://response.restoration.noaa.gov/esi>

*Description:**Abstract:*

This data set contains sensitive biological resource data for dolphin and manatees in Mississippi. Vector polygons in this data set represent marine mammal 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 Mississippi. 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:**Single\_Date/Time:**Calendar\_Date:*

2009

*Currentness\_Reference:*

The data were compiled during 2008 - 2009. The currentness date for this data is 2009 and is documented in the Lineage section.

*Status:**Progress:*

Complete

*Maintenance\_and\_Update\_Frequency:*

None Scheduled

*Spatial\_Domain:**Bounding\_Coordinates:**West\_Bounding\_Coordinate:*

-89.75000

*East\_Bounding\_Coordinate:*

-88.37500

*North\_Bounding\_Coordinate:*

30.50000

*South\_Bounding\_Coordinate:*  
30.12500

*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

*Theme:*

*Theme\_Keyword\_Thesaurus:*  
NOS Data Explorer Topic Category

*Theme\_Keyword:*  
Environmental Monitoring

*Place:*

*Place\_Keyword\_Thesaurus:*  
None

*Place\_Keyword:*  
Mississippi

*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 Mississippi 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 Mississippi 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 the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness (CG-533), Washington, D.C.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 9.3) and SQL SERVER(R) (version 2000). The hardware configuration is PC's with Windows Operating System (2000/XP/2003). 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: birds.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, t\_mammal.e00, and wetlands.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.

*Program\_Affiliation:*

*Program\_Name:*

National Ocean Service Data Explorer

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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, and maps on marine mammal distribution and concentration areas. These data do not necessarily represent all marine mammal occurrences in Mississippi. 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*; 21, Atlantic spotted dolphin, *Stenella plagiodon*.

*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:*

G.HOPKINS, NATIONAL PARK SERVICE

*Publication\_Date:*

2009

*Title:*

DISTRIBUTION AND ABUNDANCE OF BIOLOGICAL  
AND HUMAN USE RESOURCES ON GULF ISLANDS

*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:*

2009

*Source\_Currentness\_Reference:*

DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

M\_MAMMAL INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

K. MULLIN, NATIONAL MARINE FISHERIES SERVICE

*Publication\_Date:*

2009

*Title:*

ABUNDANCE AND DISTRIBUTION DATA FOR MARINE  
MAMMALS IN MISSISSIPPI WATERS

*Geospatial\_Data\_Presentation\_Form:*

EXPERT KNOWLEDGE

*Other\_Citation\_Details:*

UNPUBLISHED

*Type\_of\_Source\_Media:*

PERSONAL COMMUNICATION

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:*  
 2009  
*Source\_Currentness\_Reference:*  
 DATE OF COMMUNICATION  
*Source\_Citation\_Abbreviation:*  
 NONE  
*Source\_Contribution:*  
 M\_MAMMAL INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 T. MANN, MISSISSIPPI DEPARTMENT OF WILDLIFE  
 FISHERIES AND PARKS  
*Publication\_Date:*  
 2009  
*Title:*  
 DISTRIBUTION AND ABUNDANCE DATA FOR  
 REPTILES IN MISSISSIPPI  
*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:*  
 2009  
*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 the National Park Service, Mississippi Department of Marine Resources, Dauphin Island Sea Lab, and National Marine Fisheries Service, and 2) numerous 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 compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the M\_MAMMAL data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:*

200912

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:*

NOAA, Office of Response and Restoration

*Contact\_Person:*

Jill Petersen

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*Address\_Type:*

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*State\_or\_Province:*

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*Postal\_Code:*

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*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:*

579

*SDTS\_Terms\_Description:*

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

Area point

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

579

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Complete chain

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

1123

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Link

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

218176

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Node, planar graph

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

1049

[Back To Index](#)*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

[Back To Index](#)*Entity\_and\_Attribute\_Information:**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 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 (232), 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:*

2320400002

*Range\_Domain\_Maximum:*

2320400600

*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:*

232000153

*Range\_Domain\_Maximum:*

232000156

*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:*

232000001

*Range\_Domain\_Maximum:*

232000219

*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 (232), 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:*

2320100002

*Range\_Domain\_Maximum:*

2320902443

*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:*

232000001

*Range\_Domain\_Maximum:*

232000219

*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 a species at a particular location. No quantitative or qualitative information on concentrations of marine mammals was available, so this field is populated with "-".

*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 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:*

bat

*Enumerated\_Domain\_Value\_Definition:*

Bat

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

bear

*Enumerated\_Domain\_Value\_Definition:*

Bear

*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:*

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:*

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:*  
 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:*

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 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.

*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 Mississippi atlas, the number is 232), 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)).

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*Distributor:*

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John Kaperick

*Contact\_Organization:*

NOAA, Office of Response and Restoration

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*State\_or\_Province:*

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*Postal\_Code:*

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*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 the widest community of GIS/mapping users. Distribution formats include Geodatabase; ARC export, MOSS, and Shape files; and MARPLOT map folders. An ArcMap .mxd file, an ArcView 3.x ESI project, and an ESI\_Viewer product for use with the MARPLOT data are also included on the distribution CDs/DVDs 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.

[Back To Index](#)*Metadata\_Reference\_Information:**Metadata\_Date:*

20100512

*Metadata\_Review\_Date:*

20100512

*Metadata\_Contact:**Contact\_Information:**Contact\_Person\_Primary:**Contact\_Person:*

Jill Petersen

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*Metadata\_Standard\_Name:*

Content Standards for Digital Geospatial Metadata

*Metadata\_Standard\_Version:*

FGDC-STD-001-1998

*Metadata\_Extensions:*

*Online\_Linkage:*

[http://www.ncddc.noaa.gov/metadataresource/metadata-references/files/ncddcmdprofile\\_v2.pdf](http://www.ncddc.noaa.gov/metadataresource/metadata-references/files/ncddcmdprofile_v2.pdf)

*Profile\_Name:*

Content Specification for Metadata in the National Coastal Data Development Center's Data Catalog Version 2.0

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# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Mississippi: T\_MAMMAL (Terrestrial Mammal Polygons)

## 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)

##### *Originator:*

Department of Homeland Security (DHS)

##### *Originator:*

United States Coast Guard (USCG)

##### *Originator:*

Office of Incident Management and Preparedness (CG-533), Washington, D.C.

##### *Publication\_Date:*

200912

##### *Title:*

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

##### *Edition:*

Second

##### *Geospatial\_Data\_Presentation\_Form:*

vector digital data

##### *Series\_Information:*

##### *Series\_Name:*

None

##### *Issue\_Identification:*

Mississippi

##### *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 and the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness (CG-533), Washington, D.C.

*Online\_Linkage:*

<http://response.restoration.noaa.gov/esi>

*Description:**Abstract:*

This data set contains sensitive biological resource data for Louisiana black bear, Northern raccoon, river otter, rice rat, Eastern pipistrel, and muskrat in Mississippi. 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 Mississippi. 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:**Single\_Date/Time:**Calendar\_Date:*

2009

*Currentness\_Reference:*

The data were compiled during 2008 - 2009. The currentness date for this data is 2009 and is documented in the Lineage section.

*Status:**Progress:*

Complete

*Maintenance\_and\_Update\_Frequency:*

None Scheduled

*Spatial\_Domain:**Bounding\_Coordinates:**West\_Bounding\_Coordinate:*

-89.75000

*East\_Bounding\_Coordinate:*

-88.37500

*North\_Bounding\_Coordinate:*

30.50000

*South\_Bounding\_Coordinate:*  
30.12500

*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

*Theme:*

*Theme\_Keyword\_Thesaurus:*  
NOS Data Explorer Topic Category

*Theme\_Keyword:*  
Environmental Monitoring

*Place:*

*Place\_Keyword\_Thesaurus:*  
None

*Place\_Keyword:*  
Mississippi

*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 Mississippi 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 Mississippi 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 the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness (CG-533), Washington, D.C.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 9.3) and SQL SERVER(R) (version 2000). The hardware configuration is PC's with Windows Operating System (2000/XP/2003). 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: birds.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, t\_mammal.e00, and wetlands.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.

*Program\_Affiliation:*

*Program\_Name:*

National Ocean Service Data Explorer

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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 survey data on terrestrial mammal distribution. These data do not necessarily represent all terrestrial mammal occurrences in Mississippi. 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*; 44, Common raccoon, *Procyon lotor*; 102, Louisiana black bear, *Ursus americanus luteolus*; 266, Marsh oryzomys, *Oryzomys palustris*; 267, Eastern pipistrelle, *Pipistrellus subflavus*.

*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:*

B. YOUNG, MISSISSIPPI DEPARTMENT OF WILDLIFE  
FISHERIES AND PARKS

*Publication\_Date:*

2009

*Title:*

DISTRIBUTION DATA FOR BLACK BEAR IN  
MISSISSIPPI

*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:*

2009

*Source\_Currentness\_Reference:*

DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

T\_MAMMAL INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

G.HOPKINS, NATIONAL PARK SERVICE

*Publication\_Date:*

2009

*Title:*

DISTRIBUTION AND ABUNDANCE OF BIOLOGICAL  
AND HUMAN USE RESOURCES ON GULF ISLANDS

*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:*  
2009  
*Source\_Currentness\_Reference:*  
DATE OF COMMUNICATION  
*Source\_Citation\_Abbreviation:*  
NONE  
*Source\_Contribution:*  
T\_MAMMAL INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
J. CLARK, MISSISSIPPI DEPARTMENT OF MARINE  
RESOURCES  
*Publication\_Date:*  
2009  
*Title:*  
ABUNDANCE AND DISTRIBUTION DATA FOR  
WILDLIFE 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:*  
2009  
*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) personal interviews with resource experts from the Mississippi Department of Wildlife, Fisheries, and Parks, National Park Service - Gulf Island National Seashore (GINS), and U.S. Fish and Wildlife Service (USFWS) and 2) numerous published and unpublished reports. The above digital and/or hardcopy sources were compiled by the project biologist to create the T\_MAMMAL data layer. Depending on the type of source data, three general approaches are used for compiling the data layer: 1) information gathered during initial



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

*Process\_Date:*

200912

*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:*

2332

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:*  
 Area point  
*Point\_and\_Vector\_Object\_Count:*  
 2332  
*SDTS\_Terms\_Description:*  
*SDTS\_Point\_and\_Vector\_Object\_Type:*  
 Complete chain  
*Point\_and\_Vector\_Object\_Count:*  
 3391  
*SDTS\_Terms\_Description:*  
*SDTS\_Point\_and\_Vector\_Object\_Type:*  
 Link  
*Point\_and\_Vector\_Object\_Count:*  
 230375  
*SDTS\_Terms\_Description:*  
*SDTS\_Point\_and\_Vector\_Object\_Type:*  
 Node, planar graph  
*Point\_and\_Vector\_Object\_Count:*  
 2987

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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:*  
*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 (232), 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:*

2320900002

*Range\_Domain\_Maximum:*

2320902443

*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:*

232000213

*Range\_Domain\_Maximum:*

232000219

*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:*

232000001

*Range\_Domain\_Maximum:*

232000219

*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 (232), 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:*

2320100002

*Range\_Domain\_Maximum:*

2320902443

*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:*

232000001

*Range\_Domain\_Maximum:*

232000219

*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 a species at a particular location. No quantitative or qualitative information on concentrations of terrestrial mammals was available, so this field is populated with "-".

*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:*

bat

*Enumerated\_Domain\_Value\_Definition:*

Bat

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

bear

*Enumerated\_Domain\_Value\_Definition:*

Bear

*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:*

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:*

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:*

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:*

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 BORES 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 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.

*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 Mississippi atlas, the number is 232), 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/esl\\_guidelines](http://response.restoration.noaa.gov/esl_guidelines)).

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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 the widest community of GIS/mapping users. Distribution formats include Geodatabase; ARC export, MOSS, and Shape files; and MARPLOT map folders. An ArcMap .mxd file, an ArcView 3.x ESI project, and an ESI\_Viewer product for use with the MARPLOT data are also included on the distribution CDs/DVDs 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:*

20100512

*Metadata\_Review\_Date:*

20100512

*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

*Metadata\_Extensions:*

*Online\_Linkage:*

[http://www.ncddc.noaa.gov/metadataresource/metadata-references/files/ncddcmdprofile\\_v2.pdf](http://www.ncddc.noaa.gov/metadataresource/metadata-references/files/ncddcmdprofile_v2.pdf)

*Profile\_Name:*

Content Specification for Metadata in the National Coastal Data Development Center's Data Catalog Version 2.0

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# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Mississippi: HABITATS (Habitat Polygons)

## 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)

##### *Originator:*

Department of Homeland Security (DHS)

##### *Originator:*

United States Coast Guard (USCG)

##### *Originator:*

Office of Incident Management and Preparedness (CG-533), Washington, D.C.

##### *Publication\_Date:*

200912

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Mississippi: HABITATS (Habitat Polygons)

##### *Edition:*

Second

##### *Geospatial\_Data\_Presentation\_Form:*

vector digital data

##### *Series\_Information:*

##### *Series\_Name:*

None

##### *Issue\_Identification:*

Mississippi

##### *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 and the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness (CG-533), Washington, D.C.

*Online\_Linkage:*

<http://response.restoration.noaa.gov/esi>

*Description:**Abstract:*

This data set contains sensitive biological resource data for submerged aquatic vegetation (seagrass) and inshore/offshore artificial reefs in Mississippi. Vector polygons in this data set represent seagrass and artificial reef 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 Mississippi. 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:*

2005

*Ending\_Date:*

2009

*Currentness\_Reference:*

The data were compiled during 2008 - 2009. The currentness dates for this data range from 2005 to 2009 and are documented in the Lineage section.

*Status:**Progress:*

Complete

*Maintenance\_and\_Update\_Frequency:*

None Scheduled

*Spatial\_Domain:**Bounding\_Coordinates:**West\_Bounding\_Coordinate:*

-89.75000

*East\_Bounding\_Coordinate:*

-88.37500



*North\_Bounding\_Coordinate:*

30.50000

*South\_Bounding\_Coordinate:*

30.12500

*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

*Theme:*

*Theme\_Keyword\_Thesaurus:*

NOS Data Explorer Topic Category

*Theme\_Keyword:*

Environmental Monitoring

*Place:*

*Place\_Keyword\_Thesaurus:*

None

*Place\_Keyword:*

Mississippi

*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 Mississippi 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 Mississippi 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 the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness (CG-533), Washington, D.C.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 9.3) and SQL SERVER(R) (version 2000). The hardware configuration is PC's with Windows Operating System (2000/XP/2003). 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: birds.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, t\_mammal.e00, and wetlands.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.

*Program\_Affiliation:*

*Program\_Name:*

National Ocean Service Data Explorer

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*Data\_Quality\_Information:*

*Attribute\_Accuracy:*

*Attribute\_Accuracy\_Report:*

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a

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

*Logical\_Consistency\_Report:*

A multi-stage error checking process, described in the above Attribute\_Accuracy\_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary node, etc.), and SQL SERVER(R) to ARC/INFO(R) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resources at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

*Completeness\_Report:*

These data represent a synthesis of digital data on seagrass and artificial reef distribution. These data do not necessarily represent all habitat occurrences in Mississippi. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name [n/a if not applicable]): 85, Seagrass, 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:*

C. MAY

*Publication\_Date:*

2005

*Title:*

SEAGRASS2005

*Geospatial\_Data\_Presentation\_Form:*

vector digital data

*Publication\_Information:*

*Publication\_Place:*

MOSS POINT, MISSISSIPPI

*Publisher:*

GRAND BAY NERR, MISSISSIPPI DEPARTMENT  
OF MARINE RESOURCES

*Type\_of\_Source\_Media:*

EMAIL

*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:*

HABITATS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

G.HOPKINS, NATIONAL PARK SERVICE

*Publication\_Date:*

2009

*Title:*

DISTRIBUTION AND ABUNDANCE OF BIOLOGICAL  
AND HUMAN USE RESOURCES ON GULF ISLANDS

*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:*  
 2009  
*Source\_Currentness\_Reference:*  
 DATE OF COMMUNICATION  
*Source\_Citation\_Abbreviation:*  
 NONE  
*Source\_Contribution:*  
 HABITATS INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 M. WOODREY, MISSISSIPPI STATE UNIVERSITY  
*Publication\_Date:*  
 2009  
*Title:*  
 DISTRIBUTION AND ABUNDANCE OF COASTAL  
 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:*  
 2009  
*Source\_Currentness\_Reference:*  
 DATE OF COMMUNICATION  
*Source\_Citation\_Abbreviation:*  
 NONE  
*Source\_Contribution:*  
 HABITATS INFORMATION  
*Process\_Step:*  
*Process\_Description:*  
 Three main sources of data were used to depict habitat distribution and seasonality for this data layer: 1) personal communication with National Park Service - Gulf Islands National Seashore, 2) digital data depicting seagrass polygons from Grand Bay National Estuarine Research Reserve, and 3) digital data depicting artificial reef polygons from Mississippi Department of Marine Resources (MDMR). The above digital and/or hardcopy sources were compiled by the project biologist to create the HABITATS data layer. Depending on the type of source data, three general approaches are used for compiling the data layer: 1) information gathered

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

*Process\_Date:*

200912

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:*

NOAA, Office of Response and Restoration

*Contact\_Person:*

Jill Petersen

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*Address\_Type:*

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*State\_or\_Province:*

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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:*

28

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:*  
 Area point  
*Point\_and\_Vector\_Object\_Count:*  
 28  
*SDTS\_Terms\_Description:*  
*SDTS\_Point\_and\_Vector\_Object\_Type:*  
 Complete chain  
*Point\_and\_Vector\_Object\_Count:*  
 150  
*SDTS\_Terms\_Description:*  
*SDTS\_Point\_and\_Vector\_Object\_Type:*  
 Link  
*Point\_and\_Vector\_Object\_Count:*  
 61250  
*SDTS\_Terms\_Description:*  
*SDTS\_Point\_and\_Vector\_Object\_Type:*  
 Node, planar graph  
*Point\_and\_Vector\_Object\_Count:*  
 148

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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:*  
*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 seagrass and artificial reef

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 (232), 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:*

2320300002

*Range\_Domain\_Maximum:*

2320300029

*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:*

232000135

*Range\_Domain\_Maximum:*

232000138

*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:*

232000001

*Range\_Domain\_Maximum:*

232000219

*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 (232), 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:*

2320100002

*Range\_Domain\_Maximum:*

2320902443

*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:*

232000001

*Range\_Domain\_Maximum:*

232000219

*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 seagrass was available, so this field is populated with "-".

*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:*

bat

*Enumerated\_Domain\_Value\_Definition:*

Bat

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

bear

*Enumerated\_Domain\_Value\_Definition:*

Bear

*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:*

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:*

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:*

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:*

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 BIORIS 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 = interbreeding; 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 BIORIS 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 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.

*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 Mississippi atlas, the number is 232), 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)).

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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 the widest community of GIS/mapping users. Distribution formats include Geodatabase; ARC export, MOSS, and Shape files; and MARPLOT map folders. An ArcMap .mxd file, an ArcView 3.x ESI project, and an ESI\_Viewer product for use with the MARPLOT data are also included on the distribution CDs/DVDs 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:*

20100512

*Metadata\_Review\_Date:*

20100512

*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

*Metadata\_Extensions:*

*Online\_Linkage:*

[http://www.ncddc.noaa.gov/metadataresource/metadata-references/files/ncddcmdprofile\\_v2.pdf](http://www.ncddc.noaa.gov/metadataresource/metadata-references/files/ncddcmdprofile_v2.pdf)

*Profile\_Name:*

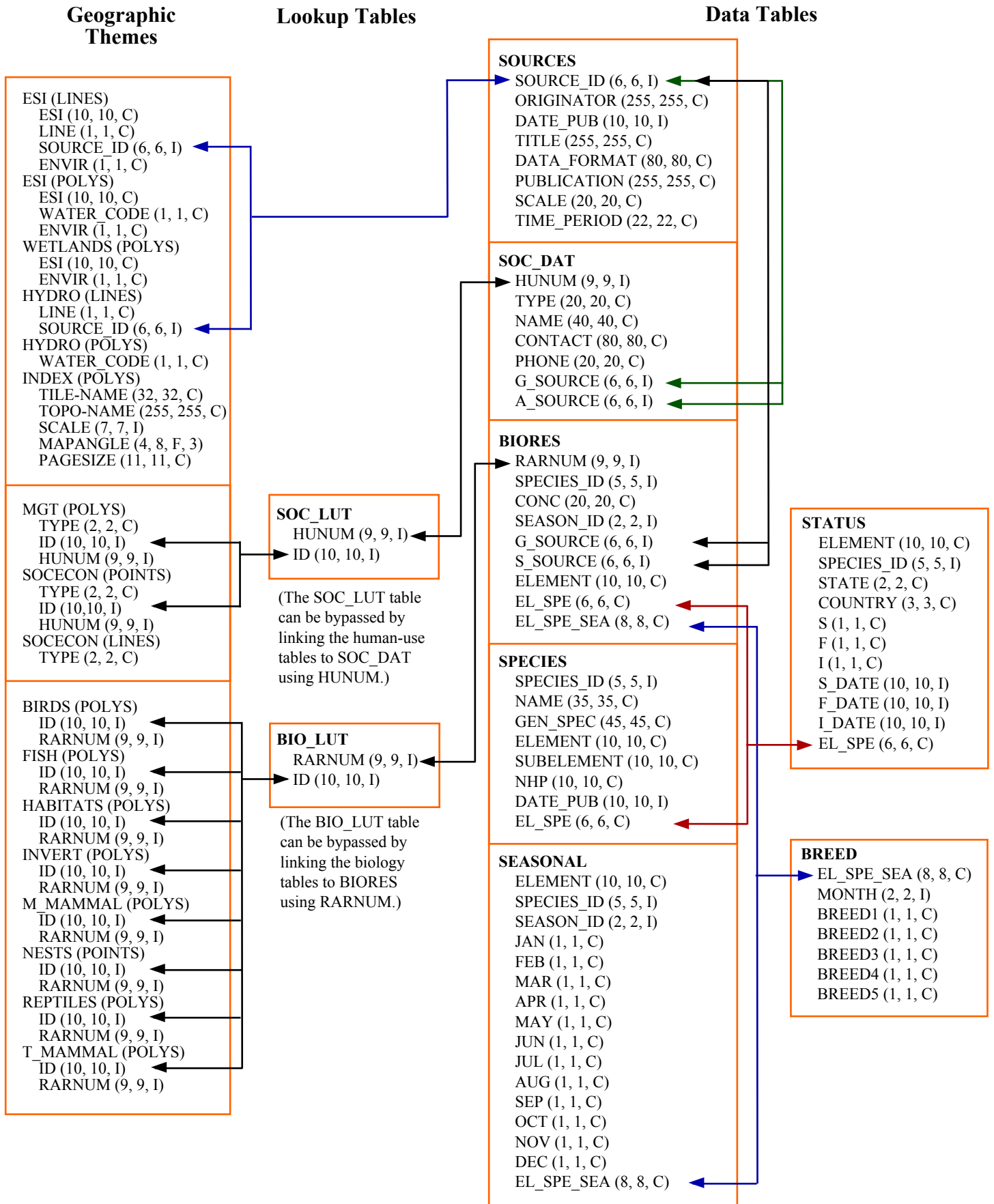
Content Specification for Metadata in the National Coastal Data Development Center's Data Catalog Version 2.0

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# Mississippi ESI

## Entity Relationship Diagram for the Relational Data Tables

Relationships between spatial data layers and relational data tables



## Mississippi ESI

# Entity Relationship Diagram for the Desktop/Flat File Approach

Relationships between spatial data layers and desktop data tables

