Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Mississippi: HYDRO (Hydrography 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)
- Department of Homeland Security (DHS)
- United States Coast Guard (USCG)
- 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:

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

**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)
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

**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

---

**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

---

**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
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).

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.

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.ncdcd.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

Back To Index
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 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:**

**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_BoundingCoordinate:**
-89.75000
**East_BoundingCoordinate:**
-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:
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

**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 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

Mississippi: ESI
MISSISSIPPI DEPARTMENT OF INFORMATION TECHNOLOGY SERVICES

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:
  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: ESI

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:
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 Auxiliary, 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 aerial photographs.
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:
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        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:
        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

Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Geographic:
Latitude_Resolution: 0.0000001
Longitude_Resolution: 0.0000001
Geographic_Coordinate_Units:
Decimal degrees

Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257222

Entity_and_Attribute_Information:
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
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:
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
    Enumerated_Domain:
        Enumerated_Domain_Value:
            10D
        Enumerated_Domain_Value_Definition:
            Scrub-shrub Wetlands
        Enumerated_Domain_Value_Definition_Source:
            NOAA ESI Guidelines
    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
        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

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).

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:
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_orProvince: Washington

Postal_Code: 98115-6349

Contact_Voice_Telephone:
Contact Facsimile Telephone:
(206) 526-6944
(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:

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

**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:**

**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_BoundingCoordinate:**
-89.75000

**East_BoundingCoordinate:**
-88.37500

**North_BoundingCoordinate:**
30.50000

**South_BoundingCoordinate:**
30.12500
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

**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:**
one

**Source_Time_Period_of_Content:**

**Time_Period_Information:**

**Range_of_Dates/Times:**

**Beginning_Date:**
1988
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: NOAA, Office of Response and Restoration
      Contact_Person: Jill Petersen
    Contact_Address:
      Address_Type: Physical address
      Address: 7600 Sand Point Way, N.E.
      City: Seattle
      State_or_Province: Washington
      Postal_Code: 98115-6349
    Contact_Voice_Telephone: (206) 526-6944
    Contact_Facsimile_Telephone: (206) 526-6329
    Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

Spatial_Data_Organization_Information:
  Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
  SDTS_Terms_Description:
    SDTS_Point_and_Vector_Object_Type:
      GT-polygon composed of chains
    Point_and_Vector_Object_Count:
      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

Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Geographic:
      Latitude_Resolution:
        0.0000001
      Longitude_Resolution:
        0.0000001
    Geographic_Coordinate_Units:
      Decimal degrees
  Geodetic_Model:
    Horizontal_Datum_Name:
      North American Datum of 1983
    Ellipsoid_Name:
      Geodetic Reference System 80
    Semi-major_Axis:
      6378137.000000
    Denominator_of_Flattening_Ratio:
      298.257222

Entity_and_Attribute_Information:
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).
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.

Back To Index
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_orProvince:
        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:
    Profile_Name:
        Content Specification for Metadata in the National Coastal Data Development Center's Data Catalog Version 2.0
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

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.
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:
(206) 526-6944
Contact Facsimile Telephone:
(206) 526-6329
Contact Electronic Mail Address:
Jill.Petersen@noaa.gov

Spatial Data Organization Information:
Direct Spatial Reference Method:
Vector
Point and Vector Object Information:
SDTS Terms Description:
SDTS Point and Vector Object Type:
GT-polygon composed of chains
Point and Vector Object Count:
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

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:
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).

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:
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.
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_Extensions: Online_Linkage:
Profile_Name: Content Specification for Metadata in the National Coastal Data Development Center's Data Catalog Version 2.0

Back To Index
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 Information:**

**Originator:**
- National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD)
- Department of Homeland Security (DHS)
- United States Coast Guard (USCG)
- 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:**
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, soci_lut.e00, sources.e00, species.e00, and status.e00.

**Program Affiliation:**
- **Program Name:** National Ocean Service Data Explorer

**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:

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: 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: BOUNDARIES OF STATE PARKS IN MISSISSIPPI
Geospatial_Data_Presentation_Form: vector digital data
Online_Linkage:
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
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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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

Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition: Geographic:
  Latitude Resolution: 0.0000001
  Longitude Resolution: 0.0000001
Geodetic_Model:
  Horizontal_Datum_Name: North American Datum of 1983
  Ellipsoid_Name: Geodetic Reference System 80
  Semi-major_Axis: 6378137.000000
  Denominator_of_Flattening_Ratio: 298.257222

Entity_and_Attribute_Information:
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

Enumerated Domain Value:
IR

Enumerated Domain Value Definition:
Indian Reservation

Enumerated Domain Value Definition Source:
NOAA ESI Guidelines

Enumerated Domain Value:
MA

Enumerated Domain Value Definition:
Management Area

Enumerated Domain Value Definition Source:
NOAA ESI Guidelines

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:**
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: ARCHAELOGICAL 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
Marina

**EnumeratedDomainValueDefinitionSource:**
NOAA ESI Guidelines

**AttributeDomainValues:**

**EnumeratedDomain:**

**EnumeratedDomainValue:**
NATIONAL PARK

**EnumeratedDomainValueDefinition:**
National Park

**EnumeratedDomainValueDefinitionSource:**
NOAA ESI Guidelines

**AttributeDomainValues:**

**EnumeratedDomain:**

**EnumeratedDomainValue:**
PARK

**EnumeratedDomainValueDefinition:**
Regional or State Park

**EnumeratedDomainValueDefinitionSource:**
NOAA ESI Guidelines

**AttributeDomainValues:**

**EnumeratedDomain:**

**EnumeratedDomainValue:**
RECREATIONAL FISHING

**EnumeratedDomainValueDefinition:**
Recreational Fishing

**EnumeratedDomainValueDefinitionSource:**
NOAA ESI Guidelines

**AttributeDomainValues:**

**EnumeratedDomain:**

**EnumeratedDomainValue:**
WILDLIFE REFUGE

**EnumeratedDomainValueDefinition:**
Wildlife Refuge

**EnumeratedDomainValueDefinitionSource:**
NOAA ESI Guidelines

**Attribute:**

**AttributeLabel:**
NAME

**AttributeDefinition:**
The feature name.

**AttributeDefinitionSource:**
NOAA ESI Guidelines

**AttributeDomainValues:**

**UnrepresentableDomain:**
Acceptable values change from atlas to atlas.

**Attribute:**

**AttributeLabel:**
CONTACT

**AttributeDefinition:**
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
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).

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.

**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:**

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

Originator:
- National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD)
- Department of Homeland Security (DHS)
- United States Coast Guard (USCG)
- 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_BoundingCoordinate:
-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

**Data_Quality_Information:**

*Attribute_Accuracy:*
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:**
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:
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
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.
Contact_Organization_Primary:
    Contact_Organization:
        NOAA, Office of Response and Restoration
    Contact_Person:
        Jill Petersen
Contact_Address:
    Address_Type:
        Physical address
    Address:
        7600 Sand Point Way, N.E.
    City:
        Seattle
    State_or_Province:
        Washington
    Postal_Code:
        98115-6349
Contact_Voice_Telephone:
    (206) 526-6944
Contact_Facsimile_Telephone:
    (206) 526-6329
Contact_Electronic_Mail_Address:
    Jill.Petersen@noaa.gov

Spatial_Data_Organization_Information:
    Direct_Spatial_Reference_Method:
        Vector
    Point_and_Vector_Object_Information:
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type:
                Complete chain
            Point_and_Vector_Object_Count:
                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
**Spatial_Reference_Information:**

*Horizontal_Coordinate_System_Definition:*

**Geographic:**

*Latitude_Resolution:*

0.0000001

*Longitude_Resolution:*

0.0000001

*Geographic_Coordinate_Units:*

Decimal degrees

**Geodetic_Model:**

*Horizontal_Datum_Name:*

North American Datum of 1983

*Ellipsoid_Name:*

Geodetic Reference System 80

*Semi-major_Axis:*

6378137.000000

*Denominator_of_Flattening_Ratio:*

298.257222

---

**Entity_and_Attribute_Information:**

*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

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Back To Index
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

Enumerated_Domain:
A2

Enumerated_Domain_Value_Definition:
Access

Enumerated_Domain_Value_Definition_Source:
NOAA ESI Guidelines

Enumerated_Domain:
AR

Enumerated_Domain_Value_Definition:
Artificial Reef

Enumerated_Domain_Value_Definition_Source:
NOAA ESI Guidelines

Enumerated_Domain:
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

Enumerated Domain Values:

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 HNUM. HNUM 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.
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).

**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.
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:


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

**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

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, Sterna 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:

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: 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:
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:
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:
BIRDS 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:
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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:
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Source_Contribution:
BIRDS INFORMATION

Source_Information:
Source_Citation:

Citation_Information:
Originator:
M. WOODREY, MISSISSIPPI STATE UNIVERSITY

Publication_Date:
2009
DATE OF COMMUNICATION
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
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:
    Washington
  Postal_Code:
    98115-6349
Contact_Voice_Telephone:
  (206) 526-6944
Contact_Facsimile_Telephone:
  (206) 526-6329
Contact_Electronic_Mail_Address:
    Jill.Petersen@noaa.gov

Spatial_Data_Organization_Information:
  Direct_Spatial_Reference_Method:
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  Point_and_Vector_Object_Information:
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type:
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    Point_and_Vector_Object_Count:
4011
SDTS_Terms_Description:
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SDTS_Terms_Description:
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  Point_and_Vector_Object_Count:
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      Longitude_Resolution:
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    Geographic_Coordinate_Units:
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Ellipsoid_Name:
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Denominator_of_Flattening_Ratio:
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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:

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
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            Enumerated_Domain_Value_Definition:
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                Enumerated_Domain_Value_Definition_Source:
                    NOAA ESI Guidelines
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        Enumerated_Domain_Value:
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            Enumerated_Domain_Value_Definition:
                Habitats and plants
                Enumerated_Domain_Value_Definition_Source:
                    NOAA ESI Guidelines
    Enumerated_Domain:
        Enumerated_Domain_Value:
            INVERT
            Enumerated_Domain_Value_Definition:
                Invertebrates
                Enumerated_Domain_Value_Definition_Source:
                    NOAA ESI Guidelines
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            M_MAMMAL
            Enumerated_Domain_Value_Definition:
                Marine mammals
                Enumerated_Domain_Value_Definition_Source:
                    NOAA ESI Guidelines
    Enumerated_Domain:
        Enumerated_Domain_Value:
            REPTILE
            Enumerated_Domain_Value_Definition:
                Reptiles and Amphibians
                Enumerated_Domain_Value_Definition_Source:
                    NOAA ESI Guidelines
    Enumerated_Domain:
        Enumerated_Domain_Value:
            T_MAMMAL
            Enumerated_Domain_Value_Definition:
                Terrestrial mammals
                Enumerated_Domain_Value_Definition_Source:
                    NOAA ESI Guidelines

Attribute:

Attribute **Label**: EL_SPE

**Attribute Definition:**
Concatenation of ELEMENT and SPECIES_ID. This item links records in the BIORRES data table to records in the SPECIES and STATUS data tables.

**Attribute Definition Source:**
NOAA ESI Guidelines

**Attribute Domain Values:**

**Enumerated Domain:**

**Enumerated Domain Value:** E####

**Enumerated Domain Value Definition:**
Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (e.g. ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').

**Enumerated Domain Value Definition Source:**
NOAA ESI Guidelines

**Attribute:**

**Attribute Label:** EL_SPE_SEA

**Attribute Definition:**
Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links records in the BIORRES data table to records in the SEASONAL and BREED data tables.

**Attribute Definition Source:**
NOAA ESI Guidelines

**Attribute Domain Values:**

**Enumerated Domain:**

**Enumerated Domain Value:** E#######

**Enumerated Domain Value Definition:**
Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the last two characters are SEASON_ID (e.g. ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').

**Enumerated Domain Value Definition Source:**
NOAA ESI Guidelines

**Detailed Description:**

**Entity Type:**

**Entity Type Label:** SPECIES

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

**Entity Type Definition Source:**
NOAA ESI Guidelines
Attribute:
  Attribute_Label: SPECIES_ID
  Attribute_Definition: Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.
  Attribute_Definition_Source: NOAA ESI Guidelines
  Attribute_Domain_Values:
    Range_Domain:
      Range_Domain_Minimum: 1
      Range_Domain_Maximum: N

Attribute:
  Attribute_Label: NAME
  Attribute_Definition: Species common name for the entire ESI data set.
  Attribute_Definition_Source: NOAA ESI Guidelines
  Attribute_Domain_Values:
    Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:
  Attribute_Label: GEN_SPEC
  Attribute_Definition: Species scientific name for the entire ESI data set.
  Attribute_Definition_Source: NOAA ESI Guidelines
  Attribute_Domain_Values:
    Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:
  Attribute_Label: ELEMENT
  Attribute_Definition: Major categories of biological data.
  Attribute_Definition_Source: NOAA ESI Guidelines
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: BIRD
      Enumerated_Domain_Value_Description: Birds
      Enumerated_Domain_Value_Description_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:
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Attribute_Definition:
  Element subgroup delineating a logical grouping of species.
Attribute_Definition_Source:
  NOAA ESI Guidelines
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NOAA ESI Guidelines

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*Enumerated_Domain_Value_Definition_Source*: NOAA ESI Guidelines

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*Enumerated_Domain_Value_Definition*:

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*Enumerated_Domain_Value_Definition_Source*:

NOAA ESI Guidelines

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Raptor

*Enumerated_Domain_Value_Definition_Source*:

NOAA ESI Guidelines

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*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
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
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
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
Attribute: 
  Attribute_Label: BREED3
  Attribute_Definition: Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED3 = molting; if ELEMENT is "FISH" then BREED3 = larvae; if ELEMENT is "INVERT" then BREED3 = larvae; if ELEMENT is "REPTILE" then BREED3 = internesting; if ELEMENT is "M_MAMMAL" then BREED3 = pupping. This attribute is not used for HABITAT or T_MAMMAL elements.
  Attribute_Definition_Source: NOAA ESI Guidelines

Attribute_Domain_Values: 
  Enumerated_Domain:
    Enumerated_Domain_Value: Y
      Enumerated_Domain_Value_Definition: Life-history stage or activity present
        Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines
    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
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:
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_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 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
Species of Special Concern

International threatened or endangered status.

Endangered on international list

Threatened on international list

Species of Special Concern

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

YYYYMM

YYYYY for year and optionally MM for month
**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
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.
Overview Description:

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).

Back To Index
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.

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

**Originator:**
- National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD)
- Department of Homeland Security (DHS)
- United States Coast Guard (USCG)
- 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:

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_BoundingCoordinate: -89.75000
East_BoundingCoordinate: -88.37500
North_BoundingCoordinate: 30.50000
South_BoundingCoordinate: 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, biore.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

**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:**
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
Address: 7600 Sand Point Way, N.E.
City: Seattle
State_or_Province: Washington
Postal_Code: 98115-6349
Contact_Voice_Telephone: (206) 526-6944
Contact_Facsimile_Telephone: (206) 526-6329
Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector

Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Area point
Point_and_Vector_Object_Count: 3 

Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Geographic:
Latitude_Resolution: 0.0000001
Longitude_Resolution:
Geographic Coordinate Units:
Decimal degrees

Geodetic Model:
Horizontal Datum Name:
North American Datum of 1983

Ellipsoid Name:
Geodetic Reference System 80

Semi-major Axis:
6378137.000000

Denominator of Flattening Ratio:
298.257222

Entity and Attribute Information:
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:
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#######
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_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
**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 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**
- **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
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_Description:
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_Description_Source: NOAA ESI Guidelines
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Y
Enumerated_Domain_Value_Description: Life-history stage or activity present
Enumerated_Domain_Value_Description_Source: NOAA ESI Guidelines
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: N
Enumerated_Domain_Value_Description: Life-history stage or activity not present or not reported
Enumerated_Domain_Value_Description_Source: NOAA ESI Guidelines
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: -
Enumerated_Domain_Value_Description: Breed category not used or not appropriate for record(s) in question
Enumerated_Domain_Value_Description_Source: NOAA ESI Guidelines

Attribute:
Attribute_Label: BREED3
Attribute_Description:
Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED3 = molting; if ELEMENT is "FISH" then BREED3 = larvae; if ELEMENT is "INVERT" then BREED3 = larvae; if ELEMENT is "REPTILE" then BREED3 = internesting; if ELEMENT is "M_MAMMAL" then BREED3 = pupping. This attribute is not used for HABITAT or T_MAMMAL elements.
Attribute_Description_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

- **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

- **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
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**: Mississippi: NESTS
**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**: 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**: 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 _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_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 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 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 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 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 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).

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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_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:**

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

Back To Index
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:

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),
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_BoundingCoordinate: -89.75000
East_BoundingCoordinate: -88.37500
North_BoundingCoordinate: 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

**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, Porgy, 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, Sheephead, Archosargus probatocephalus; 140, Ladyfish, Elops saurus; 142, Crevally 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 lathami; 305, Red snapper, Lutjanus campechanus; 306, Gray snapper, Lutjanus griseus; 307, Lane snapper, Lutjanus synagris; 308, Rock sea bass, Centropristis philadelphica; 309, Spotfin mojarra, Eucinostomus argenteus; 310, Atlantic spadefish, Chaetodipterus faber; 312, Harvestfish, Peprilus alepidotus; 313, Gulf butterfish, Peprilus burti; 315, Blacktip shark, Carcharhinus limbus; 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:**

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

Title:

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

Geospatial_Data_Presentation_Form:

HARDCOPY TEXT

Publication_Information:

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:

HARDCOPY TEXT

Publication_Information:

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:

HARDCOPY TEXT

Publication_Information:

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:

HARDCOPY TEXT

Publication_Information:

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:

HARDCOPY TEXT

Publication_Information:

Publication_Date:

2009

Title:
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

**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

Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Geographic:
  Latitude_Resolution: 0.0000001
  Longitude_Resolution: 0.0000001
Geographic_Coordinate_Units: Decimal degrees
Geodetic_Model:
  Horizontal_Datum_Name: North American Datum of 1983
  Ellipsoid_Name: Geodetic Reference System 80
  Semi-major_Axis: 6378137.000000
  Denominator_of_Flattening_Ratio: 298.257222

Entity_and_Attribute_Information:
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
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:**
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
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
**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:**
**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:**
Mississippi:  FISH
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
    Enumerated_Domain_Value: FISH
      Enumerated_Domain_Value_Definition: Fish
      Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines
    Enumerated_Domain_Value: Mississippi: FISH
    Enumerated_Domain_Value: Mississippi: BIRD
      Enumerated_Domain_Value_Definition: Birds
      Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines
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
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: NHP
Attribute_Definition: Natural Heritage Program global ranking.
Attribute_Definition_Source: Network of Natural Heritage Program

Attribute: DATE_PUB
Attribute_Definition: Date of NHP listing.
Attribute_Definition_Source: NOAA ESI Guidelines
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:
**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

Enumeration_Domain_Value_Definition_Source:
NOAA ESI Guidelines

Attribute:
Attribute_Label:
DEC
Attribute_Definition:
December
Attribute_Definition_Source:
NOAA ESI Guidelines
Attribute_Domain_Values:
Enumeration_Domain:
Enumeration_Domain_Value:
X
Enumeration_Domain_Value_Definition:
Present in December
Enumeration_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 BORES and BREED data tables.
Attribute_Definition_Source:
NOAA ESI Guidelines
Attribute_Domain_Values:
Enumeration_Domain:
Enumeration_Domain_Value:
E####
Enumeration_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').
Enumeration_Domain_Value_Definition_Source:
NOAA ESI Guidelines

Detailed_Description:
Entity_Type:
Entity_Type_Label:
BREED
Entity_Type_Definition:
The data table BREED identifies the monthly presence of certain life-history stages or activities for each species at a given location.
Entity_Type_Definition_Source:
NOAA ESI Guidelines

Attribute:
Attribute_Label:
**EL_SPE_SEA**

*Attribute Definition:*

Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links records in the BREED data table to records in the BIORES and SEASONAL data tables.

*Attribute Definition Source:*

NOAA ESI Guidelines

*Attribute Domain Values:*

*Enumerated Domain:*

*Enumerated Domain Value:*

E########

*Enumerated Domain Value Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the last two characters are SEASON_ID (e.g. ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').

*Enumerated Domain Value Definition Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute Label:*

MONTH

*Attribute Definition:*

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

*Attribute Definition Source:*

NOAA ESI Guidelines

*Attribute Domain Values:*

*Range Domain:*

*Range Domain Minimum:*

1

*Range Domain Maximum:*

12

*Attribute:*

*Attribute Label:*

BREED1

*Attribute Definition:*

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

*Attribute Definition Source:*

NOAA ESI Guidelines

*Attribute Domain Values:*

*Enumerated Domain:*

*Enumerated Domain Value:*

Y
Enumerated_Domain_Value_Definition:
Life-history stage or activity present

Enumerated_Domain_Value_Definition_Source:
NOAA ESI Guidelines

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value:
N

Enumerated_Domain_Value_Definition:
Life-history stage or activity not present or not reported

Enumerated_Domain_Value_Definition_Source:
NOAA ESI Guidelines

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value:
-

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

Enumerated_Domain_Value_Definition_Source:
NOAA ESI Guidelines

Attribute:
Attribute_Label:
BREED2

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

Attribute_Definition_Source:
NOAA ESI Guidelines

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value:
Y

Enumerated_Domain_Value_Definition:
Life-history stage or activity present

Enumerated_Domain_Value_Definition_Source:
NOAA ESI Guidelines

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value:
N

Enumerated_Domain_Value_Definition:
Life-history stage or activity not present or not reported

Enumerated_Domain_Value_Definition_Source:
NOAA ESI Guidelines
Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value:

- 

Enumerated Domain Value Definition:
  Breed category not used or not appropriate for record(s) in question

Enumerated Domain Value Definition Source:
  NOAA ESI Guidelines

Attribute:

Attribute Label:
  BREED3

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

Attribute Definition Source:
  NOAA ESI Guidelines

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value:

Y

Enumerated Domain Value Definition:
  Life-history stage or activity present

Enumerated Domain Value Definition Source:
  NOAA ESI Guidelines

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value:

N

Enumerated Domain Value Definition:
  Life-history stage or activity not present or not reported

Enumerated Domain Value Definition Source:
  NOAA ESI Guidelines

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value:

- 

Enumerated Domain Value Definition:
  Breed category not used or not appropriate for record(s) in question

Enumerated Domain Value Definition Source:
  NOAA ESI Guidelines

Attribute:

Attribute Label:
  BREED4
Attribute Definition:
Life history stage or activity type, where: if ELEMENT is "FISH" then BREED4 = juveniles; if ELEMENT is "INVERT" then BREED4 = juveniles; if ELEMENT is "REPTILE" then BREED4 = juveniles; if ELEMENT is "M_MAMMAL" then BREED4 = molting. This attribute is not used for BIRD, HABITAT, or T_MAMMAL elements.

Attribute Definition Source:
NOAA ESI Guidelines

Attribute Domain Values:
Enumerated Domain:
Enumerated Domain Value:
Y
Enumerated Domain Value Definition:
Life-history stage or activity present
Enumerated Domain Value Definition Source:
NOAA ESI Guidelines

Attribute Domain Values:
Enumerated Domain:
Enumerated Domain Value:
N
Enumerated Domain Value Definition:
Life-history stage or activity not present or not reported
Enumerated Domain Value Definition Source:
NOAA ESI Guidelines

Attribute Domain Values:
Enumerated Domain:
Enumerated Domain Value:
-

Enumerated Domain Value Definition:
Breed category not used or not appropriate for record(s) in question
Enumerated Domain Value Definition Source:
NOAA ESI Guidelines

Attribute:
Attribute Label:
BREED5
Attribute Definition:
Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 = adults; if ELEMENT is "INVERT" then BREED5 = adults; if ELEMENT is "REPTILE" then BREED5 = adults. This attribute is not used for BIRD, M_MAMMAL, HABITAT or T_MAMMAL elements.

Attribute Definition Source:
NOAA ESI Guidelines

Attribute Domain Values:
Enumerated Domain:
Enumerated Domain Value:
Y
Enumerated Domain Value Definition:
Life-history stage or activity present
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_Source: NOAA ESI Guidelines

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**

**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:**

T

**Enumerated Domain Value Definition:**

Threatened on international list

**Enumerated Domain Value Definition Source:**

NOAA ESI Guidelines

**Attribute Domain Values:**

**Enumerated Domain:**

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:**

YYYYY 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 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

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:
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.

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:
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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:

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

Back To Index
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 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:

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, biore.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

**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:
    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.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

Mississippi: INVERT
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.
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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**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:**

Back To Index
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

Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Geographic:
      Latitude_Resolution:
        0.0000001
      Longitude_Resolution:
        0.0000001
      Geographic_Coordinate_Units:
        Decimal degrees
  Geodetic_Model:
    Horizontal_Datum_Name:
      North American Datum of 1983
    Ellipsoid_Name:
      Geodetic Reference System 80
    Semi-major_Axis:
      6378137.000000
    Denominator_of_Flattening_Ratio:
      298.257222

Entity_and_Attribute_Information:
  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:
        Mississippi: INVERT
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: 2320000001
  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:
\[\text{Range Domain Minimum:} \quad 232000001\]
\[\text{Range Domain Maximum:} \quad 232000219\]

Attribute:
\text{Attribute Label:}
\text{SPECIES ID}
\text{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.
\text{Attribute Definition Source:}
NOAA ESI Guidelines
\text{Attribute Domain Values:}
\text{Range Domain:}
\[\text{Range Domain Minimum:} \quad 1\]
\[\text{Range Domain Maximum:} \quad N\]

Attribute:
\text{Attribute Label:}
\text{CONC}
\text{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 ",-".
\text{Attribute Definition Source:}
NOAA ESI Guidelines
\text{Attribute Domain Values:}
\text{Unrepresentable Domain:}
Acceptable values change from atlas to atlas.

Attribute:
\text{Attribute Label:}
\text{SEASON ID}
\text{Attribute Definition:}
Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.
\text{Attribute Definition Source:}
NOAA ESI Guidelines
\text{Attribute Domain Values:}
\text{Range Domain:}
\[\text{Range Domain Minimum:} \quad 1\]
\[\text{Range Domain Maximum:} \quad N\]
**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
    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:**
YYMM for year and optionally MM for month

**Enumerated_Domain_Value_Definition_Source:**
NOAA ESI Guidelines

**AttributeDomainValues:**

**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

**AttributeDomainValues:**

**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 BrowseGraphic 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: MONTH
  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: BREED1
  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:** 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:**
NOAA ESI Guidelines

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value:
- 

Enumerated Domain Value Definition:
Breed category not used or not appropriate for record(s) in question

Enumerated Domain Value Definition Source:
NOAA ESI Guidelines

Attribute:

Attribute Label:
BREED3

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

Attribute Definition Source:
NOAA ESI Guidelines

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value:
Y

Enumerated Domain Value Definition:
Life-history stage or activity present

Enumerated Domain Value Definition Source:
NOAA ESI Guidelines

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value:
N

Enumerated Domain Value Definition:
Life-history stage or activity not present or not reported

Enumerated Domain Value Definition Source:
NOAA ESI Guidelines

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value:
- 

Enumerated Domain Value Definition:
Breed category not used or not appropriate for record(s) in question

Enumerated Domain Value Definition Source:
NOAA ESI Guidelines

Attribute:

Attribute Label:
BREED4

**Attribute Definition:**
Life history stage or activity type, where: if ELEMENT is "FISH" then BREED4 = juveniles; if ELEMENT is "INVERT" then BREED4 = juveniles; if ELEMENT is "REPTILE" then BREED4 = juveniles; if ELEMENT is "M_MAMMAL" then BREED4 = molting. This attribute is not used for BIRD, HABITAT, or T_MAMMAL elements.

**Attribute Definition Source:**
NOAA ESI Guidelines

**Attribute Domain Values:**

- **Enumerated Domain:**
  - **Enumerated Domain Value:** Y
    - **Enumerated Domain Value Definition:** Life-history stage or activity present
    - **Enumerated Domain Value Definition Source:** NOAA ESI Guidelines

- **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

- **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
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
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
    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 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 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).

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
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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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:

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
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:

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_mamal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, t_mamal.e00, and wetlands.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut.e00, biofile.e00, biore.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

**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:**

**Positional_Accuracy:**

**Horizontal_Positional_Accuracy:**
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:
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

Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Geographic:
  Latitude_Resolution:
    0.0000001
  Longitude_Resolution:
    0.0000001
Geographic_Coordinate_Units:
  Decimal degrees
Geodetic_Model:
  Horizontal_Datum_Name:
    North American Datum of 1983
  Ellipsoid_Name:
    Geodetic Reference System 80
  Semi-major_Axis:
    6378137.000000
  Denominator_of_Flattening_Ratio:
    298.257222

Entity_and_Attribute_Information:
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_SPESEA

**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_SPESEA = '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
- **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:
Attribute: 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
correct characters are SPECIES_ID (e.g. ELEMENT = 'BIRD' and
SPECIES_ID = 1; EL_SPE = 'B00001').
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
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_Description:
November
Attribute_Description_Source:
Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value:
X

Enumerated Domain Value Definition:
Present in November

Enumerated Domain Value Definition Source:
NOAA ESI Guidelines

Attribute:

Attribute Label:
DEC

Attribute Definition:
December

Attribute Definition Source:
NOAA ESI Guidelines

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value:
X

Enumerated Domain Value Definition:
Present in December

Enumerated Domain Value Definition Source:
NOAA ESI Guidelines

Attribute:

Attribute Label:
EL_SPE_SEA

Attribute Definition:
Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links records in the SEASONAL data table to records in the BIORES and BREED data tables.

Attribute Definition Source:
NOAA ESI Guidelines

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value:
E#######

Enumerated Domain Value Definition:
Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the last two characters are SEASON_ID (e.g. ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').

Enumerated Domain Value Definition Source:
NOAA ESI Guidelines

Detailed Description:

Entity Type:

Entity Type Label:
BREED

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

**Entity_Type_Definition_Source:**
NOAA ESI Guidelines

**Attribute:**

**Attribute_Label:**
EL_SPE_SEA

**Attribute_Definition:**
Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links records in the BREED data table to records in the BIORES and SEASONAL data tables.

**Attribute_Definition_Source:**
NOAA ESI Guidelines

**Attribute_Domain_Values:**

**Enumerated_Domain:**

**Enumerated_Domain_Value:**
E#######

**Enumerated_Domain_Value_Definition:**
Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the last two characters are SEASON_ID (e.g. ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').

**Enumerated_Domain_Value_Definition_Source:**
NOAA ESI Guidelines

**Attribute:**

**Attribute_Label:**
MONTH

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

**Attribute_Definition_Source:**
NOAA ESI Guidelines

**Attribute_Domain_Values:**

**Range_Domain:**

**Range_Domain_Minimum:**
1

**Range_Domain_Maximum:**
12

**Attribute:**

**Attribute_Label:**
BREED1

**Attribute_Definition:**
Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED1 = nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning; if ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M_MAMMAL" then BREED1 = mating. This attribute is not used for HABITAT or T_MAMMAL.
**Attribute Definition Source**: NOAA ESI Guidelines

**Attribute Domain Values**:

**Enumerated Domain**:

**Enumerated Domain Value**:
- Y

**Enumerated Domain Value Definition**:
Life-history stage or activity present

**Enumerated Domain Value Definition Source**:
NOAA ESI Guidelines

**Attribute Domain Values**:

**Enumerated Domain**:

**Enumerated Domain Value**:
- N

**Enumerated Domain Value Definition**:
Life-history stage or activity not present or not reported

**Enumerated Domain Value Definition Source**:
NOAA ESI Guidelines

**Attribute Domain Values**:

**Enumerated Domain**:

**Enumerated Domain Value**:
- 

**Enumerated Domain Value Definition**:
Breed category not used or not appropriate for record(s) in question

**Enumerated Domain Value Definition Source**:
NOAA ESI Guidelines

**Attribute**:

**Attribute Label**:
BREED2

**Attribute Definition**:
Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = migrating; if ELEMENT is "FISH" then BREED2 = eggs; if ELEMENT is "INVERT" then BREED2 = eggs; if ELEMENT is "REPTILE" then BREED2 = hatching; if ELEMENT is "M_MAMMAL" then BREED2 = calving. This attribute is not used for HABITAT or T_MAMMAL elements.

**Attribute Definition Source**:
NOAA ESI Guidelines

**Attribute Domain Values**:

**Enumerated Domain**:

**Enumerated Domain Value**:
- Y

**Enumerated Domain Value Definition**:
Life-history stage or activity present

**Enumerated Domain Value Definition Source**:
NOAA ESI Guidelines

**Attribute Domain Values**:

**Enumerated Domain**:
Enumerated_Domain_Value: N
Enumerated_Domain_Value_Definition: Life-history stage or activity not present or not reported
Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines

Attribute Domain Values:
Enumerated_Domain:
Enumerated_Domain_Value: -
Enumerated_Domain_Value_Definition: Breed category not used or not appropriate for record(s) in question
Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines

Attribute: Attribute_Label: BREED3
Attribute_Definition: Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED3 = molting; if ELEMENT is "FISH" then BREED3 = larvae; if ELEMENT is "INVERT" then BREED3 = larvae; if ELEMENT is "REPTILE" then BREED3 = internesting; if ELEMENT is "M_MAMMAL" then BREED3 = pupping. This attribute is not used for HABITAT or T_MAMMAL elements.
Attribute_Definition_Source: NOAA ESI Guidelines

Attribute Domain Values:
Enumerated_Domain:
Enumerated_Domain_Value: Y
Enumerated_Domain_Value_Definition: Life-history stage or activity present
Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines

Attribute Domain Values:
Enumerated_Domain:
Enumerated_Domain_Value: N
Enumerated_Domain_Value_Definition: Life-history stage or activity not present or not reported
Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines

Attribute Domain Values:
Enumerated_Domain:
Enumerated_Domain_Value: -
Enumerated_Domain_Value_Definition: Breed category not used or not appropriate for record(s) in
**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
**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
  Enumerated_Domain:
    Enumerated_Domain_Value:
      T
    Enumerated_Domain_Value_Definition: Threatened on international list
    Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines
  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:
Y 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 labels and 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, seasonalties, 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).

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.

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_Extensions: Online_Linkage:
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 Information:

Originator:
- National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD)
- Department of Homeland Security (DHS)
- United States Coast Guard (USCG)
- 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
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_BoundingCoordinate: -89.75000
East_BoundingCoordinate: -88.37500
North_BoundingCoordinate: 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

**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:**
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:
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
  Contact_Address:  
    Address_Type:  
      Physical address
    Address:  
      7600 Sand Point Way, N.E.
    City:  
      Seattle
    State_orProvince:  
      Washington
    Postal_Code:  
      98115-6349
  Contact_Voice_Telephone:  
    (206) 526-6944
  Contact_Facsimile_Telephone:  
    (206) 526-6329
  Contact_Electronic_Mail_Address:  
    Jill.Petersen@noaa.gov

Spatial_Data_Organization_Information:  
  Direct_Spatial_Reference_Method:  
    Vector
  Point_and_Vector_Object_Information:  
    SDTS_Terms_Description:  
      SDTS_Point_and_Vector_Object_Type:  
        GT-polygon composed of chains
      Point_and_Vector_Object_Count:  
        579
    SDTS_Terms_Description:  
      SDTS_Point_and_Vector_Object_Type:  
        Area point
      Point_and_Vector_Object_Count:  

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**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

---

**Spatial Reference Information:**

**Horizontal Coordinate System Definition:**

**Geographic:**
- **Latitude Resolution:** 0.0000001
- **Longitude Resolution:** 0.0000001

**Geographic Coordinate Units:**
- Decimal degrees

**Geodetic Model:**
- **Horizontal Datum Name:** North American Datum of 1983
- **Ellipsoid Name:** Geodetic Reference System 80

**Semi-major Axis:**
- 6378137.000000

**Denominator of Flattening Ratio:**
- 298.257222

---

**Entity and Attribute Information:**

**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:** 23200001
- **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 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 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 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: Habits 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
    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.
<table>
<thead>
<tr>
<th>Attribute Name</th>
<th>Domain</th>
<th>Definition</th>
<th>Definition Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIRD</td>
<td>Enumerated Domain_Value</td>
<td>Birds</td>
<td>NOAA ESI Guidelines</td>
</tr>
<tr>
<td>FISH</td>
<td>Enumerated Domain_Value</td>
<td>Fish</td>
<td>NOAA ESI Guidelines</td>
</tr>
<tr>
<td>HABITAT</td>
<td>Enumerated Domain_Value</td>
<td>Habitats and plants</td>
<td>NOAA ESI Guidelines</td>
</tr>
<tr>
<td>INVERT</td>
<td>Enumerated Domain_Value</td>
<td>Invertebrates</td>
<td>NOAA ESI Guidelines</td>
</tr>
<tr>
<td>M_MAMMAL</td>
<td>Enumerated Domain_Value</td>
<td>Marine Mammals</td>
<td>NOAA ESI Guidelines</td>
</tr>
<tr>
<td>REPTILE</td>
<td>Enumerated Domain_Value</td>
<td>Reptiles and Amphibians</td>
<td></td>
</tr>
</tbody>
</table>
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:
<table>
<thead>
<tr>
<th>Attribute</th>
<th>Attribute Label</th>
<th>Attribute Definition</th>
<th>Attribute Definition Source</th>
<th>Attribute Domain Values</th>
<th>Enumerated Domain</th>
<th>Enumerated Domain Value</th>
<th>Enumerated Domain Value Definition</th>
<th>Enumerated Domain Value Definition Source</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FEB</td>
<td>February</td>
<td>NOAA ESI Guidelines</td>
<td></td>
<td>X</td>
<td>Present in February</td>
<td>NOAA ESI Guidelines</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MAR</td>
<td>March</td>
<td>NOAA ESI Guidelines</td>
<td></td>
<td>X</td>
<td>Present in March</td>
<td>NOAA ESI Guidelines</td>
<td></td>
</tr>
<tr>
<td></td>
<td>APR</td>
<td>April</td>
<td>NOAA ESI Guidelines</td>
<td></td>
<td>X</td>
<td>Present in April</td>
<td>NOAA ESI Guidelines</td>
<td></td>
</tr>
</tbody>
</table>
Attribute \_Label: MAY
\nAttribute \_Definition: May
\nAttribute \_Definition \_Source: NOAA ESI Guidelines
\nAttribute \_Domain \_Values: 
\nEnumerated \_Domain:
  Enumerated \_Domain \_Value: X
  Enumerated \_Domain \_Value \_Definition: Present in May
  Enumerated \_Domain \_Value \_Definition \_Source: NOAA ESI Guidelines

Attribute:
\nAttribute \_Label: JUN
\nAttribute \_Definition: June
\nAttribute \_Definition \_Source: NOAA ESI Guidelines
\nAttribute \_Domain \_Values:
  Enumerated \_Domain:
    Enumerated \_Domain \_Value: X
    Enumerated \_Domain \_Value \_Definition: Present in June
    Enumerated \_Domain \_Value \_Definition \_Source: NOAA ESI Guidelines

Attribute:
\nAttribute \_Label: JUL
\nAttribute \_Definition: July
\nAttribute \_Definition \_Source: NOAA ESI Guidelines
\nAttribute \_Domain \_Values:
  Enumerated \_Domain:
    Enumerated \_Domain \_Value: X
    Enumerated \_Domain \_Value \_Definition: Present in July
    Enumerated \_Domain \_Value \_Definition \_Source: NOAA ESI Guidelines

Attribute:
\nAttribute \_Label: AUG
\nAttribute \_Definition: August
Attribute: SEP
  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: OCT
  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: NOV
  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
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:

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

Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines

Attribute:

Attribute_Label: BREED3

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

Attribute_Definition_Source: NOAA ESI Guidelines

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Y

Enumerated_Domain_Value_Definition: Life-history stage or activity present

Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: N

Enumerated_Domain_Value_Definition: Life-history stage or activity not present or not reported

Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: -

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

Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines
Attribute:
  Attribute_Label: BREED4
  Attribute_Definition:
  Life history stage or activity type, where: if ELEMENT is "FISH" then 
  BREED4 = juveniles; if ELEMENT is "INVERT" then BREED4 = 
  juveniles; if ELEMENT is "REPTILE" then BREED4 = juveniles; if 
  ELEMENT is "M_MAMMAL" then BREED4 = molting. This attribute is 
  not used for BIRD, HABITAT, or T_MAMMAL elements.
  Attribute_Definition_Source: NOAA ESI Guidelines
  Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: Y
    Enumerated_Domain_Value_Definition: Life-history stage or activity present
    Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines
  Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: N
    Enumerated_Domain_Value_Definition: Life-history stage or activity not present or not reported
    Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines
  Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: 
    Enumerated_Domain_Value_Definition: Breed category not used or not appropriate for record(s) in 
    question
    Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines

Attribute:
  Attribute_Label: BREED5
  Attribute_Definition:
  Life history stage or activity type, where: if ELEMENT is "FISH" then 
  BREED5 = adults; if ELEMENT is "INVERT" then BREED5 = adults; if 
  ELEMENT is "REPTILE" then BREED5 = adults. This attribute is not 
  used for BIRD, M_MAMMAL, HABITAT or T_MAMMAL elements.
  Attribute_Definition_Source: NOAA ESI Guidelines
  Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value:
Y

*Enumerated_Domain_Value_Definition:*
Life-history stage or activity present

*Enumerated_Domain_Value_Definition_Source:*
NOAA ESI Guidelines

**Attribute_Domain_Values:**

*Enumerated_Domain:*

*Enumerated_Domain_Value:*

N

*Enumerated_Domain_Value_Definition:*
Life-history stage or activity not present or not reported

*Enumerated_Domain_Value_Definition_Source:*
NOAA ESI Guidelines

**Attribute_Domain_Values:**

*Enumerated_Domain:*

*Enumerated_Domain_Value:*

-

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

*Enumerated_Domain_Value_Definition_Source:*
NOAA ESI Guidelines

**Detailed_Description:**

**Entity_Type:**

*Entity_Type_Label:*
STATUS

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

*Entity_Type_Definition_Source:*
NOAA ESI Guidelines

**Attribute:**

*Attribute_Label:*
ELEMENT

*Attribute_Definition:*
Major categories of biological data.

*Attribute_Definition_Source:*
NOAA ESI Guidelines

**Attribute_Domain_Values:**

*Enumerated_Domain:*

*Enumerated_Domain_Value:*

BIRD

*Enumerated_Domain_Value_Definition:*
Birds

*Enumerated_Domain_Value_Definition_Source:*
NOAA ESI Guidelines
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value:
      FISH
      Enumerated_Domain_Value_Definition:
        Fish
      Enumerated_Domain_Value_Definition_Source:
        NOAA ESI Guidelines

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value:
      HABITAT
      Enumerated_Domain_Value_Definition:
        Habitats and Plants
      Enumerated_Domain_Value_Definition_Source:
        NOAA ESI Guidelines

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value:
      INVERT
      Enumerated_Domain_Value_Definition:
        Invertebrates
      Enumerated_Domain_Value_Definition_Source:
        NOAA ESI Guidelines

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value:
      M_MAMMAL
      Enumerated_Domain_Value_Definition:
        Marine Mammals
      Enumerated_Domain_Value_Definition_Source:
        NOAA ESI Guidelines

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value:
      REPTILE
      Enumerated_Domain_Value_Definition:
        Reptiles and Amphibians
      Enumerated_Domain_Value_Definition_Source:
        NOAA ESI Guidelines

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value:
      T_MAMMAL
      Enumerated_Domain_Value_Definition:
        Terrestrial Mammals
      Enumerated_Domain_Value_Definition_Source:
        NOAA ESI Guidelines

Attribute:
Attribute Label: SPECIES_ID
Attribute Definition: Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.
Attribute Definition Source: NOAA ESI Guidelines
Attribute Domain Values:
  Range Domain:
    Range Domain Minimum: 1
    Range Domain Maximum: N

Attribute 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 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 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
**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

- **Enumerated Domain:**
  - **Enumerated Domain Value:** T
  - **Enumerated Domain Value Definition:** Threatened on international list
  - **Enumerated Domain Value Definition Source:** NOAA ESI Guidelines

- **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**

**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:** SOURCES

**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:**
  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:**
  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:**
  Acceptable values change from atlas to atlas.

**Overview_Description:**

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).

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_orProvince:
    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.

Metadata_Reference_Information:
Metadata_Date: 20100512
Metadata_Review_Date: 20100512
Metadata_Contact:
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_Extensions:
Profile_Name: Content Specification for Metadata in the National Coastal Data Development Center's Data Catalog Version 2.0
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**

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*Identification Information:

**Citation Information:**

**Originator:**

- National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD)
- Department of Homeland Security (DHS)
- United States Coast Guard (USCG)
- 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:**

[datagfig.jpg](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:**

[datagfig2.jpg](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

**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:**

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:
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

**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

**Spatial_Reference_Information:**

**Horizontal_Coordinate_System_Definition:**
- **Geographic:**
  - **Latitude_Resolution:**
    - 0.0000001
  - **Longitude_Resolution:**
    - 0.0000001
  - **Geographic_Coordinate_Units:**
    - Decimal degrees

**Geodetic_Model:**
- **Horizontal_Datum_Name:**
  - North American Datum of 1983
- **Ellipsoid_Name:**
  - Geodetic Reference System 80
- **Semi-major_Axis:**
  - 6378137.000000
- **Denominator_of_Flattening_Ratio:**
  - 298.257222

**Entity_and_Attribute_Information:**

**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
**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: 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:
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:
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:*

Mississippi: T_MAMMAL
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

Enumerated_Domain:

Enumerated_Domain_Value:
FISH

Enumerated_Domain_Value_Definition:
Fish

Enumerated_Domain_Value_Definition_Source:
NOAA ESI Guidelines

Enumerated_Domain:

Enumerated_Domain_Value:
HABITAT

Enumerated_Domain_Value_Definition:
Habitats and plants

Enumerated_Domain_Value_Definition_Source:
NOAA ESI Guidelines

Enumerated_Domain:

Enumerated_Domain_Value:
INVERT

Enumerated_Domain_Value_Definition:
Invertebrates

Enumerated_Domain_Value_Definition_Source:
NOAA ESI Guidelines

Enumerated_Domain:

Enumerated_Domain_Value:
M_MAMMAL

Enumerated_Domain_Value_Definition:
Marine Mammals

Enumerated_Domain_Value_Definition_Source:
NOAA ESI Guidelines

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
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
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

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

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

Enumerated Domain:

Enumerated Domain Value:
**Enumerated_Domain_Value:**
N
**Enumerated_Domain_Value_Definition:**
Life-history stage or activity not present or not reported

**Enumerated_Domain_Value_Definition_Source:**
NOAA ESI Guidelines

**Attribute_Domain_Values:**

**Enumerated_Domain:**

**Enumerated_Domain_Value:**

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

**Enumerated_Domain_Value_Definition_Source:**
NOAA ESI Guidelines

**Attribute:**

**Attribute_Label:**
BREED3

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

**Attribute_Definition_Source:**
NOAA ESI Guidelines

**Attribute_Domain_Values:**

**Enumerated_Domain:**

**Enumerated_Domain_Value:**
Y

**Enumerated_Domain_Value_Definition:**
Life-history stage or activity present

**Enumerated_Domain_Value_Definition_Source:**
NOAA ESI Guidelines

**Attribute_Domain_Values:**

**Enumerated_Domain:**

**Enumerated_Domain_Value:**
N

**Enumerated_Domain_Value_Definition:**
Life-history stage or activity not present or not reported

**Enumerated_Domain_Value_Definition_Source:**
NOAA ESI Guidelines

**Attribute_Domain_Values:**

**Enumerated_Domain:**

**Enumerated_Domain_Value:**

**Enumerated_Domain_Value_Definition:**
Breed category not used or not appropriate for record(s) in Mississippi: T_MAMMAL
**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
  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
  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 endangered or threatened 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.

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
**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:
YYYYY 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

**I_DATE**

*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

**EL_SPE**

*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/esi_guidelines).

Distribution_Information:
Distributor:
Contact Information:
Contact Person Primary:
Contact Person: John Kaperick
Contact Organization: NOAA, Office of Response and Restoration
Contact Address:
Address Type: Physical Address
Address: 7600 Sand Point Way N.E.
City:
Seattle
State or Province: Washington
Postal Code: 98115-6349
Contact Voice Telephone: (206) 526-6400
Contact Facsimile Telephone: (206) 526-6329

Resource Description: Downloadable Data

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

Custom Order Process: Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to 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.

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 Extensions:
Online Linkage: 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

Back To Index
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 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
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:
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_BoundingCoordinate:
-89.75000
East_BoundingCoordinate:
-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_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_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

**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:**

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.
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
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
  Contact_Address:
    Address_Type:
      Physical address
    Address:
      7600 Sand Point Way, N.E.
    City:
      Seattle
    State_orProvince:
      Washington
    Postal_Code:
      98115-6349
  Contact_Voice_Telephone:
    (206) 526-6944
  Contact_Facsimile_Telephone:
    (206) 526-6329
  Contact_Electronic_Mail_Address:
    Jill.Petersen@noaa.gov

Spatial_Data_Organization_Information:
  Direct_Spatial_Reference_Method:
    Vector
  Point_and_Vector_Object_Information:
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type:
        GT-polygon composed of chains
      Point_and_Vector_Object_Count:
        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

Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
  Geographic:
    Latitude_Resolution:
      0.0000001
    Longitude_Resolution:
      0.0000001
    Geographic_Coordinate_Units:
      Decimal degrees
  Geodetic_Model:
    Horizontal_Datum_Name:
      North American Datum of 1983
    Ellipsoid_Name:
      Geodetic Reference System 80
    Semi-major_Axis:
      6378137.000000
    Denominator_of_Flattening_Ratio:
      298.257222

Entity_and_Attribute_Information:
  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**

**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: SPECIES_ID**

**Attribute Definition:**

Mississippi: HABITATS

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:**

**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:**

Mississippi: HABITATS
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:
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:
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

Enumerated_Domain:

Enumerated_Domain_Value:
  amphibian
Enumerated_Domain_Value_Definition: Amphibian
Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines

Enumerated_Domain:

Enumerated_Domain_Value:
  bat
Enumerated_Domain_Value_Definition: Bat
Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines

Enumerated_Domain:

Enumerated_Domain_Value:
  bear
Enumerated_Domain_Value_Definition: Bear
Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines

Enumerated_Domain:

Enumerated_Domain_Value:
  bivalve
Enumerated_Domain_Value_Definition: Bivalve
Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines

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
  Enumerated_Domain:
    Enumerated_Domain_Value:
      invert
      Enumerated_Domain_Value_Definition:
        Invertebrate
      Enumerated_Domain_Value_Definition_Source:
        NOAA ESI Guidelines
  Enumerated_Domain:
    Enumerated_Domain_Value:
      m_benthic
      Enumerated_Domain_Value_Definition:
        Marine benthic fish
      Enumerated_Domain_Value_Definition_Source:
        NOAA ESI Guidelines
  Enumerated_Domain:
    Enumerated_Domain_Value:
      m_pelagic
      Enumerated_Domain_Value_Definition:
        Marine pelagic fish
      Enumerated_Domain_Value_Definition_Source:
        NOAA ESI Guidelines
  Enumerated_Domain:
    Enumerated_Domain_Value:
      manatee
      Enumerated_Domain_Value_Definition:
        Manatee
      Enumerated_Domain_Value_Definition_Source:
        NOAA ESI Guidelines
  Enumerated_Domain:
    Enumerated_Domain_Value:
      passerine
      Enumerated_Domain_Value_Definition:
        Passerine bird
      Enumerated_Domain_Value_Definition_Source:
        NOAA ESI Guidelines
  Enumerated_Domain:
    Enumerated_Domain_Value:
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
Attribute:
    Attribute_Label: MAY
    Attribute_Definition: May
    Attribute_Definition_Source: NOAA ESI Guidelines
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: X
            Enumerated_Domain_Value_Definition: Present in May
            Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines

Attribute:
    Attribute_Label: JUN
    Attribute_Definition: June
    Attribute_Definition_Source: NOAA ESI Guidelines
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: X
            Enumerated_Domain_Value_Definition: Present in June
            Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines

Attribute:
    Attribute_Label: JUL
    Attribute_Definition: July
    Attribute_Definition_Source: NOAA ESI Guidelines
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: X
            Enumerated_Domain_Value_Definition: Present in July
            Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines

Attribute:
    Attribute_Label:
AUG
Attribute_Definition:
August
Attribute_Definition_Source:
NOAA ESI Guidelines
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value:
X
Enumerated_Domain_Value_Definition:
Present in August
Enumerated_Domain_Value_Definition_Source:
NOAA ESI Guidelines

Attribute:
Attribute_Label:
SEP
Attribute_Definition:
September
Attribute_Definition_Source:
NOAA ESI Guidelines
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value:
X
Enumerated_Domain_Value_Definition:
Present in September
Enumerated_Domain_Value_Definition_Source:
NOAA ESI Guidelines

Attribute:
Attribute_Label:
OCT
Attribute_Definition:
October
Attribute_Definition_Source:
NOAA ESI Guidelines
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value:
X
Enumerated_Domain_Value_Definition:
Present in October
Enumerated_Domain_Value_Definition_Source:
NOAA ESI Guidelines

Attribute:
Attribute_Label:
NOV
Attribute_Definition:
November
Attribute_Definition_Source:
NOAA ESI Guidelines

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value:
X

Enumerated Domain Value Definition:
Present in November

Enumerated Domain Value Definition Source:
NOAA ESI Guidelines

Attribute:

Attribute Label:
DEC

Attribute Definition:
December

Attribute Definition Source:
NOAA ESI Guidelines

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value:
X

Enumerated Domain Value Definition:
Present in December

Enumerated Domain Value Definition Source:
NOAA ESI Guidelines

Attribute:

Attribute Label:
EL_SPE_SEA

Attribute Definition:
Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links records in the SEASONAL data table to records in the BIORES and BREED data tables.

Attribute Definition Source:
NOAA ESI Guidelines

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value:
E#######

Enumerated Domain Value Definition:
Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the last two characters are SEASON_ID (e.g. ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').

Enumerated Domain Value Definition Source:
NOAA ESI Guidelines

Detailed Description:

Entity Type:

Entity Type Label:
BREED

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

**Entity_Type_Definition_Source:**
NOAA ESI Guidelines

**Attribute:**

**Attribute_Label:**
EL_SPE_SEA

**Attribute_Definition:**
Concatenation of ELEMENT, SPECIES_ID, and SEASON_ID. This item links records in the BREED data table to records in the BIORES and SEASONAL data tables.

**Attribute_Definition_Source:**
NOAA ESI Guidelines

**Attribute_Domain_Values:**

**Enumerated_Domain:**

**Enumerated_Domain_Value:**
E############

**Enumerated_Domain_Value_Definition:**
Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the last two characters are SEASON_ID (e.g. ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').

**Enumerated_Domain_Value_Definition_Source:**
NOAA ESI Guidelines

**Attribute:**

**Attribute_Label:**
MONTH

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

**Attribute_Definition_Source:**
NOAA ESI Guidelines

**Attribute_Domain_Values:**

**Range_Domain:**

**Range_Domain_Minimum:**
1

**Range_Domain_Maximum:**
12

**Attribute:**

**Attribute_Label:**
BREED1

**Attribute_Definition:**
Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED1 = nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning; if ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M_MAMMAL" then BREED1 = mating. This attribute is not used for HABITAT or T_MAMMAL.
Attribute Definition Source:
NOAA ESI Guidelines

Attribute Domain Values:
Enumerated Domain:
Enumerated Domain Value:
Y
Enumerated Domain Value Definition:
Life-history stage or activity present
Enumerated Domain Value Definition Source:
NOAA ESI Guidelines

Attribute Domain Values:
Enumerated Domain:
Enumerated Domain Value:
N
Enumerated Domain Value Definition:
Life-history stage or activity not present or not reported
Enumerated Domain Value Definition Source:
NOAA ESI Guidelines

Attribute Domain Values:
Enumerated Domain:
Enumerated Domain Value:
-
Enumerated Domain Value Definition:
Breed category not used or not appropriate for record(s) in question
Enumerated Domain Value Definition Source:
NOAA ESI Guidelines

Attribute:
Attribute Label:
BREED2
Attribute Definition:
Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = migrating; if ELEMENT is "FISH" then BREED2 = eggs; if ELEMENT is "INVERT" then BREED2 = eggs; if ELEMENT is "REPTILE" then BREED2 = hatching; if ELEMENT is "M_MAMMAL" then BREED2 = calving. This attribute is not used for HABITAT or T_MAMMAL elements.
Attribute Definition Source:
NOAA ESI Guidelines

Attribute Domain Values:
Enumerated Domain:
Enumerated Domain Value:
Y
Enumerated Domain Value Definition:
Life-history stage or activity present
Enumerated Domain Value Definition Source:
NOAA ESI Guidelines

Attribute Domain Values:
Enumerated Domain:
Enumerated_Domain_Value: N
Enumerated_Domain_Value_Definition: Life-history stage or activity not present or not reported
Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value:

Enumerated_Domain_Value_Definition:
Breed category not used or not appropriate for record(s) in question
Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines

Attribute: Attribute_Label: BREED3
Attribute_Definition: Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED3 = molting; if ELEMENT is "FISH" then BREED3 = larvae; if ELEMENT is "INVERT" then BREED3 = larvae; if ELEMENT is "REPTILE" then BREED3 = internesting; if ELEMENT is "M_MAMMAL" then BREED3 = pupping. This attribute is not used for HABITAT or T_MAMMAL elements.
Attribute_Definition_Source: NOAA ESI Guidelines

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Y
Enumerated_Domain_Value_Definition: Life-history stage or activity present
Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: N
Enumerated_Domain_Value_Definition: Life-history stage or activity not present or not reported
Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value:

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

Enumerated_Domain_Value_Definition_Source:
NOAA ESI Guidelines

Attribute:
Attribute_Label: BREED4
Attribute_Definition:
Life history stage or activity type, where: if ELEMENT is "FISH" then BREED4 = juveniles; if ELEMENT is "INVERT" then BREED4 = juveniles; if ELEMENT is "REPTILE" then BREED4 = juveniles; if ELEMENT is "M_MAMMAL" then BREED4 = molting. This attribute is not used for BIRD, HABITAT, or T_MAMMAL elements.

Attribute_Definition_Source:
NOAA ESI Guidelines

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Y
Enumerated_Domain_Value_Definition:
Life-history stage or activity present
Enumerated_Domain_Value_Definition_Source:
NOAA ESI Guidelines

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: N
Enumerated_Domain_Value_Definition:
Life-history stage or activity not present or not reported
Enumerated_Domain_Value_Definition_Source:
NOAA ESI Guidelines

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: 
Enumerated_Domain_Value_Definition:
Breed category not used or not appropriate for record(s) in question
Enumerated_Domain_Value_Definition_Source:
NOAA ESI Guidelines

Attribute:
Attribute_Label: BREED5
Attribute_Definition:
Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 = adults; if ELEMENT is "INVERT" then BREED5 = adults; if ELEMENT is "REPTILE" then BREED5 = adults. This attribute is not used for BIRD, M_MAMMAL, HABITAT or T_MAMMAL elements.

Attribute_Definition_Source:
NOAA ESI Guidelines
Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value:

Y

Enumerated Domain Value Definition:

Life-history stage or activity present

Enumerated Domain Value Definition Source:

NOAA ESI Guidelines

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value:

N

Enumerated Domain Value Definition:

Life-history stage or activity not present or not reported

Enumerated Domain Value Definition Source:

NOAA ESI Guidelines

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value:

-

Enumerated Domain Value Definition:

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

Enumerated Domain Value Definition Source:

NOAA ESI Guidelines

Detailed Description:

Entity Type:

Entity Type Label:

STATUS

Entity Type Definition:

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

Entity Type Definition Source:

NOAA ESI Guidelines

Attribute:

Attribute Label:

ELEMENT

Attribute Definition:

Major categories of biological data.

Attribute Definition Source:

NOAA ESI Guidelines

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value:

BIRD

Enumerated Domain Value Definition:
Birds

Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value:
FISH

Enumerated_Domain_Value_Definition:
Fish

Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value:
HABITAT

Enumerated_Domain_Value_Definition:
Habitats and Plants

Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value:
INVERT

Enumerated_Domain_Value_Definition:
Invertebrates

Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value:
M_MAMMAL

Enumerated_Domain_Value_Definition:
Marine Mammals

Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value:
REPTILE

Enumerated_Domain_Value_Definition:
Reptiles and Amphibians

Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value:
T_MAMMAL

Enumerated_Domain_Value_Definition:
Terrestrial Mammals
Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines

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

Attribute_Definition_Source: NOAA ESI Guidelines
Attribute_Domain_Values:
Range_Domain:
  Range_Domain_Minimum: 1
  Range_Domain_Maximum: N

Attribute:
Attribute_Label: STATE
Attribute_Definition: Two-letter state abbreviation.

Attribute_Definition_Source: NOAA ESI Guidelines
Attribute_Domain_Values:
  Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:
Attribute_Label: COUNTRY
Attribute_Definition: Three-letter country abbreviation.

Attribute_Definition_Source: NOAA ESI Guidelines
Attribute_Domain_Values:
  Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:
Attribute_Label: S
Attribute_Definition: State threatened or endangered status.

Attribute_Definition_Source: NOAA ESI Guidelines
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: E
    Enumerated_Domain_Value_Definition: Endangered on state list
Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: T
Enumerated_Domain_Value_Definition: Threatened on state list
Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: C
Enumerated_Domain_Value_Definition: Species of Special Concern
Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines

Attribute:
Attribute_Label: F
Attribute_Definition: Federal threatened or endangered status.
Attribute_Definition_Source: NOAA ESI Guidelines

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: E
Enumerated_Domain_Value_Definition: Endangered on federal list
Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: T
Enumerated_Domain_Value_Definition: Threatened on federal list
Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: C
Enumerated_Domain_Value_Definition: Species of Special Concern
Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines
Attribute:
  Attribute_Label: I
  Attribute_Definition: International threatened or endangered status.
  Attribute_Definition_Source: NOAA ESI Guidelines
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: E
        Enumerated_Domain_Value_Definition: Endangered on international list
        Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: T
        Enumerated_Domain_Value_Definition: Threatened on international list
        Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: C
        Enumerated_Domain_Value_Definition: Species of Special Concern
        Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines

Attribute:
  Attribute_Label: S_DATE
  Attribute_Definition: Publication date of source material used to assign state status values for each species, if used.
  Attribute_Definition_Source: NOAA ESI Guidelines
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: YYYYMM
        Enumerated_Domain_Value_Definition: YYYY for year and optionally MM for month
        Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines

Attribute:
  Attribute_Label:
F_DATE
Attribute_Definition:
Publication date of source material used to assign federal status values for each species, if used.
Attribute_Definition_Source:
NOAA ESI Guidelines
Attribute_Domain_Values:
Enumerated_Domain:
    Enumerated_Domain_Value:
        YYYYMM
    Enumerated_Domain_Value_Definition:
        YYYY for year and optionally MM for month
    Enumerated_Domain_Value_Definition_Source:
        NOAA ESI Guidelines

Attribute:
Attribute_Label:
    I_DATE
Attribute_Definition:
Publication date of source material used to assign international status values for each species, if used.
Attribute_Definition_Source:
NOAA ESI Guidelines
Attribute_Domain_Values:
Enumerated_Domain:
    Enumerated_Domain_Value:
        YYYYMM
    Enumerated_Domain_Value_Definition:
        YYYY for year and optionally MM for month
    Enumerated_Domain_Value_Definition_Source:
        NOAA ESI Guidelines

Attribute:
Attribute_Label:
    EL_SPE
Attribute_Definition:
Concatenation of ELEMENT and SPECIES_ID. This item links the STATUS data table to the BIORES and SPECIES data tables.
Attribute_Definition_Source:
NOAA ESI Guidelines
Attribute_Domain_Values:
Enumerated_Domain:
    Enumerated_Domain_Value:
        E#####
    Enumerated_Domain_Value_Definition:
        Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (e.g. ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').
    Enumerated_Domain_Value_Definition_Source:
        NOAA ESI Guidelines

Detailed_Description:
Entity_Type:

Entity_Type_Label: SOURCES

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

Entity_Type_Definition_Source: NOAA ESI Guidelines

Attribute:

Attribute_Label: SOURCE_ID

Attribute_Definition: Source identifier that links records in the SOURCES data table to the items G_SOURCE and A_SOURCE in the SOC_DAT table; G_SOURCE and S_SOURCE in the BIORES table; and SOURCE_ID 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).

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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.

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
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Metadata Standard Name: Content Standards for Digital Geospatial Metadata


Metadata Extensions:

Online Linkage:
http://www.ncdmc.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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(The BIO_LUT table can be bypassed by linking the biology tables to BIORES using RARNUM.)

(The SOC_LUT table can be bypassed by linking the human-use tables to SOC_DAT using HUNUM.)
The BIO_LUT table can be bypassed by linking the biology tables to BIORES using RARNUM.

The SOC_LUT table can be bypassed by linking the human-use tables to SOC_DAT using HUNUM.