Louisiana ESI: HYDRO (Hydrography Lines and Polygons)

Metadata also available as - [Parseable text] - [SGML]

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, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Publication Date: 200410
Title: Louisiana ESI: HYDRO (Hydrography Lines and Polygons)
Edition: First
Geospatial Data Presentation Form: Vector digital data
Series Information:
Series Name: None
Issue Identification: Louisiana

Publication Information:
Publication Place: Seattle, Washington
Publisher:
National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Other Citation Details:
Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Description:

Abstract:
This data set contains vector lines and polygons representing coastal hydrography used in the creation of the Environmental Sensitivity Index (ESI) for coastal Louisiana. 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 or geographic features, SOC or socioeconomic features, and HYDRO or
water features.

This data set comprises a portion of the ESI for Louisiana. 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: 1988
    Ending_Date: 2001

Currentness_Reference:
These data were compiled during 2002-2003. The currentness dates for the data range from
1988 to 2001 and are documented in the Source_Information section.

Status:
  Progress: Complete
  Maintenance_and_Update_Frequency: None Scheduled

Spatial_Domain:
Boundaries:
  West_Bounding_Coordinate: -94.000
  East_Bounding_Coordinate: -88.792
  North_Bounding_Coordinate: 30.625
  South_Bounding_Coordinate: 28.875

Keywords:
  Theme:
    Theme_Keyword_Thesaurus: None
    Theme_Keyword: ESI
    Theme_Keyword: Sensitivity maps
    Theme_Keyword: Hydrography
    Theme_Keyword: Coastal resources
    Theme_Keyword: Oil spill planning
    Theme_Keyword: Coastal Zone Management
    Theme_Keyword: Wildlife

Place:
  Place_Keyword_Thesaurus: None
  Place_Keyword: Louisiana

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
  Louisiana 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, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, in cooperation with Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Native_Data_Set_Environment:
The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) and SQL SERVER(r) (version 7.0). The hardware configuration is PC's with Windows Operating System (NT4.0/2000).

The Spatial_Data_Organization_Information section refers only to the source files in the ARC export format. The following files are included in that data set: birds.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, lg_index.e00, mgt.e00, parish.e00, nests.e00, reptiles.e00, roads.e00, sm_index.e00, socecon.e00, t_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biore, biofile, breed, breed_dt, seasonal, soc_dat, soc_lut, sources, species, and status.

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 nodes, etc.), and SQL SERVER(r) to ARC/INFO(r) consistencies. The GIS manager makes a final review, 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 Louisiana. These data do not necessarily represent all hydrography sites present in Louisiana.

Positional_Accuracy:
Horizontal_Positional_Accuracy:
Horizontal_Positional_Accuracy_Report:
The hydrography data set was developed from a pre-existing digital source and reflects 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. Note that there were some topological inconsistencies in the source data used to create this data set, including edge matching errors and sliver polygons. In the majority of cases, these inconsistencies were not corrected and are still present in the data.

Lineage:
Source_Information:
Source_Citation:
Citation_Information:
Originator: USGS National Wetlands Research Center (NWRC)
Publication_Date: Unpublished material
Process_Description:
The main source of data used to depict the hydrography for this data layer was the Minerals Management Service (MMS) Gulf-Wide Information System hydrography layer for Louisiana. This layer was used with no modifications. The lineage information listed in the previous section refers to the source lineage of the hydrography layer from the Gulf-Wide Information System. For further information regarding the process description of this layer, please refer to the metadata document entitled "Gulf-Wide Information Systems, Louisiana: Hydrography". Metadata documents are available from the Louisiana Oil Spill Coordinator's Office (LOSCO) at this address: David Gisclair, Technical Assistance Program Director, Louisiana Oil Spill Coordinator's Office, Office of the Governor, 150 Third Street, Suite 405, Baton Rouge, LA 70801. Other contact methods include: phone (225) 578-7817, fax (225) 578-6400, and email dgisclair@lsu.edu.

Process_Date: 200312

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 rings
  Point_and_Vector_Object_Count: 53308
SDTS_Terms_Description:
  SDTS_Point_and_Vector_Object_Type: Area point
  Point_and_Vector_Object_Count: 53308
SDTS_Terms_Description:
  SDTS_Point_and_Vector_Object_Type: Complete chain
  Point_and_Vector_Object_Count: 56131
SDTS_Terms_Description:
  SDTS_Point_and_Vector_Object_Type: Link
  Point_and_Vector_Object_Count: 3063044
SDTS_Terms_Description:
  SDTS_Point_and_Vector_Object_Type: Node, planar graph
  Point_and_Vector_Object_Count: 55951

Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Geographic:
  Latitude_Resolution: 0.00005
  Longitude_Resolution: 0.00005
  Geographic_Coordinate_Units: Decimal degrees
Geodetic_Model:
  Horizontal_Datum_Name: North American Datum of 1983 (HARN)
  Ellipsoid_Name: Geodetic Reference System 80
  Semi-major_Axis: 6378137
  Denominator_of_Flattening_Ratio: 298.257222

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: Research Planning, Inc.
Attribute:
  Attribute_Label: LINE
  Attribute_Definition: Type of geographic feature.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: H
Enumerated_Domain_Value_Definition: Hydrography
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: I
Enumerated_Domain_Value_Definition: Index
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: S
Enumerated_Domain_Value_Definition: Shoreline
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: SOURCE_ID
Attribute_Definition: Data source of the ESI lines
Attribute_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: 1
Enumerated_Domain_Value_Definition: Original digital data (USGS DLG)
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: 6
Enumerated_Domain_Value_Definition: Louisiana DNR Digital Shoreline Data USGS source data
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: 7
Enumerated_Domain_Value_Definition: Digital USGS Index
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: 8
Enumerated_Domain_Value_Definition: Digitized line
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: 9
Enumerated_Domain_Value_Definition: Digital Shoreline from Louisiana Department of Natural Resources Study area boundary
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.

Attribute:
Attribute_Label: WATER_CODE
Attribute_Definition: Specifies a polygon as either water or land
Attribute_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: L
Enumerated_Domain_Value_Definition: Land
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: U
Enumerated_Domain_Value_Definition: Unranked
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain: W
Enumerated_Domain_Value: Water
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.

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: Research Planning, Inc.

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: Research Planning, Inc.

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: ESI Atlas for Louisiana

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

Custom_Order_Process:
Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.
Louisiana ESI: ESI (Environmental Sensitivity Index Shoreline Types - Lines)

Metadata also available as - [Parseable text] - [SGML]

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, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Publication Date: 200410

Title: Louisiana ESI: ESI (Environmental Sensitivity Index Shoreline Types - Lines)

Edition: First

Geospatial Data Presentation Form: Vector digital data

Series Information:

Series Name: None

Issue Identification: Louisiana

Publication Information:

Publication Place: Seattle, Washington

Publisher:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Other Citation Details:

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Description:

Abstract:

This data set contains vector lines representing the shoreline and coastal habitats of Louisiana classified according to the Environmental Sensitivity Index (ESI) classification system. This data set comprises a portion of the ESI for Louisiana. 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:* 1988
  *Ending_Date:* 2001

**CurrentnessReference:**
The ESI shoreline data were compiled during 2002-2003. The currentness dates for these data range from 1988 to 2001 and are documented in the Source_Information section.

**Status:**
**Progress:** Complete
**Maintenance_and_Update_Frequency:** None Scheduled

**Spatial_Domain:**
**Bounding_Coordinates:**
  *West_BoundingCoordinate:* -94.000
  *East_BoundingCoordinate:* -88.792
  *North_BoundingCoordinate:* 30.625
  *South_BoundingCoordinate:* 28.875

**Keywords:**
**Theme:**
  *Theme_Keyword_Thesaurus:* None
  *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:* Shoreline Types

**Place:**
  *Place_Keyword_Thesaurus:* None
  *Place_Keyword:* Louisiana

**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 Louisiana 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, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, in cooperation with Minerals Management Service (MMS), New
Native_Data_Set_Environment:
The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) and SQL SERVER(r) (version 7.0). The hardware configuration is PC's with Windows Operating System (NT4.0/2000).

The Spatial_Data_Organization_Information section refers only to the source files in the ARC export format. The following files are included in that data set: birds.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, lg_index.e00, mgt.e00, parish.e00, nests.e00, reptiles.e00, roads.e00, sm_index.e00, socecon.e00, t_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, bioreis, biofile, breed, breed_dt, seasonal, soc_dat, soc_lut, sources, species, and status.

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 nodes, 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.

Positional_Accuracy:
Horizontal_Positional_Accuracy:
Horizontal_Positional_Accuracy_Report:
The shoreline was digitized from the 1998 LOSCO/USGS Digital Orthophoto Quarter Quadrangles (DOQQ), which meet National Map Accuracy Standards at an approximate scale of 1:12,000. The horizontal positional accuracy for the majority of shoreline lines are likely to be similar to that of the DOQQs. A known problem existed with the registration of the DOQQs representing the northern portion of the Chandaleur Islands. This was fixed with a temporary re-registration to other digital data, but horizontal positional accuracy is likely to have suffered. In some cases, shoreline lines were digitized from field sketches and oblique aerial photography. The horizontal positional accuracy of these lines is difficult to quantify, but likely to be far worse than that of the shoreline digitized from DOQQs. The minimum mapping unit (MMU) of the actual shoreline classification segments is estimated at 50 feet. 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:
Louisiana Oil Spill Coordinator's Office (LOSCO) & U.S. Geological Survey (USGS)
Publication Date: 2000
Title: Color Infrared Orthophotography of Louisiana
Geospatial Data Presentation Form: Digital image
Publication Information:
Publication Place: Baton Rouge, LA
Publisher: LOSCO
Source Scale Denominator: 12000
Type of Source Media: Disk
Source Time Period of Content:
Time Period Information:
Single Date/Time:
Calendar Date: 1998
Source Currentness Reference: Date of survey
Source Citation Abbreviation: None
Source Contribution: Imagery of coastal Louisiana
Source Information:
Source Citation:
Citation Information:
Originator: Ramsey, K. & S. Penland (Louisiana State University)
Publication Date: Unpublished material
Title: Geomorphological Ranking of the Outer Coast of Louisiana
Geospatial Data Presentation Form: Digital arcs
Publication Information:
Publication Place: Unknown
Publisher: Unknown
Source Scale Denominator: Unknown
Type of Source Media: Disk
Source Time Period of Content:
Time Period Information:
Single Date/Time:
Calendar Date: 1999
Source Currentness Reference: Date of Communication
Source Citation Abbreviation: None
Source Contribution: Shoreline classification for outer coast of Louisiana
Source Information:
Source Citation:
Citation Information:
Originator: Louisiana Department of Wildlife and Fisheries (LDWF) and USGS National Wetlands Research Center (NWRC)
Publication Date: 1997
Title: Louisiana Coastal Marsh Vegetative Type Map
Geospatial Data Presentation Form: Digital polys
Publication Information:
Publication Place: Lafayette, LA
Publisher: LDWF and USGS NWRC
Source Scale Denominator: Unknown
Type of Source Media: Disk
Source Time Period of Content:
Time Period Information:
Single Date/Time:
Calendar Date: 1997
Source Currentness Reference: Date of survey
Source Citation Abbreviation: None
Source Contribution: Coastal marsh type data
Source Information:
The main source of data used to depict the sensitive shoreline for this data layer was the Minerals Management Service (MMS) Gulf-Wide Information System ESI layer for Louisiana. This layer was used with no modifications. The lineage information listed in the previous section refers to the source lineage of the ESI layer from the Gulf-Wide Information System. For further information regarding the process description of this layer, please refer to the metadata document entitled "Gulf-Wide Information System, Louisiana: Outer Coast Environmental Sensitivity Index (ESI) Arcs". Metadata documents are available from the Louisiana Oil Spill Coordinator's Office (LOSCO) at this address: David Gisclair, Technical Assistance Program Director, Louisiana Oil Spill Coordinator's Office, Office of the Governor, 150 Third Street, Suite 405, Baton Rouge, LA 70801. Other contact methods include: phone (225) 578-7817, fax (225) 578-6400, and email dgisclair@lsu.edu.

Process_Date: 200312
Process_Contact:
  Contact_Information:
    Contact_Organization_Primary:
      Contact_Organization: NOAA, Office of Response and Restoration
      Contact_Person: Jill Petersen
    Contact_Address:
      Address_Type: Physical address
      Address: 7600 Sand Point Way N.E.
      City: Seattle
      State_or_Province: Washington
      Postal_Code: 98115-6349
    Contact_Voice_Telephone: (206) 526-6944
    Contact_Facsimile_Telephone: (206) 526-6329
    Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

Spatial_Data_Organization_Information:
  Direct_Spatial_Reference_Method: Vector
  Point_and_Vector_Object_Information:
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Complete chain
      Point_and_Vector_Object_Count: 6016
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Link
      Point_and_Vector_Object_Count: 790299
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Node, planar graph
      Point_and_Vector_Object_Count: 6515

Spatial_Reference_Information:
  HorizontalCoordinate_System_Definition:
    Geographic:
      Latitude_Resolution: 0.00005
      Longitude_Resolution: 0.00005
    Geographic_Coordinate_Units: Decimal degrees
  Geodetic_Model:
    Horizontal_Datum_Name: North American Datum of 1983 (HARN)
    Ellipsoid_Name: Geodetic Reference System 80
    Semi-major_Axis: 6378137
    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: Research Planning, Inc.

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 affect 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: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:
- Enumerated_Domain_Value: 1B
  - Enumerated_Domain_Value_Definition: Exposed, Solid Man-made Structures
  - Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
- Enumerated_Domain_Value: 2A
  - Enumerated_Domain_Value_Definition: Exposed, Wave-cut Platforms in Clay
  - Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
- Enumerated_Domain_Value: 2B
  - Enumerated_Domain_Value_Definition: Exposed, Scarps and Steep Slopes in Clay
  - Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
- Enumerated_Domain_Value: 3A
  - Enumerated_Domain_Value_Definition: Fine- to Medium-grained Sand Beaches
  - Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
- Enumerated_Domain_Value: 3B
  - Enumerated_Domain_Value_Definition: Scarps and Steep Slopes in Sand
  - Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
- Enumerated_Domain_Value: 4
Enumerated_Domain_Value_Definition: Coarse-Grained Sand Beaches
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
  Enumerated_Domain_Value: 5
  Enumerated_Domain_Value_Definition: Mixed Sand and Gravel Beaches
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
  Enumerated_Domain_Value: 6A
  Enumerated_Domain_Value_Definition: Gravel Beaches
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
  Enumerated_Domain_Value: 6B
  Enumerated_Domain_Value_Definition: Riprap
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
  Enumerated_Domain_Value: 7
  Enumerated_Domain_Value_Definition: Exposed Tidal Flats
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
  Enumerated_Domain_Value: 8A
  Enumerated_Domain_Value_Definition: Sheltered Rocky Shores and Sheltered Scarps in Mud, or Clay
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
  Enumerated_Domain_Value: 8B
  Enumerated_Domain_Value_Definition: Sheltered, Man-made Structures
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
  Enumerated_Domain_Value: 8C
  Enumerated_Domain_Value_Definition: Sheltered Riprap
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
  Enumerated_Domain_Value: 9A
  Enumerated_Domain_Value_Definition: Sheltered Tidal Flats
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
  Enumerated_Domain_Value: 9B
  Enumerated_Domain_Value_Definition: Sheltered, Vegetated Low Banks
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
  Enumerated_Domain_Value: 10A
  Enumerated_Domain_Value_Definition: Salt- and Brackish-water Marsh
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
  Enumerated_Domain_Value: 10B
  Enumerated_Domain_Value_Definition: Freshwater Marshes
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
  Enumerated_Domain_Value: 10C
  Enumerated_Domain_Value_Definition: Freshwater Swamps
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
  Enumerated_Domain_Value: 10D
  Enumerated_Domain_Value_Definition: Scrub-Shrub Wetlands, including Black Mangroves
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
  Enumerated_Domain_Value: U
  Enumerated_Domain_Value_Definition: Unranked
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
  Attribute_Label: LINE
  Attribute_Definition: Type of geographic feature.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: B
      Enumerated_Domain_Value_Definition: Breakwater
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Enumerated_Domain:
      Enumerated_Domain_Value: S
      Enumerated_Domain_Value_Definition: Shoreline
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
  Attribute_Label: SOURCE_ID
  Attribute_Definition: Data source of the ESI lines. 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.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: 2
      Enumerated_Domain_Value_Definition: Low-altitude overflight field sketches and oblique photography
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Enumerated_Domain:
      Enumerated_Domain_Value: 3
      Enumerated_Domain_Value_Definition: Digitized from aerial photography (DOQQs)
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
  Attribute_Label: ENVIR
  Attribute_Definition: Type of regional environment
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: E
      Enumerated_Domain_Value_Definition: Estuarine
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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

Custom_Order_Process:
Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

Metadata_Reference_Information:
Metadata_Date: 200410
Metadata_Review_Date: 200410
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_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

Generated by mp version 2.8.2 on Thu Oct 28 16:30:31 2004
Louisiana ESI: INDEX (Index Polygons)

Metadata also available as - [Parseable text] - [SGML]

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, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Publication_Date: 200410
Title: Louisiana ESI: INDEX (Index Polygons)
Edition: First
Geospatial_Data_Presentation_Form: Vector digital data
Series_Information:
Series_Name: None
Issue_Identification: Louisiana
Publication_Information:
Publication_Date: 200410
Publication_Place: Seattle, Washington
Publisher:
National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Other_Citation_Details:
Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Description:

Abstract:
This data set contains vector polygons representing the boundaries of all the hardcopy cartographic products produced as part of the Environmental Sensitivity Index (ESI) for Louisiana, as well as digital data extents. This data set comprises a portion of the ESI data for Louisiana. 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 data
layers, LG_INDEX (Large Index Polygons) and SM_INDEX (Small Index Polygons), part of the larger Louisiana ESI database, for additional boundary information.

**Purpose:**
The ESI data were collected, mapped, and digitized to provide environmental data for oil spill planning and response. The Clean Water Act with amendments by the Oil Pollution Act of 1990 requires response plans for immediate and effective protection of sensitive resources.

**Time_Period_of_Content:**
**Time_Period_Information:**
- **Range_of_Dates/Times:**
  - **Beginning_Date:** 1999
  - **Ending_Date:** 2001

**Currentness_Reference:**
The INDEX data were compiled during 2002-2003. The currentness dates for the data range from 1999 to 2001 and are documented in the Source_Information section.

**Status:**
**Progress:** Complete
**Maintenance_and_Update_Frequency:** None Scheduled

**Spatial_Domain:**
**Bounding_Coordinates:**
- **West_Bounding_Coordinate:** -94.000
- **East_Bounding_Coordinate:** -88.792
- **North_Bounding_Coordinate:** 30.625
- **South_Bounding_Coordinate:** 28.875

**Keywords:**
**Theme:**
- **Theme_Keyword_Thesaurus:** None
- **Theme_Keyword:** ESI
- **Theme_Keyword:** Sensitivity maps
- **Theme_Keyword:** Coastal resources
- **Theme_Keyword:** Oil spill planning
- **Theme_Keyword:** Coastal Zone Management
- **Theme_Keyword:** Wildlife

**Place:**
- **Place_Keyword_Thesaurus:** None
- **Place_Keyword:** Index
- **Place_Keyword:** Lg_Index
- **Place_Keyword:** Sm_Index
- **Place_Keyword:** Louisiana

**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 Louisiana 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, Office of Response and Restoration, Hazardous Materials Response
Division, Seattle, Washington, in cooperation with Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Native_Data_Set_Environment:
The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) and SQL SERVER(r) (version 7.0). The hardware configuration is PC's with Windows Operating System (NT4.0/2000).

The Spatial_Data_Organization_Information section refers only to the source files in the ARC export format. The following files are included in that data set: birds.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, lg_index.e00, mgt.e00, parish.e00, nests.e00, reptiles.e00, roads.e00, sm_index.e00, socecon.e00, t_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, bioreis, biofile, breed, breed_dt, seasonal, soc_dat, soc_lut, sources, species, and status.

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 nodes, 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 the hardcopy cartographic products produced as part of the Environmental Sensitivity Index (ESI) for Louisiana, as well as digital data extents. Primarily, 1:24,000 and 1:250,000 U.S. Geological Survey (USGS) topographic maps were used to provide boundaries for cartographic products. In most cases, the polygons represent USGS topographic maps that were re-tiled, moved, or extended to provide better cartographic coverage of the study area. For additional boundary information, refer to the LG_INDEX (Large Index Polygons) data layer, which contains 1:100,000 scale indices, and the SM_INDEX (Small Index Polygons) data layer, which contains 1:50,000 scale indices.

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 and 1:250,000 topographic map corners. The arcs were densified to enable correct reprojection. 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: U.S. Geological Survey (USGS)
Publication_Date: Various
Title: 1:24,000 and 1:250,000 Topographic Maps
Geospatial_Data_Presentation_Form: Map
Publication_Information:
Publication_Date: Various
Publication_Place: Reston, VA
Publisher: USGS

Source_Scale_Denominator: 24000 and 250000
Type_of_Source_Media: Paper
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: Various
Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: USGS topographic map boundaries

Process_Step:
Process_Description:
The index polygons in this data layer were generated in Arc/INFO by merging the
index polygons from the SM_INDEX (Small Index Polygons) and LG_INDEX
(Large Index Polygons) data layers.

Process_Date: 200312
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 rings
Point_and_Vector_Object_Count: 146
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Area point
Point_and_Vector_Object_Count: 146
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Complete chain
Point_and_Vector_Object_Count: 397
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Link
Point_and_Vector_Object_Count: 433
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Node, planar graph
**Spatial Reference Information:**

**Horizontal Coordinate System Definition:**
- Geographic:
  - Latitude Resolution: 0.00005
  - Longitude Resolution: 0.00005
  - Geographic Coordinate Units: Decimal degrees

**Geodetic Model:**
- Horizontal Datum Name: North American Datum of 1983 (HARN)
- Ellipsoid Name: Geodetic Reference System 80
- Semi-major Axis: 6378137
- Denominator of Flattening Ratio: 298.257222

**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 map and digital data boundaries used in the creation of the Environmental Sensitivity Index (ESI) for Louisiana.
  - **Entity Type Definition Source:** Research Planning, Inc.

**Attribute:**
- **Attribute Label:** TILE-NAME
  - **Attribute Definition:**
    The TILE-NAME contains the map number according to the specified layout of the atlas. The values for each polygon are unique and range from 1 through 144.
  - **Attribute Definition Source:** Research Planning, Inc.
  - **Attribute Domain Values:**
    - Range Domain:
      - Range Domain Minimum: 1
      - Range Domain Maximum: 144

**Attribute:**
- **Attribute Label:** TOPO-NAME
  - **Attribute Definition:** Topographic map names
  - **Attribute Definition Source:** Research Planning, Inc.
  - **Attribute Domain Values:**
    - Enumerated Domain:
      - Enumerated Domain Value: ATCHAFALAYA BAY
        - Enumerated Domain Value Definition: USGS Topographic map name
        - Enumerated Domain Value Definition Source: Research Planning, Inc.
      - Enumerated Domain Value: BARATARIA PASS
        - Enumerated Domain Value Definition: USGS Topographic map name
        - Enumerated Domain Value Definition Source: Research Planning, Inc.
      - Enumerated Domain Value: BASTIAN BAY
        - Enumerated Domain Value Definition: USGS Topographic map name
        - Enumerated Domain Value Definition Source: Research Planning, Inc.
      - Enumerated Domain Value: BATON ROUGE
        - Enumerated Domain Value Definition: USGS Topographic map name
        - Enumerated Domain Value Definition Source: Research Planning, Inc.
      - Enumerated Domain Value: BAY COQUETTE

**Point and Vector Object Count:** 252
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
    Enumerated_Domain_Value: BAY RONQUILLE
    Enumerated_Domain_Value_Definition: USGS Topographic map name
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
    Enumerated_Domain_Value: BAYOU BLANC
    Enumerated_Domain_Value_Definition: USGS Topographic map name
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
    Enumerated_Domain_Value: BAYOU LUCIEN
    Enumerated_Domain_Value_Definition: USGS Topographic map name
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
    Enumerated_Domain_Value: BELLE ISLE
    Enumerated_Domain_Value_Definition: USGS Topographic map name
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
    Enumerated_Domain_Value: BELLE PASS
    Enumerated_Domain_Value_Definition: USGS Topographic map name
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
    Enumerated_Domain_Value: BIG CONSTANCE LAKE
    Enumerated_Domain_Value_Definition: USGS Topographic map name
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
    Enumerated_Domain_Value: BLACK BAY
    Enumerated_Domain_Value_Definition: USGS Topographic map name
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
    Enumerated_Domain_Value: BRETON ISLANDS
    Enumerated_Domain_Value_Definition: USGS Topographic map name
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
    Enumerated_Domain_Value: BRETON ISLANDS SE
    Enumerated_Domain_Value_Definition: USGS Topographic map name
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
    Enumerated_Domain_Value: BURAS
    Enumerated_Domain_Value_Definition: USGS Topographic map name
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
    Enumerated_Domain_Value: BURRWOOD BAYOU EAST
    Enumerated_Domain_Value_Definition: USGS Topographic map name
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
    Enumerated_Domain_Value: BURRWOOD BAYOU WEST
    Enumerated_Domain_Value_Definition: USGS Topographic map name
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
    Enumerated_Domain_Value: CALUMET ISLAND
    Enumerated_Domain_Value_Definition: USGS Topographic map name
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
    Enumerated_Domain_Value: CAMERON
    Enumerated_Domain_Value_Definition: USGS Topographic map name
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
    Enumerated_Domain_Value: CAMINADA PASS
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: CAT ISLAND PASS
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: CENTRAL ISLES DERNIERES
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: CHANDELEUR LIGHT
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: CHENIERE AU TIGRE
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: COQUILLE POINT
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: COW ISLAND
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: CREOLE
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: CROWLEY
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: DIXON BAY
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: EAST BAY JUNOP
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: EASTERN ISLES DERNIERES
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: ELLERSLIE
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: GARDEN ISLAND PASS
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: GRAND BAYOU
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: GRAND BAYOU DU LARGE
Enumerated_Domain_Value_Definition: USGS Topographic map inset
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: GRAND GOSIER ISLANDS
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: GRAND ISLE
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: GULFPORT
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: HACKBERRY BEACH
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: HELL HOLE BAYOU
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: HOG BAYOU
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: HOLLY BEACH
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: JOHNSONS BAYOU
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: LAKE CHARLES
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: LAKE POINT
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: LAKE SALVE
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: LEEVILLE
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: MAIN PASS
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: MARONE POINT
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: MORGAN CITY
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: MOUND POINT
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: MULBERRY ISLAND EAST
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: MULBERRY ISLAND WEST
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: NEW HARBOR ISLANDS
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: NEW ORLEANS
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: NORTH ISLANDS
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: OYSTER BAYOU
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: PASS A LOUTRE EAST
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: PASS A LOUTRE WEST
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: PASS DU BOIS
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: PASS TANTE PHINE
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: PELICAN PASS
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: PEVETO BEACH
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: PILOTTOWN
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: PLUMB BAYOU
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
    Enumerated_Domain_Value: POINT AU FER
    Enumerated_Domain_Value_Definition: USGS Topographic map name
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
    Enumerated_Domain_Value: POINT AU FER NE
    Enumerated_Domain_Value_Definition: USGS Topographic map name
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
    Enumerated_Domain_Value: POINT CHEVREUIL
    Enumerated_Domain_Value_Definition: USGS Topographic map name
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
    Enumerated_Domain_Value: PONCHATOUOLA
    Enumerated_Domain_Value_Definition: USGS Topographic map name
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
    Enumerated_Domain_Value: PORT ARTHUR
    Enumerated_Domain_Value_Definition: USGS Topographic map name
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
    Enumerated_Domain_Value: ROLLOVER LAKE
    Enumerated_Domain_Value_Definition: USGS Topographic map name
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
    Enumerated_Domain_Value: SMITH BAYOU
    Enumerated_Domain_Value_Definition: USGS Topographic map name
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
    Enumerated_Domain_Value: SOUTH OF SOUTH PASS
    Enumerated_Domain_Value_Definition: USGS Topographic map name
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
    Enumerated_Domain_Value: SOUTH PASS
    Enumerated_Domain_Value_Definition: USGS Topographic map name
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
    Enumerated_Domain_Value: STAKE ISLANDS
    Enumerated_Domain_Value_Definition: USGS Topographic map name
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
    Enumerated_Domain_Value: TAYLOR PASS
    Enumerated_Domain_Value_Definition: USGS Topographic map name
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
    Enumerated_Domain_Value: TERREBONNE BAY
    Enumerated_Domain_Value_Definition: USGS Topographic map name
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
    Enumerated_Domain_Value: TEXAS POINT
    Enumerated_Domain_Value_Definition: USGS Topographic map name
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
    Enumerated_Domain_Value: TIMBALIER ISLAND
    Enumerated_Domain_Value_Definition: USGS Topographic map name
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
    Enumerated_Domain_Value: TRIUMPH
Enumerated_Domain_Value_Definition: USGS Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
  Enumerated_Domain_Value: VENICE
  Enumerated_Domain_Value_Definition: USGS Topographic map name
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
  Enumerated_Domain_Value: WESTERN ISLES DERNIERES
  Enumerated_Domain_Value_Definition: USGS Topographic map name
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
  Enumerated_Domain_Value: WHITE LAKE
  Enumerated_Domain_Value_Definition: USGS Topographic map name
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: 50,000
      Enumerated_Domain_Value_Definition: Scale = 1:50,000
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Enumerated_Domain:
      Enumerated_Domain_Value: 100,000
      Enumerated_Domain_Value_Definition: Scale = 1:100,000
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
  Attribute_Label: MAPANGLE
  Attribute_Definition: MAPANGLE contains a value to rotate the final map product so that it is situated straight up and down
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Range_Domain:
      Range_Domain_Minimum: -2.233000
      Range_Domain_Maximum: 0.403000
      Attribute_Units_of_Measure: Degree

Attribute:
  Attribute_Label: PAGESIZE
  Attribute_Definition: PAGESIZE contains the value of the width and height of the map in the final map product
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: 11,17
      Enumerated_Domain_Value_Definition: Page size = 11" by 17"
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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_Protvince: Washington
  Postal_Code: 98115-6349
Contact_Voice_Telephone: (206) 526-6400
Contact_Facsimile_Telephone: (206) 526-6329

Resource_Description: ESI Atlas for Louisiana

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

Custom_Order_Process:
Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

Metadata_Reference_Information:
  Metadata_Date: 200410
  Metadata_Review_Date: 200410
  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_Protvince: 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

Generated by mp version 2.8.2 on Thu Oct 28 16:56:37 2004
Louisiana ESI: LG_INDEX (Large Index Polygons)

Metadata also available as - [Parseable text] - [SGML]

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, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Publication_Date: 200410

Title: Louisiana ESI: LG_INDEX (Large Index Polygons)

Edition: First

Geospatial_Data_Presentation_Form: Vector digital data

Series_Information:

Series_Name: None
Issue_Identification: Louisiana

Publication_Information:

Publication Place: Seattle, Washington
Publisher:

Other_Citation_Details:
Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Description:

Abstract:
This data set contains vector polygons representing the boundaries of all the hardcopy cartographic products produced as part of the Environmental Sensitivity Index (ESI) for Louisiana, as well as digital data extents. This data set comprises a portion of the ESI data for Louisiana. 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 data
layers, SM_INDEX (Small Index Polygons) and INDEX (Index Polygons), part of the larger Louisiana ESI database, for additional boundary information.

**Purpose:**
The ESI data were collected, mapped, and digitized to provide environmental data for oil spill planning and response. The Clean Water Act with amendments by the Oil Pollution Act of 1990 requires response plans for immediate and effective protection of sensitive resources.

**Time_Period_of_Content:**
**Time_Period_Information:**
**Range_of_Dates/Times:**
  **Beginning_Date:** 1999
  **Ending_Date:** 2001

**Currentness_Reference:**
These data were compiled during 2002-2003. The currentness dates for the data range from 1999 to 2001 and are documented in the Source_Information section.

**Status:**
**Progress:** Complete
**Maintenance_and_Update_Frequency:** None Scheduled

**Spatial_Domain:**
**Bounding_Coordinates:**
  **West_Bounding_Coordinate:** -94.000
  **East_Bounding_Coordinate:** -88.792
  **North_Bounding_Coordinate:** 30.625
  **South_Bounding_Coordinate:** 28.875

**Keywords:**
**Theme:**
  **Theme_Keyword_Thesaurus:** None
  **Theme_Keyword:** ESI
  **Theme_Keyword:** Sensitivity maps
  **Theme_Keyword:** Coastal resources
  **Theme_Keyword:** Oil spill planning
  **Theme_Keyword:** Coastal Zone Management
  **Theme_Keyword:** Wildlife

**Place:**
  **Place_Keyword_Thesaurus:** None
  **Place_Keyword:** Index
  **Place_Keyword:** Lg_Index
  **Place_Keyword:** Louisiana

**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 Louisiana 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, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, in cooperation with Minerals Management Service (MMS), New
Native_Data_Set_Environment:
The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO® (version 8.3) and SQL SERVER® (version 7.0). The hardware configuration is PC's with Windows Operating System (NT4.0/2000).

The Spatial_Data_Organization_Information section refers only to the source files in the ARC export format. The following files are included in that data set: birds.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, lg_index.e00, mgt.e00, parish.e00, nests.e00, reptiles.e00, roads.e00, sm_index.e00, socecon.e00, t_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biore, biofile, breed, breed_dt, seasonal, soc_dat, soc_lut, sources, species, and status.

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 nodes, etc.), and SQL SERVER® to ARC/INFO® 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 the hardcopy cartographic products produced as part of the Environmental Sensitivity Index (ESI) for Louisiana, as well as digital data extents. Primarily, 1:250,000 U.S. Geological Survey (USGS) topographic maps were used to provide boundaries for cartographic products. In most cases, the polygons represent USGS topographic maps that were re-tiled, moved, or extended to provide better cartographic coverage of the study area. For additional boundary information, refer to the SM_INDEX (Small Index Polygons) data layer, which contains 1:50,000 indices, and the INDEX (Index Polygons) data layer, which contains both the 1:100,000 and 1:50,000 scale indices.

Positional_Accuracy:
Horizontal_Positional_Accuracy:

Horizontal_Positional_Accuracy_Report:
The polygons in this data layer were generated in ArcInfo from the coordinates of the USGS 1:250,000 topographic map corners. The arcs were densified to enable correct reprojection. 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: USGS
  Publication_Date: Various
  Title: 1:250,000 Topographic Maps
  Geospatial_Data_Presentation_Form: Map
  Publication_Information:
    Publication_Date: Various
    Publisher: USGS
Source_Scale_Denominator: 250000
Type_of_Source_Media: Paper
Source_Time_Period_of_Content:
  Time_Period_Information:
    Single_Date/Time:
      Calendar_Date: Various
  Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: USGS topographic map boundaries

Process_Step:
Process_Description:
The polygons in this data layer were generated in Arc/INFO from the coordinates of the USGS map corners. The arcs were densified to enable correct reprojection.
Process_Date: 200312

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 rings
      Point_and_Vector_Object_Count: 71
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Area point
      Point_and_Vector_Object_Count: 71
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Complete chain
      Point_and_Vector_Object_Count: 211
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Link
      Point_and_Vector_Object_Count: 242
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Node, planar graph
      Point_and_Vector_Object_Count: 141
Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Geographic:
      Latitude_Resolution: 0.00005
      Longitude_Resolution: 0.00005
      Geographic_Coordinate_Units: Decimal degrees
    Geodetic_Model:
      Horizontal_Datum_Name: North American Datum of 1983 (HARN)
      Ellipsoid_Name: Geodetic Reference System 80
      Semi-major_Axis: 6378137
      Denominator_of_Flattening_Ratio: 298.257222

Entity_and_Attribute_Information:
  Detailed_Description:
    Entity_Type:
      Entity_Type_Label: LG_INDEX.PAT
      Entity_Type_Definition:
        The LG_INDEX.PAT table contains attribute information for the vector polygons
        representing the map and digital data boundaries used in the creation of the
        Environmental Sensitivity Index (ESI) for Louisiana.
        Entity_Type_Definition_Source: Research Planning, Inc.
      Attribute:
        Attribute_Label: TILE-NAME
        Attribute_Definition:
          The TILE-NAME contains the map number according to the specified layout of the
          atlas. The values for each polygon are unique and range from 74 through 144.
        Attribute_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
          Range_Domain:
            Range_Domain_Minimum: 74
            Range_Domain_Maximum: 144
      Attribute:
        Attribute_Label: TOPO-NAME
        Attribute_Definition: Topographic map names
        Attribute_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
          Enumerated_Domain:
            Enumerated_Domain_Value: ATCHAFALAYA BAY
            Enumerated_Domain_Value_Definition: USGS 1:250,000 Topographic
            map name
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
            Enumerated_Domain:
              Enumerated_Domain_Value: BATON ROUGE
              Enumerated_Domain_Value_Definition: USGS 1:250,000 Topographic
              map name
              Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
              Enumerated_Domain:
                Enumerated_Domain_Value: BLACK BAY
                Enumerated_Domain_Value_Definition: USGS 1:250,000 Topographic
                map name
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
                Enumerated_Domain:
                  Enumerated_Domain_Value: CROWLEY
                  Enumerated_Domain_Value_Definition: USGS 1:250,000 Topographic
                  map name
                  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: GULFPORT
Enumerated_Domain_Value_Definition: USGS 1:250,000 Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: LAKE CHARLES
Enumerated_Domain_Value_Definition: USGS 1:250,000 Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: MORGAN CITY
Enumerated_Domain_Value_Definition: USGS 1:250,000 Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: NEW ORLEANS
Enumerated_Domain_Value_Definition: USGS 1:250,000 Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: NORTH ISLANDS
Enumerated_Domain_Value_Definition: USGS 1:250,000 Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: PONCHATOULA
Enumerated_Domain_Value_Definition: USGS 1:250,000 Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: PORT ARTHUR
Enumerated_Domain_Value_Definition: USGS 1:250,000 Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: TERREBONNE BAY
Enumerated_Domain_Value_Definition: USGS 1:250,000 Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
Enumerated_Domain_Value: WHITE LAKE
Enumerated_Domain_Value_Definition: USGS 1:250,000 Topographic map name
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: 100,000
Enumerated_Domain_Value_Definition: Scale = 1:100,000
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: MAPANGLE
Attribute_Definition:
MAPANGLE contains a value to rotate the final map product so that it is situated
straight up and down

Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Range_Domain:
  Range_Domain_Minimum: -2.233
  Range_Domain_Maximum: 0.389
  Attribute_Units_of_Measure: Degree

Attribute:
  Attribute_Label: PAGESIZE
  Attribute_Definition:
  PAGESIZE contains the value of the width and height of the map in the final map product
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: 11,17
      Enumerated_Domain_Value_Definition: Page size = 11" by 17"
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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

Custom_Order_Process:
  Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

Metadata_Reference_Information:
  Metadata_Date: 200410
  Metadata_Review_Date: 200410
  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: (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

Generated by mp version 2.8.2 on Thu Oct 28 16:47:34 2004
Louisiana ESI: SM_INDEX (Small Index Polygons)

Metadata also available as - [Parseable text] - [SGML]

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, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

**Publication_Date:** 200410

**Title:** Louisiana ESI: SM_INDEX (Small Index Polygons)

**Edition:** First

**Geospatial_Data_Presentation_Form:** Vector digital data

**Series_Information:**

**Series_Name:** None

**Issue_Identification:** Louisiana

**Publication_Information:**

**Publication_Place:** Seattle, Washington

**Publisher:**
National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

**Other_Citation_Details:**
Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

**Description:**

**Abstract:**

This data set contains vector polygons representing the boundaries of all the hardcopy cartographic products produced as part of the Environmental Sensitivity Index (ESI) for Louisiana, as well as digital data extents. This data set comprises a portion of the ESI data for Louisiana. 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 data
layers, LG_INDEX (Large Index Polygons) and INDEX (Index Polygons), part of the larger Louisiana ESI database, for additional boundary information.

**Purpose:**
The ESI data were collected, mapped, and digitized to provide environmental data for oil spill planning and response. The Clean Water Act with amendments by the Oil Pollution Act of 1990 requires response plans for immediate and effective protection of sensitive resources.

**Time_Period_of_Content:**
**Time_Period_Information:**
- **Range_of_Dates/Times:**
  - **Beginning_Date:** 1999
  - **Ending_Date:** 2001

**Currentness_Reference:**
These data were compiled during 2002-2003. The currentness dates for the data range from 1999 to 2001 and are documented in the Source_Info section.

**Status:**
**Progress:** Complete
**Maintenance_and_Update_Frequency:** None Scheduled

**Spatial_Domain:**
**Bounding_Coordinates:**
- **West_BoundingCoordinate:** -94.000
- **East_BoundingCoordinate:** -88.792
- **North_BoundingCoordinate:** 30.625
- **South_BoundingCoordinate:** 28.875

**Keywords:**
**Theme:**
- **Theme_Keyword_Thesaurus:** None
- **Theme_Keyword:** ESI
- **Theme_Keyword:** Sensitivity maps
- **Theme_Keyword:** Coastal resources
- **Theme_Keyword:** Oil spill planning
- **Theme_Keyword:** Coastal Zone Management
- **Theme_Keyword:** Wildlife

**Place:**
- **Place_Keyword_Thesaurus:** None
- **Place_Keyword:** Index
- **Place_Keyword:** Sm_Index
- **Place_Keyword:** Louisiana

**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 Louisiana 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, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, in cooperation with Minerals Management Service (MMS), New York, New Jersey, and the State of Louisiana.
Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Native_Data_Set_Environment:
The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) and SQL SERVER(r) (version 7.0). The hardware configuration is PC's with Windows Operating System (NT4.0/2000).

The Spatial_Data_Organization_Information section refers only to the source files in the ARC export format. The following files are included in that data set: birds.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, lg_index.e00, mgt.e00, parish.e00, nests.e00, reptiles.e00, roads.e00, sm_index.e00, socecon.e00, t_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biore, biofile, breed, breed_dt, seasonal, soc_dat, soc_lut, sources, species, and status.

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 nodes, 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 the hardcopy cartographic products produced as part of the Environmental Sensitivity Index (ESI) for Louisiana, as well as digital data extents. Primarily, 1:24,000 U.S. Geological Survey (USGS) topographic maps were used to provide boundaries for cartographic products. In most cases the polygons represent USGS topographic maps that were re-tiled, moved, or extended to provide better cartographic coverage of the study area. For additional boundary information, refer to the LG_INDEX (Large Index Polygons) data layer, which contains 1:100,000 scale indices, and the INDEX (Index Polygons) data layer, which contains both the 1:50,000 and 1:100,000 scale indices.

Positional_Accuracy:

Horizontal_Positional_Accuracy:

Horizontal_Positional_Accuracy_Report:
The polygons in this data layer were generated in ArcInfo from the coordinates of the USGS 1:24,000 topographic map corners. The arcs were densified to enable correct reprojection. 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: U.S. Geological Survey (USGS)
Publication_Date: Various
Title: 1:24,000 Topographic Maps
Geospatial_Data_Presentation_Form: Map
Publication_Information:
Publication_Place: Reston, VA
Publisher: USGS
Source_Scale_Denominator: 24000
Type_of_Source_Media: Paper
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: Various
Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: USGS topographic map boundaries

Process_Step:
Process_Description:
The polygons in this data layer were generated in Arc/INFO from the coordinates of
the USGS map corners. The arcs were densified to enable correct reprojection.
Process_Date: 200312

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 rings
Point_and_Vector_Object_Count: 73
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Area point
Point_and_Vector_Object_Count: 73
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Complete chain
Point_and_Vector_Object_Count: 212
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Link
Point_and_Vector_Object_Count: 220
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Node, planar graph
Point_and_Vector_Object_Count: 141
Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Geographic:
      Latitude_Resolution: 0.00005
      Longitude_Resolution: 0.00005
      Geographic_Coordinate_Units: Decimal degrees
    Geodetic_Model:
      Horizontal_Datum_Name: North American Datum of 1983 (HARN)
      Ellipsoid_Name: Geodetic Reference System 80
      Semi-major_Axis: 6378137
      Denominator_of flattening_Ratio: 298.257222

Entity_and_Attribute_Information:
  Detailed_Description:
    Entity_Type:
      Entity_Type_Label: SM_INDEX.PAT
      Entity_Type_Definition:
        The SM_INDEX.PAT table contains attribute information for the vector polygons
        representing the map and digital data boundaries used in the creation of the
        Environmental Sensitivity Index (ESI) for Louisiana.
      Entity_Type_Definition_Source: Research Planning, Inc.
    Attribute:
      Attribute_Label: TILE-NAME
      Attribute_Definition:
        The TILE-NAME contains the map number according to the specified layout of the
        atlas. The values for each polygon are unique and range from 1 through 73.
      Attribute_Definition_Source: Research Planning, Inc.
      Attribute_Domain_Values:
        Range_Domain:
          Range_Domain_Minimum: 1
          Range_Domain_Maximum: 73
    Attribute:
      Attribute_Label: TOPO-NAME
      Attribute_Definition: Topographic map names
      Attribute_Definition_Source: Research Planning, Inc.
      Attribute_Domain_Values:
        Enumerated_Domain:
          Enumerated_Domain_Value: BARATARIA PASS
          Enumerated_Domain_Value_Definition: USGS 1:24,000 Topographic
          map name
          Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Enumerated_Domain:
          Enumerated_Domain_Value: BASTIAN BAY
          Enumerated_Domain_Value_Definition: USGS 1:24,000 Topographic
          map name
          Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Enumerated_Domain:
          Enumerated_Domain_Value: BAY COQUETTE
          Enumerated_Domain_Value_Definition: USGS 1:24,000 Topographic
          map name
          Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Enumerated_Domain:
          Enumerated_Domain_Value: BAY RONQUILLE
          Enumerated_Domain_Value_Definition: USGS 1:24,000 Topographic
          map name
          Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated Domain:
Enumrated_Domain_Value: BAYOU BLANC
Enumrated_Domain_Value_Definition: USGS 1:24,000 Topographic map name
Enumrated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated Domain:
Enumrated_Domain_Value: BAYOU LUCIEN
Enumrated_Domain_Value_Definition: USGS 1:24,000 Topographic map name
Enumrated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated Domain:
Enumrated_Domain_Value: BELLE ISLE
Enumrated_Domain_Value_Definition: USGS 1:24,000 Topographic map name
Enumrated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated Domain:
Enumrated_Domain_Value: BELLE PASS
Enumrated_Domain_Value_Definition: USGS 1:24,000 Topographic map name
Enumrated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated Domain:
Enumrated_Domain_Value: BIG CONSTANCE LAKE
Enumrated_Domain_Value_Definition: USGS 1:24,000 Topographic map name
Enumrated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated Domain:
Enumrated_Domain_Value: BRETON ISLANDS
Enumrated_Domain_Value_Definition: USGS 1:24,000 Topographic map name
Enumrated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated Domain:
Enumrated_Domain_Value: BRETON ISLANDS SE
Enumrated_Domain_Value_Definition: USGS 1:24,000 Topographic map name
Enumrated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated Domain:
Enumrated_Domain_Value: BURAS
Enumrated_Domain_Value_Definition: USGS 1:24,000 Topographic map name
Enumrated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated Domain:
Enumrated_Domain_Value: BURRWOOD BAYOU EAST
Enumrated_Domain_Value_Definition: USGS 1:24,000 Topographic map name
Enumrated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated Domain:
Enumrated_Domain_Value: BURRWOOD BAYOU WEST
Enumrated_Domain_Value_Definition: USGS 1:24,000 Topographic map name
Enumrated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated Domain:
Enumrated_Domain_Value: CALUMET ISLAND
Enumrated_Domain_Value_Definition: USGS 1:24,000 Topographic map name
Enumrated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated Domain:
Enumrated_Domain_Value: CAMERON
Enumrated_Domain_Value_Definition: USGS 1:24,000 Topographic map name
Enumrated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
    Enumerated_Domain_Value: CAMINADA PASS
    Enumerated_Domain_Value_Definition: USGS 1:24,000 Topographic map name
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
    Enumerated_Domain_Value: CAT ISLAND PASS
    Enumerated_Domain_Value_Definition: USGS 1:24,000 Topographic map name
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
    Enumerated_Domain_Value: CENTRAL ISLES DERNIERES
    Enumerated_Domain_Value_Definition: USGS 1:24,000 Topographic map name
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
    Enumerated_Domain_Value: CHANDELEUR LIGHT
    Enumerated_Domain_Value_Definition: USGS 1:24,000 Topographic map name
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
    Enumerated_Domain_Value: CHENIERE AU TIGRE
    Enumerated_Domain_Value_Definition: USGS 1:24,000 Topographic map name
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
    Enumerated_Domain_Value: COQUILLE POINT
    Enumerated_Domain_Value_Definition: USGS 1:24,000 Topographic map name
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
    Enumerated_Domain_Value: COW ISLAND
    Enumerated_Domain_Value_Definition: USGS 1:24,000 Topographic map name
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
    Enumerated_Domain_Value: CREOLE
    Enumerated_Domain_Value_Definition: USGS 1:24,000 Topographic map name
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
    Enumerated_Domain_Value: DIXON BAY
    Enumerated_Domain_Value_Definition: USGS 1:24,000 Topographic map name
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
    Enumerated_Domain_Value: EAST BAY JUNOP
    Enumerated_Domain_Value_Definition: USGS 1:24,000 Topographic map name
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
    Enumerated_Domain_Value: EASTERN ISLES DERNIERES
    Enumerated_Domain_Value_Definition: USGS 1:24,000 Topographic map name
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
    Enumerated_Domain_Value: ELLERSLIE
    Enumerated_Domain_Value_Definition: USGS 1:24,000 Topographic map name
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
<table>
<thead>
<tr>
<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>GARDEN ISLAND PASS</td>
<td>USGS 1:24,000 Topographic map name</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td></td>
<td>GRAND BAYOU</td>
<td>USGS 1:24,000 Topographic map name</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td></td>
<td>GRAND BAYOU DU LARGE</td>
<td>USGS 1:24,000 Topographic map inset</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td></td>
<td>GRAND GOSIER ISLANDS</td>
<td>USGS 1:24,000 Topographic map name</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td></td>
<td>GRAND ISLE</td>
<td>USGS 1:24,000 Topographic map name</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td></td>
<td>HACKBERRY BEACH</td>
<td>USGS 1:24,000 Topographic map name</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td></td>
<td>HELL HOLE BAYOU</td>
<td>USGS 1:24,000 Topographic map name</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td></td>
<td>HOG BAYOU</td>
<td>USGS 1:24,000 Topographic map name</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td></td>
<td>HOLLY BEACH</td>
<td>USGS 1:24,000 Topographic map name</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td></td>
<td>JOHNSONS BAYOU</td>
<td>USGS 1:24,000 Topographic map name</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td></td>
<td>LAKE POINT</td>
<td>USGS 1:24,000 Topographic map name</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td></td>
<td>LAKE SALVE</td>
<td>USGS 1:24,000 Topographic map name</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>Enumerator_Domain</td>
<td>Enumerator_Domain_Value</td>
<td>Enumerator_Domain_Value_Definition</td>
<td>Enumerator_Domain_Value_Definition_Source</td>
</tr>
<tr>
<td>-------------------</td>
<td>-------------------------</td>
<td>------------------------------------</td>
<td>-------------------------------------------</td>
</tr>
<tr>
<td>Enumerator_Domain</td>
<td>LEEVILLE</td>
<td>USGS 1:24,000 Topographic map name</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>Enumerator_Domain</td>
<td>MAIN PASS</td>
<td>USGS 1:24,000 Topographic map name</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>Enumerator_Domain</td>
<td>MARONE POINT</td>
<td>USGS 1:24,000 Topographic map name</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>Enumerator_Domain</td>
<td>MOUNT POINT</td>
<td>USGS 1:24,000 Topographic map name</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>Enumerator_Domain</td>
<td>MULBERRY ISLAND EAST</td>
<td>USGS 1:24,000 Topographic map name</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>Enumerator_Domain</td>
<td>MULBERRY ISLAND WEST</td>
<td>USGS 1:24,000 Topographic map name</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>Enumerator_Domain</td>
<td>NEW HARBOR ISLANDS</td>
<td>USGS 1:24,000 Topographic map name</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>Enumerator_Domain</td>
<td>NORTH ISLANDS</td>
<td>USGS 1:24,000 Topographic map name</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>Enumerator_Domain</td>
<td>OYSTER BAYOU</td>
<td>USGS 1:24,000 Topographic map name</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>Enumerator_Domain</td>
<td>PASS A LOUTRE EAST</td>
<td>USGS 1:24,000 Topographic map name</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>Enumerator_Domain</td>
<td>PASS A LOUTRE WEST</td>
<td>USGS 1:24,000 Topographic map name</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>Enumerator_Domain</td>
<td>PASS DU BOIS</td>
<td>USGS 1:24,000 Topographic map name</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>Enumerated_Domain:</td>
<td>Enumerated_Domain_Value:</td>
<td>Enumerated_Domain_Value_Definition:</td>
<td>Enumerated_Domain_Value_Definition_Source:</td>
</tr>
<tr>
<td>------------------</td>
<td>--------------------------</td>
<td>---------------------------------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>Enumerated_Domain:</td>
<td>PASS TANTE PHINE</td>
<td>USGS 1:24,000 Topographic map name</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>Enumerated_Domain:</td>
<td>PELICAN PASS</td>
<td>USGS 1:24,000 Topographic map name</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>Enumerated_Domain:</td>
<td>PEVETO BEACH</td>
<td>USGS 1:24,000 Topographic map name</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>Enumerated_Domain:</td>
<td>PILOTTOWN</td>
<td>USGS 1:24,000 Topographic map name</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>Enumerated_Domain:</td>
<td>PLUMB BAYOU</td>
<td>USGS 1:24,000 Topographic map name</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>Enumerated_Domain:</td>
<td>POINT AU FER</td>
<td>USGS 1:24,000 Topographic map name</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>Enumerated_Domain:</td>
<td>POINT AU FER NE</td>
<td>USGS 1:24,000 Topographic map name</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>Enumerated_Domain:</td>
<td>POINT CHEVREUIL</td>
<td>USGS 1:24,000 Topographic map name</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>Enumerated_Domain:</td>
<td>ROLLOVER LAKE</td>
<td>USGS 1:24,000 Topographic map name</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>Enumerated_Domain:</td>
<td>SMITH BAYOU</td>
<td>USGS 1:24,000 Topographic map name</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>Enumerated_Domain:</td>
<td>SOUTH OF SOUTH PASS</td>
<td>USGS 1:24,000 Topographic map name</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>Enumerated_Domain:</td>
<td>SOUTH PASS</td>
<td>USGS 1:24,000 Topographic map name</td>
<td>Research Planning, Inc.</td>
</tr>
</tbody>
</table>
Enumerated_Domain:
  Enumerated_Domain_Value: STAKE ISLANDS
  Enumerated_Domain_Value_Definition: USGS 1:24,000 Topographic map name
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
  Enumerated_Domain_Value: TAYLOR PASS
  Enumerated_Domain_Value_Definition: USGS 1:24,000 Topographic map name
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
  Enumerated_Domain_Value: TEXAS POINT
  Enumerated_Domain_Value_Definition: USGS 1:24,000 Topographic map name
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
  Enumerated_Domain_Value: TIMBALIER ISLAND
  Enumerated_Domain_Value_Definition: USGS 1:24,000 Topographic map name
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
  Enumerated_Domain_Value: TRIUMPH
  Enumerated_Domain_Value_Definition: USGS 1:24,000 Topographic map name
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
  Enumerated_Domain_Value: VENICE
  Enumerated_Domain_Value_Definition: USGS 1:24,000 Topographic map name
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
  Enumerated_Domain_Value: WESTERN ISLES DERNIERES
  Enumerated_Domain_Value_Definition: USGS 1:24,000 Topographic map name
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
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: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: 50,000
      Enumerated_Domain_Value_Definition: Scale = 1:50,000
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
  Attribute_Label: MAPANGLE
  Attribute_Definition:
    MAPANGLE contains a value to rotate the final map product so that it is situated straight up and down
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Range_Domain:
      Range_Domain_Minimum: -2.089
      Range_Domain_Maximum: 0.403
      Attribute_Units_of_Measure: Degree
Attribute:
  Attribute_Label: PAGESIZE
  Attribute_Definition:
PAGESIZE contains the value of the width and height of the map in the final map product

**Attribute_Definition_Source:** Research Planning, Inc.

**Attribute_Domain_Values:**

*Enumerated_Domain:
  *Enumerated_Domain_Value: 11,17
  *Enumerated_Domain_Value_Definition: Page size = 11" by 17"
  *Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.*

---

**Distribution_Information:**

**Distributor:**

**Contact_Information:**

*Contact_Person_Primary: 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:** ESI Atlas for Louisiana

**Distribution_Liability:**

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

**Custom_Order_Process:**

Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

---

**Metadata_Reference_Information:**

**Metadata_Date:** 200410
**Metadata_Review_Date:** 200410
**Metadata_Contact:**

*Contact_Person_Primary: 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

Generated by mp version 2.8.2 on Thu Oct 28 16:49:04 2004
Louisiana ESI: ROADS (Road Lines)

Metadata also available as - [Parseable text] - [SGML]

**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, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

**Publication Date:** 200410

**Title:** Louisiana ESI: ROADS (Road Lines)

**Edition:** First

**Geospatial Data Presentation Form:** Vector digital data

**Series Information:**

Series Name: None

Issue Identification: Louisiana

**Publication Information:**

Publication Place: Seattle, Washington


**Other Citation Details:**

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

**Description:**

Abstract:

This data set contains the state maintained primary and secondary road network of Louisiana. Vector lines in the data set represent Interstates, U.S. Highways, and Louisiana State Highways.

This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for Louisiana. 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:** 1991
- **Ending_Date:** 2001

**Currentness_Reference:**
The ROADS data were compiled during 2002-2003. The currentness dates for the data range from 1991 to 2001 and are documented in the Source_Information section.

**Status:**
- **Progress:** Complete
- **Maintenance_and_Update_Frequency:** None Scheduled

**Spatial_Domain:**
**Bounding_Coordinates:**
- **West_BoundingCoordinate:** -94.000
- **East_BoundingCoordinate:** -88.792
- **North_BoundingCoordinate:** 30.625
- **South_BoundingCoordinate:** 28.875

**Keywords:**
**Theme:**
- **Theme_Keyword_Thesaurus:** None
- **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:** Road
- **Theme_Keyword:** Highway
- **Theme_Keyword:** Interstate
- **Theme_Keyword:** Route

**Place:**
- **Place_Keyword_Thesaurus:** None
- **Place_Keyword:** Louisiana

**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 Louisiana 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, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, in cooperation with Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Native_Data_Set_Environment:
The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) and SQL SERVER(r) (version 7.0). The hardware configuration is PC's with Windows Operating System (NT4.0/2000).

The Spatial_Data_Organization_Information section refers only to the source files in the ARC export format. The following files are included in that data set: birds.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, lg_index.e00, mgt.e00, parish.e00, nests.e00, reptiles.e00, roads.e00, sm_index.e00, socecon.e00, t_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biore, biofile, breed, breed_dt, seasonal, soc_dat, soc_lut, sources, species, and status.

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 nodes, etc.), and SQL SERVER(r) to ARC/INFO(r) consistencies. The GIS manager makes a final review, 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 a synthesis of available digital and hardcopy reports of the primary and secondary road network of Louisiana. The data set includes Interstates, U.S. Highways, and Louisiana State Highways. This data set was compiled by Louisiana State University from Louisiana Department of Transportation and Development (LDOTD) source data. The data set improved upon an existing digital map (linework) that had no attributes. The source data set was derived from sources including USGS quads, aerial photography, highway plans, LDOTD's control section road network and existing general highway maps. The source data set originated in 1983-1985 by digitizing 7.5' USGS quads on high precision input tables, but is updated regularly at LDOTD using the other sources mentioned above. The data do not necessarily represent all roads present in Louisiana.

Positional_Accuracy:
Horizontal_Positional_Accuracy:
Horizontal_Positional_Accuracy_Report:
The spatial components of the biological data sets were developed from pre-existing digital 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. 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.
Lineage:
Source_Information:
Source_Citation:
Citation_Information:
Originator: Louisiana State University
Publication_Date: 1991
Title: DOTD (Department of Transportation and Development) Roads (Louisiana Highway System)
Geospatial_Data_Presentation_Form: Digital table
Publication_Information:
Publication_Place: Unknown
Publisher: Unknown
Type_of_Source_Media: Computer file
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 1999
Source_Currentness_Reference: Date LDOTD source data was completed
Source_Citation_Abbreviation: LDOTDROADS
Source_Contribution: Linework that comprised the road network
Process_Step:
Process_Description:
The main source of data used to depict the primary roads for this data layer was the LOSCO Louisiana Highway System layer. This layer was used with no modifications. The lineage information listed in the previous section refers to the source lineage of the primary roads layer from LOSCO. For further information regarding the process description of this layer, please refer to the metadata document entitled "Louisiana Highway System from LDOTD source data, Geographic NAD83, LOSCO (1999) [primaryroads]". Metadata documents are available from the Louisiana Oil Spill Coordinator's Office (LOSCO) at this address: David Gisclair, Technical Assistance Program Director, Louisiana Oil Spill Coordinator's Office, Office of the Governor, 150 Third Street, Suite 405, Baton Rouge, LA 70801. Other contact methods include: phone (225) 578-7817, fax (225) 578-6400, and email dgisclair@lsu.edu.
Process_Date: 200312
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: 3300 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: 1050
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Link
Point_and_Vector_Object_Count: 51595

Spatial_Reference_Information:
HorizontalCoordinateSystemDefinition:
Geographic:
  Latitude_Resolution: 0.00005
  Longitude_Resolution: 0.00005
  Geographic_Coordinate_Units: Decimal degrees

Geodetic_Model:
  Horizontal_Datum_Name: North American Datum of 1983 (HARN)
  Ellipsoid_Name: Geodetic Reference System 80
  Semi-major_Axis: 6378137
  Denominator_of_Flattening_Ratio: 298.257222

Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
  Entity_Type_Label: ROADS.AAT
  Entity_Type_Definition:
    The ROADS.AAT table contains attribute information for the lines representing the primary and secondary road network of Louisiana.
  Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:
  Attribute_Label: INTERSTATE
  Attribute_Definition: Interstate highway system in Louisiana
  Attribute_Definition_Source: LSU
  Attribute_Domain_Values:
    Unrepresentable_Domain:
      Free text. Interstate names, following the form 'I-nn'. I-49 'future' route is included.

Attribute:
  Attribute_Label: US_ROUTES
  Attribute_Definition: Federal designated highways
  Attribute_Definition_Source: LSU
  Attribute_Domain_Values:
    Unrepresentable_Domain:
      Free text. U.S. route names, following the form 'US nn'. Includes business routes. Multiple routes are separated by '/'.

Attribute:
  Attribute_Label: LA_ROUTES
  Attribute_Definition: State designated highways
  Attribute_Definition_Source: LSU
  Attribute_Domain_Values:
    Unrepresentable_Domain:
      Free text. State highway name, following the form 'LA nn'. Includes some business routes ('bus'), spurs ('spur'), ferry landings ('ferry'), bypasses ('bypass'), and alternate routes ('alt'). Multiple routes are separated by '/'.

Attribute:
  Attribute_Label: ROAD_TYPE
  Attribute_Definition: The category the named road falls under
  Attribute_Definition_Source: LSU
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: Interstate
Enumerated_Domain_Value_Definition: Interstate highway  
Enumerated_Domain_Value_Definition_Source: LSU

Enumerated_Domain:  
Enumerated_Domain_Value: US Highway  
Enumerated_Domain_Value_Definition: Federal designated highway  
Enumerated_Domain_Value_Definition_Source: LSU

Enumerated_Domain:  
Enumerated_Domain_Value: LA Highway  
Enumerated_Domain_Value_Definition: State designated highway  
Enumerated_Domain_Value_Definition_Source: LSU

Enumerated_Domain:  
Enumerated_Domain_Value: Multiple Routes  
Enumerated_Domain_Value_Definition: Road has multiple classifications as Interstate, U.S. Highway, or Louisiana State Highway.  
Enumerated_Domain_Value_Definition_Source: LSU

Attribute:  
Attribute_Label: LENGTH_M  
Attribute_Definition: Length of highway route segment associated with the database record  
Attribute_Definition_Source: LSU  
Attribute_Domain_Values:  
Range_Domain:  
Range_Domain_Minimum: 2  
Range_Domain_Maximum: 223959.00  
Attribute_Units_of_Measure: meters

Distribution_Information:  
Distributor:  
Contact_Information:  
Contact_Person_Primary: John Kaperick  
Contact_Organization: NOAA, Office of Response and Restoration  
Contact_Address:  
Address_Type: Physical Address  
Address: 3300 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: ESI Atlas for Louisiana  
Distribution_Liability:  
Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer-input peripherals, or when the physical medium is delivered in damaged condition.  
Custom_Order_Process:  
Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.
Metadata Reference Information:
Metadata Date: 200410
Metadata Review Date: 200410
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: 3300 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

Generated by mp version 2.8.2 on Thu Oct 28 16:43:31 2004
Louisiana ESI: PARISH (Parish Management Area Polygons)

Metadata also available as - [Parseable text] - [SGML]

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, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Publication_Date: 200410
Title: Louisiana ESI: PARISH (Parish Management Area Polygons)
Edition: First
Geospatial_Data_Presentation_Form: Vector digital data

Series_Information:

Series_Name: None
Issue_Identifier: Louisiana

Publication_Information:

Publication_Place: Seattle, Washington
Publisher:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Other_Citation_Details:

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Description:

Abstract:

This data set contains boundaries for parishes in coastal Louisiana. Vector polygons in this data set represent parish 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 Environmental Sensitivity Index (ESI) data for Louisiana. 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 data layers SOCECON (Socioeconomic Resource Points) and MGT (Management Area Polygons), part of the larger Louisiana 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:** 1999
- **Ending_Date:** 1999

**Currentness_Reference:**
The PARISH data were compiled during 2002-2003. The currentness date for the data is 1999 and is documented in the Source_Information section.

**Status:**
**Progress:** Complete
**Maintenance_and_Update_Frequency:** None Scheduled

**Spatial_Domain:**
**Bounding_Coordinates:**
- **West_BoundingCoordinate:** -94.000
- **East_BoundingCoordinate:** -88.792
- **North_BoundingCoordinate:** 30.625
- **South_BoundingCoordinate:** 28.875

**Keywords:**
**Theme:**
- **Theme_Keyword_Thesaurus:** None
- **Theme_Keyword:** ESI
- **Theme_Keyword:** Sensitivity maps
- **Theme_Keyword:** Coastal resources
- **Theme_Keyword:** Oil spill planning
- **Theme_Keyword:** Coastal Zone Management
- **Theme_Keyword:** Wildlife
- **Theme_Keyword:** Management Areas

**Place:**
- **Place_Keyword_Thesaurus:** None
- **Place_Keyword:** Louisiana

**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 Louisiana 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, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, in cooperation with Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Native_Data_Set_Environment:
The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) and SQL SERVER(r) (version 7.0). The hardware configuration is PC's with Windows Operating System (NT4.0/2000).

The Spatial_Data_Organization_Information section refers only to the source files in the ARC export format. The following files are included in that data set: birds.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, lg_index.e00, mgt.e00, parish.e00, nests.e00, reptiles.e00, roads.e00, sm_index.e00, socecon.e00, t_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biores, biofile, breed, breed_dt, seasonal, soc_dat, soc_lut, sources, species, and status.

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 nodes, etc.), and SQL SERVER(r) to ARC/INFO(r) consistencies. The GIS manager makes a final review, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks.

Completeness_Report:
These data represent digital boundaries for parish management areas. Refer to the data layers SOCECON (Socioeconomic Resource Points) and MGT (Management Area Polygons) for additional human-use information. These data do not necessarily represent all parish areas in Louisiana.

Positional_Accuracy:

Horizontal_Positional_Accuracy:

Horizontal_Positional_Accuracy_Report:
The spatial components of the PARISH data set were developed from pre-existing digital sources and reflect the positional accuracy of these original data. See the Lineage and Process_Description sections for more information on the original data source and how the data were integrated or manipulated to create the final data set.

Lineage:

Source_Information:
Source_Citation:
Citation_Information:
Originator: Louisiana Department of Transportation and Development (LDOTD)
Publication_Date: 1999
Title: Parish Boundaries of Louisiana

Geospatial Data Presentation Form: Digital polys

Publication Information:
  Publication Place: Baton Rouge, LA
  Publisher: Louisiana Oil Spill Coordinator's Office (LOSCO)

Source Scale Denominator: Unknown
Type of Source Media: Disk
Source Time Period of Content:
  Time Period Information:
    Single Date/Time:
      Calendar Date: 1999
Source Currentness Reference: Date of publication
Source Citation Abbreviation: None
Source Contribution: Boundaries for parishes

Source Information:
Source Citation:
  Citation Information:
    Originator:
      Minerals Management Service (MMS), Louisiana State University (LSU), Center for Coastal, Energy and Environmental Resources (CCEER) and the Department of Geography and Anthropology, Louisiana Department of Wildlife and Fisheries (LDWF), and Research Planning, Inc. (RPI)

Publication Date: 2001
Title: Gulf-Wide Information System, Louisiana: Parish Boundaries
Geospatial Data Presentation Form: Vector Digital Data
Publication Information:
  Publication Place: New Orleans, LA
  Publisher:
    Minerals Management Service (MMS), 1201 Elmwood Park Blvd., MS-5220, New Orleans, LA 70123-2394

Type of Source Media: CD-ROM
Source Time Period of Content:
  Time Period Information:
    Single Date/Time:
      Calendar Date: 2001
Source Currentness Reference: Date of publication
Source Citation Abbreviation: None
Source Contribution: Parish boundaries

Process Step:
  Process Description:
    The main source of data used to depict the parish boundaries for this data layer was the MMS Gulf-Wide Information System parish layer for Louisiana. This layer was used with no modifications. The lineage information listed in the previous section refers to the source lineage of the parish layer from the Gulf-Wide Information System. For further information regarding the process description of this layer, please refer to the metadata document entitled "Gulf-Wide Information System, Louisiana: Parish Boundaries". Metadata documents are available from the Louisiana Oil Spill Coordinator's Office (LOSCO) at this address: David Gisclair, Technical Assistance Program Director, Louisiana Oil Spill Coordinator's Office, Office of the Governor, 150 Third Street, Suite 405, Baton Rouge, LA 70801. Other contact methods include: phone (225) 578-7817, fax (225) 578-6400, and email dgisclair@lsu.edu.

Process Date: 200312
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 rings
    Point_and_Vector_Object_Count: 38
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Area point
      Point_and_Vector_Object_Count: 38
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Complete chain
      Point_and_Vector_Object_Count: 146
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Link
      Point_and_Vector_Object_Count: 25902
    SDTS_Terms_Description:
      SDTS_Point_and_VECTOR_Object_Type: Node, planar graph
      Point_and_Vector_Object_Count: 109

Spatial Reference Information:
Horizontal Coordinate System Definition:
Geographic:
  Latitude_Resolution: 0.00005
  Longitude_Resolution: 0.00005
  Geographic_Coordinate_Units: Decimal degrees
Geodetic Model:
  Horizontal_Datum_Name: North American Datum of 1983 (HARN)
  Ellipsoid_Name: Geodetic Reference System 80
  Semi-major_Axis: 6378137
  Denominator_of_Flattening_Ratio: 298.257222

Entity and Attribute Information:
Detailed_Description:
Entity_Type:
  Entity_Type_Label: PARISH.PAT
  Entity_Type_Definition:
    The PARISH.PAT table contains attribute information for the vector polygons representing parish boundaries.
  Entity_Type_Definition_Source: Research Planning, Inc.
Attribute:
  Attribute_Label: PARISH
  Attribute_Definition: Parish name
  Attribute_Definition_Source: LDOTD
  Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Any character
Enumerated_Domain_Value_Definition: Free text
Enumerated_Domain_Value_Definition_Source: LDOTD

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: ESI Atlas for Louisiana

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

Custom_Order_Process:
Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

Metadata_Reference_Information:
Metadata_Date: 200410
Metadata_Review_Date: 200410
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
**Louisiana ESI: BIRDS (Bird Polygons)**

Metadata also available as - [Parseable text] - [SGML]

**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, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

- **Publication Date:** 200410
- **Title:** Louisiana ESI: BIRDS (Bird Polygons)
- **Edition:** First
- **Geospatial Data Presentation Form:** Vector digital data
- **Series Information:**
  - **Series Name:** None
  - **Issue Identification:** Louisiana
- **Publication Information:**
  - **Publication Place:** Seattle, Washington
  - **Publisher:** National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington
- **Other Citation Details:**
  Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

**Description:**

**Abstract:**

This data set contains sensitive biological resource data for waterfowl species and shorebirds in coastal Louisiana. Vector polygons in this data set represent locations of bird nesting, migratory staging, and feeding 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 Environmental Sensitivity Index (ESI) data for Louisiana. 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 (Nest Points) data layer, part of the larger Louisiana 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:** 1960
  - **Ending_Date:** 2001

**Currentness_Reference:**
The biological data were compiled during 2002-2003. The currentness dates for these data range from 1960 to 2001 and are documented in the Source_Information section.

**Status:**

- **Progress:** Complete
- **Maintenance_and_Update_Frequency:** None Scheduled

**Spatial_Domain:**

- **Bounding_Coordinates:**
  - **West_Bounding_Coordinate:** -94.000
  - **East_Bounding_Coordinate:** -88.792
  - **North_Bounding_Coordinate:** 30.625
  - **South_Bounding_Coordinate:** 28.875

**Keywords:**

- **Theme:**
  - **Theme_Keyword_Thesaurus:** None
  - **Theme_Keyword:** ESI
  - **Theme_Keyword:** Sensitivity maps
  - **Theme_Keyword:** Coastal resources
  - **Theme_Keyword:** Oil spill planning
  - **Theme_Keyword:** Coastal Zone Management
  - **Theme_Keyword:** Wildlife
  - **Theme_Keyword:** Bird

- **Place:**
  - **Place_Keyword_Thesaurus:** None
  - **Place_Keyword:** Louisiana

**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 Louisiana 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, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, in cooperation with Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Native Data Set Environment:
The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) and SQL SERVER(r) (version 7.0). The hardware configuration is PC's with Windows Operating System (NT4.0/2000).

The Spatial_Data_Organization_Information section refers only to the source files in the ARC export format. The following files are included in that data set: birds.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, lg_index.e00, mgt.e00, parish.e00, nests.e00, reptiles.e00, roads.e00, sm_index.e00, socecon.e00, t_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, bioreis, biofile, breed, breed_dt, seasonal, soc_dat, soc_lut, sources, species, and status.

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 nodes, etc.), and SQL SERVER(r) to ARC/INFO(r) consistencies. The GIS manager makes a final review, 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 is mapped by a linear feature, a value of 20 is added to the standard element value. 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. HUNUM's are also modified to include the atlas number, so "resource at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

Completeness_Report:
These data represent a synthesis of expert knowledge and available hardcopy reports on bird nesting, migratory staging, and feeding concentration areas. See also the NESTS (Nest Points) data layer, part of the larger Louisiana ESI database, for additional bird information. These data do not necessarily represent all bird occurrences in Louisiana. The following species are included in this data set: (Species_ID, Common Name, Scientific Name, if applicable): 16, Mallard, Anas platyrhynchos; 17, Northern pintail, Anas acuta; 18, Green-winged teal, Anas crecca; 20, Northern shoveler, Anas clypeata; 21, Canvasback, Aythya valisineria; 23, Lesser scaup, Aythya affinis; 34, American coot, Fulica Americana; 139, Snowy plover, Charadrius alexandrinus; 140, Threatened raptor; 153, Piping
plover, Charadrius melodus; 154, Wilson's plover, Charadrius wilsonia; 162, Gadwall, Anas strepera; 169, American wigeon, Anas americana; 180, Ring-necked duck, Aythya collaris; 190, Blue-winged teal, Anas discors; 198, Hooded merganser, Lophodytes cucullatus; 211, Mottled duck, Anas fulvigula; 227, Threatened shorebird; 313, Rare raptor; 315, Rare shorebird; 319, Rare wading bird; 613, Endangered passerine-like bird; 615, Rare passerine-like bird; 616, Rare seabird; 1002, Shorebirds; 1007, Colonial waterbirds.

**Positional_Accuracy:**

**Horizontal_Positional_Accuracy:**

**Horizontal_Positional_Accuracy_Report:**
The spatial components of the biological data sets were developed from pre-existing digital 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. 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.

**Lineage:**

**Source_Information:**

**Source_Citation:**

**Citation_Information:**

**Originator:**

Vermillion, W., Louisiana Department of Wildlife and Fisheries (LDWF)

**Publication_Date:** Unpublished material

**Title:** Shorebird Concentration Areas for Louisiana

**Geospatial_Data_Presentation_Form:** Expert

**Publication_Information:**

**Publication_Date:** 1999

**Publication_Place:** Unknown

**Publisher:** Unknown

**Type_of_Source_Media:** Personal communication

**Source_Time_Period_of_Content:**

**Time_Period_Information:**

**Single_Date/Time:**

**Calendar_Date:** 1999

**Source_Currentness_Reference:** Date of communication

**Source_Citation_Abbreviation:** None

**Source_Contribution:** Shorebird concentration areas and seasonality

**Source_Information:**

**Source_Citation:**

**Citation_Information:**

**Originator:**

Louisiana Department of Wildlife and Fisheries (LDWF) and Louisiana Natural Heritage Program (LNHP) (Lester, G.)

**Publication_Date:** 1999

**Title:** Louisiana Element Occurrence Record (EOR) Database

**Geospatial_Data_Presentation_Form:** Digital table

**Publication_Information:**

**Publication_Date:** 1999

**Publication_Place:** Unknown

**Publisher:** Unknown

**Type_of_Source_Media:** Paper

**Source_Time_Period_of_Content:**

**Time_Period_Information:**

**Single_Date/Time:**

**Calendar_Date:** 1999

**Source_Currentness_Reference:** Date of publication

**Source_Citation_Abbreviation:** None

**Source_Contribution:**

Coordinates and description of LNHP element occurrences for Louisiana

**Source_Information:**

**Source_Citation:**
Citation Information:
Originator: USGS National Wetlands Research Center (NWRC)
Publication_Date: 2000
Title: Louisiana Stewardship Areas
Geospatial_Data_Presentation_Form: Digital Polys
Publication_Information:
Publication Place: Lafayette, LA
Publisher: USGS NWRC

Source Scale Denominator: Various
Type of Source Media: Disk
Source Time Period of Content:
Time Period Information:
Single Date/Time:
Calendar Date: 1999
Source Currentness Reference: Date of compilation
Source Citation Abbreviation: None
Source Contribution: Managed lands boundaries

Source Information:
Source Citation:
Citation Information:
Originator: Lacassine NWR, USFWS
Publication Date: Unpublished Material
Title: Active Mini-refuges in Louisiana
Geospatial Data Presentation Form: Digital Points
Publication Information:
Publication Place: Unknown
Publisher: Unknown

Source Scale Denominator: Unknown
Type of Source Media: Disk
Source Time Period of Content:
Time Period Information:
Single Date/Time:
Calendar Date: 2000
Source Currentness Reference: Date of communication
Source Citation Abbreviation: None
Source Contribution: Mini-refuge boundaries

Source Information:
Source Citation:
Citation Information:
Originator: Minerals Management Service (MMS), Louisiana State University (LSU), Louisiana Department of Wildlife and Fisheries (LDWF), and Research Planning, Inc. (RPI)
Publication Date: 2001
Title: Gulf-Wide Information System, Louisiana: Outer Coast Environmental Sensitivity Index (ESI) Arcs
Geospatial Data Presentation Form: Digital Arcs
Publication Information:
Publication Place: New Orleans, LA
Publisher:
Minerals Management Service (MMS), 1201 Elmwood Park Blvd., New Orleans, LA 70123-2394

Source Scale Denominator: 12000
Type of Source Media: CD-ROM
Source Time Period of Content:
Time Period Information:
Single Date/Time:
Calendar Date: 2001
Source Currentness Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: ESI types (shoreline habitats) for the outer coast of Louisiana
Source_Information:

Source_Citation:

Citation_Information:

Originator: Louisiana Department of Wildlife and Fisheries (LDWF), Waterfowl Program (R. Helm)
Publication_Date: Unpublished material
Title: Waterfowl Surveys for the Louisiana Coastal Zone
Geospatial_Data_Presentation_Form: Digital table
Publication_Information:

Publication_Place: Unknown
Publisher: U.S. DOI, Fish and Wildlife Service, Washington, DC.

Type_of_Source_Media: Disk
Source_Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date: 1988
Ending_Date: 1998

Source_Currentness_Reference: Date of Survey
Source_Citation_Abbreviation: None
Source_Contribution: Waterfowl densities by transect line and habitat

Source_Information:

Source_Citation:

Citation_Information:

Originator: Bellrose, F. C.
Publication_Date: 1980
Title: Ducks, Geese, and Swans of North America
Geospatial_Data_Presentation_Form: Hard text
Publication_Information:

Publication_Place: Harrisburg, PA
Publisher: Stackpole Books

Type_of_Source_Media: Paper
Source_Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:

Calendar_Date: 1980
Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: Seasonality and life history information for selected waterfowl species

Source_Information:

Source_Citation:

Citation_Information:

Originator: Helm, R., Louisiana Department of Wildlife and Fisheries (LDWF)
Publication_Date: Unpublished material
Title: Seasonality for American Coot and Selected Ducks
Geospatial_Data_Presentation_Form: Expert
Publication_Information:

Publication_Place: Unknown
Publisher: Unknown

Type_of_Source_Media: Personal communication
Source_Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:

Calendar_Date: 1998
Source_Currentness_Reference: Date of communication
Source_Citation_Abbreviation: None
Source_Contribution:
Seasonality and life history information for American coot and selected ducks

Source_Information:
Source_Citation:

Citation_Information:
Originator:
Louisiana State University (LSU) and Louisiana Department of Wildlife and Fisheries (LDWF), Waterfowl Program
Publication_Date: Unpublished material
Title: Survey of Near-Shore Louisiana for Lesser Scaup
Geospatial_Data_Presentation_Form: Hardcopy Table
Publication_Information:
Publication_Place: Unknown
Publisher: Unknown

Type_of_Source_Media: Paper
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 1999
Source_Currentness_Reference: Date of Survey
Source_Citation_Abbreviation: None
Source_Contribution: Nearshore lesser scaup densities and survey areas

Source_Information:
Source_Citation:

Citation_Information:
Originator: USGS National Wetlands Research Center (NWRC)
Publication_Date: Unpublished material
Title: Gulf of Mexico Coastal Louisiana Habitat Data
Geospatial_Data_Presentation_Form: Digital Polys
Publication_Information:
Publication_Place: Unknown
Publisher: Unknown

Source_Scale_Denominator: 24000
Type_of_Source_Media: Disk
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 1988
Source_Currentness_Reference: Date of survey
Source_Citation_Abbreviation: None
Source_Contribution: Coastal habitat data

Source_Information:
Source_Citation:

Citation_Information:
Originator:
Louisiana Department of Wildlife and Fisheries (LDWF) and US Geological Survey (USGS) National Wetlands Research Center (NWRC)
Publication_Date: 1997
Title: Louisiana Coastal Marsh Vegetative Type Map
Geospatial_Data_Presentation_Form: Digital Polys
Publication_Information:
Publication_Place: Lafayette, LA
Publisher: LDWF and USGS NWRC

Type_of_Source_Media: Paper
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 1997
Source_Currentness_Reference: Date of survey
Source_Citation_Abbreviation: None
Source_Contribution: Coastal marsh type data
Source_Information:

Source_Citation:
Citation_Information:
Originator: Louisiana Department of Wildlife and Fisheries (LDWF) and US Geological Survey (USGS) National Wetlands Research Center (NWRC)
Publication_Date: 1978
Title: Louisiana Coastal Marsh Vegetative Type Map
Geospatial_Data_Presentation_Form: Digital Polys
Publication_Information:
  Publication_Place: Lafayette, LA
  Publisher: LDWF and USGS NWRC
Type_of_Source_Media: Paper
Source_Time_Period_of_Content:
  Time_Period_Information:
    Single_Date/Time:
      Calendar_Date: 1978
Source_Currentness_Reference: Date of survey
Source_Citation_Abbreviation: None
Source_Contribution: Historical coastal marsh type data

Source_Information:

Source_Citation:
Citation_Information:
Originator: Louisiana Oil Spill Coordinator's Office (LOSCO)
Publication_Date: 1999
Title: Louisiana Offshore Bathymetry
Geospatial_Data_Presentation_Form: Digital Arcs
Publication_Information:
  Publication_Place: Baton Rouge, LA
  Publisher: LOSCO
Source_Scale_Denominator: 80000
Type_of_Source_Media: Disks
Source_Time_Period_of_Content:
  Time_Period_Information:
    Range_of_Dates/Times:
      Beginning_Date: 1990
      Ending_Date: 1994
Source_Currentness_Reference: Date of survey
Source_Citation_Abbreviation: None
Source_Contribution: Isobaths for coastal Louisiana

Source_Information:

Source_Citation:
Citation_Information:
Originator: Louisiana Department of Environmental Quality (LDEQ)
Publication_Date: 1999
Title: Watershed Basin Subsegments of Louisiana
Geospatial_Data_Presentation_Form: Digital Polys
Publication_Information:
  Publication_Place: Baton Rouge, LA
  Publisher: Louisiana Oil Spill Coordinator's Office (LOSCO)
Source_Scale_Denominator: 100000
Type_of_Source_Media: Disks
Source_Time_Period_of_Content:
  Time_Period_Information:
    Single_Date/Time:
      Calendar_Date: 1999
Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: Hydrologic basin boundaries
Source_Information:
  Citation_Information:
    Originator: Martin R. and G. Lester
    Publication_Date: 1990
    Title: Atlas and Census of Wading Bird and Seabird Nesting Colonies in Louisiana
    Geospatial_Data_Presentation_Form: Hard text
    Publication_Information:
      Publication_Date: 1990
    Publisher: Louisiana Department of Wildlife and Fisheries (LDWF), LA Natural Heritage Program Special Pub. No. 3
  Source_Scale_Denominator: Various
  Type_of_Source_Media: Paper
  Source_Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
        Calendar_Date: 1990
  Source_Currentness_Reference: Date of publication
  Source_Citation_Abbreviation: None
  Source_Contribution: Seasonality and life-history information for wading bird and seabirds counts for waterbird colonies in coastal Louisiana
Source_Information:
  Citation_Information:
    Originator: Lowery, G.H.
    Publication_Date: 1960
    Title: Louisiana Birds
    Geospatial_Data_Presentation_Form: Hard text
    Publication_Information:
      Publication_Date: 1960
    Publisher: LSU Press
  Type_of_Source_Media: Paper
  Source_Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
        Calendar_Date: 1960
  Source_Currentness_Reference: Date of publication
  Source_Citation_Abbreviation: None
  Source_Contribution: Seasonality and life-history information for selected birds
Source_Information:
  Citation_Information:
    Originator: ABI (Nature Serve)
    Publication_Date: 2000
    Title: Seasonality and Distribution for Selected Species
    Geospatial_Data_Presentation_Form: Digital table
    Publication_Information:
      Publication_Date: 2000
    Publisher: <http://www.natureserve.org/>
  Type_of_Source_Media: Disk
  Source_Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
        Calendar_Date: 2000
The main sources of data used to depict sensitive bird distributions and seasonality for this data layer were the Minerals Management Service (MMS) Gulf-Wide Information System's shorebird, waterfowl, and NHP (Natural Heritage Program) layers. The shorebird and waterfowl layers were modified to depict the general distributions of these resources by habitat type. This process merged specific distributions based on the population density of each species in a particular habitat, creating general distributions with a range of population densities. The NHP data were compared to information found in the nests data layer. Any information duplicated in the NHP data when compared to the nests layer was removed from the NHP layer, as more specific information was usually associated with the data in the nests layer. The lineage information listed in the previous section refers to the source lineage of the shorebird, waterfowl, and NHP layers from the Gulf-Wide Information System. For further information regarding the process description of these layers, please refer to the metadata documents entitled "Gulf-Wide Information Systems, Louisiana: Shorebirds", "Gulf-Wide Information Systems, Louisiana: Waterfowl", and "Gulf-Wide Information Systems, Louisiana: NHP". Metadata documents are available from the Louisiana Oil Spill Coordinator's Office (LOSCO) at this address: David Gisclair, Technical Assistance Program Director, Louisiana Oil Spill Coordinator's Office, Office of the Governor, 150 Third Street, Suite 405,
Baton Rouge, LA 70801. Other contact methods include: phone (225) 578-7817, fax (225) 578-6400, and email dgisclair@lsu.edu.

**Process_Date:** 200312

**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 rings

**Point.and.Vector.Object.Count:** 17085

**SDTS.Terms.Description:**

**SDTS.Point.and.Vector.Object.Type:** Area point

**Point.and.Vector.Object.Count:** 17085

**SDTS.Terms.Description:**

**SDTS.Point.and.Vector.Object.Type:** Complete chain

**Point.and.Vector.Object.Count:** 25935

**SDTS.Terms.Description:**

**SDTS.Point.and.Vector.Object.Type:** Link

**Point.and.Vector.Object.Count:** 1103651

**SDTS.Terms.Description:**

**SDTS.Point.and.Vector.Object.Type:** Node, planar graph

**Point.and.Vector.Object.Count:** 22811

---

**Spatial.Reference.Information:**

**Horizontal.Coordinate.System.Definition:**

**Geographic:**

**Latitude.Resolution:** 0.00005

**Longitude.Resolution:** 0.00005

**Geographic.Coordinate.Units:** Decimal degrees

**Geodetic.Model:**

**Horizontal.Datum.Name:** North American Datum of 1983 (HARN)

**Ellipsoid.Name:** Geodetic Reference System 80

**Semi-major.Axis:** 6378137

**Denominator.of.Flattening.Ratio:** 298.257222

---

**Entity.and.Attribute.Information:**

**Overview.Description:**

**Entity.and.Attribute.Overview:**

In addition to the geographic data layers, six relational attribute or data tables, BIORES,
BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, 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 Louisiana atlas, the number is 33), 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, T_E, 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.

**Detailed_Description:**

**Entity_Type:**

**Entity_Type_Label:** BIRDS.PAT

**Entity_Type_Definition:**

The BIRDS.PAT table contains attribute information for the vector polygons representing bird nesting, migratory staging, and feeding site 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:** Research Planning, Inc.

**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 (33), 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:** 330100002
Range_Domain_Maximum: 330119504

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 polygons and do not contain information.
Attribute_Definition_Source: NOAA
Attribute_Domain_Values:
  Range_Domain:
    Range_Domain_Minimum: 33000375
    Range_Domain_Maximum: 33000698

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: Research Planning, Inc.

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: 33000001
    Range_Domain_Maximum: 33000927

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 (33), 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: 330100001
    Range_Domain_Maximum: 330912750

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: Research Planning, Inc.

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: 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: Research Planning, Inc.
ATTRIBUTE DOMAIN VALUES:

<table>
<thead>
<tr>
<th>Range Domain</th>
<th>Range Domain Minimum</th>
<th>Range Domain Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>033000001</td>
<td>033000927</td>
</tr>
</tbody>
</table>

Attribute: CONC
ATTRIBUTE DEFINITION: The field CONC refers to "concentration," abundance, or density value of a species at a particular location. For waterfowl species, this field contains a range of peak mean density values as individuals per square mile (for example, "8-TO-15-IND/SQ-MI"), developed for each species in each habitat type. Louisiana Department of Wildlife and Fisheries (LDWF) Marsh Waterfowl Transect Survey data from 1988-1998 were used to develop range density values for each species in each habitat zone (four marsh types, selected agriculture areas) across watershed units, for each surveyed month. For areas where the peak mean monthly density for a species was not sampled, CONC was populated with "PRESENT". In cases where the peak mean monthly density was less than 0.5, CONC was populated with "PRESENT". For offshore scaup polygons, CONC was populated with mean densities from the month of January as individuals per square mile. For other bird species, where no concentration information was available, the field was populated with ".".
ATTRIBUTE DEFINITION SOURCE: Research Planning, Inc.
ATTRIBUTE DOMAIN VALUES:

<table>
<thead>
<tr>
<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>Any character</td>
<td>Free text</td>
<td>Research Planning, Inc.</td>
</tr>
</tbody>
</table>

Attribute: 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: Research Planning, Inc.
ATTRIBUTE DOMAIN VALUES:

<table>
<thead>
<tr>
<th>Range Domain</th>
<th>Range Domain Minimum</th>
<th>Range Domain Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>N</td>
</tr>
</tbody>
</table>

Attribute: 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: Research Planning, Inc.
ATTRIBUTE DOMAIN VALUES:

<table>
<thead>
<tr>
<th>Range Domain</th>
<th>Range Domain Minimum</th>
<th>Range Domain Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>N</td>
</tr>
</tbody>
</table>

Attribute: 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**: Research Planning, Inc.

**Attribute Domain Values**:

**Range Domain**:
- **Range Domain Minimum**: 1
- **Range Domain Maximum**: N

**Attribute**: ELEMENT

**Attribute Label**: Major categories of biological data

**Attribute Definition Source**: Research Planning, Inc.

**Attribute Domain Values**:

**Enumerated Domain**:
- **Enumerated Domain Value**: BIRD
- **Enumerated Domain Value Definition**: Birds
- **Enumerated Domain Value Definition Source**: Research Planning, Inc.

**Attribute Domain Values**:

**Enumerated Domain**:
- **Enumerated Domain Value**: FISH
- **Enumerated Domain Value Definition**: Fish
- **Enumerated Domain Value Definition Source**: Research Planning, Inc.

**Attribute Domain Values**:

**Enumerated Domain**:
- **Enumerated Domain Value**: HABITAT
- **Enumerated Domain Value Definition**: Habitats and Plants
- **Enumerated Domain Value Definition Source**: Research Planning, Inc.

**Attribute Domain Values**:

**Enumerated Domain**:
- **Enumerated Domain Value**: INVERT
- **Enumerated Domain Value Definition**: Invertebrates
- **Enumerated Domain Value Definition Source**: Research Planning, Inc.

**Attribute Domain Values**:

**Enumerated Domain**:
- **Enumerated Domain Value**: M_MAMMAL
- **Enumerated Domain Value Definition**: Marine Mammals
- **Enumerated Domain Value Definition Source**: Research Planning, Inc.

**Attribute Domain Values**:

**Enumerated Domain**:
- **Enumerated Domain Value**: REPTILE
- **Enumerated Domain Value Definition**: Reptiles and Amphibians
- **Enumerated Domain Value Definition Source**: Research Planning, Inc.

**Attribute Domain Values**:

**Enumerated Domain**:
- **Enumerated Domain Value**: T_MAMMAL
- **Enumerated Domain Value Definition**: Terrestrial Mammals
- **Enumerated Domain Value Definition Source**: Research Planning, Inc.

**Attribute**: EL_SPE

**Attribute Label**: 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**: Research Planning, Inc.

**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 (for example, ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001')
- **Enumerated Domain Value Definition Source**: Research Planning, Inc.
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: Research Planning, Inc.
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 (for example, ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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 a list of layer-specific species.
  Entity_Type_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.
Attribute_Domain_Values:
  Range_Domain:
    Range_Domain_Minimum: 1
    Range_Domain_Maximum: N

Attribute:

Attribute_Label: NAME
Attribute_Definition: Species common name
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: Species common name for the entire ESI data set
    Enumerated_Domain_Value_Definition: Free text
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: GEN_SPEC
Attribute_Definition: Species scientific name
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: Species scientific name for the entire ESI data set
    Enumerated_Domain_Value_Definition: Free text
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: ELEMENT
Attribute_Definition: Major categories of biological data
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
    Enumerated_Domain_Value: BIRD
    Enumerated_Domain_Value_Definition: Birds
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: FISH
        Enumerated_Domain_Value_Definition: Fish
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: HABITAT
        Enumerated_Domain_Value_Definition: Habitats and Plants
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: INVERT
        Enumerated_Domain_Value_Definition: Invertebrates
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: M_MAMMAL
        Enumerated_Domain_Value_Definition: Marine Mammals
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: REPTILE
        Enumerated_Domain_Value_Definition: Reptiles and Amphibians
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: T_MAMMAL
        Enumerated_Domain_Value_Definition: Terrestrial Mammals
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
    Attribute_Label: SUBELEMENT
    Attribute_Definition: Element subgroup delineating a logical grouping of species
    Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: alligator
        Enumerated_Domain_Value_Definition: Alligator
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: amphibian
        Enumerated_Domain_Value_Definition: Amphibian
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: bat
        Enumerated_Domain_Value_Definition: Bat
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: bear
        Enumerated_Domain_Value_Definition: Bear
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain_Value: bird
Enumerated_Domain_Value_Definition: Bird
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: bivalve
  Enumerated_Domain_Value_Definition: Bivalve
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: cephalopod
  Enumerated_Domain_Value_Definition: Cephalopod
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: crab
  Enumerated_Domain_Value_Definition: Crab
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: crayfish
  Enumerated_Domain_Value_Definition: Crayfish
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: diadromous
  Enumerated_Domain_Value_Definition: Diadromous fish
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: diving
  Enumerated_Domain_Value_Definition: Diving bird
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: e_nursery
  Enumerated_Domain_Value_Definition: Estuarine nursery fish
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: e_resident
  Enumerated_Domain_Value_Definition: Estuarine resident fish
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: fish
  Enumerated_Domain_Value_Definition: Fish
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: freshwater
  Enumerated_Domain_Value_Definition: Freshwater fish
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: gull_tern
  Enumerated_Domain_Value_Definition: Gull or tern
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
Enumerated_Domain_Value: insect
Enumerated_Domain_Value_Definition: Insect
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: lizard
Enumerated_Domain_Value_Definition: Lizard
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: m_benthic
Enumerated_Domain_Value_Definition: Marine benthic fish
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: m_pelagic
Enumerated_Domain_Value_Definition: Marine pelagic fish
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: passerine
Enumerated_Domain_Value_Definition: Passerine bird
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: plant
Enumerated_Domain_Value_Definition: Plant
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: raptor
Enumerated_Domain_Value_Definition: Raptor
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: sav
Enumerated_Domain_Value_Definition: Submersed aquatic vegetation
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: shorebird
Enumerated_Domain_Value_Definition: Shorebird
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: shrimp
Enumerated_Domain_Value_Definition: Shrimp
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: sm_mammal
Enumerated_Domain_Value_Definition: Small mammal
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: snake
Enumerated_Domain_Value_Definition: Snake
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: turtle
Enumerated_Domain_Value_Definition: Turtle
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: upland
Enumerated_Domain_Value_Definition: Upland
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: wading
Enumerated_Domain_Value_Definition: Wading bird
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: waterfowl
Enumerated_Domain_Value_Definition: Waterfowl
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: wetland
Enumerated_Domain_Value_Definition: Wetland
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: 0
Enumerated_Domain_Value_Definition: Not ranked
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Numeric
Enumerated_Domain_Value_Definition: mmyyyy
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.
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 (for example, ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.

Attribute:

Attribute_Label: ELEMENT
Attribute_Definition: Major categories of biological data
Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: BIRD
Enumerated_Domain_Value_Definition: Birds
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: FISH
Enumerated_Domain_Value_Definition: Fish
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: HABITAT
Enumerated_Domain_Value_Definition: Habitats and Plants
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: INVERT
Enumerated_Domain_Value_Definition: Invertebrates
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: M_MAMMAL
Enumerated_Domain_Value_Definition: Marine Mammals
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: REPTILE
Enumerated_Domain_Value_Definition: Reptiles and Amphibians
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: T_MAMMAL
Enumerated_Domain_Value_Definition: Terrestrial Mammals
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.

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**
- **Attribute Label**: JAN
- **Attribute Definition**: January
- **Attribute Definition Source**: Research Planning, Inc.
- **Enumerated Domain**: X
  - **Enumerated Domain Value Definition**: Present in January
  - **Enumerated Domain Value Definition Source**: Research Planning, Inc.

**Attribute**
- **Attribute Label**: FEB
- **Attribute Definition**: February
- **Attribute Definition Source**: Research Planning, Inc.
- **Enumerated Domain**: X
  - **Enumerated Domain Value Definition**: Present in February
  - **Enumerated Domain Value Definition Source**: Research Planning, Inc.

**Attribute**
- **Attribute Label**: MAR
- **Attribute Definition**: March
- **Attribute Definition Source**: Research Planning, Inc.
- **Enumerated Domain**: X
  - **Enumerated Domain Value Definition**: Present in March
  - **Enumerated Domain Value Definition Source**: Research Planning, Inc.

**Attribute**
- **Attribute Label**: APR
- **Attribute Definition**: April
- **Attribute Definition Source**: Research Planning, Inc.
- **Enumerated Domain**: X
  - **Enumerated Domain Value Definition**: Present in April
  - **Enumerated Domain Value Definition Source**: Research Planning, Inc.

**Attribute**
- **Attribute Label**: MAY
- **Attribute Definition**: May
- **Attribute Definition Source**: Research Planning, Inc.
- **Enumerated Domain**: X
  - **Enumerated Domain Value Definition**: Present in May
  - **Enumerated Domain Value Definition Source**: Research Planning, Inc.

**Attribute**
- **Attribute Label**: JUN
- **Attribute Definition**: June
- **Attribute Definition Source**: Research Planning, Inc.
- **Enumerated Domain**: X
  - **Enumerated Domain Value Definition**: Present in June
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: JUL
Attribute_Definition: July
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: X
    Enumerated_Domain_Value_Definition: Present in July
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: AUG
Attribute_Definition: August
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: X
    Enumerated_Domain_Value_Definition: Present in August
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: SEP
Attribute_Definition: September
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: X
    Enumerated_Domain_Value_Definition: Present in September
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: OCT
Attribute_Definition: October
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: X
    Enumerated_Domain_Value_Definition: Present in October
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: NOV
Attribute_Definition: November
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: X
    Enumerated_Domain_Value_Definition: Present in November
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: DEC
Attribute_Definition: December
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: X
    Enumerated_Domain_Value_Definition: Present in December
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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:** Research Planning, Inc.

**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 (for example, ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').

**Enumerated Domain Value Definition Source:** Research Planning, Inc.

**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:** Research Planning, Inc.

**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:** Research Planning, Inc.

**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 (for example, ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').

**Enumerated Domain Value Definition Source:** Research Planning, Inc.

**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:** Research Planning, Inc.

**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 elements.

**Attribute Definition Source:** Research Planning, Inc.

**Attribute Domain Values:**

**Enumerated Domain:**

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

**Enumerated Domain Value Definition Source:** Research Planning, Inc.
Enumerated_Domain:

- Enumerated_Domain_Value: N
  Enumerated_Domain_Value_Definition: Life-history stage or activity not present
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.

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: Research Planning, Inc.

Attribute_Domain_Values:

- Enumerated_Domain:
  Enumerated_Domain_Value: Y
  Enumerated_Domain_Value_Definition: Life-history stage or activity present
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

- Enumerated_Domain:
  Enumerated_Domain_Value: N
  Enumerated_Domain_Value_Definition: Life-history stage or activity not present
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.

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: Research Planning, Inc.

Attribute_Domain_Values:

- Enumerated_Domain:
  Enumerated_Domain_Value: Y
  Enumerated_Domain_Value_Definition: Life-history stage or activity present
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

- Enumerated_Domain:
  Enumerated_Domain_Value: N
  Enumerated_Domain_Value_Definition: Life-history stage or activity not present
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.

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: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: Y
    Enumerated_Domain_Value_Definition: Life-history stage or activity present
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

  Enumerated_Domain:
    Enumerated_Domain_Value: N
    Enumerated_Domain_Value_Definition: Life-history stage or activity not present
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.

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: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: Y
    Enumerated_Domain_Value_Definition: Life-history stage or activity present
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

  Enumerated_Domain:
    Enumerated_Domain_Value: N
    Enumerated_Domain_Value_Definition: Life-history stage or activity not present
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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:* Research Planning, Inc.

**Detailed_Description:**

**Entity_Type:**

- **Entity_Type_Label:** SOURCES
- **Entity_Type_Defined:**
  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:** Research Planning, Inc.

**Attribute:**

- **Attribute_Label:** SOURCE_ID
- **Attribute_Defined:**
  Source identifier that links records in the SOURCES data table to the items G_SOURCE and A_SOURCE in the SOC_DAT table, and to G_SOURCE and S_SOURCE in the BIORES table.
- **Attribute_Defined_Source:** Research Planning, Inc.
- **Attribute_Domain_Values:**
  - **Range_Domain:**
    - **Range_Domain_Minimum:** 1
    - **Range_Domain_Maximum:** N

**Attribute:**

- **Attribute_Label:** ORIGINATOR
- **Attribute_Defined:**
  Author or developer of source material or data set
- **Attribute_Defined_Source:** Research Planning, Inc.
- **Attribute_Domain_Values:**
  - **Enumerated_Domain:**
    - **Enumerated_Domain_Value:** Any character
    - **Enumerated_Domain_Value_Defined:** Free text
    - **Enumerated_Domain_Value_Defined_Source:** Research Planning, Inc.

**Attribute:**

- **Attribute_Label:** DATE_PUB
- **Attribute_Defined:**
  Date of source material, publication, or date of personal communication with expert source
- **Attribute_Defined_Source:** Research Planning, Inc.
- **Attribute_Domain_Values:**
  - **Enumerated_Domain:**
    - **Enumerated_Domain_Value:** Numeric
    - **Enumerated_Domain_Value_Defined:** mmyyyy
    - **Enumerated_Domain_Value_Defined_Source:** Research Planning, Inc.

**Attribute:**

- **Attribute_Label:** TITLE
- **Attribute_Defined:**
  Title of source material or data
- **Attribute_Defined_Source:** Research Planning, Inc.
- **Attribute_Domain_Values:**
  - **Enumerated_Domain:**
    - **Enumerated_Domain_Value:** Any character
    - **Enumerated_Domain_Value_Defined:** Free text
    - **Enumerated_Domain_Value_Defined_Source:** Research Planning, Inc.

**Attribute:**

- **Attribute_Label:** DATA_FORMAT
- **Attribute_Defined:**
  The format of the source material
- **Attribute_Defined_Source:** Research Planning, Inc.
- **Attribute_Domain_Values:**
  - **Enumerated_Domain:**
    - **Enumerated_Domain_Value:** Any character
    - **Enumerated_Domain_Value_Defined:** Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
  Attribute_Label: PUBLICATION
  Attribute_Definition: Additional citation information
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
    Enumerated_Domain_Value: Any character
    Enumerated_Domain_Value_Definition: Free text
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
  Attribute_Label: SCALE
  Attribute_Definition: Scale denominator of the source
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
    Enumerated_Domain_Value: integer
    Enumerated_Domain_Value_Definition: Any integer
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
  Attribute_Label: TIME_PERIOD
  Attribute_Definition: Date(s) of data collection that the source material is based upon.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
    Enumerated_Domain_Value: Numeric
    Enumerated_Domain_Value_Definition: yyyy
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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 or federal 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: Research Planning, Inc.

Attribute:
  Attribute_Label: ELEMENT
  Attribute_Definition: Major categories of biological data
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
    Enumerated_Domain_Value: BIRD
    Enumerated_Domain_Value_Definition: Birds
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: FISH
  Enumerated_Domain_Value_Definition: Fish
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: HABITAT
  Enumerated_Domain_Value_Definition: Habitats and Plants
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: INVERT

Enumerated_Domain_Value_Definition: Invertebrates
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:
  Enumerated_Domain_Value: M_MAMMAL
  Enumerated_Domain_Value_Definition: Marine Mammals
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
  Enumerated_Domain_Value: REPTILE
  Enumerated_Domain_Value_Definition: Reptiles and Amphibians
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:
  Enumerated_Domain_Value: T_MAMMAL
  Enumerated_Domain_Value_Definition: Terrestrial Mammals
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.
  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: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: Any character
      Enumerated_Domain_Value_Definition: Two-letter state abbreviation
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
  Attribute_Label: S_F
  Attribute_Definition:
    State and Federal status
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: F
      Enumerated_Domain_Value_Definition: Federally listed
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

    Enumerated_Domain_Value: S
      Enumerated_Domain_Value_Definition: State listed
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

    Enumerated_Domain_Value: S/F
      Enumerated_Domain_Value_Definition: State and federally listed
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
  Attribute_Label: T_E
  Attribute_Definition:
    Threatened and endangered status
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
Enumerated_Domain:
  Enumerated_Domain_Value: E
  Enumerated_Domain_Value_Definition: Endangered on state or federal list
  Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: T
    Enumerated_Domain_Value_Definition: Threatened on state or federal list
    Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service

Attribute:
  Attribute_Label: DATE_PUB
  Attribute_Definition:
    Publication date of source material used to assign state and federal status values for each species, if used.
  Attribute_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.

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

**Custom_Order_Process:**
Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

---

**Metadata_Reference_Information:**

**Metadata_Date:** 200410

**Metadata_Review_Date:** 200410

**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

---

Generated by mp version 2.8.2 on Thu Oct 28 15:27:44 2004
Louisiana ESI: NESTS (Nest Points)

Metadata also available as - [Parseable text] - [SGML]

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, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Publication Date: 200410
Title: Louisiana ESI: NESTS (Nest Points)
Edition: First
Geospatial Data Presentation Form: Vector digital data
Series Information:
Series Name: None
Issue Identification: Louisiana

Publication Information:
Publication Place: Seattle, Washington
Publisher:
National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Other Citation Details:
Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Description:

Abstract:
This data set contains sensitive biological resource data for seabird and wading bird nesting colonies in coastal Louisiana. Vector points in this data set represent locations of seabird and wading bird colonies. 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 Environmental Sensitivity Index (ESI) data for Louisiana. 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 (Bird Polygons) data layer, part of the larger Louisiana 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:** 1978
- **Ending_Date:** 2001

**Currentness_Reference:**
The biological data were compiled during 2002-2003. The currentness dates for these data range from 1978 to 2001 and are documented in the Source_Information section.

**Status:**
- **Progress:** Complete
- **Maintenance_and_Update_Frequency:** None Scheduled

**Spatial_Domain:**
**Bounding_Coordinates:**
- **West_Bounding_Coordinate:** -94.000
- **East_Bounding_Coordinate:** -88.792
- **North_Bounding_Coordinate:** 30.625
- **South_Bounding_Coordinate:** 28.875

**Keywords:**
**Theme:**
- **Theme_Keyword_Thesaurus:** None
- **Theme_Keyword:** ESI
- **Theme_Keyword:** Sensitivity maps
- **Theme_Keyword:** Coastal resources
- **Theme_Keyword:** Oil spill planning
- **Theme_Keyword:** Coastal Zone Management
- **Theme_Keyword:** Wildlife
- **Theme_Keyword:** Nest
- **Theme_Keyword:** Bird

**Place:**
- **Place_Keyword_Thesaurus:** None
- **Place_Keyword:** Louisiana

**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 Louisiana 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, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, in cooperation with Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Native_Data_Set_Environment:
The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) and SQL SERVER(r) (version 7.0). The hardware configuration is PC's with Windows Operating System (NT4.0/2000).

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 nodes, etc.), and SQL SERVER(r) to ARC/INFO(r) consistencies. The GIS manager makes a final review, 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 normally represented by a point or polygon is mapped by a linear feature, a value of 20 is added to the standard element value. 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 "resource 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 available digital and hardcopy reports of seabird and wading bird colony locations and nesting abundances. These data do not necessarily represent all nesting sites present in Louisiana. See also the BIRDS (Bird Polygons) data layer, part of the larger Louisiana ESI database, for additional bird information. The following species are included in this data set: (Species_ID, Common Name, Scientific Name, if applicable): 54, Great blue heron, Ardea herodias; 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; 98, Laughing gull, Larus atricilla; 115, White ibis, Eudocimus albus; 116, Roseate spoonbill, Ajaia ajaja; 118, Brown pelican, Pelecanus occidentalis; 120, Yellow-crowned night-heron, Nyctanassa violacea; 121, Anhinga, Anhinga anhinga; 133, Black skimmer, Rynchops niger; 134, Gull-billed tern, Sterna nilotica; 135, Sandwich tern, Sterna sandvicensis; 136, Caspian tern, Sterna caspia; 137, Royal tern, Sterna maxima; 138, Forster's tern, Sterna forsteri; 163, Reddish egret, Egretta rufescens; 325, Neotropic cormorant, Phalacrocorax brasilianus; 617, White-faced or Glossy ibis, Plegadis spp.

**Positional Accuracy:**

**Horizontal(Positional_Accuracy):**

**Horizontal(Positional_Accuracy_Report):**

The spatial components of the biological data sets were developed from pre-existing digital 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. 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.

**Lineage:**

**Source Information:**

**Source Citation:**

**Citation Information:**

*Originator:* Leburg, P. (University of Louisiana - Lafayette)
*Publication_Date:* Unpublished material
*Title:* Louisiana Department of Wildlife and Fisheries (LDWF) Colonial Waterbird Data for Louisiana
*Geospatial_Data_Presentation_Form:* Digital table
*Publication Information:*

**Publication Place:** Unknown
**Publisher:** Unknown

*Type_of_Source_Media:* Disk
*Source_Time_Period_of_Content:*

**Time_Period_Information:**

*Range_of_Dates/Times:*
*Beginning_Date:* 1990
*Ending_Date:* 1999
*Source_Currentness_Reference:* Dates of Survey
*Source_Citation_Abbreviation:* None
*Source_Contribution:* Colony coordinates and mean species counts for waterbird colonies in coastal Louisiana

**Source Information:**

**Source Citation:**

**Citation Information:**

*Originator:* Martin, R. and G. Lester
*Publication_Date:* 1990
*Title:* Atlas and Census of Wading Bird and Seabird Nesting Colonies in Louisiana
*Geospatial_Data_Presentation_Form:* Hardcopy text
*Publication Information:*

**Publication Place:** Lafayette, LA
**Publisher:** Louisiana Department of Wildlife and Fisheries (LDWF), LA Natural Heritage Program Special Pub. No. 3

*Type_of_Source_Media:* Paper
*Source_Time_Period_of_Content:*

**Time_Period_Information:**

*Single_Date/Time:* Calendar_Date: 1990
Seasonality and life history information for seabird and wading bird species in coastal Louisiana

Colony coordinates and species counts for seabird colonies in coastal Louisiana

Colony coordinates and species counts for wading bird colonies, western coastal Louisiana

Minerals Management Service (MMS), Louisiana State University (LSU), Center for Coastal, Energy and Environmental Resources
(CCEER) and the Department of Geography and Anthropology, Louisiana Department of Wildlife and Fisheries (LDWF), and Research Planning, Inc. (RPI)

Publication_Date: 2001
Title: Gulf-Wide Information System, Louisiana: Nests
Geospatial_Data_Presentation_Form: Vector Digital Data
Publication_Information:
  Publication_Date: 2001
  Publisher: Minerals Management Service (MMS), 1201 Elmwood Park Blvd., MS-5220, New Orleans, LA 70123-2394

Type_of_Source_Media: CD-ROM
Source_Time_Period_of_Content:
  Time_Period_Information:
    Single_Date/Time:
      Calendar_Date: 2001
Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: Seabird and wading bird colony distributions and seasonality

Process_Description:
The main source of data used to depict seabird and wading bird colony distribution and seasonality for this data layer was the Minerals Management Service (MMS) Gulf-Wide Information System nests layer for Louisiana. This layer was used with no modifications. The lineage information listed in the previous section refers to the source lineage of the nests layer from the Gulf-Wide Information System. For further information regarding the process description of this layer, please refer to the metadata document entitled "Gulf-Wide Information Systems, Louisiana: Nests". Metadata documents are available from the Louisiana Oil Spill Coordinator's Office (LOSCO) at this address: David Gisclair, Technical Assistance Program Director, Louisiana Oil Spill Coordinator's Office, Office of the Governor, 150 Third Street, Suite 405, Baton Rouge, LA 70801. Other contact methods include: phone (225) 578-7817, fax (225) 578-6400, and email dgisclair@lsu.edu.

Process_Date: 200312
Process_Contact:
  Contact_Organization_Primary:
    Contact_Organization: NOAA, Office of Response and Restoration
    Contact_Person: Jill Petersen
  Contact_Address:
    Address_Type: Physical address
    Address: 3300 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: Entity Point
      Point_and_Vector_Object_Count: 430
Spatial_Reference_Information:

Horizontal_Coordinate_System_Definition:

  Geographic:

    Latitude_Resolution: 0.00005
    Longitude_Resolution: 0.00005
    Geographic_Coordinate_Units: Decimal degrees

Geodetic_Model:

  Horizontal_Datum_Name: North American Datum of 1983 (HARN)
  Ellipsoid_Name: Geodetic Reference System 80
  Semi-major_Axis: 6378137
  Denominator_of_Flattening_Ratio: 298.257222

Entity_and_Attribute_Information:

Overview_Description:

  Entity_and_Attribute_Overview:

In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, NESTS) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (for the Louisiana atlas, the number is 33), 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, T_E, 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 gives 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.

Detailed_Description:

  Entity_Type:
**Entity_Type_Label**: NESTS.PAT

**Entity_Type_Definition**: The NESTS.PAT table contains attribute information for the vector points representing locations of seabird and wading bird colonies. Note that all attribute information is stored in a series of relational files, described below. See theBrowse_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**: Research Planning, Inc.

**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 (33), element number (5), and record number.

**Attribute_Definition_Source**: NOAA  
**Attribute_Domain_Values**:  
**Range_Domain**:  
Range_Domain_Minimum: 330500001  
Range_Domain_Maximum: 330500430

**Attribute**:  
**Attribute_Label**: RARNUM  
**Attribute_Definition**: An identifier that links directly to the BIORES table or the flat format BIOFILE table.

**Attribute_Definition_Source**: NOAA  
**Attribute_Domain_Values**:  
**Range_Domain**:  
Range_Domain_Minimum: 33000001  
Range_Domain_Maximum: 33000470

**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 theBrowse_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**: Research Planning, Inc.

**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: 33000001  
Range_Domain_Maximum: 33000927

**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 (33), 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**: 
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: Research Planning, Inc.

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: 033000001
            Range_Domain_Maximum: 033000927

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: Research Planning, Inc.
    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 species at a particular location. This field contains either mean or raw counts of nests or individuals for each species present at a particular colony.

Three sources of data were used to derive waterbird nesting colony abundances for this data layer: (1) the 1990-1999 Louisiana Department of Wildlife and Fisheries (LDWF) Colonial Waterbird data set; (2) the 1997 Louisiana State University (LSU) Center for Coastal, Energy, and Environmental Resources (CCEER) Seabird Colonies data set; and (3) selected waterbird colony records from the 2001 Louisiana Natural Heritage Program (LNHP) Element Occurrence Record (EOR) Database. The 1990-1999 LDWF data set was used as the primary source.

The CONC field may contain mean counts from 1990-1999 ("90-99AV"), or raw counts from the last recorded survey year ("9XCOUNT"; for example, "97COUNT") if a mean was not available. In some cases, a mean value of zero is specified. This indicates that the mean count was below 0.5 and was rounded down to zero. In some cases, a count of zero ("0-IND-(9XCOUNT)") from a survey year may be specified. This indicates that, although that species was recently present at that colony, the latest survey data recorded no individuals or nests for that species. Since colonies may be active in some years but not others, this does not imply that a colony site is no longer active or no longer present, or that the colony is small or unimportant. In some cases, the presence of a particular species may have been recorded in a particular survey year, but no quantitative count was made. In this case, the species will be recorded as present ("PRESENT-(9XCOUNT)"") in a particular year.
**Attribute Definition Source**: Research Planning, Inc.

**Attribute Domain Values**:

- **Enumerated Domain**:
  
  - **Enumerated Domain Value**: Any character
  
  **Enumerated Domain Value Definition**: Free text
  
  **Enumerated Domain Value Definition Source**: Research Planning, Inc.

**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**: Research Planning, Inc.

**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**: Research Planning, Inc.

**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**: Research Planning, Inc.

**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**: Research Planning, Inc.

**Attribute Domain Values**:

- **Enumerated Domain**:
  
  - **Enumerated Domain Value**: BIRD
  
  **Enumerated Domain Value Definition**: Birds
  
  **Enumerated Domain Value Definition Source**: Research Planning, Inc.

- **Enumerated Domain**:
  
  - **Enumerated Domain Value**: FISH
  
  **Enumerated Domain Value Definition**: Fish
  
  **Enumerated Domain Value Definition Source**: Research Planning, Inc.

- **Enumerated Domain**:
  
  - **Enumerated Domain Value**: HABITAT
  
  **Enumerated Domain Value Definition**: Habitats and Plants
  
  **Enumerated Domain Value Definition Source**: Research Planning, Inc.

- **Enumerated Domain**:
  
  - **Enumerated Domain Value**: INVERT
  
  **Enumerated Domain Value Definition**: Invertebrates
  
  **Enumerated Domain Value Definition Source**: Research Planning, Inc.
Attribute Domain Values:

Enumerated Domain:
- Enumerated Domain Value: M_MAMMAL
  Enumerated Domain Value Definition: Marine Mammals
  Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:
- Enumerated Domain Value: REPTILE
  Enumerated Domain Value Definition: Reptiles and Amphibians
  Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:
- Enumerated Domain Value: T_MAMMAL
  Enumerated Domain Value Definition: Terrestrial Mammals
  Enumerated Domain Value Definition Source: Research Planning, Inc.

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: Research Planning, Inc.

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 (for example, ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').
  Enumerated Domain Value Definition Source: Research Planning, Inc.

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: Research Planning, Inc.

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, and the last two characters are SEASON_ID (for example, ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE SEA = 'B0000101').
  Enumerated Domain Value Definition Source: Research Planning, Inc.

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 a list of layer-specific species.
Entity Type Definition Source: Research Planning, Inc.

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: Research Planning, Inc.
Attribute Domain Values:
  Range Domain:
  Range Domain Minimum: 1
  Range Domain Maximum: N

Attribute:
  Attribute Label: NAME
  Attribute Definition: Species common name
  Attribute Definition Source: Research Planning, Inc.
  Attribute Domain Values:
    Enumerated Domain:
      Enumerated Domain Value: Species common name for the entire ESI data set
      Enumerated Domain Value Definition: Free text
      Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:
  Attribute Label: GEN_SPEC
  Attribute Definition: Species scientific name
  Attribute Definition Source: Research Planning, Inc.
  Attribute Domain Values:
    Enumerated Domain:
      Enumerated Domain Value: Species scientific name for the entire ESI data set
      Enumerated Domain Value Definition: Free text
      Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:
  Attribute Label: ELEMENT
  Attribute Definition: Major categories of biological data
  Attribute Definition Source: Research Planning, Inc.
  Attribute Domain Values:
    Enumerated Domain:
      Enumerated Domain Value: BIRD
      Enumerated Domain Value Definition: Birds
      Enumerated Domain Value Definition Source: Research Planning, Inc.
    Enumerated Domain:
      Enumerated Domain Value: FISH
      Enumerated Domain Value Definition: Fish
      Enumerated Domain Value Definition Source: Research Planning, Inc.
    Enumerated Domain:
      Enumerated Domain Value: HABITAT
      Enumerated Domain Value Definition: Habitats and Plants
      Enumerated Domain Value Definition Source: Research Planning, Inc.
    Enumerated Domain:
      Enumerated Domain Value: INVERT
      Enumerated Domain Value Definition: Invertebrates
      Enumerated Domain Value Definition Source: Research Planning, Inc.
    Enumerated Domain:
      Enumerated Domain Value: M_MAMMAL
      Enumerated Domain Value Definition: Marine Mammals
      Enumerated Domain Value Definition Source: Research Planning, Inc.
    Enumerated Domain:
      Enumerated Domain Value: REPTILE
      Enumerated Domain Value Definition: Reptiles and Amphibians
      Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:
  Enumerated Domain:
**Enumerated Domain Value:** T_MAMMAL
**Enumerated Domain Value Definition:** Terrestrial Mammals
**Enumerated Domain Value Definition Source:** Research Planning, Inc.

**Attribute:**
**Attribute Label:** SUBELEMENT
**Attribute Definition:** Element subgroup delineating a logical grouping of species
**Attribute Definition Source:** Research Planning, Inc.

**Attribute Domain Values:**
- **Enumerated Domain:**
  - **Enumerated Domain Value:** alligator
    - **Enumerated Domain Value Definition:** Alligator
    - **Enumerated Domain Value Definition Source:** Research Planning, Inc.
  - **Enumerated Domain Value:** amphibian
    - **Enumerated Domain Value Definition:** Amphibian
    - **Enumerated Domain Value Definition Source:** Research Planning, Inc.
  - **Enumerated Domain Value:** bat
    - **Enumerated Domain Value Definition:** Bat
    - **Enumerated Domain Value Definition Source:** Research Planning, Inc.
  - **Enumerated Domain Value:** bear
    - **Enumerated Domain Value Definition:** Bear
    - **Enumerated Domain Value Definition Source:** Research Planning, Inc.
  - **Enumerated Domain Value:** bird
    - **Enumerated Domain Value Definition:** Bird
    - **Enumerated Domain Value Definition Source:** Research Planning, Inc.
  - **Enumerated Domain Value:** bivalve
    - **Enumerated Domain Value Definition:** Bivalve
    - **Enumerated Domain Value Definition Source:** Research Planning, Inc.
  - **Enumerated Domain Value:** cephalopod
    - **Enumerated Domain Value Definition:** Cephalopod
    - **Enumerated Domain Value Definition Source:** Research Planning, Inc.
  - **Enumerated Domain Value:** crab
    - **Enumerated Domain Value Definition:** Crab
    - **Enumerated Domain Value Definition Source:** Research Planning, Inc.
  - **Enumerated Domain Value:** crayfish
    - **Enumerated Domain Value Definition:** Crayfish
    - **Enumerated Domain Value Definition Source:** Research Planning, Inc.
  - **Enumerated Domain Value:** diadromous
    - **Enumerated Domain Value Definition:** Diadromous fish
    - **Enumerated Domain Value Definition Source:** Research Planning, Inc.
  - **Enumerated Domain Value:** diving
Enumerated_Domain_Value_Definition: Diving bird
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: e_nursery
    Enumerated_Domain_Value_Definition: Estuarine nursery fish
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: e_resident
    Enumerated_Domain_Value_Definition: Estuarine resident fish
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: fish
    Enumerated_Domain_Value_Definition: Fish
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: freshwater
    Enumerated_Domain_Value_Definition: Freshwater fish
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: gull_tern
    Enumerated_Domain_Value_Definition: Gull or tern
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: insect
    Enumerated_Domain_Value_Definition: Insect
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: lizard
    Enumerated_Domain_Value_Definition: Lizard
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: m_benthic
    Enumerated_Domain_Value_Definition: Marine benthic fish
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: m_pelagic
    Enumerated_Domain_Value_Definition: Marine pelagic fish
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: passerine
    Enumerated_Domain_Value_Definition: Passerine bird
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: plant
    Enumerated_Domain_Value_Definition: Plant
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: raptor
Enumerated Domain Value Definition: Raptor
Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:
Enumerated Domain:
Enumerated Domain Value: sav
Enumerated Domain Value Definition: Submersed aquatic vegetation
Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:
Enumerated Domain:
Enumerated Domain Value: shorebird
Enumerated Domain Value Definition: Shorebird
Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:
Enumerated Domain:
Enumerated Domain Value: shrimp
Enumerated Domain Value Definition: Shrimp
Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:
Enumerated Domain:
Enumerated Domain Value: sm_mammal
Enumerated Domain Value Definition: Small mammal
Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:
Enumerated Domain:
Enumerated Domain Value: snake
Enumerated Domain Value Definition: Snake
Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:
Enumerated Domain:
Enumerated Domain Value: turtle
Enumerated Domain Value Definition: Turtle
Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:
Enumerated Domain:
Enumerated Domain Value: upland
Enumerated Domain Value Definition: Upland
Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:
Enumerated Domain:
Enumerated Domain Value: wading
Enumerated Domain Value Definition: Wading bird
Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:
Enumerated Domain:
Enumerated Domain Value: waterfowl
Enumerated Domain Value Definition: Waterfowl
Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:
Enumerated Domain:
Enumerated Domain Value: wetland
Enumerated Domain Value Definition: Wetland
Enumerated Domain Value Definition Source: Research Planning, Inc.

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: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: 0
            Enumerated_Domain_Value_Definition: Not ranked
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Numeric
            Enumerated_Domain_Value_Definition: mmyyyy
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.
    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 (for example, ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.

Attribute:
    Attribute_Label: ELEMENT
    Attribute_Definition:
        Major categories of biological data
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: BIRD
            Enumerated_Domain_Value_Definition: Birds
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: FISH
            Enumerated_Domain_Value_Definition: Fish
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: HABITAT
            Enumerated_Domain_Value_Definition: Habitats and Plants
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: INVERT
            Enumerated_Domain_Value_Definition: Invertebrates
**Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.

### Attribute Domain Values:

**Enumerated_Domain:**
- **Enumerated_Domain_Value:** M_MAMMAL
  - **Enumerated_Domain_Value_Definition:** Marine Mammals
  - **Enumerated_Domain_Value_Source:** Research Planning, Inc.

**Enumerated_Domain:**
- **Enumerated_Domain_Value:** REPTILE
  - **Enumerated_Domain_Value_Definition:** Reptiles and Amphibians
  - **Enumerated_Domain_Value_Source:** Research Planning, Inc.

**Enumerated_Domain:**
- **Enumerated_Domain_Value:** T_MAMMAL
  - **Enumerated_Domain_Value_Definition:** Terrestrial Mammals
  - **Enumerated_Domain_Value_Source:** Research Planning, Inc.

### 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:** Research Planning, Inc.

### 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:** Research Planning, Inc.

### Attribute Domain Values:

**Range_Domain:**
- **Range_Domain_Minimum:** 1
- **Range_Domain_Maximum:** N

### Attribute:
**Attribute_Label:** JAN
**Attribute_Definition:** January
**Attribute_Definition_Source:** Research Planning, Inc.

### Attribute Domain Values:

- **Enumerated_Domain:**
  - **Enumerated_Domain_Value:** X
  - **Enumerated_Domain_Value_Definition:** Present in January
  - **Enumerated_Domain_Value_Source:** Research Planning, Inc.

### Attribute:
**Attribute_Label:** FEB
**Attribute_Definition:** February
**Attribute_Definition_Source:** Research Planning, Inc.

### Attribute Domain Values:

- **Enumerated_Domain:**
  - **Enumerated_Domain_Value:** X
  - **Enumerated_Domain_Value_Definition:** Present in February
  - **Enumerated_Domain_Value_Source:** Research Planning, Inc.

### Attribute:
**Attribute_Label:** MAR
**Attribute_Definition:** March
**Attribute_Definition_Source:** Research Planning, Inc.

### Attribute Domain Values:

- **Enumerated_Domain:**
Enumerated_Domain_Value: X
Enumerated_Domain_Value_Defined: Present in March
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
  Attribute_Label: APR
  Attribute_Definition: April
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: X
      Enumerated_Domain_Value_Defined: Present in April
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
  Attribute_Label: MAY
  Attribute_Definition: May
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: X
      Enumerated_Domain_Value_Defined: Present in May
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
  Attribute_Label: JUN
  Attribute_Definition: June
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: X
      Enumerated_Domain_Value_Defined: Present in June
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
  Attribute_Label: JUL
  Attribute_Definition: July
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: X
      Enumerated_Domain_Value_Defined: Present in July
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
  Attribute_Label: AUG
  Attribute_Definition: August
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: X
      Enumerated_Domain_Value_Defined: Present in August
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
  Attribute_Label: SEP
  Attribute_Definition: September
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: X
      Enumerated_Domain_Value_Defined: Present in September
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
  Attribute_Label: OCT
  Attribute_Definition: October
**Attribute Definition Source:** Research Planning, Inc.

**Attribute Domain Values:**

- **Enumerated Domain:**
  - **Enumerated Domain Value:** X
  - **Enumerated Domain Value Definition:** Present in October
  - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

**Attribute:**

- **Attribute Label:** NOV
- **Attribute Definition:** November
- **Attribute Definition Source:** Research Planning, Inc.

- **Attribute Domain Values:**
  - **Enumerated Domain:**
    - **Enumerated Domain Value:** X
    - **Enumerated Domain Value Definition:** Present in November
    - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

**Attribute:**

- **Attribute Label:** DEC
- **Attribute Definition:** December
- **Attribute Definition Source:** Research Planning, Inc.

- **Attribute Domain Values:**
  - **Enumerated Domain:**
    - **Enumerated Domain Value:** X
    - **Enumerated Domain Value Definition:** Present in December
    - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

**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:** Research Planning, Inc.

- **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 (for example, ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
    - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

**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:** Research Planning, Inc.

**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:** Research Planning, Inc.

- **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 (for example, ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.
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 elements.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
  Enumerated_Domain_Value: Y
  Enumerated_Domain_Value_Definition: Life-history stage or activity present
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
  Enumerated_Domain_Value: N
  Enumerated_Domain_Value_Definition: Life-history stage or activity not present
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
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: Research Planning, Inc.

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: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
  Enumerated_Domain_Value: Y
  Enumerated_Domain_Value_Definition: Life-history stage or activity present
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
  Enumerated_Domain_Value: N
  Enumerated_Domain_Value_Definition: Life-history stage or activity not present
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.

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: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Y
Enumerated_Domain_Value_Definition: Life-history stage or activity present
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: N
Enumerated_Domain_Value_Definition: Life-history stage or activity not present
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
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: Research Planning, Inc.

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: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Y
Enumerated_Domain_Value_Definition: Life-history stage or activity present
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: N
Enumerated_Domain_Value_Definition: Life-history stage or activity not present
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
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: Research Planning, Inc.

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: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:  
   Enumerated_Domain_Value: Y  
   Enumerated_Domain_Value_Definition: Life-history stage or activity present  
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:  
   Enumerated_Domain_Value: N  
   Enumerated_Domain_Value_Definition: Life-history stage or activity not present  
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.

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: Research Planning, Inc.

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, and to G_SOURCE and S_SOURCE in the BIORES table.  
Attribute_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:  
   Enumerated_Domain_Value: Any character  
   Enumerated_Domain_Value_Definition: Free text
Attribute:

Attribute_Label: DATE_PUB
Attribute_Definition: Date of source material, publication, or date of personal communication with expert source
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
    Enumerated_Domain_Value: Numeric
    Enumerated_Domain_Value_Definition: mmyyyy
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: TITLE
Attribute_Definition: Title of source material or data
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
    Enumerated_Domain_Value: Any character
    Enumerated_Domain_Value_Definition: Free text
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: DATA_FORMAT
Attribute_Definition: The format of the source material
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
    Enumerated_Domain_Value: Any character
    Enumerated_Domain_Value_Definition: Free text
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: PUBLICATION
Attribute_Definition: Additional citation information
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
    Enumerated_Domain_Value: Any character
    Enumerated_Domain_Value_Definition: Free text
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: SCALE
Attribute_Definition: Scale denominator of the source
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
    Enumerated_Domain_Value: integer
    Enumerated_Domain_Value_Definition: Any integer
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: TIME_PERIOD
Attribute_Definition: Date(s) of data collection that the source material is based upon.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
    Enumerated_Domain_Value: Numeric
    Enumerated_Domain_Value_Definition: yyyy
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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 or federal 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:** Research Planning, Inc.

**Attribute:**
**Attribute Label:** ELEMENT  
**Attribute Definition:** Major categories of biological data  
**Attribute Definition Source:** Research Planning, Inc.

**Attribute Domain Values:**
- **Enumerated Domain:**
  - **Enumerated Domain Value:** BIRD  
    **Enumerated Domain Value Definition:** Birds  
    **Enumerated Domain Value Definition Source:** Research Planning, Inc.

**Attribute Domain Values:**
- **Enumerated Domain:**
  - **Enumerated Domain Value:** FISH  
    **Enumerated Domain Value Definition:** Fish  
    **Enumerated Domain Value Definition Source:** Research Planning, Inc.

**Attribute Domain Values:**
- **Enumerated Domain:**
  - **Enumerated Domain Value:** HABITAT  
    **Enumerated Domain Value Definition:** Habitats and Plants  
    **Enumerated Domain Value Definition Source:** Research Planning, Inc.

**Attribute Domain Values:**
- **Enumerated Domain:**
  - **Enumerated Domain Value:** INVERT  
    **Enumerated Domain Value Definition:** Invertebrates  
    **Enumerated Domain Value Definition Source:** Research Planning, Inc.

**Attribute Domain Values:**
- **Enumerated Domain:**
  - **Enumerated Domain Value:** M_MAMMAL  
    **Enumerated Domain Value Definition:** Marine Mammals  
    **Enumerated Domain Value Definition Source:** Research Planning, Inc.

**Attribute Domain Values:**
- **Enumerated Domain:**
  - **Enumerated Domain Value:** REPTILE  
    **Enumerated Domain Value Definition:** Reptiles and Amphibians  
    **Enumerated Domain Value Definition Source:** Research Planning, Inc.

**Attribute Domain Values:**
- **Enumerated Domain:**
  - **Enumerated Domain Value:** T_MAMMAL  
    **Enumerated Domain Value Definition:** Terrestrial Mammals  
    **Enumerated Domain Value Definition Source:** Research Planning, Inc.

**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:** Research Planning, Inc.

**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:** Research Planning, Inc.
**Attribute**

**Attribute Label:** S_F
**Attribute Definition:** State and Federal status
**Attribute Definition Source:** Research Planning, Inc.

**Attribute Domain Values:**

- **Enumerated Domain:**
  - **Enumerated Domain Value:** F
  - **Enumerated Domain Value Definition:** Federally listed
  - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

- **Enumerated Domain:**
  - **Enumerated Domain Value:** S
  - **Enumerated Domain Value Definition:** State listed
  - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

- **Enumerated Domain:**
  - **Enumerated Domain Value:** S/F
  - **Enumerated Domain Value Definition:** State and federally listed
  - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

**Attribute:**

**Attribute Label:** T_E
**Attribute Definition:** Threatened and endangered status
**Attribute Definition Source:** Research Planning, Inc.

**Attribute Domain Values:**

- **Enumerated Domain:**
  - **Enumerated Domain Value:** E
  - **Enumerated Domain Value Definition:** Endangered on state or federal list
  - **Enumerated Domain Value Definition Source:** U.S. Fish and Wildlife Service

- **Enumerated Domain:**
  - **Enumerated Domain Value:** T
  - **Enumerated Domain Value Definition:** Threatened on state or federal list
  - **Enumerated Domain Value Definition Source:** U.S. Fish and Wildlife Service

**Attribute:**

**Attribute Label:** DATE_PUB
**Attribute Definition:** Publication date of source material used to assign state and federal status values for each species, if used.
**Attribute Definition Source:** Research Planning, Inc.

**Attribute Domain Values:**

- **Enumerated Domain:**
  - **Enumerated Domain Value:** Numeric
  - **Enumerated Domain Value Definition:** mmyyyy
  - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

**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:** Research Planning, Inc.

**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 (for example, ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Distribution_Information:
Distributor:

Contact_Information:
Contact_Person_Primary: John Kaperick
Contact_Organization: NOAA, Office of Response and Restoration

Contact_Address:
Address_Type: Physical Address
Address: 3300 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: ESI Atlas for Louisiana

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

Custom_Order_Process:
Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

Metadata_Reference_Information:
Metadata_Date: 200410
Metadata_Review_Date: 200410
Metadata_Contact:

Contact_Information:
Contact_Person_Primary: Jill Petersen
Contact_Organization: NOAA, Office of Response and Restoration
Contact_Position: GIS Manager

Contact_Address:
Address_Type: Physical Address
Address: 3300 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
Louisiana ESI: FISH (Fish Polygons)

Metadata also available as - [Parseable text] - [SGML]

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, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Publication_Date: 200410
Title: Louisiana ESI: FISH (Fish Polygons)
Edition: First
Geospatial_Data_Presentation_Form: Vector digital data
Series_Information:
Series_Name: None
Issue_Identification: Louisiana
Publication_Information:
Publication_Date: Seattle, Washington
Publisher:
National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Description:
Abstract:
This data set contains sensitive biological resource data for freshwater (inland) fish species in coastal Louisiana. Vector polygons represent water-bodies and other fish habitats with similar species composition and relative abundance in various inland rivers, lakes, and, in some cases, adjacent wetlands. 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 Environmental Sensitivity Index (ESI) data for Louisiana. 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:** 1988
  - **Ending_Date:** 2001
**Currentness_Reference:**
The biological data were compiled during 2002-2003. The currentness dates for these data range from 1988 to 2001 and are documented in the Source_Information section.

**Status:**
**Progress:** Complete
**Maintenance_and_Update_Frequency:** None Scheduled

**Spatial_Domain:**
**Bounding_Coordinates:**
- **West_BoundingCoordinate:** -94.000
- **East_BoundingCoordinate:** -88.792
- **North_BoundingCoordinate:** 30.625
- **South_BoundingCoordinate:** 28.875

**Keywords:**
**Theme:**
- **Theme_Keyword_Thesaurus:** None
- **Theme_Keyword:** ESI
- **Theme_Keyword:** Sensitivity maps
- **Theme_Keyword:** Coastal resources
- **Theme_Keyword:** Oil spill planning
- **Theme_Keyword:** Coastal Zone Management
- **Theme_Keyword:** Wildlife
- **Theme_Keyword:** Fish

**Place:**
- **Place_Keyword_Thesaurus:** None
- **Place_Keyword:** Louisiana

**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 Louisiana ESI data.
**Browse_Graphic_File_Type:** JPEG

**Data_Set_Credit:**
This project was supported by the National Oceanic and Atmospheric Administration (NOAA),
Natural Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, in cooperation with Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Native Data Set Environment:
The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO® (version 8.3) and SQL SERVER® (version 7.0). The hardware configuration is PC's with Windows Operating System (NT4.0/2000).

The Spatial Data Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: birds.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, lg_index.e00, mgt.e00, parish.e00, nests.e00, reptiles.e00, roads.e00, sm_index.e00, socecon.e00, t_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biores, biofile, breed, breed_dt, seasonal, soc_dat, soc_lut, sources, species, and status.

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 nodes, etc.), and SQL SERVER® to ARC/INFO® consistencies. The GIS manager makes a final review, 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 is mapped by a linear feature, a value of 20 is added to the standard element value. 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 "resource 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, existing digital sources, and available hardcopy maps describing freshwater (inland) fish resources in coastal Louisiana. These data do not represent all freshwater fish occurrences in coastal Louisiana. The following species are included in this data set: (Species_ID, Common Name, Scientific Name, if applicable): 76, Alligator gar, Lepisosteus spatula; 82, Bantam sunfish, Lepomis symmetricus; 98, American eel, Anguilla rostrata; 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; 113, Bay anchovy, Anchoa mitchilli; 114, Florida pompano, Trachinotus carolinus; 116, Striped mullet, Mugil cephalus; 119, Silver perch, Bairdiella chrysoura; 121, Spot, Leiostomus
xanththurus; 122, Black drum, Pogonias cromis; 123, Atlantic croaker, Micropogonias undulatus; 125, Bigmouth buffalo, Ictiobus cyprinellus; 127, Spanish mackerel, Scomberomorus maculatus; 137, Sheepshead, Archosargus probatocephaus; 140, Ladyfish, Elops saurus; 142, Crevalle jack, Caranx hippos; 143, Tarpon, Megalops atlanticus; 162, Common carp, Cyprinus carpio; 163, Gizzard shad, Dorosoma cepedianum; 176, Yellow bullhead, Ameiurus natalis; 179, Largemouth bass, Micropterus salmoides; 181, Black crappie, Pomoxis nigromaculatus; 182, Bluegill, Lepomis macrochirus; 183, Green sunfish, Lepomis cyanellus; 190, White bass, Morone chrysoptus; 200, Blue catfish, Ictalurus furcatus; 201, Channel catfish, Ictalurus punctatus; 202, White crappie, Pomoxis annularis; 203, Warmouth, Lepomis gulosus; 204, Redear sunfish, Lepomis microlophus; 205, Freshwater drum, Aplodinotus grunniens; 206, Spotted sunfish, Lepomis punctatus; 213, Gulf menhaden, Brevoortia patronus; 215, Sand seatrout, Cynoscion arenarius; 216, Black buffalo, Ictiobus niger; 218, Bowfin, Amia calva; 243, Longear sunfish, Lepomis megalotis; 246, Black bullhead, Ameiurus melas; 249, Logperch, Percina caprodes; 252, Yellow bass, Morone mississippiensis; 257, Flathead catfish, Pylodictis olivaris; 271, Inland silverside, Menidia beryllina; 277, Paddlefish, Polyodon spathula; 279, Blue sucker, Cyclopterus elongatus; 280, Hybrid sunfish, Lepomis spp.; 289, Skipjack herring, Alopa chrysodichloris; 291, Shiners, Notropis spp.; 306, Gray snapper, Lutjanus griseus; 319, Gulf sturgeon, Acipenser oxyrinchus desotoi; 322, Flier, Centrarchus macropterus; 329, Grass carp, Ctenopharyngodon idella; 353, Golden shiner, Notemigonus crysoleucus; 365, Rare fish; 366, Hogchoker, Trinectes maculates; 375, Bay whiff, Citharichthys spiloterus; 376, Fringed flounder, Etropus crosstous; 378, Atlantic needlefish, Strongylopterus marina; 423, Goldfish, Carassius auratus; 433, Gulf pipefish, Syngnathus scovelli; 462, Hybrid striped bass, Morone sp.; 464, Longnose gar, Lepisosteus osseus; 465, Madtoms, Noturus spp.; 466, Minnows; 468, Orangespotted sunfish, Lepomis humilis; 469, Pirate perch, Aphredoderus sayanus; 470, Smallmouth buffalo, Ictiobus bubalus; 471, Spotted bass, Micropterus punctatus; 472, Spotted gar, Lepisosteus oculatus; 611, Lined sole, Achirus lineatus; 612, Speckled worm eel, Myrophis punctatus; 614, Roughtail stingray, Dasyatis centoura; 615, Violet goby, Gobiidius broussoneti; 616, Quillback, Carpiodes cyprinus; 617, River carpsucker, Carpiodes carpio; 618, Spotted sucker, Minytrema melanops; 619, Shortnose gar, Lepisosteus platostomus; 620, Endangered fish; 621, Threatened fish; 647, Shovelnose sturgeon, Scaphirhynchus platorynchus; 648, Chubsucker, Erimyzon spp.; 649, Silver carp, Hypopthalmichthys molitrix; 650, Bighead carp, Hypopthalmichthys nobilis; 1012, Catfish; 1013, Darters; 1029, Gobies.

**Positional_Accuracy:**

**Horizontal_Positional_Accuracy_Report:**

The spatial components of the biological data sets were developed from pre-existing digital 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. 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.

**Lineage:**

**Source_Information:**

**Source_Citation:**

**Citation_Information:**

**Originator:** Louisiana Department of Wildlife and Fisheries (LDWF), Inland Fisheries Division

**Publication_Date:** Unpublished material

**Title:** Inland Fisheries Summary Data for Louisiana

**Geospatial_Data_Presentation_Form:** Digital table / Expert

**Publication_Information:**

**Publication_Date:** 1999
Source_Contribution: Freshwater fish species presence and relative abundance

Source_Information:
Source_Citation:
Citation_Information:
 originator: NOAA SEA Division
Publication_Date: 1996
Title: Estuarine and living marine resources
Geospatial_Data_Presentation_Form: Digital map
Publication_Information:
Publication_Place: Unknown
Publisher: Database Contact: Mark Monaco and D.M. Nelson
Source_Scale_Denominator: Varies
Type_of_Source_Media: Disk
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 1996
Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: Areas of living marine resources

Source_Information:
Source_Citation:
Citation_Information:
Originator: Louisiana Department of Wildlife and Fisheries (LDWF) and Louisiana Natural Heritage Program (LNHP) (Lester, G.)
Publication_Date: 1999
Title: Louisiana Element Occurrence Record (EOR) Database
Geospatial_Data_Presentation_Form: Digital table
Publication_Information:
Publication_Place: Unknown
Publisher: Unknown
Type_of_Source_Media: Paper
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 1999
Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: Coordinates and description of LNHP element occurrences for Louisiana

Source_Information:
Source_Citation:
Citation_Information:
Originator: USGS National Wetlands Research Center (NWRC)
Publication_Date: Unpublished material
Title: Gulf of Mexico Coastal Louisiana Habitat Data
Geospatial_Data_Presentation_Form: Digital Polys
Publication_Information:
Publication_Place: Unknown
Publisher: Unknown
Source_Scale_Denominator: 24000
Type_of_Source_Media: Disk
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 1988
Source_Currentness_Reference: Date of survey
Source_Citation_Abbreviation: None
Source_Contribution: Coastal habitat data
Source Information:
Source Citation:
Citation Information:
Originator:
Minerals Management Service (MMS), Louisiana State University (LSU), Center for Coastal, Energy and Environmental Resources (CCEER) and the Department of Geography and Anthropology, Louisiana Department of Wildlife and Fisheries (LDWF), and Research Planning, Inc. (RPI)
Publication Date: 2001
Title: Gulf-Wide Information System, Louisiana: Freshwater fish
Geospatial Data Presentation Form: Vector Digital Data
Publication Information:
Publication Place: New Orleans, LA
Publisher:
Minerals Management Service (MMS), 1201 Elmwood Park Blvd., MS-5220, New Orleans, LA 70123-2394
Type of Source Media: CD-ROM
Source Time Period of Content:
Time Period Information:
Single Date/Time:
Calendar Date: 2001
Source Currentness Reference: Date of publication
Source Citation Abbreviation: None
Source Contribution: Fish distributions and seasonality
Source Information:
Source Citation:
Citation Information:
Originator:
Minerals Management Service (MMS), Louisiana State University (LSU), Center for Coastal, Energy and Environmental Resources (CCEER) and the Department of Geography and Anthropology, Louisiana Department of Wildlife and Fisheries (LDWF), and Research Planning, Inc. (RPI)
Publication Date: 2001
Title: Gulf-Wide Information System, Louisiana: NHP
Geospatial Data Presentation Form: Vector Digital Data
Publication Information:
Publication Place: New Orleans, LA
Publisher:
Minerals Management Service (MMS), 1201 Elmwood Park Blvd., MS-5220, New Orleans, LA 70123-2394
Type of Source Media: CD-ROM
Source Time Period of Content:
Time Period Information:
Single Date/Time:
Calendar Date: 2001
Source Currentness Reference: Date of publication
Source Citation Abbreviation: None
Source Contribution: Natural Heritage Program (NHP) distribution and seasonality information
Process Step:
Process Description:
The main sources of data used to depict sensitive fish distributions and seasonality for this data layer were the Minerals Management Service (MMS) Gulf-Wide Information System's freshwater fish and NHP (Natural Heritage Program) layers. These layers were used with no modifications. The lineage information listed in the previous section refers to the source lineage of the freshwater fish and NHP layers from the Gulf-Wide Information System. For further information regarding the process description of these layers, please refer to the metadata documents entitled
"Gulf-Wide Information Systems, Louisiana: Freshwater Fish" and "Gulf-Wide Information Systems, Louisiana: NHP". Metadata documents are available from the Louisiana Oil Spill Coordinator's Office (LOSCO) at this address: David Gisclair, Technical Assistance Program Director, Louisiana Oil Spill Coordinator's Office, Office of the Governor, 150 Third Street, Suite 405, Baton Rouge, LA 70801. Other contact methods include: phone (225) 578-7817, fax (225) 578-6400, and email digisclair@lsu.edu.

**Process_Date:** 200312

**Process_Contact:**

**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 rings
  **Point_and_Vector_Object_Count:** 24655

**SDTS_Terms_Description:**
  **SDTS_Point_and_Vector_Object_Type:** Area point
  **Point_and_Vector_Object_Count:** 24655

**SDTS_Terms_Description:**
  **SDTS_Point_and_Vector_Object_Type:** Complete chain
  **Point_and_Vector_Object_Count:** 44688

**SDTS_Terms_Description:**
  **SDTS_Point_and_Vector_Object_Type:** Link
  **Point_and_Vector_Object_Count:** 983832

**SDTS_Terms_Description:**
  **SDTS_Point_and_Vector_Object_Type:** Node, planar graph
  **Point_and_Vector_Object_Count:** 30761

**Spatial_Reference_Information:**

**HorizontalCoordinateSystemDefinition:**

**Geographic:**
  **LatitudeResolution:** 0.00005
  **LongitudeResolution:** 0.00005
  **GeographicCoordinateUnits:** Decimal degrees

**GeodeticModel:**
  **HorizontalDatumName:** North American Datum of 1983 (HARN)
  **EllipsoidName:** Geodetic Reference System 80
  **Semi-majorAxis:** 6378137
  **Denominator_of_Flattening_Ratio:** 298.257222
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 Louisiana atlas, the number is 33) and 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, T_E, 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.

Detailed_Description:
Entity_Type:
  Entity_Type_Label: FISH.PAT
  Entity_Type_Definition: The FISH.PAT table contains attribute information for the vector polygons representing freshwater fish 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: Research Planning, Inc.
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 (33), element number (2), and record number. ID values of 9999 are holes in polygons and do not contain
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: Research Planning, Inc.

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: 33000699
  Range_Domain_Maximum: 33000927

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 (33), 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: 330100001
  Range_Domain_Maximum: 330912750
AttributeLabel:  RARNUM
AttributeDefinition:  
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.
AttributeDefinitionSource:  NOAA
AttributeDomainValues:
  RangeDomain:
    RangeDomainMinimum:  033000001
    RangeDomainMaximum:  033000927

Attribute:
AttributeLabel:  SPECIES_ID
AttributeDefinition:  Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.
AttributeDefinitionSource:  Research Planning, Inc.
AttributeDomainValues:
  RangeDomain:
    RangeDomainMinimum:  1
    RangeDomainMaximum:  N

Attribute:
AttributeLabel:  CONC
AttributeDefinition:  The field CONC refers to "concentration," abundance, or density value of a species at a particular location. For some fish species, this field contains the relative abundance categories from NOAA's Estuarine Living Marine Resources (ELMR) data, used to develop this layer. These categories (5=highly abundant, 4=abundant, 3=common, 2=rare, and 1=no information) are intended to simulate the categories often used by fisheries biologists. The CONC field was populated with the maximum monthly abundance value. For species with more than one life stage present in a given area, the juvenile stage took precedence, followed by adult, then larvae. For species not included in the ELMR data, the species were recorded as "PRESENT", or were assigned a qualitative abundance category of "LOW", "MED", or "HIGH" by LDWF resource experts, based upon their knowledge of relative abundance. For other fish species, where no concentration information was available, the field was populated with '-'.
AttributeDefinitionSource:  Research Planning, Inc.
AttributeDomainValues:
  EnumeratedDomain:
    EnumeratedDomainValue:  Any character
    EnumeratedDomainValueDefinition:  Free text
    EnumeratedDomainValueDefinitionSource:  Research Planning, Inc.

Attribute:
AttributeLabel:  SEASON_ID
AttributeDefinition:  Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.
AttributeDefinitionSource:  Research Planning, Inc.
AttributeDomainValues:
  RangeDomain:
    RangeDomainMinimum:  1
    RangeDomainMaximum:  N

Attribute:
AttributeLabel:  G_SOURCE
AttributeDefinition:  Geographic source identifier that links records in the BIORES data table to records in the SOURCES data table.
AttributeDefinitionSource:  Research Planning, Inc.
AttributeDomainValues:
  RangeDomain:
    RangeDomainMinimum:  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: Research Planning, Inc.
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: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: BIRD
    Enumerated_Domain_Value_Definition: Birds
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Enumerated_Domain:
    Enumerated_Domain_Value: FISH
    Enumerated_Domain_Value_Definition: Fish
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Enumerated_Domain:
    Enumerated_Domain_Value: HABITAT
    Enumerated_Domain_Value_Definition: Habitats and Plants
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Enumerated_Domain:
    Enumerated_Domain_Value: INVERT
    Enumerated_Domain_Value_Definition: Invertebrates
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Enumerated_Domain:
    Enumerated_Domain_Value: M_MAMMAL
    Enumerated_Domain_Value_Definition: Marine Mammals
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Enumerated_Domain:
    Enumerated_Domain_Value: REPTILE
    Enumerated_Domain_Value_Definition: Reptiles and Amphibians
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Enumerated_Domain:
    Enumerated_Domain_Value: T_MAMMAL
    Enumerated_Domain_Value_Definition: Terrestrial Mammals
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.
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 (for example, ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').

**Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.

**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:** Research Planning, Inc.

**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 (for example, ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
**Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.

**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 a list of layer-specific species.
**Entity_Type_Definition_Source:** Research Planning, Inc.

**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:** Research Planning, Inc.

**Attribute_Domain_Values:**
**Range_Domain:**
**Range_Domain_Minimum:** 1
**Range_Domain_Maximum:** N

**Attribute:**
**Attribute_Label:** NAME
**Attribute_Definition:** Species common name
**Attribute_Definition_Source:** Research Planning, Inc.

**Attribute_Domain_Values:**
**Enumerated_Domain:**
**Enumerated_Domain_Value:** Species common name for the entire ESI data set
**Enumerated_Domain_Value_Definition:** Free text
**Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.

**Attribute:**
**Attribute_Label:** GEN_SPEC
**Attribute_Definition:** Species scientific name
**Attribute_Definition_Source:** Research Planning, Inc.

**Attribute_Domain_Values:**
**Enumerated_Domain:**
**Enumerated_Domain_Value:** Species scientific name for the entire ESI data set
**Enumerated_Domain_Value_Definition:** Free text
**Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.

**Attribute:**
Attribute_Label: ELEMENT
Attribute_Definition: Major categories of biological data
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: BIRD
    Enumerated_Domain_Value_Definition: Birds
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: FISH
    Enumerated_Domain_Value_Definition: Fish
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: HABITAT
    Enumerated_Domain_Value_Definition: Habitats and Plants
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: INVERT
    Enumerated_Domain_Value_Definition: Invertebrates
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: M_MAMMAL
    Enumerated_Domain_Value_Definition: Marine Mammals
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: REPTILE
    Enumerated_Domain_Value_Definition: Reptiles and Amphibians
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: T_MAMMAL
    Enumerated_Domain_Value_Definition: Terrestrial Mammals
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: SUBELEMENT
Attribute_Definition: Element subgroup delineating a logical grouping of species
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: alligator
    Enumerated_Domain_Value_Definition: Alligator
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: amphibian
    Enumerated_Domain_Value_Definition: Amphibian
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: bat
    Enumerated_Domain_Value_Definition: Bat
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: bear
<table>
<thead>
<tr>
<th>Enumerated_Domain_Value_Definition</th>
<th>Enumerated_Domain_Value_Definition_Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bear</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>Bird</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>Bivalve</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>Cephalopod</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>Crab</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>Crayfish</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>Diadromous fish</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>Diving bird</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>Estuarine nursery fish</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>Estuarine resident fish</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>Fish</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>Freshwater fish</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>gull_tern</td>
<td></td>
</tr>
</tbody>
</table>
Enumerated_Domain_Value_Definition: Gull or tern
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: insect
Enumerated_Domain_Value_Definition: Insect
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: lizard
Enumerated_Domain_Value_Definition: Lizard
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: m_benthic
Enumerated_Domain_Value_Definition: Marine benthic fish
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: m_pelagic
Enumerated_Domain_Value_Definition: Marine pelagic fish
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: passerine
Enumerated_Domain_Value_Definition: Passerine bird
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: plant
Enumerated_Domain_Value_Definition: Plant
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: raptor
Enumerated_Domain_Value_Definition: Raptor
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: sav
Enumerated_Domain_Value_Definition: Submersed aquatic vegetation
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: shorebird
Enumerated_Domain_Value_Definition: Shorebird
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: shrimp
Enumerated_Domain_Value_Definition: Shrimp
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: sm_mammal
Enumerated_Domain_Value_Definition: Small mammal
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: snake
Enumerated_Domain_Value_Definition: Snake
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: turtle
Enumerated_Domain_Value_Definition: Turtle
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: upland
Enumerated_Domain_Value_Definition: Upland
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: wading
Enumerated_Domain_Value_Definition: Wading bird
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: waterfowl
Enumerated_Domain_Value_Definition: Waterfowl
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: wetland
Enumerated_Domain_Value_Definition: Wetland
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: 0
Enumerated_Domain_Value_Definition: Not ranked
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.
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 (for example, ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').

**Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.

**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:** Research Planning, Inc.

**Attribute:**

**Attribute_Label:** ELEMENT

**Attribute_Definition:** Major categories of biological data

**Attribute_Definition_Source:** Research Planning, Inc.

**Attribute_Domain_Values:**

**Enumerated_Domain:**

**Enumerated_Domain_Value:** BIRD

**Enumerated_Domain_Value_Definition:** Birds

**Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.

**Enumerated_Domain:**

**Enumerated_Domain_Value:** FISH

**Enumerated_Domain_Value_Definition:** Fish

**Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.

**Enumerated_Domain:**

**Enumerated_Domain_Value:** HABITAT

**Enumerated_Domain_Value_Definition:** Habitats and Plants

**Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.

**Enumerated_Domain:**

**Enumerated_Domain_Value:** INVERT

**Enumerated_Domain_Value_Definition:** Invertebrates

**Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.

**Enumerated_Domain:**

**Enumerated_Domain_Value:** M_MAMMAL

**Enumerated_Domain_Value_Definition:** Marine Mammals

**Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.

**Enumerated_Domain:**

**Enumerated_Domain_Value:** REPTILE

**Enumerated_Domain_Value_Definition:** Reptiles and Amphibians

**Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.

**Enumerated_Domain:**

**Enumerated_Domain_Value:** T_MAMMAL

**Enumerated_Domain_Value_Definition:** Terrestrial Mammals

**Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.

**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:** Research Planning, Inc.

**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: Research Planning, Inc.
Attribute_Domain_Values:
  Range_Domain:
    Range_Domain_Minimum: 1
    Range_Domain_Maximum: N

Attribute:
Attribute_Label: JAN
Attribute_Definition: January
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: X
    Enumerated_Domain_Value_Definition: Present in January
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: FEB
Attribute_Definition: February
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: X
    Enumerated_Domain_Value_Definition: Present in February
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: MAR
Attribute_Definition: March
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: X
    Enumerated_Domain_Value_Definition: Present in March
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: APR
Attribute_Definition: April
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: X
    Enumerated_Domain_Value_Definition: Present in April
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: MAY
Attribute_Definition: May
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: X
    Enumerated_Domain_Value_Definition: Present in May
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: JUN
Attribute_Definition: June
Attribute_Definition_Source: Research Planning, Inc.
Attribute Domain Values:
Enumerated Domain:
Enumerated Domain Value: X
Enumerated Domain Value Definition: Present in June
Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:
Attribute Label: JUL
Attribute Definition: July
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
Enumerated Domain:
Enumerated Domain Value: X
Enumerated Domain Value Definition: Present in July
Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:
Attribute Label: AUG
Attribute Definition: August
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
Enumerated Domain:
Enumerated Domain Value: X
Enumerated Domain Value Definition: Present in August
Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:
Attribute Label: SEP
Attribute Definition: September
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
Enumerated Domain:
Enumerated Domain Value: X
Enumerated Domain Value Definition: Present in September
Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:
Attribute Label: OCT
Attribute Definition: October
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
Enumerated Domain:
Enumerated Domain Value: X
Enumerated Domain Value Definition: Present in October
Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:
Attribute Label: NOV
Attribute Definition: November
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
Enumerated Domain:
Enumerated Domain Value: X
Enumerated Domain Value Definition: Present in November
Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:
Attribute Label: DEC
Attribute Definition: December
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
Enumerated Domain:
Enumerated Domain Value: X
Enumerated Domain Value Definition: Present in December
Enumerated Domain Value Definition Source: Research Planning, Inc.

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: Research Planning, Inc.
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 (for example, ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
        Enumerated Domain Value Definition Source: Research Planning, Inc.

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: Research Planning, Inc.
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: Research Planning, Inc.
    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 (for example, ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
            Enumerated Domain Value Definition Source: Research Planning, Inc.

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: Research Planning, Inc.
    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 elements.
    Attribute Definition Source: Research Planning, Inc.
    Attribute Domain Values:
        Enumerated Domain:
            Enumerated Domain Value: Y
**Enumerated_Domain_Value_Definition**: Life-history stage or activity present

**Enumerated_Domain_Value_Definition_Source**: Research Planning, Inc.

**Attribute Domain Values**:

**Enumerated_Domain**:

**Enumerated_Domain_Value**: N
**Enumerated_Domain_Value_Definition**: Life-history stage or activity not present

**Enumerated_Domain_Value_Definition_Source**: Research Planning, Inc.

**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**: Research Planning, Inc.

**Attribute**: **BREED2**

**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**: Research Planning, Inc.

**Attribute Domain Values**:

**Enumerated_Domain**:

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

**Enumerated_Domain_Value_Definition_Source**: Research Planning, Inc.

**Attribute Domain Values**:

**Enumerated_Domain**:

**Enumerated_Domain_Value**: N
**Enumerated_Domain_Value_Definition**: Life-history stage or activity not present

**Enumerated_Domain_Value_Definition_Source**: Research Planning, Inc.

**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**: Research Planning, Inc.

**Attribute**: **BREED3**

**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**: Research Planning, Inc.

**Attribute Domain Values**:

**Enumerated_Domain**:

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

**Enumerated_Domain_Value_Definition_Source**: Research Planning, Inc.
**Enumerated_Domain:**
- **Enumerated_Domain_Value**: N
  **Enumerated_Domain_Value_Definition**: Life-history stage or activity not present
  **Enumerated_Domain_Value_Definition_Source**: Research Planning, Inc.

**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**: Research Planning, Inc.

**Attribute_Domain_Values:**
- **Enumerated_Domain**: 
  - **Enumerated_Domain_Value**: Y
    **Enumerated_Domain_Value_Definition**: Life-history stage or activity present
    **Enumerated_Domain_Value_Definition_Source**: Research Planning, Inc.
  - **Enumerated_Domain_Value**: N
    **Enumerated_Domain_Value_Definition**: Life-history stage or activity not present
    **Enumerated_Domain_Value_Definition_Source**: Research Planning, Inc.
  - **Enumerated_Domain_Value**: -
    **Enumerated_Domain_Value_Definition**: Breed category not used or not appropriate for record(s) in question
    **Enumerated_Domain_Value_Definition_Source**: Research Planning, Inc.

**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**: Research Planning, Inc.

**Attribute_Domain_Values:**
- **Enumerated_Domain**: 
  - **Enumerated_Domain_Value**: Y
    **Enumerated_Domain_Value_Definition**: Life-history stage or activity present
    **Enumerated_Domain_Value_Definition_Source**: Research Planning, Inc.
  - **Enumerated_Domain_Value**: N
    **Enumerated_Domain_Value_Definition**: Life-history stage or activity not present
    **Enumerated_Domain_Value_Definition_Source**: Research Planning, Inc.
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: Research Planning, Inc.

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: Research Planning, Inc.

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, and to G_SOURCE and S_SOURCE in the BIORES table.
Attribute_Definition_Source: Research Planning, Inc.
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: Research Planning, Inc.
Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character
Enumerated_Domain_Value_Definition: Free text
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: DATE_PUB
Attribute_Definition: Date of source material, publication, or date of personal communication with expert source
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Numeric
Enumerated_Domain_Value_Definition: mmyyyy
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: TITLE
Attribute_Definition: Title of source material or data
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character
Enumerated_Domain_Value_Definition: Free text
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: DATA_FORMAT
Attribute_Definition: The format of the source material
Attribute_Definition_Source: Research Planning, Inc.
Attribute Domain Values:

Enumerated Domain:
- Enumerated Domain Value: Any character
- Enumerated Domain Value Definition: Free text
- Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:
- Attribute Label: PUBLICATION
- Attribute Definition: Additional citation information
- Attribute Definition Source: Research Planning, Inc.
- Attribute Domain Values:
  - Enumerated Domain:
    - Enumerated Domain Value: Any character
    - Enumerated Domain Value Definition: Free text
    - Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:
- Attribute Label: SCALE
- Attribute Definition: Scale denominator of the source
- Attribute Definition Source: Research Planning, Inc.
- Attribute Domain Values:
  - Enumerated Domain:
    - Enumerated Domain Value: integer
    - Enumerated Domain Value Definition: Any integer
    - Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:
- Attribute Label: TIME_PERIOD
- Attribute Definition: Date(s) of data collection that the source material is based upon.
- Attribute Definition Source: Research Planning, Inc.
- Attribute Domain Values:
  - Enumerated Domain:
    - Enumerated Domain Value: Numeric
    - Enumerated Domain Value Definition: yyyy
    - Enumerated Domain Value Definition Source: Research Planning, Inc.

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 or federal 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: Research Planning, Inc.

Attribute:
- Attribute Label: ELEMENT
- Attribute Definition: Major categories of biological data
- Attribute Definition Source: Research Planning, Inc.
- Attribute Domain Values:
  - Enumerated Domain:
    - Enumerated Domain Value: BIRD
    - Enumerated Domain Value Definition: Birds
    - Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:
- Enumerated Domain Value: FISH
- Enumerated Domain Value Definition: Fish
- Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:
- Enumerated Domain Value: HABITAT
- Enumerated Domain Value Definition: Habitats and Plants
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: INVERT
Enumerated_Domain_Value_Definition: Invertebrates
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: M_MAMMAL
Enumerated_Domain_Value_Definition: Marine Mammals
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: REPTILE
Enumerated_Domain_Value_Definition: Reptiles and Amphibians
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: T_MAMMAL
Enumerated_Domain_Value_Definition: Terrestrial Mammals
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.

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: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Any character
Enumerated_Domain_Value_Definition: Two-letter state abbreviation
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: S_F
Attribute_Definition: State and Federal status
Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: F
Enumerated_Domain_Value_Definition: Federally listed
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: S
Enumerated_Domain_Value_Definition: State listed
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: S/F
Enumerated_Domain_Value_Definition: State and federally listed
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute Label: T_E
Attribute Definition: Threatened and endangered status
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
Enumerated Domain:
  Enumerated Domain Value: E
  Enumerated Domain Value Definition: Endangered on state or federal list
  Enumerated Domain Value Definition Source: U.S. Fish and Wildlife Service

Attribute Domain Values:
Enumerated Domain:
  Enumerated Domain Value: T
  Enumerated Domain Value Definition: Threatened on state or federal list
  Enumerated Domain Value Definition Source: U.S. Fish and Wildlife Service

Attribute:
Attribute Label: DATE_PUB
Attribute Definition:
Publication date of source material used to assign state and federal status values for each species, if used.
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
Enumerated Domain:
  Enumerated Domain Value: Numeric
  Enumerated Domain Value Definition: mmyyyy
  Enumerated Domain Value Definition Source: Research Planning, Inc.

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: Research Planning, Inc.
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 (for example, ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').
  Enumerated Domain Value Definition Source: Research Planning, Inc.

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

Custom_Order_Process:
Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

Metadata_Reference_Information:

Metadata_Date: 200410
Metadata_Review_Date: 200410
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_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

Generated by mp version 2.8.2 on Thu Oct 28 16:23:51 2004
Louisiana ESI: INVERT (Invertebrate Polygons)

Metadata:

- Identification_Information
- Data_Quality_Information
- Spatial_Data_Organization_Information
- Spatial_Reference_Information
- Entity_and_Attribute_Information
- Distribution_Information
- Metadata_Reference_Information

Identification_Information:

Citation:

Citation_Information:

Originator:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Publication_Date: 200410
Title: Louisiana ESI: INVERT (Invertebrate Polygons)
Edition: First
Geospatial_Data_Presentation_Form: Vector digital data
Series_Information:

Series_Name: None
Issue_Identification: Louisiana

Publication_Information:

Publication_Place: Seattle, Washington
Publisher:


Other_Citation_Details:

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Description:

Abstract:

This data set contains sensitive biological resource data for marine and estuarine invertebrate species, and major concentration areas for harvested or potentially harvested crawfish and river shrimp in coastal Louisiana. Vector polygons in this data set represent invertebrate 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 Environmental Sensitivity Index (ESI) data for Louisiana. 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:** 1988
- **Ending_Date:** 2001

**Currentness_Reference:**
The biological data were compiled during 2002-2003. The currentness dates for these data range from 1988 to 2001 and are documented in the Source_Information section.

**Status:**
**Progress:** Complete
**Maintenance_and_Update_Frequency:** None Scheduled

**Spatial_Domain:**
**Bounding_Coordinates:**
- **West_Bounding_Coordinate:** -94.000
- **East_Bounding_Coordinate:** -88.792
- **North_Bounding_Coordinate:** 30.625
- **South_Bounding_Coordinate:** 28.875

**Keywords:**
**Theme:**
- **Theme_Keyword_Thesaurus:** None
- **Theme_Keyword:** ESI
- **Theme_Keyword:** Sensitivity maps
- **Theme_Keyword:** Coastal resources
- **Theme_Keyword:** Oil spill planning
- **Theme_Keyword:** Coastal Zone Management
- **Theme_Keyword:** Wildlife
- **Theme_Keyword:** Invertebrate

**Place:**
- **Place_Keyword_Thesaurus:** None
- **Place_Keyword:** Crawfish
- **Place_Keyword:** Louisiana

**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 Louisiana 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, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, in cooperation with Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Native_Data_Set_Environment:
The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) and SQL SERVER(r) (version 7.0). The hardware configuration is PC's with Windows Operating System (NT4.0/2000).

The Spatial_Data_Organization_Information section refers only to the source files in the ARC export format. The following files are included in that data set: birds.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, lg_index.e00, mgt.e00, parish.e00, nests.e00, reptiles.e00, roads.e00, sm_index.e00, socecon.e00, t_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biores, biofile, breed, breed_dt, seasonal, soc_dat, soc_lut, sources, species, and status.

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 nodes, etc.), and SQL SERVER(r) to ARC/INFO(r) consistencies. The GIS manager makes a final review, 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 normally represented by a point or polygon is mapped by a linear feature, a value of 20 is added to the standard element value. 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 "resource at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

Completeness_Report:
These data represent a synthesis of expert knowledge and available hardcopy and digital maps on invertebrate distribution and major concentration areas for harvested or potentially harvested crawfish and river shrimp in coastal Louisiana. These data do not necessarily represent all invertebrate occurrences in Louisiana. The following species are included in this data set: (Species_ID, Common Name, Scientific Name, if applicable) 4, Pink shrimp, Penaeus duorarum; 49, Blue crab, Callinectes sapidus; 50, White shrimp, Penaeus setiferus; 51, Brown shrimp, Penaeus aztecus; 83, White river crawfish, Procambarus acutus; 84, Red swamp crawfish, Procambarus clarkii; 119, Bay squid, Lolliguncula brevis; 120, Gulf stone crab, Menippe adina; 288, Florida stone crab, Menippe
mercenaria; 378, Rare insect; 379, Rare crayfish; 380, Rare freshwater mussel; 381, Threatened freshwater mussel; 408, River shrimp, Macrobrachium sp.

Positional Accuracy:

Horizontal Positional Accuracy:
The spatial components of the biological data sets were developed from pre-existing digital 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 was integrated or manipulated to create the final data set. 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.

Lineage:

Source Information:

Source Citation:

Citation Information:

Originator:
Louisiana Department of Wildlife and Fisheries (LDWF), Inland Fisheries Division

Publication Date: Unpublished material
Title: Inland Fisheries Summary Data for Louisiana
Geospatial Data Presentation Form: Digital table / Expert
Publication Information:
Publication Place: Unknown
Publisher: Unknown

Type of Source Media: Disk
Source Time Period of Content:
Time Period Information:
Single Date/Time:
Calendar Date: 1999
Source Currentness Reference: Date of Compilation
Source Citation Abbreviation: None
Source Contribution:
Major concentration areas for harvested or potentially harvested crawfish and river shrimp

Source Information:

Source Citation:

Citation Information:

Originator: NOAA SEA Division
Publication Date: 1996
Title: Estuarine and living marine resources
Geospatial Data Presentation Form: Digital map
Publication Information:
Publication Place: Unknown
Publisher: Database Contact: Mark Monaco and D.M. Nelson

Source Scale Denominator: Varies
Type of Source Media: Disk
Source Time Period of Content:
Time Period Information:
Single Date/Time:
Calendar Date: 1996
Source Currentness Reference: Date of publication
Source Citation Abbreviation: None
Source Contribution: Areas of living marine resources

Source Information:

Source Citation:

Citation Information:

Originator:
Louisiana Department of Wildlife and Fisheries (LDWF) and Louisiana Natural Heritage Program (LNHP) (Lester, G.)
Publication_Date: 1999
Title: Louisiana Element Occurrence Record (EOR) Database
Geospatial_Data_Presentation_Form: Digital table
Publication_Information:
  Publication_Place: Unknown
  Publisher: Unknown

Type_of_Source_Media: Paper
Source_Time_Period_of_Content:
  Time_Period_Information:
    Single_Date/Time:
      Calendar_Date: 1999
Source_Currentness_Reference: Date of publication
Source_Contribution: Coordinates and description of LNHP element occurrences for Louisiana
Source_Information:
  Source_Citation:
    Citation_Information:
      Originator: USGS National Wetlands Research Center (NWRC)
      Publication_Date: Unpublished material
      Title: Gulf of Mexico Coastal Louisiana Habitat Data
      Geospatial_Data_Presentation_Form: Digital polys
    Publication_Information:
      Publication_Place: Unknown
      Publisher: Unknown

Source_Scale_Denominator: 24000
Type_of_Source_Media: Disk
Source_Time_Period_of_Content:
  Time_Period_Information:
    Single_Date/Time:
      Calendar_Date: 1988
Source_Currentness_Reference: Date of Survey
Source_Contribution: Coastal habitat data
Source_Information:
  Source_Citation:
    Citation_Information:
      Originator: Minerals Management Service (MMS), Louisiana State University (LSU), Center for Coastal, Energy and Environmental Resources (CCEER) and the Department of Geography and Anthropology, Louisiana Department of Wildlife and Fisheries (LDWF), and Research Planning, Inc. (RPI)
      Publication_Date: 2001
      Title: Gulf-Wide Information System, Louisiana: Crawfish
      Geospatial_Data_Presentation_Form: Vector Digital Data
    Publication_Information:
      Publication_Place: New Orleans, LA
      Publisher:
        Minerals Management Service (MMS), 1201 Elmwood Park Blvd., MS-5220, New Orleans, LA 70123-2394

Type_of_Source_Media: CD-ROM
Source_Time_Period_of_Content:
  Time_Period_Information:
    Single_Date/Time:
      Calendar_Date: 2001
Source_Currentness_Reference: Date of publication
Source_Contribution: Invertebrate distributions and seasonality information
Source_Information:
The main sources of data used to depict sensitive invertebrate distributions and seasonality for this data layer were the Minerals Management Service (MMS) Gulf-Wide Information System's crawfish and NHP layers. These layers were used with no modifications. The lineage information listed in the previous section refers to the source lineage of the crawfish and NHP layers from the Gulf-Wide Information System. For further information regarding the process description of these layers, please refer to the metadata documents entitled "Gulf-Wide Information Systems, Louisiana: Crawfish" and "Gulf-Wide Information Systems, Louisiana: NHP". Metadata documents are available from the Louisiana Oil Spill Coordinator's Office (LOSCO) at this address: David Gisclair, Technical Assistance Program Director, Louisiana Oil Spill Coordinator's Office, Office of the Governor, 150 Third Street, Suite 405, Baton Rouge, LA 70801. Other contact methods include: phone (225) 578-7817, fax (225) 578-6400, and email dgisclair@lsu.edu.
**Direct_Spatial_Reference_Method:** Vector

**Point_and_Vector_Object_Information:**

- **SDTS_Terms_Description:**
  - **SDTS_Point_and_Vector_Object_Type:** GT-polygon composed of rings
  - **Point_and_Vector_Object_Count:** 10440

- **SDTS_Terms_Description:**
  - **SDTS_Point_and_Vector_Object_Type:** Area point
  - **Point_and_Vector_Object_Count:** 10440

- **SDTS_Terms_Description:**
  - **SDTS_Point_and_Vector_Object_Type:** Complete chain
  - **Point_and_Vector_Object_Count:** 15732

- **SDTS_Terms_Description:**
  - **SDTS_Point_and_Vector_Object_Type:** Link
  - **Point_and_Vector_Object_Count:** 737196

- **SDTS_Terms_Description:**
  - **SDTS_Point_and_Vector_Object_Type:** Node, planar graph
  - **Point_and_Vector_Object_Count:** 14444

---

**Spatial_Reference_Information:**

**Horizontal_Coordinate_System_Definition:**

- **Geographic:**
  - **Latitude_Resolution:** 0.00005
  - **Longitude_Resolution:** 0.00005
  - **Geographic_Coordinate_Units:** Decimal degrees

- **Geodetic_Model:**
  - **Horizontal_Datum_Name:** North American Datum of 1983 (HARN)
  - **Ellipsoid_Name:** Geodetic Reference System 80
  - **Semi-major_Axis:** 6378137
  - **Denominator_of_Flattening_Ratio:** 298.257222

---

**Entity_and_Attribute_Information:**

**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, 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 Louisiana atlas, the number is 33), 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, T_E, 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 gives 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.

**Detailed_Description:**

**Entity_Type:**
- **Entity_Type_Label:** INVERT.PAT
- **Entity_Type_Definition:**
  The INVERT.PAT table contains attribute information for the vector polygons representing invertebrate concentration areas and major concentration areas for for harvested or potentially harvested crawfish and river shrimp in coastal Louisiana. 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:** Research Planning, Inc.

**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 (33), 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:** 330700002
      - **Range_Domain_Maximum:** 330712287

- **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 polygons and do not contain information.
  - **Attribute_Definition_Source:** NOAA
  - **Attribute_Domain_Values:**
    - **Range_Domain:**
      - **Range_Domain_Minimum:** 33000840
      - **Range_Domain_Maximum:** 33000873

**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:** Research Planning, Inc.
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: 033000001
    Range_Domain_Maximum: 033000927

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 (33), 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: 330100001
    Range_Domain_Maximum: 330912750

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: Research Planning, Inc.

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: 033000001
    Range_Domain_Maximum: 033000927

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: Research Planning, Inc.
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 species at a particular location. For some invertebrate species, this field contains the relative abundance categories from NOAA's Estuarine Living Marine Resources (ELMR) data, used to develop this layer. These categories (5=highly abundant, 4=abundant,
3=common, 2=rare, and 1=no information) are intended to simulate the categories often used by fisheries biologists. The CONC field was populated with the maximum monthly abundance value. For species with more than one life stage present in a given area, the juvenile stage took precedence, followed by adult, then larvae. For species not included in the ELMR data, the species was recorded as 'PRESENT'. For other invertebrate species, where no concentration information was available, the field is populated with '-'.

**Attribute Definition Source:** Research Planning, Inc.

**Attribute Domain Values:**

- **Enumerated Domain:**
  - **Enumerated Domain Value:** Any character
  - **Enumerated Domain Value Definition:** Free text
  - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

**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:** Research Planning, Inc.

**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:** Research Planning, Inc.

**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:** Research Planning, Inc.

**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:** Research Planning, Inc.

**Attribute Domain Values:**

- **Enumerated Domain:**
  - **Enumerated Domain Value:** BIRD
  - **Enumerated Domain Value Definition:** Birds
  - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

**Attribute Domain Values:**

- **Enumerated Domain:**
  - **Enumerated Domain Value:** FISH
  - **Enumerated Domain Value Definition:** Fish
  - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

**Attribute Domain Values:**

- **Enumerated Domain:**
  - **Enumerated Domain Value:** HABITAT
Enumerated_Domain_Value_Definition: Habitats and Plants
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: INVERT
Enumerated_Domain_Value_Definition: Invertebrates
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: M_MAMMAL
Enumerated_Domain_Value_Definition: Marine Mammals
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: REPTILE
Enumerated_Domain_Value_Definition: Reptiles and Amphibians
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: T_MAMMAL
Enumerated_Domain_Value_Definition: Terrestrial Mammals
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.

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 (for example, ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.

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 (for example, ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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 a list of layer-specific species.
Entity_Type_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.
Attribute_Domain_Values:
    Range_Domain:
        Range_Domain_Minimum: 1
        Range_Domain_Maximum: N

Attribute:
Attribute_Label: NAME
Attribute_Definition: Species common name
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: Species common name for the entire ESI data set
        Enumerated_Domain_Value_Definition: Free text
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: GEN_SPEC
Attribute_Definition: Species scientific name
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: Species scientific name for the entire ESI data set
        Enumerated_Domain_Value_Definition: Free text
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: ELEMENT
Attribute_Definition: Major categories of biological data
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: BIRD
        Enumerated_Domain_Value_Definition: Birds
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Enumerated_Domain:
        Enumerated_Domain_Value: FISH
        Enumerated_Domain_Value_Definition: Fish
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Enumerated_Domain:
        Enumerated_Domain_Value: HABITAT
        Enumerated_Domain_Value_Definition: Habitats and Plants
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Enumerated_Domain:
        Enumerated_Domain_Value: INVERT
        Enumerated_Domain_Value_Definition: Invertebrates
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Enumerated_Domain:
        Enumerated_Domain_Value: M_MAMMAL
        Enumerated_Domain_Value_Definition: Marine Mammals
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute Domain Values:
Enumerated Domain:
  Enumerated Domain Value: REPTILE
  Enumerated Domain Value Definition: Reptiles and Amphibians
  Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:
Enumerated Domain:
  Enumerated Domain Value: T_MAMMAL
  Enumerated Domain Value Definition: Terrestrial Mammals
  Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:
Attribute Label: SUBELEMENT
Attribute Definition: Element subgroup delineating a logical grouping of species
Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:
Enumerated Domain:
  Enumerated Domain Value: alligator
  Enumerated Domain Value Definition: Alligator
  Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:
Enumerated Domain:
  Enumerated Domain Value: amphibian
  Enumerated Domain Value Definition: Amphibian
  Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:
Enumerated Domain:
  Enumerated Domain Value: bat
  Enumerated Domain Value Definition: Bat
  Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:
Enumerated Domain:
  Enumerated Domain Value: bear
  Enumerated Domain Value Definition: Bear
  Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:
Enumerated Domain:
  Enumerated Domain Value: bird
  Enumerated Domain Value Definition: Bird
  Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:
Enumerated Domain:
  Enumerated Domain Value: bivalve
  Enumerated Domain Value Definition: Bivalve
  Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:
Enumerated Domain:
  Enumerated Domain Value: cephalopod
  Enumerated Domain Value Definition: Cephalopod
  Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:
Enumerated Domain:
  Enumerated Domain Value: crab
  Enumerated Domain Value Definition: Crab
  Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:
Enumerated Domain:
  Enumerated Domain Value: crayfish
  Enumerated Domain Value Definition: Crayfish
  Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:
### Enumerated_Domain:
- **Enumerated_Domain_Value**: diadromous  
  **Enumerated_Domain_Value_Definition**: Diadromous fish  
  **Enumerated_Domain_Value_Definition_Source**: Research Planning, Inc.

### Attribute_Domain_Values:
- **Enumerated_Domain**:
  - **Enumerated_Domain_Value**: diving  
    **Enumerated_Domain_Value_Definition**: Diving bird  
    **Enumerated_Domain_Value_Definition_Source**: Research Planning, Inc.

### Attribute_Domain_Values:
- **Enumerated_Domain**:
  - **Enumerated_Domain_Value**: e_nursery  
    **Enumerated_Domain_Value_Definition**: Estuarine nursery fish  
    **Enumerated_Domain_Value_Definition_Source**: Research Planning, Inc.

### Attribute_Domain_Values:
- **Enumerated_Domain**:
  - **Enumerated_Domain_Value**: e_resident  
    **Enumerated_Domain_Value_Definition**: Estuarine resident fish  
    **Enumerated_Domain_Value_Definition_Source**: Research Planning, Inc.

### Attribute_Domain_Values:
- **Enumerated_Domain**:
  - **Enumerated_Domain_Value**: fish  
    **Enumerated_Domain_Value_Definition**: Fish  
    **Enumerated_Domain_Value_Definition_Source**: Research Planning, Inc.

### Attribute_Domain_Values:
- **Enumerated_Domain**:
  - **Enumerated_Domain_Value**: freshwater  
    **Enumerated_Domain_Value_Definition**: Freshwater fish  
    **Enumerated_Domain_Value_Definition_Source**: Research Planning, Inc.

### Attribute_Domain_Values:
- **Enumerated_Domain**:
  - **Enumerated_Domain_Value**: gull_tern  
    **Enumerated_Domain_Value_Definition**: Gull or tern  
    **Enumerated_Domain_Value_Definition_Source**: Research Planning, Inc.

### Attribute_Domain_Values:
- **Enumerated_Domain**:
  - **Enumerated_Domain_Value**: insect  
    **Enumerated_Domain_Value_Definition**: Insect  
    **Enumerated_Domain_Value_Definition_Source**: Research Planning, Inc.

### Attribute_Domain_Values:
- **Enumerated_Domain**:
  - **Enumerated_Domain_Value**: lizard  
    **Enumerated_Domain_Value_Definition**: Lizard  
    **Enumerated_Domain_Value_Definition_Source**: Research Planning, Inc.

### Attribute_Domain_Values:
- **Enumerated_Domain**:
  - **Enumerated_Domain_Value**: m_benthic  
    **Enumerated_Domain_Value_Definition**: Marine benthic fish  
    **Enumerated_Domain_Value_Definition_Source**: Research Planning, Inc.

### Attribute_Domain_Values:
- **Enumerated_Domain**:
  - **Enumerated_Domain_Value**: m_pelagic  
    **Enumerated_Domain_Value_Definition**: Marine pelagic fish  
    **Enumerated_Domain_Value_Definition_Source**: Research Planning, Inc.

### Attribute_Domain_Values:
- **Enumerated_Domain**:
  - **Enumerated_Domain_Value**: passerine  
    **Enumerated_Domain_Value_Definition**: Passerine bird  
    **Enumerated_Domain_Value_Definition_Source**: Research Planning, Inc.
<table>
<thead>
<tr>
<th>Enumerated_Domain:</th>
<th>Enumeration_Domain_Value:</th>
<th>Definition:</th>
<th>Definition_Source:</th>
</tr>
</thead>
<tbody>
<tr>
<td>plant</td>
<td>plant</td>
<td>Plant</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>raptor</td>
<td>raptor</td>
<td>Raptor</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>sav</td>
<td>Submersed aquatic vegetation</td>
<td>Research Planning, Inc.</td>
<td></td>
</tr>
<tr>
<td>shorebird</td>
<td>Shorebird</td>
<td>Research Planning, Inc.</td>
<td></td>
</tr>
<tr>
<td>shrimp</td>
<td>Shrimp</td>
<td>Research Planning, Inc.</td>
<td></td>
</tr>
<tr>
<td>sm_mammal</td>
<td>Small mammal</td>
<td>Research Planning, Inc.</td>
<td></td>
</tr>
<tr>
<td>snake</td>
<td>Snake</td>
<td>Research Planning, Inc.</td>
<td></td>
</tr>
<tr>
<td>turtle</td>
<td>Turtle</td>
<td>Research Planning, Inc.</td>
<td></td>
</tr>
<tr>
<td>upland</td>
<td>Upland</td>
<td>Research Planning, Inc.</td>
<td></td>
</tr>
<tr>
<td>wading</td>
<td>Wading bird</td>
<td>Research Planning, Inc.</td>
<td></td>
</tr>
<tr>
<td>waterfowl</td>
<td>Waterfowl</td>
<td>Research Planning, Inc.</td>
<td></td>
</tr>
<tr>
<td>wetland</td>
<td>Wetland</td>
<td>Research Planning, Inc.</td>
<td></td>
</tr>
</tbody>
</table>
**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: Research Planning, Inc.  
Attribute_Domain_Values:  
  Enumerated_Domain:  
  Enumerated_Domain_Value: 0  
  Enumerated_Domain_Value_Definition: Not ranked  
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

**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: Research Planning, Inc.  
Attribute_Domain_Values:  
  Enumerated_Domain:  
  Enumerated_Domain_Value: E####

**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: Research Planning, Inc.

**Attribute:** Attribute_Label: ELEMENT  
Attribute_Definition: Major categories of biological data  
Attribute_Definition_Source: Research Planning, Inc.  
Attribute_Domain_Values:  
  Enumerated_Domain:  
  Enumerated_Domain_Value: BIRD  
  Enumerated_Domain_Value_Definition: Birds  
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

**Attribute:** Attribute_Label: FISH  
Attribute_Definition: Fish  
Attribute_Definition_Source: Research Planning, Inc.


**Enumerated_Domain_Value**: HABITAT
**Enumerated_Domain_Value_Definition**: Habitats and Plants
**Enumerated_Domain_Value_Definition_Source**: Research Planning, Inc.

**Attribute_Domain_Values**:

**Enumerated_Domain**:
- **Enumerated_Domain_Value**: INVERT
  **Enumerated_Domain_Value_Definition**: Invertebrates
  **Enumerated_Domain_Value_Definition_Source**: Research Planning, Inc.

**Attribute_Domain_Values**:

**Enumerated_Domain**:
- **Enumerated_Domain_Value**: M_MAMMAL
  **Enumerated_Domain_Value_Definition**: Marine Mammals
  **Enumerated_Domain_Value_Definition_Source**: Research Planning, Inc.

**Attribute_Domain_Values**:

**Enumerated_Domain**:
- **Enumerated_Domain_Value**: REPTILE
  **Enumerated_Domain_Value_Definition**: Reptiles and Amphibians
  **Enumerated_Domain_Value_Definition_Source**: Research Planning, Inc.

**Attribute_Domain_Values**:

**Enumerated_Domain**:
- **Enumerated_Domain_Value**: T_MAMMAL
  **Enumerated_Domain_Value_Definition**: Terrestrial Mammals
  **Enumerated_Domain_Value_Definition_Source**: Research Planning, Inc.

**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**: Research Planning, Inc.

**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**: Research Planning, Inc.

**Attribute_Domain_Values**:

**Range_Domain**:
- **Range_Domain_Minimum**: 1
- **Range_Domain_Maximum**: N

**Attribute**:
- **Attribute_Label**: JAN
**Attribute_Definition**: January
**Attribute_Definition_Source**: Research Planning, Inc.

**Attribute_Domain_Values**:

**Enumerated_Domain**:
- **Enumerated_Domain_Value**: X
  **Enumerated_Domain_Value_Definition**: Present in January
  **Enumerated_Domain_Value_Definition_Source**: Research Planning, Inc.

**Attribute**:
- **Attribute_Label**: FEB
**Attribute_Definition**: February
**Attribute_Definition_Source**: Research Planning, Inc.

**Attribute_Domain_Values**:

**Enumerated_Domain**:
- **Enumerated_Domain_Value**: X
  **Enumerated_Domain_Value_Definition**: Present in February
Enumerate

**Attribute:**
- **Attribute Label:** MAR
  - **Attribute Definition:** March
  - **Attribute Definition Source:** Research Planning, Inc.
  - **Enumerated Domain:**
    - **Enumerated Domain Value:** X
    - **Enumerated Domain Value Definition:** Present in March
    - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

**Attribute:**
- **Attribute Label:** APR
  - **Attribute Definition:** April
  - **Attribute Definition Source:** Research Planning, Inc.
  - **Enumerated Domain:**
    - **Enumerated Domain Value:** X
    - **Enumerated Domain Value Definition:** Present in April
    - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

**Attribute:**
- **Attribute Label:** MAY
  - **Attribute Definition:** May
  - **Attribute Definition Source:** Research Planning, Inc.
  - **Enumerated Domain:**
    - **Enumerated Domain Value:** X
    - **Enumerated Domain Value Definition:** Present in May
    - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

**Attribute:**
- **Attribute Label:** JUN
  - **Attribute Definition:** June
  - **Attribute Definition Source:** Research Planning, Inc.
  - **Enumerated Domain:**
    - **Enumerated Domain Value:** X
    - **Enumerated Domain Value Definition:** Present in June
    - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

**Attribute:**
- **Attribute Label:** JUL
  - **Attribute Definition:** July
  - **Attribute Definition Source:** Research Planning, Inc.
  - **Enumerated Domain:**
    - **Enumerated Domain Value:** X
    - **Enumerated Domain Value Definition:** Present in July
    - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

**Attribute:**
- **Attribute Label:** AUG
  - **Attribute Definition:** August
  - **Attribute Definition Source:** Research Planning, Inc.
  - **Enumerated Domain:**
    - **Enumerated Domain Value:** X
    - **Enumerated Domain Value Definition:** Present in August
    - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

**Attribute:**
- **Attribute Label:** SEP
  - **Attribute Definition:** September
  - **Attribute Definition Source:** Research Planning, Inc.
  - **Enumerated Domain:**
Enumerated_Domain:
Enumerated_Domain_Value: X
Enumerated_Domain_Value_Definition: Present in September
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: OCT
Attribute_Definition: October
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: X
Enumerated_Domain_Value_Definition: Present in October
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: NOV
Attribute_Definition: November
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: X
Enumerated_Domain_Value_Definition: Present in November
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: DEC
Attribute_Definition: December
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: X
Enumerated_Domain_Value_Definition: Present in December
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.
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 (for example, ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.

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:** Research Planning, Inc.

**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 (for example, ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').

**Enumerated Domain Value Definition Source:** Research Planning, Inc.

**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:** Research Planning, Inc.

**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 elements.

**Attribute Definition Source:** Research Planning, Inc.

**Attribute Domain Values:**

**Enumerated Domain:**

**Enumerated Domain Value:** Y

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

**Enumerated Domain Value Definition Source:** Research Planning, Inc.

**Attribute Domain Values:**

**Enumerated Domain:**

**Enumerated Domain Value:** N

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

**Enumerated Domain Value Definition Source:** Research Planning, Inc.

**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:** Research Planning, Inc.

**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:** Research Planning, Inc.

**Attribute Domain Values:**

**Enumerated Domain:**

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

Attribute: 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: Research Planning, Inc.

Enumerated_Domain: Y
Enumerated_Domain_Value_Definition: Life-history stage or activity present
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain: N
Enumerated_Domain_Value_Definition: Life-history stage or activity not present
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain: -
Enumerated_Domain_Value_Definition: Breed category not used or not appropriate for record(s) in question
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute: 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: Research Planning, Inc.

Enumerated_Domain: Y
Enumerated_Domain_Value_Definition: Life-history stage or activity present
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain: N
Enumerated_Domain_Value_Definition: Life-history stage or activity not present
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain: -
Enumerated_Domain_Value_Definition: Breed category not used or not appropriate for record(s) in question
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
**Enumerated_Domain:**

- **Enumerated_Domain_Value:** N
  - **Enumerated_Domain_Value_Definition:** Life-history stage or activity not present
  - **Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.

**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:** Research Planning, Inc.

**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:** Research Planning, Inc.

**Attribute_Domain_Values:**

- **Enumerated_Domain:**
  - **Enumerated_Domain_Value:** Y
  - **Enumerated_Domain_Value_Definition:** Life-history stage or activity present
  - **Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.

**Attribute_Domain_Values:**

- **Enumerated_Domain:**
  - **Enumerated_Domain_Value:** N
  - **Enumerated_Domain_Value_Definition:** Life-history stage or activity not present
  - **Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.

**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:** Research Planning, Inc.

**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:** Research Planning, Inc.

**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, and to G_SOURCE and S_SOURCE in the BIORES table.
- **Attribute_Definition_Source:** Research Planning, Inc.

**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: Research Planning, Inc.
Attribute_Domain_Values:
   Enumerated_Domain:
      Enumerated_Domain_Value: Any character
      Enumerated_Domain_Value_Definition: Free text
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: DATE_PUB
Attribute_Definition: Date of source material, publication, or date of personal communication with expert source
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
   Enumerated_Domain:
      Enumerated_Domain_Value: Numeric
      Enumerated_Domain_Value_Definition: mmyyyy
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: TITLE
Attribute_Definition: Title of source material or data
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
   Enumerated_Domain:
      Enumerated_Domain_Value: Any character
      Enumerated_Domain_Value_Definition: Free text
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: DATA_FORMAT
Attribute_Definition: The format of the source material
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
   Enumerated_Domain:
      Enumerated_Domain_Value: Any character
      Enumerated_Domain_Value_Definition: Free text
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: PUBLICATION
Attribute_Definition: Additional citation information
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
   Enumerated_Domain:
      Enumerated_Domain_Value: Any character
      Enumerated_Domain_Value_Definition: Free text
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: SCALE
Attribute_Definition: Scale denominator of the source
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
   Enumerated_Domain:
      Enumerated_Domain_Value: integer
      Enumerated_Domain_Value_Definition: Any integer
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: TIME_PERIOD
Attribute_Definition: Date(s) of data collection that the source material is based upon.
Attribute_Definition_Source: Research Planning, Inc.
**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 or federal 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:** Research Planning, Inc.

**Attribute:**

**Attribute Label:** ELEMENT

**Attribute Definition:** Major categories of biological data

**Attribute Definition Source:** Research Planning, Inc.

**Attribute Domain Values:**

**Enumerated Domain:**

- **Enumerated Domain Value:** BIRD
  - **Enumerated Domain Value Definition:** Birds
  - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

- **Enumerated Domain Value:** FISH
  - **Enumerated Domain Value Definition:** Fish
  - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

- **Enumerated Domain Value:** HABITAT
  - **Enumerated Domain Value Definition:** Habitats and Plants
  - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

- **Enumerated Domain Value:** INVERT
  - **Enumerated Domain Value Definition:** Invertebrates
  - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

- **Enumerated Domain Value:** M_MAMMAL
  - **Enumerated Domain Value Definition:** Marine Mammals
  - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

- **Enumerated Domain Value:** REPTILE
  - **Enumerated Domain Value Definition:** Reptiles and Amphibians
  - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

- **Enumerated Domain Value:** T_MAMMAL
  - **Enumerated Domain Value Definition:** Terrestrial Mammals
  - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

**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:** Research Planning, Inc.

**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:** Research Planning, Inc.
**Attribute Domain Values:**
- Enumerated Domain:
  - Enumerated Domain Value: Any character
  - Enumerated Domain Value Definition: Two-letter state abbreviation
  - Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:
**Attribute Label:** S_F
**Attribute Definition:** State and Federal status
**Attribute Definition Source:** Research Planning, Inc.
**Attribute Domain Values:**
- Enumerated Domain:
  - Enumerated Domain Value: F
    - Enumerated Domain Value Definition: Federally listed
    - Enumerated Domain Value Definition Source: Research Planning, Inc.
  - Enumerated Domain Value: S
    - Enumerated Domain Value Definition: State listed
    - Enumerated Domain Value Definition Source: Research Planning, Inc.
  - Enumerated Domain Value: S/F
    - Enumerated Domain Value Definition: State and federally listed
    - Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:
**Attribute Label:** T_E
**Attribute Definition:** Threatened and endangered status
**Attribute Definition Source:** Research Planning, Inc.
**Attribute Domain Values:**
- Enumerated Domain:
  - Enumerated Domain Value: E
    - Enumerated Domain Value Definition: Endangered on state or federal list
    - Enumerated Domain Value Definition Source: U.S. Fish and Wildlife Service
  - Enumerated Domain Value: T
    - Enumerated Domain Value Definition: Threatened on state or federal list
    - Enumerated Domain Value Definition Source: U.S. Fish and Wildlife Service

Attribute:
**Attribute Label:** DATE_PUB
**Attribute Definition:** Publication date of source material used to assign state and federal status values for each species, if used.
**Attribute Definition Source:** Research Planning, Inc.
**Attribute Domain Values:**
- Enumerated Domain:
  - Enumerated Domain Value: Numeric
    - Enumerated Domain Value Definition: mmyyyy
    - Enumerated Domain Value Definition Source: Research Planning, Inc.
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: Research Planning, Inc.
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 (for example, ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').
Enumerated Domain Value Definition Source: Research Planning, Inc.

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: ESI Atlas for Louisiana
Distribution Liability:
Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer-input peripherals, or when the physical medium is delivered in damaged condition.
Custom Order Process:
Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

Metadata Reference Information:
Metadata Date: 200410
Metadata Review Date: 200410
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
**Louisiana ESI: REPTILES (Reptile and Amphibian Polygons)**

Metadata also available as - [Parseable text] - [SGML]

**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, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

**Publication Date:** 200410

**Title:** Louisiana ESI: REPTILES (Reptile and Amphibian Polygons)

**Edition:** First

**Geospatial Data Presentation Form:** Vector digital data

**Series Information:**

- **Series Name:** None
- **Issue Identification:** Louisiana

**Publication Information:**

- **Publication Place:** Seattle, Washington
- **Publisher:**
  National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

**Other Citation Details:**

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

**Description:**

**Abstract:**

This data set contains sensitive biological resource data for reptiles and amphibians in coastal Louisiana. Vector polygons represent reptile and amphibian habitats, with nest density values by habitat zone and parish or management unit. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described
This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for Louisiana. 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:** 1988
  - **Ending_Date:** 2001

**Currentness_Reference:**
The biological data were compiled during 2002-2003. The currentness dates for these data range from 1988 to 2001 and are documented in the Source_Information section.

**Status:**
- **Progress:** Complete
- **Maintenance_and_Update_Frequency:** None Scheduled

**Spatial_Domain:**
- **Bounding_Coordinates:**
  - **West_Bounding_Coordinate:** -94.000
  - **East_Bounding_Coordinate:** -88.792
  - **North_Bounding_Coordinate:** 30.625
  - **South_Bounding_Coordinate:** 28.875

**Keywords:**
- **Theme:**
  - **Theme_Keyword_Thesaurus:** None
  - **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:** Alligator
  - **Theme_Keyword:** Reptiles
  - **Theme_Keyword:** Amphibians

- **Place:**
  - **Place_Keyword_Thesaurus:** None
  - **Place_Keyword:** Louisiana

**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 Louisiana ESI data.
This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, in cooperation with Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) and SQL SERVER(r) (version 7.0). The hardware configuration is PC's with Windows Operating System (NT4.0/2000).

The Spatial_Dataset_Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: birds.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, lg_index.e00, mgt.e00, parish.e00, nests.e00, reptiles.e00, roads.e00, sm_index.e00, socecon.e00, t_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biores, biofile, breed, breed_dt, seasonal, soc_dat, soc_lut, sources, species, and status.

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 nodes, etc.), and SQL SERVER(r) to ARC/INFO(r) consistencies. The GIS manager makes a final review, 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 normally represented by a point or polygon is mapped by a linear feature, a value of 20 is added to the standard element value. 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 "resource at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

Completeness_Report:

These data represent a synthesis of expert knowledge and available digital and hardcopy maps describing major reptile and amphibian resources in coastal Louisiana. These data do not represent all reptile/amphibian occurrences in Louisiana. The following species are included in this data set: (Species_ID, Common Name, Scientific Name, if applicable): 3, American alligator, Alligator mississippiensis; 34, Rare lizard; 35, Threatened aquatic turtle; 37, Rare snake; 39, Threatened sea turtle; 111, Rare terrestrial/aquatic turtle; 112, Rare amphibian.

2.4.1.1 Horizontal Positional Accuracy
Report The spatial components of the biological data sets were developed from pre-existing digital 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. 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.

### Lineage:

#### Source Information:

**Source Citation:**

**Citation Information:**

**Originator:** Louisiana Department of Wildlife and Fisheries (LDWF), Fur and Refuge Division (Kinler, N.)

**Publication Date:** Unpublished material

**Title:** Alligator Nest Survey Data

**Geospatial Data Presentation Form:** Hardcopy table

**Publication Information:**

**Publication Place:** Unknown

**Publisher:** Unknown

**Type of Source Media:** Paper

**Source Time Period of Content:**

**Time Period Information:**

**Range of Dates/Times:**

**Beginning Date:** 1996

**Ending Date:** 2000

**Source Currentness Reference:** Date of Survey

**Source Citation Abbreviation:** None

**Source Contribution:** Alligator nest densities by habitat or management unit

#### Source Information:

**Source Citation:**

**Citation Information:**

**Originator:** Lester, G.

**Publication Date:** 1988

**Title:** Plants and Animals of the Louisiana Coastal Zone

**Geospatial Data Presentation Form:** Hard text

**Publication Information:**

**Publication Place:** Baton Rouge, LA

**Publisher:**

Louisiana Department of Wildlife and Fisheries (LDWF), LA Natural Heritage Program Special Pub. No. 2

**Type of Source Media:** Paper

**Source Time Period of Content:**

**Time Period Information:**

**Single Date/Time:**

**Calendar Date:** 1988

**Source Currentness Reference:** Date of publication

**Source Citation Abbreviation:** None

**Source Contribution:** Seasonality and life-history information for selected species

#### Source Information:

**Source Citation:**

**Citation Information:**

**Originator:** Louisiana Department of Wildlife and Fisheries (LDWF) and Louisiana Natural Heritage Program (LNHP) (Lester, G.)

**Publication Date:** 1999

**Title:** Louisiana Element Occurrence Record (EOR) Database

**Geospatial Data Presentation Form:** Digital table

**Publication Information:**

**Publication Place:** Unpublished

**Publisher:** Unknown
Source_Scale_Denominator: Unknown
Type_of_Source_Media: Disk
Source_Time_Period_of_Content:
  Time_Period_Information:
    Single_Date/Time:
      Calendar_Date: 1999
Source_Currentness_Reference: Date of Survey
Source_Citation_Abbreviation: None
Source_Contribution:
  Coordinates and description of LNHP element occurrences for Louisiana
Source_Information:
  Source_Citation:
    Citation_Information:
      Originator: USGS National Wetlands Research Center (NWRC)
      Publication_Date: Unpublished material
      Title: Gulf of Mexico Coastal Louisiana Habitat Data
      Geospatial_Data_Presentation_Form: Digital polys
      Publication_Information:
        Publication_Place: Unknown
        Publisher: Unknown
Source_Scale_Denominator: 24000
Type_of_Source_Media: Disk
Source_Time_Period_of_Content:
  Time_Period_Information:
    Single_Date/Time:
      Calendar_Date: 1988
Source_Currentness_Reference: Date of Survey
Source_Citation_Abbreviation: None
Source_Contribution: Coastal habitat data
Source_Information:
  Source_Citation:
    Citation_Information:
      Originator: Louisiana Department of Wildlife and Fisheries (LDWF) and USGS National Wetlands Research Center (NWRC)
      Publication_Date: 1997
      Title: Louisiana Coastal Marsh Vegetative Type Map
      Geospatial_Data_Presentation_Form: Digital polys
      Publication_Information:
        Publication_Place: Lafayette, LA
        Publisher: LDWF and USGS NWRC
Source_Scale_Denominator: Unknown
Type_of_Source_Media: Disk
Source_Time_Period_of_Content:
  Time_Period_Information:
    Single_Date/Time:
      Calendar_Date: 1997
Source_Currentness_Reference: Date of Survey
Source_Citation_Abbreviation: None
Source_Contribution: Coastal marsh type data
Source_Information:
  Source_Citation:
    Citation_Information:
      Originator: USGS National Wetlands Research Center (NWRC)
      Publication_Date: 2000
      Title: Louisiana Stewardship Areas
      Geospatial_Data_Presentation_Form: Digital polys
      Publication_Information:
        Publication_Place: Lafayette, LA
        Publisher: USGS NWRC
Source Scale Denominator: Various
Type of Source Media: Disk
Source Time Period of Content:
  Time Period Information:
    Single Date/Time:
      Calendar Date: 1999
Source Currentness Reference: Dates of compilation
Source Citation Abbreviation: None
Source Contribution:
  Wildlife Management Areas and National Wildlife Refuge boundaries
Source Information:
Source Citation:
  Citation Information:
    Originator: Louisiana Oil Spill Coordinator's Office (LOSCO)
    Publication Date: 2000
    Title: Parish boundaries of Louisiana
    Geospatial Data Presentation Form: Digital polys
  Publication Information:
    Publication Place: Baton Rouge, LA.
    Publisher: LOSCO
Type of Source Media: Disk
Source Time Period of Content:
  Time Period Information:
    Single Date/Time:
      Calendar Date: 2000
Source Currentness Reference: Date of publication
Source Citation Abbreviation: None
Source Contribution: Parish boundaries
Source Information:
Source Citation:
  Citation Information:
    Originator: Minerals Management Service (MMS), Louisiana State University (LSU), Center for Coastal, Energy and Environmental Resources (CCEER) and the Department of Geography and Anthropology, Louisiana Department of Wildlife and Fisheries (LDWF), and Research Planning, Inc. (RPI)
    Publication Date: 2001
    Title: Gulf-Wide Information System, Louisiana: Alligators
    Geospatial Data Presentation Form: Vector Digital Data
  Publication Information:
    Publication Place: New Orleans, LA
    Publisher: Minerals Management Service (MMS), 1201 Elmwood Park Blvd., MS-5220, New Orleans, LA 70123-2394
Type of Source Media: CD-ROM
Source Time Period of Content:
  Time Period Information:
    Single Date/Time:
      Calendar Date: 2001
Source Currentness Reference: Date of publication
Source Citation Abbreviation: None
Source Contribution: Reptile distributions and seasonality
Source Information:
Source Citation:
  Citation Information:
    Originator: Minerals Management Service (MMS), Louisiana State University (LSU), Center for Coastal, Energy and Environmental Resources (CCEER) and the Department of Geography and Anthropology,
The main sources of data used to depict sensitive reptile/amphibian distributions and seasonality for this data layer were the Minerals Management Service (MMS) Gulf-Wide Information System's alligators and (Natural Heritage Program) NHP layers. The alligator layer was modified to depict the general distributions of these resources by habitat type. This process merged specific distributions based on the population density of each species in a particular habitat, creating general distributions with a range of population densities. The lineage information listed in the previous section refers to the source lineage of the alligators and NHP layers from the Gulf-Wide Information System. For further information regarding the process description of these layers, please refer to the metadata documents entitled "Gulf-Wide Information Systems, Louisiana: Alligators" and "Gulf-Wide Information Systems, Louisiana: NHP". Metadata documents are available from the Louisiana Oil Spill Coordinator's Office (LOSCO) at this address: David Gisclair, Technical Assistance Program Director, Louisiana Oil Spill Coordinator's Office, Office of the Governor, 150 Third Street, Suite 405, Baton Rouge, LA 70801. Other contact methods include: phone (225) 578-7817, fax (225) 578-6400, and email dgisclair@lsu.edu.

Process_Date: 200312
Process_Contact:
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_Fax_Telephone: (206) 526-6329
Contact_Email_Address: Jill.Petersen@noaa.gov

Spatial_Data_Organization_Information:
  Direct_Spatial_Referencing_Method: Vector
  Point_and_Vector_Object_Information:
**SDTS_Terms_Description:**

- **SDTS_Point_and_Vector_Object_Type:** GT-polygon composed of rings
  - **Point_and_Vector_Object_Count:** 12253

- **SDTS_Point_and_Vector_Object_Type:** Area point
  - **Point_and_Vector_Object_Count:** 12253

- **SDTS_Point_and_Vector_Object_Type:** Complete chain
  - **Point_and_Vector_Object_Count:** 15845

- **SDTS_Point_and_Vector_Object_Type:** Link
  - **Point_and_Vector_Object_Count:** 1138180

- **SDTS_Point_and_Vector_Object_Type:** Node, planar graph
  - **Point_and_Vector_Object_Count:** 14452

---

**Spatial_Reference_Information:**

**Horizontal_Coordinate_System_Definition:**

- **Geographic:**
  - **Latitude_Resolution:** 0.00005
  - **Longitude_Resolution:** 0.00005
  - **Geographic_Coordinate_Units:** Decimal degrees

- **Geodetic_Model:**
  - **Horizontal_Datum_Name:** North American Datum of 1983 (HARN)
  - **Ellipsoid_Name:** Geodetic Reference System 80
  - **Semi-major_Axis:** 6378137
  - **Denominator_of_Flattening_Ratio:** 298.257222

---

**Entity_and_Attribute_Information:**

**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, 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 Louisiana atlas, the number is 33) 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, T_E, 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.

**Detailed_Description:**

**Entity_Type:**

**Entity_Type_Label:** REPTILES.PAT

**Entity_Type_Definition:**

The REPTILES.PAT table contains attribute information for the vector polygons representing reptile and amphibian habitats 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:** Research Planning, Inc.

**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 (33), 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:** 330600002
- **Range_Domain_Maximum:** 330612283

**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 polygons and do not contain information.

**Attribute_Definition_Source:** NOAA

**Attribute_Domain_Values:**

**Range_Domain:**

- **Range_Domain_Minimum:** 33000874
- **Range_Domain_Maximum:** 33000907

**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:** Research Planning, Inc.

**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: 33000001
  Range Domain Maximum: 33000927

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 (33), 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: 330100001
  Range Domain Maximum: 330912750

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: Research Planning, Inc.

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: 033000001
  Range Domain Maximum: 033000927

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: Research Planning, Inc.
  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 species at a particular location. For American alligators, this field contains a range of mean nest densities rounded to the nearest whole acre per nest (for example, "593-TO-38-AC/NEST"). Louisiana Department of Wildlife and Fisheries (LDWF) Alligator Nest Survey data from 1996-2000 was used to develop a range of density values for alligators in each combination of habitat zone (four marsh types, forested wetland areas) across parishes or management units. Nest density
values for management units were given higher priority because sampling effort is
greater in these areas and/or because these areas are managed for wildlife, typically
resulting in different nest densities than surrounding marsh areas. For records
describing polygons where alligators may occur but do not typically nest, the field is
populated with "TRANSIENT". For other reptile species, where no concentration
information was available, the field is populated with "-".

*Attribute_Definition_Source:* Research Planning, Inc.
*Attribute_Domain_Values:*

<table>
<thead>
<tr>
<th>Enumerated_Domain_Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any character</td>
<td></td>
</tr>
</tbody>
</table>

*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:* Research Planning, Inc.
*Attribute_Domain_Values:*

<table>
<thead>
<tr>
<th>Range_Domain_Minimum</th>
<th>Range_Domain_Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>N</td>
</tr>
</tbody>
</table>

*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:* Research Planning, Inc.
*Attribute_Domain_Values:*

<table>
<thead>
<tr>
<th>Range_Domain_Minimum</th>
<th>Range_Domain_Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>N</td>
</tr>
</tbody>
</table>

*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:* Research Planning, Inc.
*Attribute_Domain_Values:*

<table>
<thead>
<tr>
<th>Range_Domain_Minimum</th>
<th>Range_Domain_Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>N</td>
</tr>
</tbody>
</table>

*Attribute:*

*Attribute_Label: ELEMENT*
*Attribute_Definition:* Major categories of biological data
*Attribute_Definition_Source:* Research Planning, Inc.
*Attribute_Domain_Values:*

<table>
<thead>
<tr>
<th>Enumerated_Domain_Value</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIRD</td>
<td>Birds</td>
</tr>
<tr>
<td>FISH</td>
<td>Fish</td>
</tr>
<tr>
<td>HABITAT</td>
<td>Habitats and Plants</td>
</tr>
</tbody>
</table>
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: INVERT
Enumerated_Domain_Value_Definition: Invertebrates
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: M_MAMMAL
Enumerated_Domain_Value_Definition: Marine Mammals
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: REPTILE
Enumerated_Domain_Value_Definition: Reptiles and Amphibians
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: T_MAMMAL
Enumerated_Domain_Value_Definition: Terrestrial Mammals
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.

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 (for example, ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.

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 (for example, ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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 a list of layer-specific species.
Entity_Type_Definition_Source: Research Planning, Inc.
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: Research Planning, Inc. 
  Attribute_Domain_Values: 
    Range_Domain: 
      Range_Domain_Minimum: 1 
      Range_Domain_Maximum: N 

Attribute: 
  Attribute_Label: NAME 
  Attribute_Definition: Species common name 
  Attribute_Definition_Source: Research Planning, Inc. 
  Attribute_Domain_Values: 
    Enumerated_Domain: 
      Enumerated_Domain_Value: Species common name for the entire ESI data set 
      Enumerated_Domain_Value_Definition: Free text 
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc. 

Attribute: 
  Attribute_Label: GEN_SPEC 
  Attribute_Definition: Species scientific name 
  Attribute_Definition_Source: Research Planning, Inc. 
  Attribute_Domain_Values: 
    Enumerated_Domain: 
      Enumerated_Domain_Value: Species scientific name for the entire ESI data set 
      Enumerated_Domain_Value_Definition: Free text 
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc. 

Attribute: 
  Attribute_Label: ELEMENT 
  Attribute_Definition: Major categories of biological data 
  Attribute_Definition_Source: Research Planning, Inc. 
  Attribute_Domain_Values: 
    Enumerated_Domain: 
      Enumerated_Domain_Value: BIRD 
      Enumerated_Domain_Value_Definition: Birds 
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc. 

Attribute_Domain_Values: 
  Enumerated_Domain: 
    Enumerated_Domain_Value: FISH 
    Enumerated_Domain_Value_Definition: Fish 
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc. 

Attribute_Domain_Values: 
  Enumerated_Domain: 
    Enumerated_Domain_Value: HABITAT 
    Enumerated_Domain_Value_Definition: Habitats and Plants 
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc. 

Attribute_Domain_Values: 
  Enumerated_Domain: 
    Enumerated_Domain_Value: INVERT 
    Enumerated_Domain_Value_Definition: Invertebrates 
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc. 

Attribute_Domain_Values: 
  Enumerated_Domain: 
    Enumerated_Domain_Value: M_MAMMAL 
    Enumerated_Domain_Value_Definition: Marine Mammals 
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc. 

Attribute_Domain_Values: 

Enumerated_Domain:
Enumrated_Domain_Value: REPTILE
Enumrated_Domain_Value_Definition: Reptiles and Amphibians
Enumrated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumrated_Domain_Value: T_MAMMAL
Enumrated_Domain_Value_Definition: Terrestrial Mammals
Enumrated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: SUBELEMENT
Attribute_Definition: Element subgroup delineating a logical grouping of species
Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumrated_Domain_Value: alligator
Enumrated_Domain_Value_Definition: Alligator
Enumrated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumrated_Domain_Value: amphibian
Enumrated_Domain_Value_Definition: Amphibian
Enumrated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumrated_Domain_Value: bat
Enumrated_Domain_Value_Definition: Bat
Enumrated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumrated_Domain_Value: bear
Enumrated_Domain_Value_Definition: Bear
Enumrated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumrated_Domain_Value: bird
Enumrated_Domain_Value_Definition: Bird
Enumrated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumrated_Domain_Value: bivalve
Enumrated_Domain_Value_Definition: Bivalve
Enumrated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumrated_Domain_Value: cephalopod
Enumrated_Domain_Value_Definition: Cephalopod
Enumrated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumrated_Domain_Value: crab
Enumrated_Domain_Value_Definition: Crab
Enumrated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumrated_Domain_Value: crayfish
Enumrated_Domain_Value_Definition: Crayfish
Enumrated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: diadromous
Enumerated_Domain_Value_Definition: Diadromous fish
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
  Enumerated_Domain_Value: diving
  Enumerated_Domain_Value_Definition: Diving bird
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
  Enumerated_Domain_Value: e_nursery
  Enumerated_Domain_Value_Definition: Estuarine nursery fish
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
  Enumerated_Domain_Value: e_resident
  Enumerated_Domain_Value_Definition: Estuarine resident fish
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
  Enumerated_Domain_Value: fish
  Enumerated_Domain_Value_Definition: Fish
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
  Enumerated_Domain_Value: freshwater
  Enumerated_Domain_Value_Definition: Freshwater fish
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
  Enumerated_Domain_Value: gull_tern
  Enumerated_Domain_Value_Definition: Gull or tern
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
  Enumerated_Domain_Value: insect
  Enumerated_Domain_Value_Definition: Insect
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
  Enumerated_Domain_Value: lizard
  Enumerated_Domain_Value_Definition: Lizard
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
  Enumerated_Domain_Value: m_benthic
  Enumerated_Domain_Value_Definition: Marine benthic fish
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
  Enumerated_Domain_Value: m_pelagic
  Enumerated_Domain_Value_Definition: Marine pelagic fish
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
  Enumerated_Domain_Value: passerine
  Enumerated_Domain_Value_Definition: Passerine bird
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: plant
Enumerated_Domain_Value_Definition: Plant
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: raptor
Enumerated_Domain_Value_Definition: Raptor
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: sav
Enumerated_Domain_Value_Definition: Submersed aquatic vegetation
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: shorebird
Enumerated_Domain_Value_Definition: Shorebird
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: shrimp
Enumerated_Domain_Value_Definition: Shrimp
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: sm_mammal
Enumerated_Domain_Value_Definition: Small mammal
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: snake
Enumerated_Domain_Value_Definition: Snake
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: turtle
Enumerated_Domain_Value_Definition: Turtle
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: upland
Enumerated_Domain_Value_Definition: Upland
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: wading
Enumerated_Domain_Value_Definition: Wading bird
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: waterfowl
Enumerated_Domain_Value_Definition: Waterfowl
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: wetland
Enumerated_Domain_Value_Definition: Wetland
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: NHP
**Attribute**

**Attribute_Label:** DATE_PUB
**Attribute_Definition:** Date of NHP listing
**Attribute_Definition_Source:** Research Planning, Inc.
**Attribute_Domain_Values:**
- **Enumerated_Domain:**
  - **Enumerated_Domain_Value:** 0
  - **Enumerated_Domain_Value_Definition:** Not ranked
  - **Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.
- **Enumerated_Domain:**
  - **Enumerated_Domain_Value:** Numeric
  - **Enumerated_Domain_Value_Definition:** mmyyyy
  - **Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.

**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:** Research Planning, Inc.
**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 (for example, ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').
  - **Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.

**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:** Research Planning, Inc.

**Attribute:**

**Attribute_Label:** ELEMENT
**Attribute_Definition:** Major categories of biological data
**Attribute_Definition_Source:** Research Planning, Inc.
**Attribute_Domain_Values:**
- **Enumerated_Domain:**
  - **Enumerated_Domain_Value:** BIRD
  - **Enumerated_Domain_Value_Definition:** Birds
  - **Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.
- **Enumerated_Domain:**
  - **Enumerated_Domain_Value:** FISH
  - **Enumerated_Domain_Value_Definition:** Fish
  - **Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.
- **Enumerated_Domain:**
  - **Enumerated_Domain_Value:** HABITAT
**Enumerated_Domain_Value_Definition:** Habits and Plants  
**Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.

**Attribute_Domain_Values:**  
**Enumerated_Domain:**  
**Enumerated_Domain_Value:** INVERT  
**Enumerated_Domain_Value_Definition:** Invertebrates  
**Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.

**Attribute_Domain_Values:**  
**Enumerated_Domain:**  
**Enumerated_Domain_Value:** M_MAMMAL  
**Enumerated_Domain_Value_Definition:** Marine Mammals  
**Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.

**Attribute_Domain_Values:**  
**Enumerated_Domain:**  
**Enumerated_Domain_Value:** REPTILE  
**Enumerated_Domain_Value_Definition:** Reptiles and Amphibians  
**Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.

**Attribute_Domain_Values:**  
**Enumerated_Domain:**  
**Enumerated_Domain_Value:** T_MAMMAL  
**Enumerated_Domain_Value_Definition:** Terrestrial Mammals  
**Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.

**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:** Research Planning, Inc.

**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:** Research Planning, Inc.

**Attribute_Domain_Values:**  
**Range_Domain:**  
**Range_Domain_Minimum:** 1  
**Range_Domain_Maximum:** N

**Attribute:**  
**Attribute_Label:** JAN  
**Attribute_Definition:** January  
**Attribute_Definition_Source:** Research Planning, Inc.

**Attribute_Domain_Values:**  
**Enumerated_Domain:**  
**Enumerated_Domain_Value:** X  
**Enumerated_Domain_Value_Definition:** Present in January  
**Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.

**Attribute:**  
**Attribute_Label:** FEB  
**Attribute_Definition:** February  
**Attribute_Definition_Source:** Research Planning, Inc.

**Attribute_Domain_Values:**  
**Enumerated_Domain:**  
**Enumerated_Domain_Value:** X  
**Enumerated_Domain_Value_Definition:** Present in February  
**Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.
Attribute:
Attribute_Label: MAR
Attribute_Definition: March
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: X
    Enumerated_Domain_Value_Definition: Present in March
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: APR
Attribute_Definition: April
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: X
    Enumerated_Domain_Value_Definition: Present in April
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: MAY
Attribute_Definition: May
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: X
    Enumerated_Domain_Value_Definition: Present in May
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: JUN
Attribute_Definition: June
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: X
    Enumerated_Domain_Value_Definition: Present in June
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: JUL
Attribute_Definition: July
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: X
    Enumerated_Domain_Value_Definition: Present in July
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: AUG
Attribute_Definition: August
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: X
    Enumerated_Domain_Value_Definition: Present in August
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: SEP
Attribute_Definition: September
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
Enumerated_Domain_Value: X
Enumerated_Domain_Value_Definition: Present in September
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: OCT
Attribute_Definition: October
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: X
Enumerated_Domain_Value_Definition: Present in October
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: NOV
Attribute_Definition: November
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: X
Enumerated_Domain_Value_Definition: Present in November
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: DEC
Attribute_Definition: December
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: X
Enumerated_Domain_Value_Definition: Present in December
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.
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 (for example, ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.

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: Research Planning, Inc.
**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 (for example, ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').

**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:** Research Planning, Inc.

**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 elements.

**Attribute Definition Source:** Research Planning, Inc.

**Attribute Domain Values:**

- **Enumerated Domain:**
  - **Enumerated Domain Value:** Y
    - **Enumerated Domain Value Definition:** Life-history stage or activity present
  - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

- **Enumerated Domain:**
  - **Enumerated Domain Value:** N
    - **Enumerated Domain Value Definition:** Life-history stage or activity not present
  - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

- **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:** Research Planning, Inc.

**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:** Research Planning, Inc.

**Attribute Domain Values:**

- **Enumerated Domain:**
  - **Enumerated Domain Value:** Y
    - **Enumerated Domain Value Definition:** Life-history stage or activity present
  - **Enumerated Domain Value Definition Source:** Research Planning, Inc.
Attribute Domain Values:

**Attribute**: BREED3
**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 Domain Values**:
**Enumerated Domain**: 
- **Enumerated Domain Value**: Y 
  **Enumerated Domain Value Definition**: Life-history stage or activity present 
  **Enumerated Domain Value Definition Source**: Research Planning, Inc.
- **Enumerated Domain Value**: N 
  **Enumerated Domain Value Definition**: Life-history stage or activity not present 
  **Enumerated Domain Value Definition Source**: Research Planning, Inc.
- **Enumerated Domain Value**: - 
  **Enumerated Domain Value Definition**: Breed category not used or not appropriate for record(s) in question 
  **Enumerated Domain Value Definition Source**: Research Planning, Inc.
Enumerated_Domain_Value: N
Enumerated_Domain_Value_Definition: Life-history stage or activity not present
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.

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: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: Y
      Enumerated_Domain_Value_Definition: Life-history stage or activity present
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Enumerated_Domain:
      Enumerated_Domain_Value: N
      Enumerated_Domain_Value_Definition: Life-history stage or activity not present
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    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: Research Planning, Inc.

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: Research Planning, Inc.

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, and to G_SOURCE and S_SOURCE in the BIORES table.
  Attribute_Definition_Source: Research Planning, Inc.
  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: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: Any character
    Enumerated_Domain_Value_Definition: Free text
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: DATE_PUB
Attribute_Definition: Date of source material, publication, or date of personal communication with expert source
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: Numeric
    Enumerated_Domain_Value_Definition: mmyyyy
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: TITLE
Attribute_Definition: Title of source material or data
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: Any character
    Enumerated_Domain_Value_Definition: Free text
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: DATA_FORMAT
Attribute_Definition: The format of the source material
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: Any character
    Enumerated_Domain_Value_Definition: Free text
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: PUBLICATION
Attribute_Definition: Additional citation information
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: Any character
    Enumerated_Domain_Value_Definition: Free text
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: SCALE
Attribute_Definition: Scale denominator of the source
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: integer
    Enumerated_Domain_Value_Definition: Any integer
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: TIME_PERIOD
Attribute_Definition: Date(s) of data collection that the source material is based upon.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
  Enumerated_Domain_Value: Numeric
  Enumerated_Domain_Value_Definition: yyyy
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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 or federal 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: Research Planning, Inc.

Attribute:
  Attribute_Label: ELEMENT
  Attribute_Definition: Major categories of biological data
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: BIRD
      Enumerated_Domain_Value_Definition: Birds
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Enumerated_Domain:
      Enumerated_Domain_Value: FISH
      Enumerated_Domain_Value_Definition: Fish
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Enumerated_Domain:
      Enumerated_Domain_Value: HABITAT
      Enumerated_Domain_Value_Definition: Habitats and Plants
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Enumerated_Domain:
      Enumerated_Domain_Value: INVERT
      Enumerated_Domain_Value_Definition: Invertebrates
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Enumerated_Domain:
      Enumerated_Domain_Value: M_MAMMAL
      Enumerated_Domain_Value_Definition: Marine Mammals
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Enumerated_Domain:
      Enumerated_Domain_Value: REPTILE
      Enumerated_Domain_Value_Definition: Reptiles and Amphibians
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Enumerated_Domain:
      Enumerated_Domain_Value: T_MAMMAL
      Enumerated_Domain_Value_Definition: Terrestrial Mammals
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

  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: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: M_MAMMAL
      Enumerated_Domain_Value_Definition: Marine Mammals
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Range_Domain_Minimum: 1
Range_Domain_Maximum: N

Attribute:
Attribute_Label: STATE
Attribute_Definition: Two-letter state abbreviation
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: Any character
  Enumerated_Domain_Value_Definition: Two-letter state abbreviation
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: S_F
Attribute_Definition: State and Federal status
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: F
  Enumerated_Domain_Value_Definition: Federally listed
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: S
  Enumerated_Domain_Value_Definition: State listed
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: S/F
  Enumerated_Domain_Value_Definition: State and federally listed
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: T_E
Attribute_Definition: Threatened and endangered status
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: E
  Enumerated_Domain_Value_Definition: Endangered on state or federal list
  Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service
Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: T
  Enumerated_Domain_Value_Definition: Threatened on state or federal list
  Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service

Attribute:
Attribute_Label: DATE_PUB
Attribute_Definition: Publication date of source material used to assign state and federal status values for each species, if used.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: Numeric
  Enumerated_Domain_Value_Definition: mmyyyy
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc. 

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 (for example, ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').

Enumerated Domain Value Definition Source: Research Planning, Inc. 

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

Custom Order Process:  
Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats. 

Metadata Reference Information: 
Metadata Date: 200410 
Metadata Review Date: 200410 
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.
Louisiana ESI: T_MAMMAL (Terrestrial Mammal Polygons)

Metadata also available as - [Parseable text] - [SGML]

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, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

**Publication_Date:** 200410

**Title:** Louisiana ESI: T_MAMMAL (Terrestrial Mammal Polygons)

**Edition:** First

**Geospatial_Data_Presentation_Form:** Vector digital data

**Series_Information:**

**Series_Name:** None

**Issue_Identification:** Louisiana

**Publication_Information:**

**Publication_Place:** Seattle, Washington

**Publisher:**

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

**Other_Citation_Details:**

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

**Description:**

**Abstract:**

This data set contains sensitive biological resource data for terrestrial mammals in Louisiana. 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 Environmental Sensitivity Index (ESI) data for Louisiana. 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 was 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:**
- **Beginning_Date:** 1972
- **Ending_Date:** 2001

**Currentness_Reference:**
The biological data were compiled during 2002-2003. The currentness dates for these data range from 1972 to 2001 and are documented in the Source_Information section.

**Status:**
- **Progress:** Complete
- **Maintenance_and_Update_Frequency:** None Scheduled

**Spatial_Domain:**
**Bounding_Coordinates:**
- **West_Bounding_Coordinate:** -94.000
- **East_Bounding_Coordinate:** -88.792
- **North_Bounding_Coordinate:** 30.625
- **South_Bounding_Coordinate:** 28.875

**Keywords:**
- **Theme:**
  - **Theme_Keyword_Thesaurus:** None
  - **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 Mammals
  - **Theme_Keyword:** Black bear
- **Place:**
  - **Place_Keyword_Thesaurus:** None
  - **Place_Keyword:** Louisiana

**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 Louisiana 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, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, in cooperation with Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Native_Data_Set_Environment:
The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) and SQL SERVER(r) (version 7.0). The hardware configuration is PC's with Windows Operating System (NT4.0/2000).

The Spatial_Data_Organization_Information section refers only to the source files in the ARC export format. The following files are included in that data set: birds.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, lg_index.e00, mgt.e00, parish.e00, nests.e00, reptiles.e00, roads.e00, sm_index.e00, socecon.e00, t_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biore, biofile, breed, breed_dt, seasonal, soc_dat, soc_lut, sources, species, and status.

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 nodes, etc.), and SQL SERVER(r) to ARC/INFO(r) consistencies. The GIS manager makes a final review, 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 normally represented by a point or polygon is mapped by a linear feature, a value of 20 is added to the standard element value. 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 "resource 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 existing digital, hardcopy, and expert knowledge sources describing the terrestrial mammal resources in coastal Louisiana. These data do not necessarily represent all terrestrial mammal occurrences in Louisiana. The following species are included in this data set: (Species_ID, Common Name, Scientific Name, if applicable): 8, Northern river otter, Lutra Canadensis; 37, Muskrat, Ondatra zibethicus; 38, Mink, Mustela vison; 43, Nutria, Myocastor coypus; 44, Common raccoon, Procyon lotor; 102, Louisiana black bear, Ursus americanus luteolus; 139, Rare bat; 140, Rare small mammal; 141, Threatened bear.

Positional_Accuracy:
Horizonal_Positional_Accuracy:

The spatial components of the biological data sets were developed from pre-existing digital 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. 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.

Lineage:

Source_Information:
Source_Citation:
Citation_Information:
Originator:
Lester, G. [Louisiana Department of Wildlife and Fisheries (LDWF) and Louisiana Natural Heritage Program (LNHP)]
Publication_Date: Unpublished material
Title: Louisiana Black Bear Distribution by Quad and Habitat Type
Geospatial_Data_Presentation_Form: List and Expert
Publication_Information:
Publication_Date: Unknown
Publisher: Unknown
Type_of_Source_Media: Personal communication
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 1999
Source_Currentness_Reference: Date of communication
Source_Citation_Abbreviation: None
Source_Contribution: Distribution, occupied habitat, and habitat associations for the Louisiana black bear

Source_Information:
Source_Citation:
Citation_Information:
Originator:
Kinler, N. [Louisiana Department of Wildlife and Fisheries (LDWF)]
Publication_Date: Unpublished material
Title: Furbearer Seasonality and Non-surveyed Distributions
Geospatial_Data_Presentation_Form: Expert
Publication_Information:
Publication_Date: Unknown
Publisher: Unknown
Type_of_Source_Media: Personal Communication
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 2001
Source_Currentness_Reference: Dates of communication
Source_Citation_Abbreviation: None
Source_Contribution: Seasonality, life-history, and distribution information for furbearing mammals

Source_Information:
Source_Citation:
Citation_Information:
Originator: Linscombe, G. and N. Kinler
Publication_Date: 1985
Title: Fur Harvest Distribution in Coastal Louisiana
Geospatial_Data_Presentation_Form: Hardcopy Table
Publication_Information:
Publication Place: Unknown
Publisher: Fourth Coastal Marsh and Estuary Management Symposium

Type of Source Media: Paper
Source Time Period of Content:
  Time Period Information:
    Range of Dates/Times:
      Beginning Date: 1972
      Ending Date: 1984
  Source Currentness Reference: Date of Survey
Source Citation Abbreviation: None
Source Contribution:
  Furbearing mammal harvest densities by physiographic province and wetland type

Source Information:
Source Citation:
  Citation Information:
    Originator:
      Louisiana Department of Wildlife and Fisheries (LDWF) and
      Louisiana Natural Heritage Program (LNHP) (Lester, G.)
    Publication Date: 1999
    Title: Louisiana Element Occurrence Record (EOR) Database
    Geospatial Data Presentation Form: Digital table
    Publication Information:
      Publication Place: Unpublished
      Publisher: Unknown

Type of Source Media: Paper
Source Time Period of Content:
  Time Period Information:
    Single Date/Time:
      Calendar Date: 1999
  Source Currentness Reference: Date of publication
Source Citation Abbreviation: None
Source Contribution:
  Coordinates and description of LNHP element occurrences for Louisiana

Source Information:
Source Citation:
  Citation Information:
    Originator:
      USGS National Wetlands Research Center (NWRC)
    Publication Date: Unpublished material
    Title: Gulf of Mexico Coastal Louisiana Habitat Data
    Geospatial Data Presentation Form: Digital polys
    Publication Information:
      Publication Place: Unknown
      Publisher: Unknown

Source Scale Denominator: 24000
Type of Source Media: Disk
Source Time Period of Content:
  Time Period Information:
    Single Date/Time:
      Calendar Date: 1988
  Source Currentness Reference: Date of survey
Source Citation Abbreviation: None
Source Contribution: Coastal habitat data

Source Information:
Source Citation:
  Citation Information:
    Originator:
      Louisiana Department of Wildlife and Fisheries (LDWF) and
      USGS National Wetlands Research Center (NWRC)
    Publication Date: 1997
Title: Louisiana Coastal Marsh Vegetative Type Map
Geospatial_Data_Presentation_Form: Digital polys
Publication_Information:
  Publication_Place: Lafayette, LA
  Publisher: LDWF and USGS NWRC
Source_Scale_Denominator: Unknown
Type_of_Source_Media: Disk
Source_Time_Period_of_Content:
  Time_Period_Information:
    Single_Date/Time:
      Calendar_Date: 1997
Source_Currentness_Reference: Date of Survey
Source_Citation_Abbreviation: None
Source_Contribution: Coastal marsh type data
Source_Information:
  Source_Citation:
    Citation_Information:
      Originator:
        Bowker, B. and T. Jacobson [U.S. Fish and Wildlife Service (USFWS)]
      Publication_Date: 1995
      Title: Louisiana Black Bear Recovery Plan
      Geospatial_Data_Presentation_Form: Hard text
      Publication_Information:
        Publication_Place: Jackson, MS
        Publisher: USFWS
Type_of_Source_Media: Disk
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:
  Distribution, occupied habitat, and habitat associations for the Louisiana black bear
Source_Information:
  Source_Citation:
    Citation_Information:
      Originator: Louisiana Oil Spill Coordinator's Office (LOSCO)
      Publication_Date: 2000
      Title: Parish Boundaries of Louisiana
      Geospatial_Data_Presentation_Form: Digital polys
      Publication_Information:
        Publication_Place: Baton Rouge, LA
        Publisher: LOSCO
Source_Scale_Denominator: Unknown
Type_of_Source_Media: Disk
Source_Time_Period_of_Content:
  Time_Period_Information:
    Single_Date/Time:
      Calendar_Date: 2000
Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: Parish boundaries (defining physiographic provinces)
Source_Information:
  Source_Citation:
    Citation_Information:
    Originator:
      Minerals Management Service (MMS), Louisiana State University (LSU), Center for Coastal, Energy and Environmental Resources
Louisiana ESI: T_MAMMAL (Terrestrial Mammal Polygons)

Publication Date: 2001
Title: Gulf-Wide Information System, Louisiana: Bears
Geospatial Data Presentation Form: Vector Digital Data
Publication Information:
  Publication Place: New Orleans, LA
  Publisher: Minerals Management Service (MMS), 1201 Elmwood Park Blvd., MS-5220, New Orleans, LA 70123-2394

Type of Source Media: CD-ROM
Source Time Period of Content:
  Time Period Information:
    Single Date/Time:
      Calendar Date: 2001
      Source Currentness Reference: Date of publication
      Source Citation Abbreviation: None
      Source Contribution: Louisiana black bear distributions and seasonality

Source Information:
  Source Citation:
    Citation Information:
      Originator: Minerals Management Service (MMS), Louisiana State University (LSU), Center for Coastal, Energy and Environmental Resources (CCEER) and the Department of Geography and Anthropology, Louisiana Department of Wildlife and Fisheries (LDWF), and Research Planning, Inc. (RPI)

Publication Date: 2001
Title: Gulf-Wide Information System, Louisiana: Small Mammal
Geospatial Data Presentation Form: Vector Digital Data
Publication Information:
  Publication Place: New Orleans, LA
  Publisher: Minerals Management Service (MMS), 1201 Elmwood Park Blvd., MS-5220, New Orleans, LA 70123-2394

Type of Source Media: CD-ROM
Source Time Period of Content:
  Time Period Information:
    Single Date/Time:
      Calendar Date: 2001
      Source Currentness Reference: Date of publication
      Source Citation Abbreviation: None
      Source Contribution: Small mammal distributions and seasonality information

Source Information:
  Source Citation:
    Citation Information:
      Originator: Minerals Management Service (MMS), Louisiana State University (LSU), Center for Coastal, Energy and Environmental Resources (CCEER) and the Department of Geography and Anthropology, Louisiana Department of Wildlife and Fisheries (LDWF), and Research Planning, Inc. (RPI)

Publication Date: 2001
Title: Gulf-Wide Information System, Louisiana: NHP
Geospatial Data Presentation Form: Vector Digital Data
Publication Information:
  Publication Place: New Orleans, LA
  Publisher: Minerals Management Service (MMS), 1201 Elmwood Park Blvd., MS-5220, New Orleans, LA 70123-2394

Type of Source Media: CD-ROM
Source Time Period of Content:
  Time Period Information:
    Single Date/Time:
      Calendar Date: 2001
      Source Currentness Reference: Date of publication
      Source Citation Abbreviation: None
      Source Contribution: Louisiana black bear distributions and seasonality

Source Information:
  Source Citation:
    Citation Information:
      Originator: Minerals Management Service (MMS), Louisiana State University (LSU), Center for Coastal, Energy and Environmental Resources (CCEER) and the Department of Geography and Anthropology, Louisiana Department of Wildlife and Fisheries (LDWF), and Research Planning, Inc. (RPI)
The main sources of data used to depict sensitive terrestrial mammal distributions and seasonality for this data layer were the MMS Gulf-Wide Information System's small mammal, bear, and NHP layers. The small mammal and bear layers were modified to depict the general distributions of these resources by habitat type. This process merged specific distributions based on the population density of each species in a particular habitat, creating general distributions with a range of population densities. The lineage information listed in the previous section refers to the source lineage of the small mammal, bear, and NHP layers from the Gulf-Wide Information System. For further information regarding the process description of these layers, please refer to the metadata documents entitled "Gulf-Wide Information Systems, Louisiana: Small Mammals", "Gulf-Wide Information Systems, Louisiana: Bears", and "Gulf-Wide Information Systems, Louisiana: NHP". Metadata documents are available from the Louisiana Oil Spill Coordinator's Office (LOSCO) at this address: David Gisclair, Technical Assistance Program Director, Louisiana Oil Spill Coordinator's Office, Office of the Governor, 150 Third Street, Suite 405, Baton Rouge, LA 70801. Other contact methods include: phone (225) 578-7817, fax (225) 578-6400, and email dgisclair@lsu.edu.

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 rings
Point_and_Vector_Object_Count: 12702
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Area point
Point_and_Vector_Object_Count: 12702
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Complete chain
Point_and_Vector_Object_Count: 17259
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Link
Point_and_Vector_Object_Count: 1121613
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Node, planar graph
Point_and_Vector_Object_Count: 15337

Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Geographic:
  Latitude_Resolution: 0.00005
  Longitude_Resolution: 0.00005
  GeographicCoordinateUnits: Decimal degrees
Geodetic_Model:
  Horizontal_Datum_Name: North American Datum of 1983 (HARN)
  Ellipsoid_Name: Geodetic Reference System 80
  Semi-major_Axis: 6378137
  Denominator_of_Flattening_Ratio: 298.257222

Entity_and_Attribute_Information:
Overview_Description:
Entity_and_Attribute_Overview:
In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, T_MAMMAL) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (for the Louisiana atlas, the number is 33), 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, T_E, 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 layers 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.

**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 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:** Research Planning, Inc.

**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 (33), 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:** 330900002
    - **Range_Domain_Maximum:** 330912750

- **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 polygons and do not contain information.

  **Attribute_Definition_Source:** NOAA

  **Attribute_Domain_Values:**

  - **Range_Domain:**
    - **Range_Domain_Minimum:** 33000001
    - **Range_Domain_Maximum:** 33000927

**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:** Research Planning, Inc.

**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:** 33000001
    - **Range_Domain_Maximum:** 33000927

- **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 (33), 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: 330100001
Range_Domain_Maximum: 330912750

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: Research Planning, Inc.

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: 033000001
Range_Domain_Maximum: 033000927

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: Research Planning, Inc.

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 species at a particular location. For small fur-bearing mammals, this field contains mean harvest densities rounded to the nearest whole acre per individual. The data are reported in units of acre per nest (for example, "86-TO-42-AC/NEST"), which is equivalent to acre per individual. Louisiana Department of Wildlife and Fisheries (LDWF) fur harvest distribution data for coastal Louisiana from 1972-1985 were used to develop density values for semi-aquatic fur-bearing mammals in each combination of habitat zone (four marsh types, forested wetland areas) across physiographic provinces. For records describing polygons where small fur-bearing mammals were not sampled, the field is populated with either "TRANSIENT" or "RESIDENT", depending on the behavior of each particular species in that habitat type. For the Louisiana black bear, the field is populated with "OCCUPIED" or "TRANSIENT", depending upon the relative probability of occurrence in that area. For other mammal species, where no concentration information was available, the field is populated with ".-".

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Any character
Enumerated_Domain_Value_Definition: Free text
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.
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: Research Planning, Inc.
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: Research Planning, Inc.
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: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: BIRD
Enumerated_Domain_Value_Definition: Birds
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: FISH
Enumerated_Domain_Value_Definition: Fish
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: HABITAT
Enumerated_Domain_Value_Definition: Habitats and Plants
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: INVERT
Enumerated_Domain_Value_Definition: Invertebrates
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: M_MAMMAL
Enumerated_Domain_Value_Definition: Marine Mammals
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: REPTILE
Enumerated_Domain_Value_Definition: Reptiles and Amphibians
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: T_MAMMAL
Enumerated_Domain_Value_Definition: Terrestrial Mammals
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.

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 (for example, ELEMENT = BIRD and SPECIES_ID = 1; EL_SPE = B00001).
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.

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 (for example, ELEMENT = BIRD, SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = B0000101).
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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 a list of layer-specific species.
Entity_Type_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.

Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: 1
Range_Domain_Maximum: N

Attribute:
  Attribute_Label: NAME
  Attribute_Definition: Species common name
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: Species common name for the entire ESI data set
      Enumerated_Domain_Value_Definition: Free text
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
  Attribute_Label: GEN_SPEC
  Attribute_Definition: Species scientific name
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: Species scientific name for the entire ESI data set
      Enumerated_Domain_Value_Definition: Free text
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
  Attribute_Label: ELEMENT
  Attribute_Definition: Major categories of biological data
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: BIRD
      Enumerated_Domain_Value_Definition: Birds
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: FISH
      Enumerated_Domain_Value_Definition: Fish
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: HABITAT
      Enumerated_Domain_Value_Definition: Habitats and Plants
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: INVERT
      Enumerated_Domain_Value_Definition: Invertebrates
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: M_MAMMAL
      Enumerated_Domain_Value_Definition: Marine Mammals
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: REPTILE
      Enumerated_Domain_Value_Definition: Reptiles and Amphibians
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: T_MAMMAL
      Enumerated_Domain_Value_Definition: Terrestrial Mammals
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: SUBELEMENT
Attribute_Definition: Element subgroup delineating a logical grouping of species
Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: alligator
  Enumerated_Domain_Value_Definition: Alligator
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: amphibian
  Enumerated_Domain_Value_Definition: Amphibian
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: bat
  Enumerated_Domain_Value_Definition: Bat
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: bear
  Enumerated_Domain_Value_Definition: Bear
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: bird
  Enumerated_Domain_Value_Definition: Bird
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: bivalve
  Enumerated_Domain_Value_Definition: Bivalve
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: cephalopod
  Enumerated_Domain_Value_Definition: Cephalopod
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: crab
  Enumerated_Domain_Value_Definition: Crab
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: crayfish
  Enumerated_Domain_Value_Definition: Crayfish
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: diadromous
  Enumerated_Domain_Value_Definition: Diadromous fish
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: diving
  Enumerated_Domain_Value_Definition: Diving bird
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: e_nursery
    Enumerated_Domain_Value_Definition: Estuarine nursery fish
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: e_resident
    Enumerated_Domain_Value_Definition: Estuarine resident fish
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: fish
    Enumerated_Domain_Value_Definition: Fish
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: freshwater
    Enumerated_Domain_Value_Definition: Freshwater fish
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: gull_tern
    Enumerated_Domain_Value_Definition: Gull or tern
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: insect
    Enumerated_Domain_Value_Definition: Insect
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: lizard
    Enumerated_Domain_Value_Definition: Lizard
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: m_benthic
    Enumerated_Domain_Value_Definition: Marine benthic fish
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: m_pelagic
    Enumerated_Domain_Value_Definition: Marine pelagic fish
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: passerine
    Enumerated_Domain_Value_Definition: Passerine bird
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: plant
    Enumerated_Domain_Value_Definition: Plant
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: raptor
    Enumerated_Domain_Value_Definition: Raptor
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: sav
    Enumerated_Domain_Value_Definition: Submersed aquatic vegetation
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: shorebird
    Enumerated_Domain_Value_Definition: Shorebird
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: shrimp
    Enumerated_Domain_Value_Definition: Shrimp
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: sm_mammal
    Enumerated_Domain_Value_Definition: Small mammal
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: snake
    Enumerated_Domain_Value_Definition: Snake
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: turtle
    Enumerated_Domain_Value_Definition: Turtle
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: upland
    Enumerated_Domain_Value_Definition: Upland
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: wading
    Enumerated_Domain_Value_Definition: Wading bird
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: waterfowl
    Enumerated_Domain_Value_Definition: Waterfowl
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: wetland
    Enumerated_Domain_Value_Definition: Wetland
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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**

**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:** Research Planning, Inc.
**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 (for example, ELEMENT = BIRD and SPECIES_ID = 1; EL_SPE = B00001).
  - **Enumerated Domain Value Definition Source:** Research Planning, Inc.
**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.
**Attribute**

**Attribute Label:** ELEMENT
**Attribute Definition:** Major categories of biological data
**Attribute Definition Source:** Research Planning, Inc.
**Attribute Domain Values:**
- **Enumerated Domain:**
  - **Enumerated Domain Value:** BIRD
  - **Enumerated Domain Value Definition:** Birds
  - **Enumerated Domain Value Definition Source:** Research Planning, Inc.
- **Enumerated Domain:**
  - **Enumerated Domain Value:** FISH
  - **Enumerated Domain Value Definition:** Fish
  - **Enumerated Domain Value Definition Source:** Research Planning, Inc.
- **Enumerated Domain:**
  - **Enumerated Domain Value:** HABITAT
  - **Enumerated Domain Value Definition:** Habitats and Plants
  - **Enumerated Domain Value Definition Source:** Research Planning, Inc.
- **Enumerated Domain:**
  - **Enumerated Domain Value:** INVERT
  - **Enumerated Domain Value Definition:** Invertebrates
  - **Enumerated Domain Value Definition Source:** Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: M_MAMMAL
Enumerated_Domain_Value_Definition: Marine Mammals
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: REPTILE
Enumerated_Domain_Value_Definition: Reptiles and Amphibians
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: T_MAMMAL
Enumerated_Domain_Value_Definition: Terrestrial Mammals
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.
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: Research Planning, Inc.
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: 1
Range_Domain_Maximum: N

Attribute:
Attribute_Label: JAN
Attribute_Definition: January
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: X
Enumerated_Domain_Value_Definition: Present in January
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: FEB
Attribute_Definition: February
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: X
Enumerated_Domain_Value_Definition: Present in February
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: MAR
Attribute_Definition: March
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: X
Enumerated_Domain_Value_Definition: Present in March
<table>
<thead>
<tr>
<th>Attribute</th>
<th>Attribute Label</th>
<th>Attribute Definition</th>
<th>Attribute Definition Source</th>
<th>Attribute 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>APR</td>
<td>APR</td>
<td>April</td>
<td>Research Planning, Inc.</td>
<td></td>
<td>X</td>
<td>Present in April</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>MAY</td>
<td>MAY</td>
<td>May</td>
<td>Research Planning, Inc.</td>
<td></td>
<td>X</td>
<td>Present in May</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>JUN</td>
<td>JUN</td>
<td>June</td>
<td>Research Planning, Inc.</td>
<td></td>
<td>X</td>
<td>Present in June</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>JUL</td>
<td>JUL</td>
<td>July</td>
<td>Research Planning, Inc.</td>
<td></td>
<td>X</td>
<td>Present in July</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>AUG</td>
<td>AUG</td>
<td>August</td>
<td>Research Planning, Inc.</td>
<td></td>
<td>X</td>
<td>Present in August</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>OCT</td>
<td>OCT</td>
<td>October</td>
<td>Research Planning, Inc.</td>
<td></td>
<td>X</td>
<td>Present in October</td>
<td>Research Planning, Inc.</td>
</tr>
</tbody>
</table>
Enumerated_Domain:
  Enumerated_Domain_Value: X
  Enumerated_Domain_Value_Definition: Present in October
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
  Attribute_Label: NOV
  Attribute_Definition: November
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: X
      Enumerated_Domain_Value_Definition: Present in November
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
  Attribute_Label: DEC
  Attribute_Definition: December
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: X
      Enumerated_Domain_Value_Definition: Present in December
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.
  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 (for example, ELEMENT = BIRD, SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = B0000101).
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.

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: Research Planning, Inc.
  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 (for example, ELEMENT = BIRD, SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = B0000101).
**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:** Research Planning, Inc.

**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 elements.
**Attribute_Definition_Source:** Research Planning, Inc.

**Attribute_Domain_Values:**

**Enumerated_Domain:**
- **Enumerated_Domain_Value:** Y
  - **Enumerated_Domain_Value_Definition:** Life-history stage or activity present
  - **Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.

- **Enumerated_Domain_Value:** N
  - **Enumerated_Domain_Value_Definition:** Life-history stage or activity not present
  - **Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.

- **Enumerated_Domain_Value:** -
  - **Enumerated_Domain_Value_Definition:** Breed category not used or not appropriate for record(s) in question
  - **Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.

**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:** Research Planning, Inc.

**Attribute_Domain_Values:**

**Enumerated_Domain:**
- **Enumerated_Domain_Value:** Y
  - **Enumerated_Domain_Value_Definition:** Life-history stage or activity present
  - **Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.

- **Enumerated_Domain_Value:** N
  - **Enumerated_Domain_Value_Definition:** Life-history stage or activity not present
  - **Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.
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: Research Planning, Inc.

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: Research Planning, Inc.

Attribute Domain Values:
Enumerated Domain:
  Enumerated Domain Value: Y
  Enumerated Domain Value Definition: Life-history stage or activity present
  Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:
Enumerated Domain:
  Enumerated Domain Value: N
  Enumerated Domain Value Definition: Life-history stage or activity not present
  Enumerated Domain Value Definition Source: Research Planning, Inc.

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: Research Planning, Inc.

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

Attribute Domain Values:
Enumerated Domain:
  Enumerated Domain Value: Y
  Enumerated Domain Value Definition: Life-history stage or activity present
  Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:
Enumerated Domain:
  Enumerated Domain Value: N
  Enumerated Domain Value Definition: Life-history stage or activity not present
  Enumerated Domain Value Definition Source: Research Planning, Inc.

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:* Research Planning, Inc.

**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:* Research Planning, Inc.

**Attribute_Domain_Values:**

- **Enumerated_Domain:**
  - **Enumerated_Domain_Value:** Y
  - **Enumerated_Domain_Value_Definition:** Life-history stage or activity present
  - **Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.

- **Enumerated_Domain:**
  - **Enumerated_Domain_Value:** N
  - **Enumerated_Domain_Value_Definition:** Life-history stage or activity not present
  - **Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.

- **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:** Research Planning, Inc.

**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:* Research Planning, Inc.

**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, and to G_SOURCE and S_SOURCE in the BIORES table.

*Attribute_Definition_Source:* Research Planning, Inc.

**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:* Research Planning, Inc.

**Attribute_Domain_Values:**

- **Enumerated_Domain:**
  - **Enumerated_Domain_Value:** Any character
  - **Enumerated_Domain_Value_Definition:** Free text
  - **Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.
Attribute_Label: DATE_PUB
Attribute_Definition: Date of source material, publication, or date of personal communication with expert source
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: Numeric
        Enumerated_Domain_Value_Definition: mmyyyy
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: TITLE
Attribute_Definition: Title of source material or data
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: Any character
        Enumerated_Domain_Value_Definition: Free text
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: DATA_FORMAT
Attribute_Definition: The format of the source material
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: Any character
        Enumerated_Domain_Value_Definition: Free text
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: PUBLICATION
Attribute_Definition: Additional citation information
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: Any character
        Enumerated_Domain_Value_Definition: Free text
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: SCALE
Attribute_Definition: Scale denominator of the source
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: integer
        Enumerated_Domain_Value_Definition: Any integer
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: TIME_PERIOD
Attribute_Definition: Date(s) of data collection that the source material is based upon.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: Numeric
        Enumerated_Domain_Value_Definition: yyyy
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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 or federal 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: Research Planning, Inc.

Attribute:

Attribute_Label: ELEMENT
Attribute_Definition: Major categories of biological data
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: BIRD
    Enumerated_Domain_Value_Definition: Birds
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: FISH
    Enumerated_Domain_Value_Definition: Fish
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: HABITAT
    Enumerated_Domain_Value_Definition: Habitats and Plants
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: INVERT
    Enumerated_Domain_Value_Definition: Invertebrates
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: M_MAMMAL
    Enumerated_Domain_Value_Definition: Marine Mammals
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: REPTILE
    Enumerated_Domain_Value_Definition: Reptiles and Amphibians
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: T_MAMMAL
    Enumerated_Domain_Value_Definition: Terrestrial Mammals
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.
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: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
Enumerate Domain Value: Any character
Enumerate Domain Value Definition: Two-letter state abbreviation
Enumerate Domain Value Definition Source: Research Planning, Inc.

Attribute:
Attribute Label: S_F
Attribute Definition: State and Federal status
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
- Enumerated Domain:
  - Enumerated Domain Value: F
    Enumerated Domain Value Definition: Federally listed
    Enumerated Domain Value Definition Source: Research Planning, Inc.
- Enumerated Domain:
  - Enumerated Domain Value: S
    Enumerated Domain Value Definition: State listed
    Enumerated Domain Value Definition Source: Research Planning, Inc.
- Enumerated Domain:
  - Enumerated Domain Value: S/F
    Enumerated Domain Value Definition: State and federally listed
    Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:
Attribute Label: T_E
Attribute Definition: Threatened and endangered status
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
- Enumerated Domain:
  - Enumerated Domain Value: E
    Enumerated Domain Value Definition: Endangered on state or federal list
    Enumerated Domain Value Definition Source: U.S. Fish and Wildlife Service
- Enumerated Domain:
  - Enumerated Domain Value: T
    Enumerated Domain Value Definition: Threatened on state or federal list
    Enumerated Domain Value Definition Source: U.S. Fish and Wildlife Service

Attribute:
Attribute Label: DATE_PUB
Attribute Definition: Publication date of source material used to assign state and federal status values for each species, if used.
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
- Enumerated Domain:
  - Enumerated Domain Value: Numeric
    Enumerated Domain Value Definition: mmyyyy
    Enumerated Domain Value Definition Source: Research Planning, Inc.

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: Research Planning, Inc.
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 (for example, ELEMENT = BIRD and SPECIES_ID = 1; EL_SPE = B00001).

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: ESI Atlas for Louisiana

Distribution_Liability:

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

Custom_Order_Process:

Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

Metadata_Reference_Information:

Metadata_Date: 200410
Metadata_Review_Date: 200410

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
Louisiana ESI: HABITATS (Habitat and Plant Polygons)

Metadata also available as - [Parseable text] - [SGML]

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, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Publication_Date: 200410

Title: Louisiana ESI: HABITATS (Habitat and Plant Polygons)

Edition: First

Geospatial_Data_Presentation_Form: Vector digital data

Series_Information:

Series_Name: None

Issue_Identifier: Louisiana

Publication_Information:

Publication_Place: Seattle, Washington

Publisher:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Other_Citation_Details:

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Description:

Abstract:

This data set contains sensitive biological resource data for coastal habitats in Louisiana. Vector polygons represent various habitats, including marsh types, other wetlands, and seagrasses. 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 Environmental Sensitivity Index (ESI) data for Louisiana. 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:** 1988
  - **Ending_Date:** 2001

**Currentness_Reference:**
The biological data were compiled during 2002-2003. The currentness date for these data is 1988 to 2001 and is documented in the Source_Information section.

**Status:**
- **Progress:** Complete
- **Maintenance_and_Update_Frequency:** None Scheduled

**Spatial_Domain:**
- **Bounding_Coordinates:**
  - **West_Bounding_Coordinate:** -94.000
  - **East_Bounding_Coordinate:** -88.792
  - **North_Bounding_Coordinate:** 30.625
  - **South_Bounding_Coordinate:** 28.875

**Keywords:**
- **Theme:**
  - **Theme_Keyword_Thesaurus:** None
  - **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:** Habitats
  - **Theme_Keyword:** Plants

- **Place:**
  - **Place_Keyword_Thesaurus:** None
  - **Place_Keyword:** Louisiana

**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 Louisiana 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, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, in cooperation with Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Native_Data_Set_Environment:

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO® (version 8.3) and SQL SERVER® (version 7.0). The hardware configuration is PC's with Windows Operating System (NT4.0/2000).

The Spatial_Data_Organization_Information section refers only to the source files in the ARC export format. The following files are included in that data set: birds.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, lg_index.e00, mgt.e00, parish.e00, nests.e00, reptiles.e00, roads.e00, sm_index.e00, socecon.e00, t_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biores, biofile, breed, breed_dt, seasonal, soc_dat, soc_lut, sources, species, and status.

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 nodes, etc.), and SQL SERVER® to ARC/INFO® consistencies. The GIS manager makes a final review, 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 normally represented by a point or polygon is mapped by a linear feature, a value of 20 is added to the standard element value. 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 "resource at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

Completeness_Report:

These data represent the best possible synthesis of available digital coastal habitat data. The following species are included in this data set: (Species_ID, Common Name, Scientific Name, if applicable): 59, Endangered plant; 85, Seagrass; 214, Rare plant; 510, Live oak forest; 1002, Freshwater marsh; 1003, Forested wetland; 1008, Intermediate marsh; 1009, Brackish marsh; 1010, Salt marsh; 1051, Scrub-shrub wetland.

Positional_Accuracy:

Horizontal_Positional_Accuracy:
Horizontal Positional Accuracy Report:
The spatial components of the biological data sets were developed from pre-existing digital 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. 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. Note that there were some topological inconsistencies in the source data used to create this data set, including edge matching errors and sliver polygons. In the majority of cases, these inconsistencies were not corrected and are still present in the data.

Lineage:

Source Information:
Source Citation:
Citation Information:
Originator: USGS National Wetlands Research Center (NWRC)
Publication Date: Unpublished material
Title: Gulf of Mexico Coastal Louisiana Habitat Data
Geospatial Data Presentation Form: Digital polys
Publication Information:
Publication Place: Unknown
Publisher: Unknown

Source Scale Denominator: 24000
Type of Source Media: Disk
Source Time Period of Content:
Time Period Information:
Single Date/Time:
Calendar Date: 1988
Source Currentness Reference: Dates of survey
Source Citation Abbreviation: None
Source Contribution: Coastal habitat data

Source Information:
Source Citation:
Citation Information:
Originator: Louisiana Department of Wildlife and Fisheries (LDWF) and USGS National Wetlands Research Center (NWRC)
Publication Date: 1997
Title: Louisiana Coastal Marsh Vegetative Type Map
Geospatial Data Presentation Form: Digital polys
Publication Information:
Publication Place: Lafayette, LA
Publisher: LDWF and USGS NWRC

Source Scale Denominator: Unknown
Type of Source Media: Disk
Source Time Period of Content:
Time Period Information:
Single Date/Time:
Calendar Date: 1997
Source Currentness Reference: Date of Survey
Source Citation Abbreviation: None
Source Contribution: Coastal marsh type data

Source Information:
Source Citation:
Citation Information:
Originator: USGS National Wetlands Research Center (NWRC)
Publication Date: 1992
Title: Merged 1988 Coastal Louisiana Habitat Data and 1992 SAV Data
Geospatial Data Presentation Form: Digital polys
Publication Information:
Publication Place: Lafayette LA
Publisher: USGS NWRC
Source Scale Denominator: 24000
Type of Source Media: Online
Source Time Period of Content:
  Time Period Information:
    Range of Dates/Times:
      Beginning Date: 1988
      Ending Date: 1992
Source Currentness Reference: Date of Survey
Source Citation Abbreviation: None
Source Contribution: Submerged aquatic vegetation data

Source Information:
  Source Citation:
    Citation Information:
      Originator:
        Louisiana Department of Wildlife and Fisheries (LDWF) and
        Louisiana Natural Heritage Program (LNHP) (Lester, G.)
    Publication Date: 1999
    Title: Louisiana Element Occurrence Record (EOR) Database
    Geospatial Data Presentation Form: Digital table
  Publication Information:
    Publication Place: Unknown
    Publisher: Unknown
Source Scale Denominator: None
Type of Source Media: Online
Source Time Period of Content:
  Time Period Information:
    Single Date/Time:
      Calendar Date: 1999
Source Currentness Reference: Date of publication
Source Citation Abbreviation: None
Source Contribution:
  Coordinates and description of LNHP element occurrences for Louisiana

Source Information:
  Source Citation:
    Citation Information:
      Originator: USGS National Wetlands Research Center (NWRC)
      Publication Date: Unpublished material
      Title: Chandaleur Islands LA - 1992 Submersed Aquatic Vegetation
      Geospatial Data Presentation Form: Digital polys
  Publication Information:
    Publication Place: Unknown
    Publisher: Unknown
Source Scale Denominator: 24000
Type of Source Media: Online
Source Time Period of Content:
  Time Period Information:
    Single Date/Time:
      Calendar Date: 1992
Source Currentness Reference: Date of Survey
Source Citation Abbreviation: None
Source Contribution: Submersed aquatic vegetation data

Source Information:
  Source Citation:
    Citation Information:
      Originator: Minerals Management Service (MMS), Louisiana State University
      (LSU), Center for Coastal, Energy and Environmental Resources
      (CCEER) and the Department of Geography and Anthropology,
Process_Description:
The main source of data used to depict habitat distributions for this data layer was the Minerals Management Service (MMS) Gulf-Wide Information System habitats layer for Louisiana. This layer was used with no modifications. The lineage information listed in the previous section refers to the source lineage of the habitats layer from the Gulf-Wide Information System. For further information regarding the process description of this layer, please refer to the metadata document entitled "Gulf-Wide Information Systems, Louisiana: Habitats". Metadata documents are available from the Louisiana Oil Spill Coordinator's Office (LOSCO) at this address: David Gisclair, Technical Assistance Program Director, Louisiana Oil Spill Coordinator's Office, Office of the Governor, 150 Third Street, Suite 405, Baton Rouge, LA 70801. Other contact methods include: phone (225) 578-7817, fax (225) 578-6400, and email dgisclair@lsu.edu.

Process_Date: 200312

Process_Contact:

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 rings
Point_and_Vector_Object_Count: 70699

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: Area point
Point_and_Vector_Object_Count: 70699
SDTS_Terms_Description:
   SDTS_Point_and_Vector_Object_Type: Complete chain
   Point_and_Vector_Object_Count: 101123

SDTS_Terms_Description:
   SDTS_Point_and_Vector_Object_Type: Link
   Point_and_Vector_Object_Count: 4119550

SDTS_Terms_Description:
   SDTS_Point_and_Vector_Object_Type: Node, planar graph
   Point_and_Vector_Object_Count: 84408

Spatial_Reference_Information:
   Horizontal_Coordinate_System_Definition:
      Geographic:
         Latitude_Resolution: 0.00005
         Longitude_Resolution: 0.00005
         Geographic_Coordinate_Units: Decimal degrees
      Geodetic_Model:
         Horizontal_Datum_Name: North American Datum of 1983 (HARN)
         Ellipsoid_Name: Geodetic Reference System 80
         Semi-major_Axis: 6378137
         Denominator_of_Flattening_Ratio: 298.257222

Entity_and_Attribute_Information:
   Overview_Description:
      Entity_and_Attribute_Overview:
         In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, HABITATS) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (for Louisiana, the number is 33), 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, seasonality, 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, T_E, 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.

**Detailed Description:**

**Entity Type:**
- **Entity Type Label:** HABITATS.PAT
- **Entity Type Definition:** The HABITATS.PAT table contains attribute information for the vector polygons representing habitat and plant distribution 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:** Research Planning, Inc.

**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 (33), 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:** 330300002
      - **Range Domain Maximum:** 330371164

- **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 polygons and do not contain information.
  - **Attribute Definition Source:** NOAA
  - **Attribute Domain Values:**
    - **Range Domain:**
      - **Range Domain Minimum:** 33000813
      - **Range Domain Maximum:** 33000839

**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:** Research Planning, Inc.

**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: 33000001
Range_Domain_Maximum: 33000927

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 (33), 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: 330100001
Range_Domain_Maximum: 330912750

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: Research Planning, Inc.

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: 033000001
Range_Domain_Maximum: 033000927

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: Research Planning, Inc.
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 or plant at a particular location. No concentration information was available for plant species or habitats in Louisiana, so the field is populated with "-".
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Any character
Enumerated_Domain_Value_Definition: Free text
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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:** Research Planning, Inc.

**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:** Research Planning, Inc.

**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:** Research Planning, Inc.

**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:** Research Planning, Inc.

**Attribute Domain Values:**
- **Enumerated Domain:**
  - Enumerated Domain Value: BIRD
  - Enumerated Domain Value Definition: Birds
  - Enumerated Domain Value Definition Source: Research Planning, Inc.

**Attribute Domain Values:**
- **Enumerated Domain:**
  - Enumerated Domain Value: FISH
  - Enumerated Domain Value Definition: Fish
  - Enumerated Domain Value Definition Source: Research Planning, Inc.

**Attribute Domain Values:**
- **Enumerated Domain:**
  - Enumerated Domain Value: HABITAT
  - Enumerated Domain Value Definition: Habitats and Plants
  - Enumerated Domain Value Definition Source: Research Planning, Inc.

**Attribute Domain Values:**
- **Enumerated Domain:**
  - Enumerated Domain Value: INVERT
  - Enumerated Domain Value Definition: Invertebrates
  - Enumerated Domain Value Definition Source: Research Planning, Inc.

**Attribute Domain Values:**
- **Enumerated Domain:**
  - Enumerated Domain Value: M_MAMMAL
  - Enumerated Domain Value Definition: Marine Mammals
  - Enumerated Domain Value Definition Source: Research Planning, Inc.

**Attribute Domain Values:**
- **Enumerated Domain:**
  - Enumerated Domain Value: REPTILE
  - Enumerated Domain Value Definition: Reptiles and Amphibians
  - Enumerated Domain Value Definition Source: Research Planning, Inc.
**Attribute Domain Values:**

**Enumerated Domain:**

- **Enumerated Domain Value:** T_MAMMAL
  - **Enumerated Domain Value Definition:** Terrestrial Mammals
  - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

**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:** Research Planning, Inc.

**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 (for example, ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').
  - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

**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:** Research Planning, Inc.

**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 (for example, ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
  - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

**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 a list of layer-specific species.
- **Entity Type Definition Source:** Research Planning, Inc.

**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:** Research Planning, Inc.

**Attribute Domain Values:**

- **Range Domain:**
  - **Range Domain Minimum:** 1
  - **Range Domain Maximum:** N

**Attribute:**

- **Attribute Label:** NAME
- **Attribute Definition:** Species common name
- **Attribute Definition Source:** Research Planning, Inc.

**Attribute Domain Values:**

- **Enumerated Domain:**
Enumerated Domain Value: Species common name for the entire ESI data set
Enumerated Domain Value Definition: Free text
Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:
Attribute Label: GEN_SPEC
Attribute Definition: Species scientific name
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
Enumerated Domain:
Enumerated Domain Value: Species scientific name for the entire ESI data set.
Enumerated Domain Value Definition: Free text
Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:
Attribute Label: ELEMENT
Attribute Definition: Major categories of biological data
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
Enumerated Domain:
Enumerated Domain Value: BIRD
Enumerated Domain Value Definition: Birds
Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:
Enumerated Domain:
Enumerated Domain Value: FISH
Enumerated Domain Value Definition: Fish
Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:
Enumerated Domain:
Enumerated Domain Value: HABITAT
Enumerated Domain Value Definition: Habitats and Plants
Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:
Enumerated Domain:
Enumerated Domain Value: INVERT
Enumerated Domain Value Definition: Invertebrates
Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:
Enumerated Domain:
Enumerated Domain Value: M_MAMMAL
Enumerated Domain Value Definition: Marine Mammals
Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:
Enumerated Domain:
Enumerated Domain Value: REPTILE
Enumerated Domain Value Definition: Reptiles and Amphibians
Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:
Enumerated Domain:
Enumerated Domain Value: T_MAMMAL
Enumerated Domain Value Definition: Terrestrial Mammals
Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:
Attribute Label: SUBELEMENT
Attribute Definition: Element subgroup delineating a logical grouping of species
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
Enumerated Domain:
Enumerated Domain Value: alligator
Enumerated_Domain_Value_Definition: Alligator
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: amphibian
  Enumerated_Domain_Value_Definition: Amphibian
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: bat
  Enumerated_Domain_Value_Definition: Bat
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: bear
  Enumerated_Domain_Value_Definition: Bear
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: bird
  Enumerated_Domain_Value_Definition: Bird
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: bivalve
  Enumerated_Domain_Value_Definition: Bivalve
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: cephalopod
  Enumerated_Domain_Value_Definition: Cephalopod
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: crab
  Enumerated_Domain_Value_Definition: Crab
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: crayfish
  Enumerated_Domain_Value_Definition: Crayfish
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: diadromous
  Enumerated_Domain_Value_Definition: Diadromous fish
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: diving
  Enumerated_Domain_Value_Definition: Diving bird
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: e_nursery
  Enumerated_Domain_Value_Definition: Estuarine nursery fish
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: e_resident
Enumerated_Domain_Value_Definition: Estuarine resident fish
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: fish
Enumerated_Domain_Value_Definition: Fish
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: freshwater
Enumerated_Domain_Value_Definition: Freshwater fish
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: gull_tern
Enumerated_Domain_Value_Definition: Gull or tern
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: insect
Enumerated_Domain_Value_Definition: Insect
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: lizard
Enumerated_Domain_Value_Definition: Lizard
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: m_benthic
Enumerated_Domain_Value_Definition: Marine benthic fish
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: m_pelagic
Enumerated_Domain_Value_Definition: Marine pelagic fish
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: passerine
Enumerated_Domain_Value_Definition: Passerine bird
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: plant
Enumerated_Domain_Value_Definition: Plant
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: raptor
Enumerated_Domain_Value_Definition: Raptor
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: sav
Enumerated_Domain_Value_Definition: Submersed aquatic vegetation
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: shorebird
Enumerated_Domain_Value_Definition: Shorebird
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: shrimp
    Enumerated_Domain_Value_Definition: Shrimp
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: sm_mammal
    Enumerated_Domain_Value_Definition: Small mammal
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: snake
    Enumerated_Domain_Value_Definition: Snake
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: turtle
    Enumerated_Domain_Value_Definition: Turtle
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: upland
    Enumerated_Domain_Value_Definition: Upland
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: wading
    Enumerated_Domain_Value_Definition: Wading bird
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: waterfowl
    Enumerated_Domain_Value_Definition: Waterfowl
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: wetland
    Enumerated_Domain_Value_Definition: Wetland
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: 0
      Enumerated_Domain_Value_Definition: Not ranked
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Numeric
Enumerated_Domain_Value_Definition: mmyyyy
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.
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 (for example, ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.

Attribute:
Attribute_Label: ELEMENT
Attribute_Definition: Major categories of biological data
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: BIRD
Enumerated_Domain_Value_Definition: Birds
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: FISH
Enumerated_Domain_Value_Definition: Fish
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: HABITAT
Enumerated_Domain_Value_Definition: Habitats and Plants
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: INVERT
Enumerated_Domain_Value_Definition: Invertebrates
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: M_MAMMAL
Enumerated_Domain_Value_Definition: Marine Mammals
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: REPTILE
Enumerated_Domain_Value_Definition: Reptiles and Amphibians
**Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.

**Attribute_Domain_Values:**

**Enumerated_Domain:**

**Enumerated_Domain_Value:** T_MAMMAL

**Enumerated_Domain_Value_Definition:** Terrestrial Mammals

**Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.

**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:** Research Planning, Inc.

**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:** Research Planning, Inc.

**Attribute_Domain_Values:**

**Range_Domain:**

**Range_Domain_Minimum:** 1

**Range_Domain_Maximum:** N

**Attribute:**  
**Attribute_Label:** JAN  
**Attribute_Definition:** January  
**Attribute_Definition_Source:** Research Planning, Inc.

**Attribute_Domain_Values:**

**Enumerated_Domain:**

**Enumerated_Domain_Value:** X  

**Enumerated_Domain_Value_Definition:** Present in January  

**Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.

**Attribute:**  
**Attribute_Label:** FEB  
**Attribute_Definition:** February  
**Attribute_Definition_Source:** Research Planning, Inc.

**Attribute_Domain_Values:**

**Enumerated_Domain:**

**Enumerated_Domain_Value:** X  

**Enumerated_Domain_Value_Definition:** Present in February  

**Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.

**Attribute:**  
**Attribute_Label:** MAR  
**Attribute_Definition:** March  
**Attribute_Definition_Source:** Research Planning, Inc.

**Attribute_Domain_Values:**

**Enumerated_Domain:**

**Enumerated_Domain_Value:** X  

**Enumerated_Domain_Value_Definition:** Present in March  

**Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.

**Attribute:**  
**Attribute_Label:** APR  
**Attribute_Definition:** April  
**Attribute_Definition_Source:** Research Planning, Inc.

**Attribute_Domain_Values:**

**Enumerated_Domain:**

**Enumerated_Domain_Value:** X
<table>
<thead>
<tr>
<th>Attribute Label</th>
<th>Definition</th>
<th>Definition Source</th>
<th>Domain Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAY</td>
<td>Present in May</td>
<td>Research Planning, Inc.</td>
<td>X</td>
</tr>
<tr>
<td>JUN</td>
<td>Present in June</td>
<td>Research Planning, Inc.</td>
<td>X</td>
</tr>
<tr>
<td>JUL</td>
<td>Present in July</td>
<td>Research Planning, Inc.</td>
<td>X</td>
</tr>
<tr>
<td>AUG</td>
<td>Present in August</td>
<td>Research Planning, Inc.</td>
<td>X</td>
</tr>
<tr>
<td>SEP</td>
<td>Present in September</td>
<td>Research Planning, Inc.</td>
<td>X</td>
</tr>
<tr>
<td>OCT</td>
<td>Present in October</td>
<td>Research Planning, Inc.</td>
<td>X</td>
</tr>
<tr>
<td>NOV</td>
<td>Present in November</td>
<td>Research Planning, Inc.</td>
<td>X</td>
</tr>
</tbody>
</table>


**Attribute Domains**

**Enumerated Domain**

- **Enumerated Domain Value**: X
- **Enumerated Domain Value Definition**: Present in November
- **Enumerated Domain Value Definition Source**: Research Planning, Inc.

**Attribute**

- **Attribute Label**: DEC
- **Attribute Definition**: December
- **Attribute Definition Source**: Research Planning, Inc.
- **Attribute Domain Values**
  - **Enumerated Domain**
  - **Enumerated Domain Value**: X
  - **Enumerated Domain Value Definition**: Present in December
  - **Enumerated Domain Value Definition Source**: Research Planning, Inc.

**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**: Research Planning, Inc.
- **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 (for example, ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
  - **Enumerated Domain Value Definition Source**: Research Planning, Inc.

**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**: Research Planning, Inc.

**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**: Research Planning, Inc.
- **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 (for example, ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
  - **Enumerated Domain Value Definition Source**: Research Planning, Inc.

**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**: Research Planning, Inc.
- **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 elements.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: Y
      Enumerated_Domain_Value_Definition: Life-history stage or activity present
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Enumerated_Domain:
      Enumerated_Domain_Value: N
      Enumerated_Domain_Value_Definition: Life-history stage or activity not present
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    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: Research Planning, Inc.

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: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: Y
      Enumerated_Domain_Value_Definition: Life-history stage or activity present
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Enumerated_Domain:
      Enumerated_Domain_Value: N
      Enumerated_Domain_Value_Definition: Life-history stage or activity not present
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    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: Research Planning, Inc.

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: Research Planning, Inc.

Attribute Domain Values:
Enumerated Domain:
Enumerated Domain Value: Y
Enumerated Domain Value Definition: Life-history stage or activity present
Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain Value: N
Enumerated Domain Value Definition: Life-history stage or activity not present
Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain Value: -
Enumerated Domain Value Definition: Breed category not used or not appropriate for record(s) in question
Enumerated Domain Value Definition Source: Research Planning, Inc.

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: Research Planning, Inc.

Attribute Domain Values:
Enumerated Domain:
Enumerated Domain Value: Y
Enumerated Domain Value Definition: Life-history stage or activity present
Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain Value: N
Enumerated Domain Value Definition: Life-history stage or activity not present
Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain Value: -
Enumerated Domain Value Definition: Breed category not used or not appropriate for record(s) in question
Enumerated Domain Value Definition Source: Research Planning, Inc.

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: Research Planning, Inc.
Attribute Domain Values:
Enumerated Domain:
   Enumerated Domain Value: Y
   Enumerated Domain Value Definition: Life-history stage or activity present
   Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
Enumerated Domain:
   Enumerated Domain Value: N
   Enumerated Domain Value Definition: Life-history stage or activity not present
   Enumerated Domain Value Definition Source: Research Planning, Inc.
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: Research Planning, Inc.

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: Research Planning, Inc.

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, and to G_SOURCE and S_SOURCE in the BIORES table.
   Attribute Definition Source: Research Planning, Inc.
   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: Research Planning, Inc.
   Attribute Domain Values:
   Enumerated Domain:
      Enumerated Domain Value: Any character
      Enumerated Domain Value Definition: Free text
      Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:
   Attribute Label: DATE_PUB
   Attribute Definition: Date of source material, publication, or date of personal communication with expert source
   Attribute Definition Source: Research Planning, Inc.
   Attribute Domain Values:
   Enumerated Domain:
      Enumerated Domain Value: Numeric
Enumerated_Domain_Value_Definition: mmyyyy
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
 Attribute_Label: TITLE
 Attribute_Definition: Title of source material or data
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
 Enumerated_Domain:
 Enumerated_Domain_Value: Any character
 Enumerated_Domain_Value_Definition: Free text
 Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
 Attribute_Label: DATA_FORMAT
 Attribute_Definition: The format of the source material
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
 Enumerated_Domain:
 Enumerated_Domain_Value: Any character
 Enumerated_Domain_Value_Definition: Free text
 Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
 Attribute_Label: PUBLICATION
 Attribute_Definition: Additional citation information
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
 Enumerated_Domain:
 Enumerated_Domain_Value: Any character
 Enumerated_Domain_Value_Definition: Free text
 Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
 Attribute_Label: SCALE
 Attribute_Definition: Scale denominator of the source
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
 Enumerated_Domain:
 Enumerated_Domain_Value: integer
 Enumerated_Domain_Value_Definition: Any integer
 Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
 Attribute_Label: TIME_PERIOD
 Attribute_Definition: Date(s) of data collection that the source material is based upon.
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
 Enumerated_Domain:
 Enumerated_Domain_Value: Numeric
 Enumerated_Domain_Value_Definition: yyyy
 Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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 or federal 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: Research Planning, Inc.

Attribute:
 Attribute_Label: ELEMENT
 Attribute_Definition: Major categories of biological data
**Attribute Definition Source:** Research Planning, Inc.

**Attribute Domain Values:**

1. **Enumerated Domain:**
   - **Enumerated Domain Value:** BIRD
   - **Enumerated Domain Value Definition:** Birds
   - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

2. **Enumerated Domain:**
   - **Enumerated Domain Value:** FISH
   - **Enumerated Domain Value Definition:** Fish
   - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

3. **Enumerated Domain:**
   - **Enumerated Domain Value:** HABITAT
   - **Enumerated Domain Value Definition:** Habitats and Plants
   - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

4. **Enumerated Domain:**
   - **Enumerated Domain Value:** INVERT
   - **Enumerated Domain Value Definition:** Invertebrates
   - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

5. **Enumerated Domain:**
   - **Enumerated Domain Value:** M_MAMMAL
   - **Enumerated Domain Value Definition:** Marine Mammals
   - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

6. **Enumerated Domain:**
   - **Enumerated Domain Value:** REPTILE
   - **Enumerated Domain Value Definition:** Reptiles and Amphibians
   - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

7. **Enumerated Domain:**
   - **Enumerated Domain Value:** T_MAMMAL
   - **Enumerated Domain Value Definition:** Terrestrial Mammals
   - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

**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:** Research Planning, Inc.

- **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:** Research Planning, Inc.

- **Attribute Domain Values:**
  - **Enumerated Domain:**
    - **Enumerated Domain Value:** Any character
    - **Enumerated Domain Value Definition:** Two-letter state abbreviation
    - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

**Attribute:**

- **Attribute Label:** S_F
- **Attribute Definition:** State and Federal status
- **Attribute Definition Source:** Research Planning, Inc.

- **Attribute Domain Values:**
Enumerated_Domain:
    Enumerated_Domain_Value: F
    Enumerated_Domain_Value_Definition: Federally listed
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: S
        Enumerated_Domain_Value_Definition: State listed
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Enumerated_Domain:
        Enumerated_Domain_Value: S/F
        Enumerated_Domain_Value_Definition: State and federally listed
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
    Attribute_Label: T_E
    Attribute_Definition: Threatened and endangered status
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: E
            Enumerated_Domain_Value_Definition: Endangered on state or federal list
            Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service
        Enumerated_Domain:
            Enumerated_Domain_Value: T
            Enumerated_Domain_Value_Definition: Threatened on state or federal list
            Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service

Attribute:
    Attribute_Label: DATE_PUB
    Attribute_Definition: Publication date of source material used to assign state and federal status values for each species, if used.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Numeric
            Enumerated_Domain_Value_Definition: mmyyyy
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: Research Planning, Inc.
    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 (for example, ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: ESI Atlas for Louisiana

Distribution Liability:

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

Custom Order Process:

Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Visualizer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

Metadata Reference Information:

Metadata Date: 200410
Metadata Review Date: 200410

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

Generated by mp version 2.8.2 on Thu Oct 28 16:37:12 2004
Louisiana ESI: MGT (Management Area Polygons)

Metadata also available as - [Parseable text] - [SGML]

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, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Publication_Date: 200410
Title: Louisiana ESI: MGT (Management Area Polygons)
Edition: First
Geospatial_Data_Presentation_Form: Vector digital data
Series_Information:
Series_Name: None
Issue_Identification: Louisiana
Publication_Information:
Publication_Place: Seattle, Washington
Publisher:
Other_Citation_Details:
Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Description:

Abstract:
This data set contains boundaries for managed lands in coastal Louisiana. Vector polygons in this data set represent the management areas. Location-specific type and source information is 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 Environmental Sensitivity Index (ESI) data for
Louisiana. 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 data layers SOCECON (Socioeconomic Resource Points) and PARISH (Parish Management Area Polygons), part of the larger Louisiana 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:** 1999
- **Ending_Date:** 2000

**Currentness_Reference:**
The human-use data were compiled during 2002-2003. The currentness dates for these data range from 1999 to 2000 and are documented in the Source_Information section.

**Status:**
- **Progress:** Complete
- **Maintenance_and_Update_Frequency:** None Scheduled

**Spatial_Domain:**
**Bounding_Coordinates:**
- **West_BoundingCoordinate:** -94.000
- **East_BoundingCoordinate:** -88.792
- **North_BoundingCoordinate:** 30.625
- **South_BoundingCoordinate:** 28.875

**Keywords:**
**Theme:**
- **Theme_Keyword_Thesaurus:** None
- **Theme_Keyword:** ESI
- **Theme_Keyword:** Sensitivity maps
- **Theme_Keyword:** Coastal resources
- **Theme_Keyword:** Oil spill planning
- **Theme_Keyword:** Coastal Zone Management
- **Theme_Keyword:** Wildlife
- **Theme_Keyword:** Management Areas

**Place:**
- **Place_Keyword_Thesaurus:** None
- **Place_Keyword:** Louisiana

**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 Louisiana 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, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, in cooperation with Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Native_Data_Set_Environment:
The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) and SQL SERVER(r) (version 7.0). The hardware configuration is PC's with Windows Operating System (NT4.0/2000).

The Spatial_Data_Organization_Information section refers only to the source files in the ARC export format. The following files are included in that data set: birds.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, lg_index.e00, mgt.e00, parish.e00, nests.e00, reptiles.e00, roads.e00, sm_index.e00, socecon.e00, t_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biores, biofile, breed, breed_dt, seasonal, soc_dat, soc_lut, sources, species, and status.

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 nodes, etc.), and SQL SERVER(r) to ARC/INFO(r) consistencies. The GIS manager makes a final review, 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 a synthesis of digital boundaries for management areas in Louisiana. Refer to the data layers SOCECON (Socioeconomic Resource Points) and PARISH (Parish Management Area Polygons) for additional human-use information. These data do not necessarily represent all management areas in Louisiana.

Positional_Accuracy:
Horizontal_Positional_Accuracy:
Horizontal_Positional_Accuracy_Report:
The spatial components of the MGT data set were developed from pre-existing digital sources and reflect the positional accuracy of these original data. See the Lineage and Process_Description sections for more information on the original data sources and how these data were integrated or manipulated to create the final data set.

Lineage:
Source_Information:
Source_Citation:
Citation_Information:
Originator: USGS National Wetlands Research Center (NWRC)
Publication_Date: 2000
Title: Louisiana Stewardship Areas
Geospatial_Data_Presentation_Form: Digital polys
Publication_Information:
  Publication_Place: Lafayette, LA
  Publisher: USGS NWRC
Source_Scale_Denominator: Various
Type_of_Source_Media: Disk
Source_Time_Period_of_Content:
  Time_Period_Information:
    Single_Date/Time:
      Calendar_Date: 1999
Source_Currentness_Reference: Date of compilation
Source_Citation_Abbreviation: None
Source_Contribution: Boundaries for managed lands
Source_Information:
Source_Citation:
  Citation_Information:
    Originator:
      Lacassine National Wildlife Refuge, U.S. Fish and Wildlife
      Service (USFWS)
    Publication_Date: Unpublished material
    Title: Active Mini-refuges in Louisiana
    Geospatial_Data_Presentation_Form: Digital points
Publication_Information:
  Publication_Place: Unknown
  Publisher: Louisiana Department of Wildlife and Fisheries (LDWF),
  LA Natural Heritage Program Special Pub. No. 3
Source_Scale_Denominator: Unknown
Type_of_Source_Media: Disk
Source_Time_Period_of_Content:
  Time_Period_Information:
    Single_Date/Time:
      Calendar_Date: 2000
Source_Currentness_Reference: Date of communication
Source_Citation_Abbreviation: None
Source_Contribution: Boundaries for mini-refuges
Source_Information:
Source_Citation:
  Citation_Information:
    Originator:
      U.S. Department of the Interior (USDOI), Bureau of Indian
      Affairs (BIA)
    Publication_Date: 2000
    Title: Indian Lands and Native Entities in the United States
    Geospatial_Data_Presentation_Form: Digital polys
Publication_Information:
  Publication_Place: Lakewood, CO
  Publisher: USDOI, BIA, Geographic Data Service Center
  (GDSC)
Source_Scale_Denominator: Unknown
Type_of_Source_Media: Disk
Source_Time_Period_of_Content:
  Time_Period_Information:
    Single_Date/Time:
      Calendar_Date: 2000
Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: Boundaries for Indian reservations
Source_Information:
Source_Citation:
Citation Information:
Originator:
Minerals Management Service (MMS), Louisiana State University (LSU), Center for Coastal, Energy and Environmental Resources (CCEER) and the Department of Geography and Anthropology, Louisiana Department of Wildlife and Fisheries (LDWF), and Research Planning, Inc. (RPI)
Publication Date: 2001
Title: Gulf-Wide Information System, Louisiana: Managed Lands
Geospatial Data Presentation Form: Vector Digital Data
Publication Information:
Publication Place: New Orleans, LA
Publisher:
Minerals Management Service (MMS), 1201 Elmwood Park Blvd., MS-5220, New Orleans, LA 70123-2394
Type of Source Media: CD-ROM
Source Time Period of Content:
Time Period Information:
Single Date/Time:
Calendar Date: 2001
Source Currentness Reference: Date of publication
Source Citation Abbreviation: None
Source Contribution: Managed lands information
Process Step:
Process Description:
The main source of data used to depict the management areas for this data layer was the Minerals Management Service (MMS) Gulf-Wide Information System managed lands layer for Louisiana. This layer was used with no modifications. The lineage information listed in the previous section refers to the source lineage of the managed lands layer from the Gulf-Wide Information System. For further information regarding the process description of this layer, please refer to the metadata document entitled "Gulf-Wide Information System, Louisiana: Managed Lands". Metadata documents are available from the Louisiana Oil Spill Coordinator's Office (LOSCO) at this address: David Gisclair, Technical Assistance Program Director, Louisiana Oil Spill Coordinator's Office, Office of the Governor, 150 Third Street, Suite 405, Baton Rouge, LA 70801. Other contact methods include: phone (225) 578-7817, fax (225) 578-6400, and email dgisclair@lsu.edu.
Process Date: 200312
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 rings
Point_and_Vector_Object_Count: 208

SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Area point
Point_and_Vector_Object_Count: 208

SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Complete chain
Point_and_Vector_Object_Count: 335

SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Link
Point_and_Vector_Object_Count: 19260

SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Node, planar graph
Point_and_Vector_Object_Count: 276

---

Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Geographic:
    Latitude_Resolution: 0.00005
    Longitude_Resolution: 0.00005
    Geographic_Coordinate_Units: Decimal degrees
Geodetic_Model:
    Horizontal_Datum_Name: North American Datum of 1983 (HARN)
    Ellipsoid_Name: Geodetic Reference System 80
    Semi-major_Axis: 6378137
    Denominator_of_Flattening_Ratio: 298.257222

---

Entity_and_Attribute_Information:
Overview_Description:
Entity_and_Attribute_Overview:
In addition to the geographic data layers, two relational attribute or data tables, SOC_DAT and SOURCES, are used to store the complex socioeconomic data in the ESI data structure. The geographic data layer containing socioeconomic 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 (the Louisiana atlas number is 33). ID is a unique combination of the atlas number (33), 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.

Detailed_Description:
Entity_Type:
Entity_Type_Label: MGT.PAT
Entity_Type_Definition:
The MGT.PAT table contains attribute information for the vector polygons representing managed areas in Louisiana. 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: Research Planning, Inc.

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: Research Planning, Inc.

Attribute\_Domain\_Values:

Enumerated\_Domain:

Enumerated\_Domain\_Value: IR
Enumerated\_Domain\_Value\_Definition: Indian Reservation
Enumerated\_Domain\_Value\_Definition\_Source: Research Planning, Inc.

Enumerated\_Domain:

Enumerated\_Domain\_Value: NC
Enumerated\_Domain\_Value\_Definition: Nature Conservancy
Enumerated\_Domain\_Value\_Definition\_Source: Research Planning, Inc.

Enumerated\_Domain:

Enumerated\_Domain\_Value: NP
Enumerated\_Domain\_Value\_Definition: National Park
Enumerated\_Domain\_Value\_Definition\_Source: Research Planning, Inc.

Enumerated\_Domain:

Enumerated\_Domain\_Value: P
Enumerated\_Domain\_Value\_Definition: Park
Enumerated\_Domain\_Value\_Definition\_Source: Research Planning, Inc.

Enumerated\_Domain:

Enumerated\_Domain\_Value: SR
Enumerated\_Domain\_Value\_Definition: Scenic River
Enumerated\_Domain\_Value\_Definition\_Source: Research Planning, Inc.

Enumerated\_Domain:

Enumerated\_Domain\_Value: WR
Enumerated\_Domain\_Value\_Definition: Wildlife Refuge
Enumerated\_Domain\_Value\_Definition\_Source: Research Planning, Inc.

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 (33), 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: 331100002
Range\_Domain\_Maximum: 331100262

Attribute:

Attribute\_Label: HUNUM
Attribute\_Definition:
An identifier that links directly to the SOC\_DAT table. HUNUM values of 0 are holes in polygons and do not contain information.

Attribute\_Definition\_Source: NOAA

Attribute\_Domain\_Values:

Range\_Domain:

Range\_Domain\_Minimum: 33000058
Range\_Domain\_Maximum: 3300148

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: Research Planning, Inc.

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 polygons and do not
contain information.

**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.
**Attribute_Definition_Source**: NOAA
**Attribute_Domain_Values**:

- **Range_Domain**:
  - **Range_Domain_Minimum**: 33000001
  - **Range_Domain_Maximum**: 33000148

**Attribute**

**Attribute_Label**: TYPE
**Attribute_Definition**: Identifies the feature type
**Attribute_Definition_Source**: Research Planning, Inc.
**Attribute_Domain_Values**:

- **Enumerated_Domain**:
  - **Enumerated_Domain_Value**: AIRPORT
    - **Enumerated_Domain_Value_Definition**: Airport
    - **Enumerated_Domain_Value_Definition_Source**: Research Planning, Inc.
  - **Enumerated_Domain_Value**: BOAT RAMP
    - **Enumerated_Domain_Value_Definition**: Boat Ramp
    - **Enumerated_Domain_Value_Definition_Source**: Research Planning, Inc.
  - **Enumerated_Domain_Value**: INDIAN RESERVATION
    - **Enumerated_Domain_Value_Definition**: Indian Reservation
    - **Enumerated_Domain_Value_Definition_Source**: Research Planning, Inc.
  - **Enumerated_Domain_Value**: HELIPORT
    - **Enumerated_Domain_Value_Definition**: Heliport
    - **Enumerated_Domain_Value_Definition_Source**: Research Planning, Inc.
Enumerated_Domain:

Enumerated_Domain_Value: NATIONAL PARK
Enumerated_Domain_Value_Definition: National Park
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated_Domain_Value: NATURE CONSERVANCY
Enumerated_Domain_Value_Definition: Nature Conservancy
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated_Domain_Value: MARINA
Enumerated_Domain_Value_Definition: Marina
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated_Domain_Value: PARK
Enumerated_Domain_Value_Definition: Park
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated_Domain_Value: SCENIC RIVER
Enumerated_Domain_Value_Definition: Scenic River
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated_Domain_Value: WILDLIFE REFUGE
Enumerated_Domain_Value_Definition: Wildlife Refuge
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: NAME
Attribute_Definition: The feature name
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character
Enumerated_Domain_Value_Definition: Free text
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: CONTACT
Attribute_Definition: Contact person or entity
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character
Enumerated_Domain_Value_Definition: Free text
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: PHONE
Attribute_Definition: Contact telephone number
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character
Enumerated_Domain_Value_Definition: Free text
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: G_SOURCE
Attribute_Definition:
     Geographic source integer identifier that links records in the SOC_DAT data table
to records in the SOURCES data table.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1
Range_Domain_Maximum: N

Attribute:
Attribute_Label: A_SOURCE
Attribute_Definition:
Attribute source integer identifier that links records in the SOC_DAT data table to records in the SOURCES data table.
Attribute_Definition_Source: Research Planning, Inc.
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: Research Planning, Inc.

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, and to G_SOURCE and S_SOURCE in the BIORES table.
Attribute_Definition_Source: Research Planning, Inc.
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: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
  Enumerated_Domain_Value: Any character
  Enumerated_Domain_Value_Definition: Free text
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: DATE_PUB
Attribute_Definition:
Date of source material, publication, or date of personal communication with expert source
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
  Enumerated_Domain_Value: Numeric
  Enumerated_Domain_Value_Definition: mmyyyy
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: TITLE
Attribute_Definition:
Title of source material or data
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
  Enumerated_Domain_Value: Any character
  Enumerated_Domain_Value_Definition: Free text
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:

Attribute_Label: DATA_FORMAT
Attribute_Definition: The format of the source material
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
   Enumerated_Domain:
      Enumerated_Domain_Value: Any character
      Enumerated_Domain_Value_Definition: Free text
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: PUBLICATION
Attribute_Definition: Additional citation information
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
   Enumerated_Domain:
      Enumerated_Domain_Value: Any character
      Enumerated_Domain_Value_Definition: Free text
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: SCALE
Attribute_Definition: Scale denominator of the source
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
   Enumerated_Domain:
      Enumerated_Domain_Value: integer
      Enumerated_Domain_Value_Definition: Any integer
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: TIME_PERIOD
Attribute_Definition: Date(s) of data collection that the source material is based upon.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
   Enumerated_Domain:
      Enumerated_Domain_Value: Numeric
      Enumerated_Domain_Value_Definition: yyyy
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: ESI Atlas for Louisiana

Distribution_Liability:

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

Custom_Order_Process:
Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

Metadata_Reference_Information:
Metadata_Date: 200410
Metadata_Review_Date: 200410
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

Generated by mp version 2.8.2 on Thu Oct 28 16:41:59 2004
Louisiana ESI: SOCECON (Socioeconomic Resource Points)

Metadata also available as - [Parseable text] - [SGML]

Metadata:

- Identification_Information
- Data_Quality_Information
- Spatial_Data_Organization_Information
- Spatial_Refernece_Information
- Entity_and_Attribute_Information
- Distribution_Information
- Metadata_Reference_Information

Identification_Information:

Citation:

Originator:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Publication_Date: 200410
Title: Louisiana ESI: SOCECON (Socioeconomic Resource Points)
Edition: First
Geospatial_Data_Presentation_Form: Vector digital data
Series_Information:
  Series_Name: None
  Issue_Identification: Louisiana
Publication_Information:
  Publication_Place: Seattle, Washington
  Publisher: National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Other_Citation_Details:

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington; Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Description:

Abstract:

This data set contains human-use resource data for airport, heliport, marina, and boat ramp locations in Louisiana. Vector points in this data set represent the human-use sites. 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 Environmental Sensitivity Index (ESI) data for Louisiana. 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 (Management Area Polygons) data layer, part of the larger Louisiana 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_ContentType:**
**Time_Period_Information:**
**Range_of_Dates/Times:**
  - **Beginning_Date:** 1998
  - **Ending_Date:** 2003

**Currentness_Reference:**
These data were compiled during 2002-2003. The currentness dates for these data range from 1998 to 2003 and are documented in the Source_Information section.

**Status:**
**Progress:** Complete
**Maintenance_and_Update_Frequency:** None Scheduled

**Spatial_Domain:**
**Bounding_Coordinates:**
  - **West_BoundingCoordinate:** -94.000
  - **East_BoundingCoordinate:** -88.792
  - **North_BoundingCoordinate:** 30.625
  - **South_BoundingCoordinate:** 28.875

**Keywords:**
**Theme:**
  - **Theme_Keyword_Thesaurus:** None
  - **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 resources

**Place:**
  - **Place_Keyword_Thesaurus:** None
  - **Place_Keyword:** Louisiana

**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 Louisiana 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, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington, in cooperation with Minerals Management Service (MMS), New Orleans, Louisiana; U.S. Fish and Wildlife Service (USFWS), Lafayette, Louisiana; The Louisiana Oil Spill Coordinator's Office (LOSCO), Baton Rouge, Louisiana; Louisiana Department of Wildlife and Fisheries (LDWF), Baton Rouge, Louisiana; and Louisiana Department of Natural Resources (LDNR), Baton Rouge, Louisiana.

Native_Data_Set_Environment:
The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) and SQL SERVER(r) (version 7.0). The hardware configuration is PC's with Windows Operating System (NT4.0/2000).

The Spatial_Data_Organization_Information section refers only to the source files in the ARC export format. The following files are included in that data set: birds.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, lg_index.e00, mgt.e00, parish.e00, nests.e00, reptiles.e00, roads.e00, sm_index.e00, socecon.e00, t_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biores, biofile, breed, breed_dt, seasonal, soc_dat, soc_lut, sources, species, and status.

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 nodes, etc.), and SQL SERVER(r) to ARC/INFO(r) consistencies. The GIS manager makes a final review, 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 a synthesis of expert knowledge and digital data on socioeconomic resources in Louisiana. Refer to the MGT (Management Area Polygons) data layer for additional human-use information. These data do not necessarily represent all human-use sites in Louisiana.

Positional_Accuracy:
Horizontal_Positional_Accuracy:
Horizontal_Positional_Accuracy_Report:
The spatial components of the SOCECON data set were developed from pre-existing digital 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: Louisiana Oil Spill Coordinator's Office (LOSCO)
Publication_Date: 1998
Title:
Public Use Airports in Louisiana from Bureau of Transportation Statistics (BTS) Source Data
Geospatial_Data_Presentation_Form: Digital points
Publication_Information:
Publication_Place: Baton Rouge, LA
Publisher: LOSCO

Source_Scale_Denominator: Various
Type_of_Source_Media: Disk
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 1998
Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: Airport and heliport locations
Source_Information:
Source_Citation:
Citation_Information:
Originator: Louisiana Oil Spill Coordinator's Office (LOSCO)
Publication_Date: 2003
Title: Louisiana Marinas and Boat Launches
Geospatial_Data_Presentation_Form: Digital points
Publication_Information:
Publication_Place: Baton Rouge, LA
Publisher: LOSCO

Source_Scale_Denominator: Unknown
Type_of_Source_Media: Disk
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: Marinas and Boat Launches
Source_Information:
Source_Citation:
Citation_Information:
Originator: Minerals Management Service (MMS), Louisiana State University (LSU), Center for Coastal, Energy and Environmental Resources (CCEER) and the Department of Geography and Anthropology, Louisiana Department of Wildlife and Fisheries (LDWF), and Research Planning, Inc. (RPI)
Publication_Date: 2001
Title: Gulf-Wide Information System, Louisiana: Socio-economic Features
Geospatial_Data_Presentation_Form: Vector Digital Data
Publication_Information:
Publication_Place: New Orleans, LA
Publisher:
Minerals Management Service (MMS), 1201 Elmwood Park Blvd., MS-5220, New Orleans, LA 70123-2394

Type_of_Source_Media: CD-ROM
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 2001
Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: Socioeconomic information

Process_Description:
The main source of data used to depict the socioeconomic point data for this data layer was the Minerals Management Service (MMS) Gulf-Wide Information System socio-economic features layer for Louisiana. This layer was used with no modifications. The lineage information listed in the previous section refers to the source lineage of the socio-economic features layer from the Gulf-Wide Information System. For further information regarding the process description of this layer, please refer to the metadata document entitled "Gulf-Wide Information Systems, Louisiana: Socio-economic Features." [Metadata documents are available from the Louisiana Oil Spill Coordinator's Office (LOSCO) at this address: David Gisclair, Technical Assistance Program Director, Louisiana Oil Spill Coordinator's Office, Office of the Governor, 150 Third Street, Suite 405, Baton Rouge, LA 70801. Other contact methods include: phone (225) 578-7817, fax (225) 578-6400, and email dgisclair@lsu.edu.]

Two additional sources provided digital spatial information for the marinas and boat launches, and airport and heliport locations. These additional sources were clipped by the study area boundary and all data inserted into the attribute tables.

Process_Date: 200312

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: Entity Point
      Point_and_Vector_Object_Count: 414

Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Geographic:
      Latitude_Resolution: 0.00005
      Longitude_Resolution: 0.00005
      Geographic_Coordinate_Units: Decimal degrees
  Geodetic_Model:
    Horizontal_Datum_Name: North American Datum of 1983 (HARN)
    Ellipsoid_Name: Geodetic Reference System 80
    Semi-major_Axis: 6378137
    Denominator_of_Flattening_Ratio: 298.257222
Louisiana ESI: SOCECON (Socioeconomic Resource Points)

Entity_and_Attribute_Information:
Overview_Description:
Entity_and_Attribute_Overview:
In addition to the geographic data layers, two relational attribute or data tables, SOC_DAT and SOURCES, are used to store the complex socioeconomic data in the ESI data structure. The geographic data layer containing socioeconomic resource information (in this case, SOCECON) is linked to the Socioeconomic Resources table (SOC_DAT) using the unique ID and the lookup table SOC_LUT, or it can be linked directly using HUNUM. HUNUM is a unique reference number concatenated with the atlas number (the Louisiana atlas number is 33). ID is a unique combination of the atlas number (33), 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.

Detailed_Description:
Entity_Type:
Entity_Type_Label: SOCECON.PAT
Entity_Type_Definition:
The SOCECON.PAT table contains attribute information for the vector points representing airports, heliports, boat ramps, and marinas. 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: Research Planning, Inc.

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: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: A
Enumerated_Domain_Value_Definition: Airport
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: BR
Enumerated_Domain_Value_Definition: Boat Ramp
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: HP
Enumerated_Domain_Value_Definition: Heliport
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: M
Enumerated_Domain_Value_Definition: Marina
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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 (33), element number (10), and record number.
Attribute_Definition_Source: NOAA
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: 331000001
Range_Domain_Maximum: 331000414
Attribute:

Attribute_Label: HUNUM
Attribute_Definition: An identifier that links directly to the SOC_DAT table.
Attribute_Definition_Source: NOAA
Attribute_Domain_Values:
  Range_Domain:
    Range_Domain_Minimum: 33000001
    Range_Domain_Maximum: 33000059

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: Research Planning, Inc.

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.
Attribute_Definition_Source: NOAA
Attribute_Domain_Values:
  Range_Domain:
    Range_Domain_Minimum: 33000001
    Range_Domain_Maximum: 33000148

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 (33), element number (SOCECON=10; MGT=11), and record number.
Attribute_Definition_Source: NOAA
Attribute_Domain_Values:
  Range_Domain:
    Range_Domain_Minimum: 331000001
    Range_Domain_Maximum: 331000262

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: Research Planning, Inc.

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.
Attribute_Definition_Source: NOAA
Attribute_Domain_Values:
  Range_Domain:
    Range_Domain_Minimum: 33000001
    Range_Domain_Maximum: 33000148

Attribute:

Attribute_Label: TYPE
Attribute_Definition: Identifies the feature type
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:

Enumerated Domain:
  Enumerated Domain Value: AIRPORT
  Enumerated Domain Value Definition: Airport
  Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:
  Enumerated Domain Value: BOAT RAMP
  Enumerated Domain Value Definition: Boat Ramp
  Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:
  Enumerated Domain Value: INDIAN RESERVATION
  Enumerated Domain Value Definition: Indian Reservation
  Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:
  Enumerated Domain Value: HELIPORT
  Enumerated Domain Value Definition: Heliport
  Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:
  Enumerated Domain Value: NATIONAL PARK
  Enumerated Domain Value Definition: National Park
  Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:
  Enumerated Domain Value: NATURE CONSERVANCY
  Enumerated Domain Value Definition: Nature Conservancy
  Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:
  Enumerated Domain Value: MARINA
  Enumerated Domain Value Definition: Marina
  Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:
  Enumerated Domain Value: PARK
  Enumerated Domain Value Definition: Park
  Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:
  Enumerated Domain Value: SCENIC RIVER
  Enumerated Domain Value Definition: Scenic River
  Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:
  Enumerated Domain Value: WILDLIFE REFUGE
  Enumerated Domain Value Definition: Wildlife Refuge
  Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:
  Attribute Label: NAME
  Attribute Definition: The feature name
  Attribute Definition Source: Research Planning, Inc.

Enumerated Domain:
  Enumerated Domain Value: Any character
  Enumerated Domain Value Definition: Free text
  Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:
  Attribute Label: CONTACT
  Attribute Definition: Contact person or entity
  Attribute Definition Source: Research Planning, Inc.

Enumerated Domain:
  Enumerated Domain Value: Any character
  Enumerated Domain Value Definition: Free text
  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute:
  Attribute_Label: PHONE
  Attribute_Definition: Contact telephone number
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: Any character
      Enumerated_Domain_Value_Definition: Free text
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
  Attribute_Label: G_SOURCE
  Attribute_Definition: Geographic source integer identifier that links records in the SOC_DAT data table to records in the SOURCES data table.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Range_Domain:
      Range_Domain_Minimum: 1
      Range_Domain_Maximum: N

Attribute:
  Attribute_Label: A_SOURCE
  Attribute_Definition: Attribute source integer identifier that links records in the SOC_DAT data table to records in the SOURCES data table.
  Attribute_Definition_Source: Research Planning, Inc.
  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: Research Planning, Inc.

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, and to G_SOURCE and S_SOURCE in the BIORES table.
  Attribute_Definition_Source: Research Planning, Inc.
  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: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: Any character
      Enumerated_Domain_Value_Definition: Free text
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
  Attribute_Label: DATE_PUB

Page: 9
Attribute_Definition: Date of source material, publication, or date of personal communication with expert source
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: Numeric
        Enumerated_Domain_Value_Definition: mm/yyyy
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: TITLE
Attribute_Definition: Title of source material or data
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: Any character
        Enumerated_Domain_Value_Definition: Free text
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: DATA_FORMAT
Attribute_Definition: The format of the source material
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: Any character
        Enumerated_Domain_Value_Definition: Free text
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: PUBLICATION
Attribute_Definition: Additional citation information
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: Any character
        Enumerated_Domain_Value_Definition: Free text
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: SCALE
Attribute_Definition: Scale denominator of the source
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: integer
        Enumerated_Domain_Value_Definition: Any integer
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: TIME_PERIOD
Attribute_Definition: Date(s) of data collection that the source material is based upon.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: Numeric
        Enumerated_Domain_Value_Definition: yyyy
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: ESI Atlas for Louisiana

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

Custom Order Process:
Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

Metadata Reference Information:
Metadata Date: 200410
Metadata Review Date: 200410

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

Generated by mp version 2.8.2 on Thu Oct 28 16:45:27 2004
**Louisiana ESI Entity Relationship Diagram**

**Relationships between spatial data layers and attribute data tables**

**Geographic Themes**
- ESI (LINES)
  - ID (10, 10, C)
  - LINE (1, 1, C)
  - SOURCE_ID (6, 6, I)
  - ENVIR (1, 1, C)
- HYDRO (LINES)
  - LINE (1, 1, C)
  - SOURCE_ID (6, 6, I)
- HYDRO (POLYS)
  - WATER_CODE (1, 1, C)
- INDEX (POLYS)
  - TILE-NAME (32, 32, C)
  - TOPO-NAME (255, 255, C)
  - SCALE (7, 7, I)
  - MAPANGLE (4, 8, F, 3)
  - PAGESIZE (11, 11, C)
- MGT (POLYS)
  - TYPE (2, 2, C)
  - ID (10, 10, I)
  - HUNUM (9, 9, I)
- SOCECON (POINTS)
  - TYPE (2, 2, C)
  - ID (10, 10, I)
  - HUNUM (9, 9, I)
- PARISH (POLYS)
  - PARISH (30, 30, C)
- ROADS (LINES)
  - INTERSTATE (16, 16, C)
  - US ROUTES (40, 40, C)
  - LA ROUTES (40, 40, C)
  - ROAD_TYPE (16, 16, C)
  - LENGTH_M (8, 10, F, 2)

**Lookup Tables**
- SOC_LUT
  - HUNUM (9, 9, I)
  - ID (10, 10, I)
  - (The SOC_LUT table can be bypassed by linking the human-use tables to SOC_DAT using HUNUM.)
- BIO_LUT
  - RARNUM (9, 9, I)
  - ID (10, 10, I)
  - (The BIO_LUT table can be bypassed by linking the biology tables to BIORES using RARNUM.)

**Data Tables**
- SOC_DAT
  - HUNUM (9, 9, I)
  - TYPE (20, 20, C)
  - NAME (40, 40, C)
  - CONTACT (80, 80, C)
  - PHONE (20, 20, C)
  - G_SOURCE (6, 6, I)
  - A_SOURCE (6, 6, I)
- BIORES
  - RARNUM (9, 9, I)
  - SPECIES_ID (5, 5, I)
  - CONC (20, 20, C)
  - SEASON_ID (2, 2, I)
  - G_SOURCE (6, 6, I)
  - S_SOURCE (6, 6, I)
  - ELEMENT (10, 10, C)
  - EL_SPE (6, 6, C)
  - EL_SPE_SEA (8, 8, C)
- SOURCES
  - SOURCE_ID (6, 6, I)
  - ORIGINATOR (35, 35, C)
  - DATE_PUB (10, 10, I)
  - TITLE (80, 80, C)
  - DATA_FORMAT (80, 80, C)
  - SCALE (20, 20, C)
  - TIME_PERIOD (22, 22, C)
- SPECIES
  - SPECIES_ID (5, 5, I)
  - NAME (35, 35, C)
  - GEN_SPEC (45, 45, C)
  - ELEMENT (10, 10, C)
  - SUBELEMENT (10, 10, C)
  - NHP (10, 10, C)
  - DATE_PUB (10, 10, I)
  - EL_SPE (6, 6, C)
- SEASONAL
  - ELEMENT (10, 10, C)
  - SPECIES_ID (5, 5, I)
  - SEASON_ID (2, 2, I)
  - JAN (1, 1, C)
  - FEB (1, 1, C)
  - MAR (1, 1, C)
  - APR (1, 1, C)
  - MAY (1, 1, C)
  - JUN (1, 1, C)
  - JUL (1, 1, C)
  - AUG (1, 1, C)
  - SEP (1, 1, C)
  - OCT (1, 1, C)
  - NOV (1, 1, C)
  - DEC (1, 1, C)
- STATUS
  - ELEMENT (10, 10, C)
  - SPECIES_ID (5, 5, I)
  - STATE (2, 2, C)
  - S_F (3, 3, C)
  - T_E (3, 3, C)
  - DATE_PUB (10, 10, I)
  - EL_SPE (6, 6, C)
- BREED
  - EL_SPE_SEA (8, 8, C)

(THE B_I_O _L_U_T table can be bypassed by linking the biology tables to BIORES using RARNUM.)

(THE S_O_C _L_U_T table can be bypassed by linking the human-use tables to SOC_DAT using HUNUM.)

**Legend**
- ESI_LINES
- ESI (10, 10, C)
- LINE (1, 1, C)
- SOURCE_ID (6, 6, I)
- ENVIR (1, 1, C)
- HYDRO (LINES)
- LINE (1, 1, C)
- SOURCE_ID (6, 6, I)
- HYDRO (POLYS)
- WATER_CODE (1, 1, C)
- INDEX (POLYS)
- TILE-NAME (32, 32, C)
- TOPO-NAME (255, 255, C)
- SCALE (7, 7, I)
- MAPANGLE (4, 8, F, 3)
- PAGESIZE (11, 11, C)
- MGT (POLYS)
- TYPE (2, 2, C)
- ID (10, 10, I)
- HUNUM (9, 9, I)
- SOCECON (POINTS)
- TYPE (2, 2, C)
- ID (10, 10, I)
- HUNUM (9, 9, I)
- PARISH (POLYS)
- PARISH (30, 30, C)
- ROADS (LINES)
- INTERSTATE (16, 16, C)
- US ROUTES (40, 40, C)
- LA ROUTES (40, 40, C)
- ROAD_TYPE (16, 16, C)
- LENGTH_M (8, 10, F, 2)
- BIRDS (POLYS)
- ID (10, 10, I)
- RARNUM (9, 9, I)
- FISH (POLYS)
- ID (10, 10, I)
- RARNUM (9, 9, I)
- HABITATS (POLYS)
- ID (10, 10, I)
- RARNUM (9, 9, I)
- INVERT (POLYS)
- ID (10, 10, I)
- RARNUM (9, 9, I)
- NESTS (POINTS)
- ID (10, 10, I)
- RARNUM (9, 9, I)
- REPTILES (POLYS)
- ID (10, 10, I)
- RARNUM (9, 9, I)
- T_MAMMAL (POLYS)
- ID (10, 10, I)
- RARNUM (9, 9, I)
- MGT (POLYS)
- TYPE (2, 2, C)
- ID (10, 10, I)
- HUNUM (9, 9, I)
- SOCECON (POINTS)
- TYPE (2, 2, C)
- ID (10, 10, I)
- HUNUM (9, 9, I)
- PARISH (POLYS)
- PARISH (30, 30, C)
- ROADS (LINES)
- INTERSTATE (16, 16, C)
- US ROUTES (40, 40, C)
- LA ROUTES (40, 40, C)
- ROAD_TYPE (16, 16, C)
- LENGTH_M (8, 10, F, 2)