Coastal Resources Atlas: Long Island: HYDRO (Hydrography Lines and Polygons)

Identification Information:

Citation:

Originator:

Publication Date: 200903

Title:
Coastal Resources Atlas: Long Island: HYDRO (Hydrography Lines and Polygons)

Edition: First

Geospatial Data Presentation Form: Vector digital data

Series Information:
Series Name: NONE

Issue Identification: Long Island, New York

Publication Information:
Publication Place: Seattle, Washington
Publisher:

Other Citation Details:

Description:

Abstract:
This data set contains vector lines and polygons representing coastal hydrography used in the creation of the Environmental Sensitivity Index (ESI) for Long Island, New York. The HYDRO data layer contains all annotation used in producing the atlas. The annotation features are categorized into two subclasses in order to simplify the mapping and quality control procedures: SOC, for socioeconomic features, and HYDRO, for water features.

This data set comprises a portion of the ESI data for Long Island. 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:** 1981
  **Ending_Date:** 2007

**Currentness_Reference:**
The data were compiled during 2007-2009. The currentness dates for the data range from 1981 to 2007 and are documented in the Lineage section.

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

**Spatial_Domain:**
**Bounding_Coordinates:**
  **West_Bounding_Coordinate:** 73.75000
  **East_Bounding_Coordinate:** 71.79000
  **North_Bounding_Coordinate:** 41.37500
  **South_Bounding_Coordinate:** 40.50000

**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:** Hydrography

**Place:**
  **Place_Keyword_Thesaurus:** None
  **Place_Keyword:** Long Island

**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 Long Island 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, Emergency Response Division, Seattle, Washington and Department of Homeland Security, U.S. Coast Guard, Office of Incident Management and Preparedness, Washington, D.C.
Native Data Set Environment:
The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO® (version 9.2) and SQL SERVER® (version 2000). The hardware configuration is PCs with Windows Operating System (2000/XP/2003). The Spatial Data Organization Information section refers only to the source files in the ARC export format. The following files are included in the data set: birds.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, mgt.e00, reptiles.e00, socecon.e00, t_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biore, 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 linear and polygonal hydrography for Long Island.

Positional Accuracy:
Horizontal Positional Accuracy:
Horizontal Positional Accuracy Report:
The HYDRO data set was developed from pre-existing digital data and reflects the positional accuracy of these original data. The horizontal positional accuracy of the 1:24,000 USGS topographic quads should conform to National Map Accuracy Standards at scales of 1:24,000. See the Lineage and Process Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

Lineage:
Source Information:
Citation Information:
Originator: NOAA
Publication Date: 2001
Title: RHODE ISLAND, CONNECTICUT AND NEW YORK - NEW JERSEY ENVIRONMENTAL SENSITIVITY INDEX ATLAS
Geospatial Data Presentation Form: VECTOR DIGITAL DATA
Other Citation Details:
NATIONAL OCEAN SERVICE HAZARDOUS MATERIAL RESPONSE DIVISION, 7600 SAND POINT WAY, SEATTLE, WA 98115-6349
Source Scale Denominator: 24,000
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 SURVEY
Source_Citation_Abbreviation: NONE
Source_Contribution: HYDRO INFORMATION
Source_Information:

Source_Citation:
Citation_Information:
Originator: NOAA, NOS, NATIONAL GEODETIC SURVEY (NGS)
Publication_Date: 20070810
Title: SHORELINE MAPPING PROGRAM OF SOUTH SHORE OF LONG ISLAND SOUND, NY
Geospatial_Data_Presentation_Form: VECTOR DIGITAL DATA
Other_Citation_Details: HTTP://WWW.NGS.NOAA.GOV/NEWSYS_IMS/SHORELINE/INDEX.CFM
(Contact the site webmaster if this URL is no longer active.)
Type_of_Source_Media: ONLINE
Source_Time_Period_of_Content:
Time_Period_Information:
Range_of_Dates/Times:
Beginning_Date: 20041028
Ending_Date: 20050321
Source_Currentness_Reference: DATE OF SURVEY
Source_Citation_Abbreviation: NONE
Source_Contribution: HYDRO INFORMATION
Source_Information:

Source_Citation:
Citation_Information:
Originator: RESEARCH PLANNING, INC.
Publication_Date: 2007
Title: INDEX GRID
Geospatial_Data_Presentation_Form: VECTOR DIGITAL DATA
Other_Citation_Details: UNPUBLISHED
Source_Scale_Denominator: 24,000
Type_of_Source_Media: DISC
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 2007
Source_Currentness_Reference: DATE OF PUBLICATION
Source_Citation_Abbreviation: NONE
Source_Contribution: HYDRO INFORMATION
Source_Information:

Source_Citation:
Citation_Information:
Originator: RESEARCH PLANNING, INC.
Publication_Date: 20070831
Title: OVERFLIGHT OBLIQUES
Geospatial_Data_Presentation_Form: PHOTOGRAPH
Other_Citation_Details: UNPUBLISHED
Source_Scale_Denominator: VARIES
Type_of_Source_Media: DIGITAL PHOTO
Source_Time_Period_of_Content:
Time_Period_Information:
Range_of_Dates/Times:
Beginning_Date: 20070827
Ending_Date: 20070831
The shoreline was derived from digital coastline data originating from the U.S. Geological Survey (USGS) National Wetlands Inventory and NOAA's Shoreline Mapping Program of the south shore of Long Island Sound, NY. Minor gaps in this data set were digitized from USGS digital raster graphics (DRGs) and Google Earth satellite photography. In some cases, gross shoreline changes were digitized by Research Planning, Inc. when discerned through ESI classification overflight photography. Shoreline from the NOAA ESI atlas for Rhode Island, Connecticut & New York-New Jersey Metropolitan Area was used for areas outside of Long Island. The above digital and/or hardcopy sources were compiled to create the HYDRO data layer. Depending on the type of source data, three general approaches are used for compiling the data layer: 1) hardcopy maps are digitized at their source scale; 2) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources; and/or 3) overflight changes are digitized from the scanned and registered hardcopy field maps or aerial photography. After the initial shoreline classification, these data are edgematched and checked for logical consistency errors. Review maps are plotted at 1:24,000 scale for verification of polygonal and linear attributes. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, interviews are conducted to review the maps. If necessary, edits to the HYDRO data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

Process_Date: 200903
Process_Contact:
Contact_Information:
Contact_Organization.Primary:
Contact_Organization: NOAA, Office of Response and Restoration
Contact_Person: Jill Petersen
Contact_Address:
Address_Type: Physical address
Address: 7600 Sand Point Way, N.E.
City: Seattle
State_orProvince: Washington
Postal_Code: 98115-6349
Contact_Voice_Telephone: (206) 526-6944
Contact_Facsimile_Telephone: (206) 526-6329
Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: GT-polygon composed of chains
Point_and_Vector_Object_Count: 4984
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Area point
Point_and_Vector_Object_Count: 4983
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Complete chain
Point_and_Vector_Object_Count: 17903
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Link
Point_and_Vector_Object_Count: 393204
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Label Point
Point_and_Vector_Object_Count: 132
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Node, planar graph
Point and Vector Object Count: 17903

Spatial_Reference_Information:
   Horizontal_Coordinate_System_Definition:
      Geographic:
         Latitude_Resolution: 0.0000001
         Longitude_Resolution: 0.0000001
         Geographic_Coordinate_Units: Decimal degrees
      Geodetic_Model:
         Horizontal_Datum_Name: North American Datum of 1927
         Ellipsoid_Name: Clark 1866
         Semi-major_Axis: 6378206.40000
         Denominator_of_Flattening_Ratio: 294.978698

Entity and Attribute Information:
   Overview_Description:
      In addition to the geographic data layers, one relational attribute or data table, SOURCES, is used to store the source data information in the ESI data structure. The geographic data layer containing resource information (in this case, HYDRO) is linked to the SOURCES table using the SOURCE_ID. The entity-relationship diagram describes relationships between attribute tables in the ESI data structure.
   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: B
               Enumerated_Domain_Value_Definition: Breakwater
               Enumerated_Domain_Value_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.
         Attribute_Domain_Values:
            Enumerated_Domain:
               Enumerated_Domain_Value: I
               Enumerated_Domain_Value_Definition: Index
               Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
         Attribute_Domain_Values:
            Enumerated_Domain:
               Enumerated_Domain_Value: S
               Enumerated_Domain_Value_Definition: Shoreline
               Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
**Attribute Label:** SOURCE_ID  
**Attribute Definition:** Spatial data source for the data layer lines that link 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:** 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.  
**Attribute Domain Values:**  
**Enumerated Domain:**  
- **Enumerated Domain Value:** L  
  **Enumerated Domain Value Definition:** Land  
  **Enumerated Domain Value Definition Source:** Research Planning, Inc.  
- **Enumerated Domain Value:** W  
  **Enumerated Domain Value Definition:** Water  
  **Enumerated Domain Value 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.  

**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; G_SOURCE and S_SOURCE in the BIORES table; and SOURCE_ID in the ESI and HYDRO data layers.  
**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:
      Unrepresentable Domain: Acceptable values change from atlas to atlas.

Attribute:
   Attribute Label: DATE_PUB
   Attribute Definition: Date of source material, publication, or date of personal communication with expert source.
   Attribute Definition Source: Research Planning, Inc.
   Attribute Domain Values:
      Enumerated Domain:
         Enumerated Domain Value: YYYYMM
         Enumerated Domain Value Definition: YYYY for year and optionally MM for month
         Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:
   Attribute Label: TITLE
   Attribute Definition: Title of source material or data.
   Attribute Definition Source: Research Planning, Inc.
   Attribute Domain Values:
      Unrepresentable Domain: Acceptable values change from atlas to atlas.

Attribute:
   Attribute Label: DATA_FORMAT
   Attribute Definition: The format of the source material.
   Attribute Definition Source: Research Planning, Inc.
   Attribute Domain Values:
      Unrepresentable Domain: Acceptable values change from atlas to atlas.

Attribute:
   Attribute Label: PUBLICATION
   Attribute Definition: Additional citation information.
   Attribute Definition Source: Research Planning, Inc.
   Attribute Domain Values:
      Unrepresentable Domain: Acceptable values change from atlas to atlas.

Attribute:
   Attribute Label: SCALE
   Attribute Definition: Description of the source scale.
   Attribute Definition Source: Research Planning, Inc.
   Attribute Domain Values:
      Unrepresentable Domain: Acceptable values change from atlas to atlas.

Attribute:
   Attribute Label: TIME_PERIOD
   Attribute Definition:
      Date(s) of data collection that the source material is based upon.
   Attribute Definition Source: Research Planning, Inc.
   Attribute Domain Values:
      Unrepresentable Domain: Acceptable values change from atlas to atlas.

Distribution Information:
Distributor:
Contact Information:
   Contact Person Primary:
Contact_Person: John Kaperick  
Contact_Organization: NOAA, Office of Response and Restoration  

Contact_Address:  
  Address_Type: Physical Address  
  Address: 7600 Sand Point Way N.E.  
  City: Seattle  
  State_or_Province: Washington  
  Postal_Code: 98115-6349  

Contact_Voice_Telephone: (206) 526-6400  
Contact_Facsimile_Telephone: (206) 526-6329  

Resource_Description: ESI Atlas for Long Island  

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

Custom_Order_Process:  
Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to the widest community of GIS/mapping users. Distribution formats include Geodatabase; ARC export, MOSS, and Shape files; and MARPLOT map folders. An ArcMap .mxd file, an ArcView 3.x ESI project, and an ESI Viewer product for use with the MARPLOT data are also included on the distribution CDs/DVDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.  

Metadata_Reference_Information:  
Metadata_Date: 200905  
Metadata_Review_Date: 200905  
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 2.9.8 on Thu May 28 13:24:29 2009
Coastal Resources Atlas: Long Island: ESI (Environmental Sensitivity Index Shoreline Types - Lines and Polygons)

Metadata:

- Identification Information
- Data Quality Information
- Spatial Data Organization Information
- Spatial Reference Information
- Entity and Attribute Information
- Distribution Information
- Metadata Reference Information

Identification Information:

Citation:

Citation Information:

Originator:

Publication Date: 200903

Title:
Coastal Resources Atlas: Long Island: ESI (Environmental Sensitivity Index Shoreline Types - Lines and Polygons)

Edition: First

Geospatial Data Presentation Form: Vector digital data

Series Information:
Series Name: NONE
Issue Identification: Long Island, New York

Publication Information:
Publication Place: Seattle, Washington
Publisher:

Other Citation Details:

Description:

Abstract:
This data set contains vector lines and polygons representing the shoreline and coastal habitats of Long Island, New York, classified according to the Environmental Sensitivity Index (ESI) classification system. This data set comprises a portion of the ESI data for Long Island. 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:** 1981
- **Ending_Date:** 2007

**Currentness_Reference:**
The data were compiled during 2007-2009. The currentness dates for the data range from 1981 to 2007 and are documented in the Lineage section.

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

**Spatial_Domain:**
**Bounding_Coordinates:**
- **West_BoundingCoordinate:** 73.75000
- **East_BoundingCoordinate:** 71.79000
- **North_BoundingCoordinate:** 41.37500
- **South_BoundingCoordinate:** 40.50000

**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 habitats

**Place:**
- **Place_Keyword_Thesaurus:** None
- **Place_Keyword:** Long Island
- **Place_Keyword:** New York

**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 Long Island ESI data.

**Data_Set_Credit:**
This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Emergency Response Division, Seattle, Washington and Department of Homeland Security, U.S. Coast Guard, Office of Incident Management and
Native Data Set Environment:
The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO® (version 9.2) and SQL SERVER® (version 2000). The hardware configuration is PCs with Windows Operating System (2000/XP/2003). The Spatial Data Organization Information section refers only to the source files in the ARC export format. The following files are included in the data set: birds.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, mgt.e00, reptiles.e00, soc_econ.e00, t_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biores, 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 coastal shorelines and habitats classified according to the Environmental Sensitivity Index (ESI) classification system.

Positional Accuracy:

Horizontal Positional Accuracy:
Horizontal Positional Accuracy Report:
The spatial location of the ESI shoreline was developed from pre-existing digital sources and reflects the positional accuracy of these original data. The horizontal positional accuracy of the 1:24,000 USGS topographic quads should conform to National Map Accuracy Standards at scales of 1:24,000. The minimum mapping unit (MMU) of the actual shoreline classification segments is estimated at 50 meters where mapping is conducted using 1:24,000 hardcopy fieldmaps. Field verification has shown that the absolute positional accuracy of breaks between shoreline ESI types with a 95-percent error bound is approximately 58 meters. See the Lineage and Process Description sections for more information on the original data sources used in this atlas and how these data were integrated or manipulated to create the final data set.

Lineage:

Source Information:
Citation Information:
Originator: NOAA, NOS, NATIONAL GEODETIC SURVEY (NGS)
Publication Date: 20070810
Title: SHORELINE MAPPING PROGRAM OF SOUTH SHORE OF LONG ISLAND SOUND, NY
Geospatial Data Presentation Form: VECTOR DIGITAL DATA
Long Island: ESI Shoreline Types

Other Citation Details:
HTTP://WWW.NGS.NOAA.GOV/NEWSYS_IMS/SHORELINE/INDEX.CFM
(Contact the site webmaster if this URL is no longer active.)

Type of Source Media: ONLINE
Source Time Period of Content:
Time Period Information:
Range of Dates/Times:
  Beginning Date: 20041028
  Ending Date: 20050321
Source Currentness Reference: DATE OF SURVEY
Source Citation Abbreviation: NONE
Source Contribution: ESI INFORMATION
Source Information:
Source Citation:
  Citation Information:
    Originator: RESEARCH PLANNING, INC.
    Publication Date: 2007
    Title: INDEX GRID
    Geospatial Data Presentation Form: VECTOR DIGITAL DATA
    Other Citation Details: UNPUBLISHED
  Source Scale Denominator: 24,000
Type of Source Media: DISC
Source Time Period of Content:
Time Period Information:
  Single Date/Time:
    Calendar Date: 2007
Source Currentness Reference: DATE OF PUBLICATION
Source Citation Abbreviation: NONE
Source Contribution: ESI INFORMATION
Source Information:
Source Citation:
  Citation Information:
    Originator: RESEARCH PLANNING, INC.
    Publication Date: 20070831
    Title: OVERFLIGHT OBLIQUES
    Geospatial Data Presentation Form: PHOTOGRAPH
    Other Citation Details: UNPUBLISHED
  Source Scale Denominator: VARIES
Type of Source Media: DIGITAL PHOTO
Source Time Period of Content:
Time Period Information:
  Range of Dates/Times:
    Beginning Date: 20070827
    Ending Date: 20070831
Source Currentness Reference: DATE OF SURVEY
Source Citation Abbreviation: NONE
Source Contribution: ESI INFORMATION
Source Information:
Source Citation:
  Citation Information:
    Originator: U.S. FISH & WILDLIFE SERVICE (USFWS)
    Publication Date: 2004
    Title: NATIONAL WETLANDS INVENTORY
    Geospatial Data Presentation Form: VECTOR DIGITAL DATA
    Other Citation Details: USFWS, DIVISION OF HABITAT AND RESOURCE CONSERVATION
  Source Scale Denominator: 24,000
Type of Source Media: ONLINE
Overflights of the Long Island shoreline occurred between August 27 and August 31 of 2007. Flights were conducted using fixed-wing aircraft flying at slow air speeds at altitudes of 400-600 feet. All flights were scheduled to maximize optimal low tide conditions, flying approximately 2.5 hours preceding and 2.5 hours following peak low tides. During these flights, a geomorphologist utilized a digital SLR camera to capture a continuous set of overlapping oblique images of the intertidal zone. Throughout the overflight mission, a Global Positioning System (GPS) receiver collected and recorded flight path data. Following completion of the overflight mission, all digital photographs of the intertidal zone were georeferenced using photo-mapping software and the GPS flight path data. With Geographic Information System (GIS) software, a geomorphologist reviewed each georeferenced oblique image of the intertidal zone and assigned ESI rankings to the digital shoreline. Where appropriate, multiple rankings were assigned.

The above digital and/or hardcopy sources were compiled to create the ESI data layer. Depending on the type of source data, four general approaches are used for compiling the data.
layer: 1) hardcopy maps are digitized at their source scale; 2) digital data layers are evaluated and used "as is" or integrated with the other data sources; 3) overflight classifications are digitized from the scanned and registered hardcopy field maps; and/or 4) classifications are interpreted from oblique GPS-referenced photography or video taken during overflights. After the initial shoreline classification, these data are edgematched and checked for logical consistency errors. Review maps are plotted at 1:24,000 scale for verification of polygonal and linear attributes. (See the Lineage section for additional information on the type of source data for this data layer.) The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, interviews are conducted to review the maps. If necessary, edits to the ESI data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

**Process Date:** 200903
**Process Contact:**

**Contact Information:**

- **Contact Organization Primary:**
  - **Contact Organization:** NOAA, Office of Response and Restoration
  - **Contact Person:** Jill Petersen

- **Contact Address:**
  - **Address Type:** Physical address
  - **Address:** 7600 Sand Point Way, N.E.
  - **City:** Seattle
  - **State or Province:** Washington
  - **Postal Code:** 98115-6349

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

**Spatial Data Organization Information:**

- **Direct Spatial Reference Method:** Vector
- **Point and Vector Object Information:**
  - **SDTS Terms Description:**
    - **SDTS Point and Vector Object Type:** GT-polygon composed of chains
    - **Point and Vector Object Count:** 6200
  - **SDTS Terms Description:**
    - **SDTS Point and Vector Object Type:** Area point
    - **Point and Vector Object Count:** 6199
  - **SDTS Terms Description:**
    - **SDTS Point and Vector Object Type:** Complete chain
    - **Point and Vector Object Count:** 20048
  - **SDTS Terms Description:**
    - **SDTS Point and Vector Object Type:** Link
    - **Point and Vector Object Count:** 490219
  - **SDTS Terms Description:**
    - **SDTS Point and Vector Object Type:** Node, planar graph
    - **Point and Vector Object Count:** 17793

**Spatial Reference Information:**

- **Horizontal Coordinate System Definition:**
  - **Geographic:**
    - **Latitude Resolution:** 0.0000001
    - **Longitude Resolution:** 0.0000001
  - **Geographic Coordinate Units:** Decimal degrees
  - **Geodetic Model:**
Horizontal_Datum_Name: North American Datum of 1927
Ellipsoid_Name: Clark 1866
Semi-major_Axis: 6378206.400000
Denominator_of_Flattening_Ratio: 294.978698

Entity_and_Attribute_Information:
Overview_Description:
In addition to the geographic data layers, one relational attribute or data table, SOURCES, is used to store the source data information in the ESI data structure. The geographic data layer containing resource information (in this case, ESI) is linked to the SOURCES table using the SOURCE_ID. The entity-relationship diagram describes the relationships between the attribute tables in the ESI data structure.

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 affects the persistence of stranded oil. The need for shoreline cleanup activities is determined, in part, by the slowness of natural processes in removal of oil stranded on the shoreline. The potential for biological injury, and ease of cleanup of spilled oil, are also important factors in the ESI ranking. Generally speaking, areas exposed to high levels of physical energy, such as wave action and tidal currents, and low biological activity rank low on the scale, whereas sheltered areas with associated high biological activity have the highest ranking.
Attribute_Definition_Source: 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_Value: 2A
Enumerated_Domain_Value_Definition: Exposed Wave-cut Platforms in Mud
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain_Value: 2B

Enumerated_Domain_Value: 3A
Enumerated_Domain_Value_Definition: Exposed, Eroding Cliffs in Mud
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain_Value_Definition: Exposed Scarps and Steep Slopes in Mud
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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

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

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

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

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

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

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

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

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

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

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: 9B
Enumerated_Domain_Value_Definition: Vegetated Low Banks
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
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<tr>
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Attribute:
  **Attribute Label:** SOURCE_ID
  **Attribute Definition:** Spatial data source for the data layer lines that link 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:** 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.
    - **Enumerated Domain Value:** U
      - **Enumerated Domain Value Definition:** Unranked
        - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

**Detailed Description:**

**Entity Type:**
  **Entity Type Label:** ESI.PAT
  **Entity Type Definition:** The ESI.PAT table contains attribute information for the vector polygons representing polygonal features with ESI classification.
  **Entity Type Definition Source:** Research Planning, Inc.

Attribute:
  **Attribute Label:** ESI
  **Attribute Definition:** The item ESI contains values representing the ESI polygon type.
  **Attribute Definition Source:** Research Planning, Inc.
  **Attribute Domain Values:**
  - **Enumerated Domain:**
    - **Enumerated Domain Value:** 7
      - **Enumerated Domain Value Definition:** Exposed Tidal Flats
        - **Enumerated Domain Value Definition Source:** Research Planning, Inc.
    - **Enumerated Domain Value:** 9A
      - **Enumerated Domain Value Definition:** Sheltered Tidal Flats
        - **Enumerated Domain Value Definition Source:** Research Planning, Inc.
    - **Enumerated Domain Value:** 10A
      - **Enumerated Domain Value Definition:** Salt- and Brackish-water marshes
        - **Enumerated Domain Value Definition Source:** Research Planning, Inc.
    - **Enumerated Domain Value:** 10B
      - **Enumerated Domain Value Definition:** Freshwater Marshes
        - **Enumerated Domain Value Definition Source:** Research Planning, Inc.
    - **Enumerated Domain Value:** 10C
      - **Enumerated Domain Value Definition:** Swamps
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:
  Enumerated_Domain_Value: 10D
  Enumerated_Domain_Value_Definition: Scrub-shrub Wetlands
  Enumerated_Domain_Value_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.

Attribute_Domain_Values:

Enumerated_Domain:
  Enumerated_Domain_Value: L
  Enumerated_Domain_Value_Definition: Land
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:
  Enumerated_Domain_Value: W
  Enumerated_Domain_Value_Definition: Water
  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.

Attribute_Domain_Values:

Enumerated_Domain:
  Enumerated_Domain_Value: U
  Enumerated_Domain_Value_Definition: Unranked
  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; G_SOURCE and S_SOURCE in the BIORES table; and SOURCE_ID in the ESI and HYDRO data layers.
  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:
Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:
Attribute_Label: DATE_PUB
Attribute_Definition: Date of source material, publication, or date of personal communication with expert source.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
  Enumerated_Domain_Value: YYYYMM
  Enumerated_Domain_Value_Definition: YYYY for year and optionally MM for month
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: TITLE
Attribute_Definition: Title of source material or data.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:
Attribute_Label: DATA_FORMAT
Attribute_Definition: The format of the source material.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:
Attribute_Label: PUBLICATION
Attribute_Definition: Additional citation information.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:
Attribute_Label: SCALE
Attribute_Definition: Description of the source scale.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:
Attribute_Label: TIME_PERIOD
Attribute_Definition: Date(s) of data collection that the source material is based upon.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Unrepresentable_Domain: Acceptable values change from atlas to atlas.

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

Resource_Description: ESI Atlas for Long Island

Distribution_ Liability:

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

Custom_Order_Process:

Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to the widest community of GIS/mapping users. Distribution formats include Geodatabase; ARC export, MOSS, and Shape files; and MARPLOT map folders. An ArcMap .mxd file, an ArcView 3.x ESI project, and an ESI_Viewer product for use with the MARPLOT data are also included on the distribution CDs/DVDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

Metadata_Reference_Information:

Metadata_Date: 200905
Metadata_Review_Date: 200905
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 2.9.8 on Thu May 28 14:14:46 2009
Coastal Resources Atlas: Long Island: INDEX (Index Polygons)

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

Metadata:

- Identification Information
- Data Quality Information
- Spatial Data Organization Information
- Spatial Reference Information
- Entity and Attribute Information
- Distribution Information
- Metadata Reference Information

Identification Information:

Citation Information:

Originator:

Publication Date: 200903
Title: Coastal Resources Atlas: Long Island: INDEX (Index Polygons)
Edition: First
Geospatial Data Presentation Form: Vector digital data

Series Information:

Series Name: NONE
Issue Identification: Long Island, New York

Publication Information:

Publication Place: Seattle, Washington
Publisher:

Other Citation Details:

Description:

Abstract:
This data set contains vector polygons representing the boundaries of all hardcopy cartographic products and other map and digital data boundaries used in the creation
of the Environmental Sensitivity Index (ESI) for Long Island, New York. This data set comprises a portion of the ESI data for Long Island. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources.

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

**Time_Period_of_Content:**
**Time_Period_Information:**
- **Single_Date/Time:**
  - **Calendar_Date:** 2007
**Currentness_Reference:**
The data were compiled during 2007-2009. The currentness date for the data is 2007 and is documented in the Lineage section.

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

**Spatial_Domain:**
- **Bounding_Coordinates:**
  - **West_BoundingCoordinate:** 73.75000
  - **East_BoundingCoordinate:** 71.79000
  - **North_BoundingCoordinate:** 41.37500
  - **South_BoundingCoordinate:** 40.50000

**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:** Long Island
  - **Place_Keyword:** New York

**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 Long Island 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, Emergency Response Division, Seattle, Washington and Department of Homeland Security, U.S. Coast Guard, Office of Incident Management and Preparedness, Washington, D.C.

**Native_Data_Set_Environment:**

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO® (version 9.2) and SQL SERVER® (version 2000). The hardware configuration is PCs with Windows Operating System (2000/XP/2003). The Spatial_Data_Organization_Information section refers only to the source files in the ARC export format. The following files are included in the data set: birds.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, mgt.e00, reptiles.e00, socecon.e00, t_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biorees, breed, breed_dt, seasonal, soc_dat, soc_lut, sources, species, and status.

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**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® 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 all hardcopy cartographic products as part of the Environmental Sensitivity Index (ESI) for Long Island.

**Positional_Accuracy:**
Horizontal Positional Accuracy:

Horizontal Positional Accuracy Report:
The index polygons in this data layer were generated in ArcInfo from the coordinates of the USGS 1:24,000 topographic map corners. Some small amount of positional error may be present along the arcs forming the boundaries of these polygons, particularly away from the polygon corners. Some boundaries were developed from pre-existing digital and hardcopy sources and reflect the positional accuracy of these original data. See the Lineage and Process_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

Lineage:

Source Information:

Source Citation:

Citation Information:

Originator: RESEARCH PLANNING, INC.
Publication Date: 2007
Title: INDEX GRID
Geospatial Data Presentation Form: VECTOR DIGITAL DATA
Other Citation Details: UNPUBLISHED

Source Scale Denominator: 24,000
Type of Source Media: DISC
Source Time Period of Content:

Time Period Information:

Single Date/Time:

Calendar Date: 2007

Source Currentness Reference: DATE OF PUBLICATION
Source Citation Abbreviation: NONE
Source Contribution: INDEX INFORMATION

Process Step:

Process Description:

Primarily, 1:24,000 U.S Geological Survey (USGS) topographic maps were used to provide boundaries for cartographic products. In some cases, the polygons represent USGS topographic maps that were re-tiled, moved, or extended to provide better cartographic coverage of the study area.

Process Date: 200903

Process Contact:

Contact Information:

Contact Organization Primary:

Contact Organization: NOAA, Office of Response and Restoration
Contact Person: Jill Petersen

Contact Address:

Address Type: Physical address
Address: 7600 Sand Point Way, N.E.
City: Seattle
State or Province: Washington
Postal Code: 98115-6349

Contact Voice Telephone: (206) 526-6944
Contact Facsimile Telephone: (206) 526-6329
Contact Electronic Mail Address: Jill.Petersen@noaa.gov
Spatial Data Organization Information:
  Direct Spatial Reference Method: Vector
Point and Vector Object Information:
  SDTS Terms Description:
    SDTS Point and Vector Object Type: GT-polygon composed of chains
    Point and Vector Object Count: 56
  SDTS Terms Description:
    SDTS Point and Vector Object Type: Area point
    Point and Vector Object Count: 55
  SDTS Terms Description:
    SDTS Point and Vector Object Type: Complete chain
    Point and Vector Object Count: 163
  SDTS Terms Description:
    SDTS Point and Vector Object Type: Link
    Point and Vector Object Count: 2442
  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: 0.0000001
      Longitude Resolution: 0.0000001
      Geographic Coordinate Units: Decimal degrees
    Geodetic Model:
      Horizontal Datum Name: North American Datum of 1927
      Ellipsoid Name: Clark 1866
      Semi-major Axis: 6378206.400000
      Denominator of Flattening Ratio: 294.978698

Entity and Attribute Information:
  Detailed Description:
  Entity Type:
    Entity Type Label: INDEX.PAT
    Entity Type Definition:
      The INDEX.PAT table contains attribute information for the vector polygons representing the boundaries of the maps and digital data boundaries used in the creation of the ESI.
    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.
Attribute\_Definition\_Source: Research Planning, Inc.
Attribute\_Domain\_Values:
  Range\_Domain:
    Range\_Domain\_Minimum: 1
    Range\_Domain\_Maximum: 44

Attribute:
  Attribute\_Label: TOPO-NAME
  Attribute\_Definition:
    USGS Topographic map name, short description of location, or atlas name.
  Attribute\_Definition\_Source: Research Planning, Inc.
  Attribute\_Domain\_Values:
    Unrepresentable\_Domain: Acceptable values change from atlas to atlas.

Attribute:
  Attribute\_Label: SCALE
  Attribute\_Definition:
    SCALE contains the value of the denominator of the scale at which the map is plotted in the final map product.
  Attribute\_Definition\_Source: Research Planning, Inc.
  Attribute\_Domain\_Values:
    Unrepresentable\_Domain: Acceptable values change from atlas to atlas.

Attribute:
  Attribute\_Label: MAPANGLE
  Attribute\_Definition:
    MAPANGLE contains the value to rotate the final map product so that it is situated straight up and down.
  Attribute\_Definition\_Source: Research Planning, Inc.
  Attribute\_Domain\_Values:
    Range\_Domain:
      Range\_Domain\_Minimum: -0.8550
      Range\_Domain\_Maximum: -2.0270
      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_orProvince: Washington
Postal_Code: 98115-6349
Contact_Voice_Telephone: (206) 526-6400
Contact_Facsimile_Telephone: (206) 526-6329
Resource_Description: ESI Atlas for Long Island
Distribution_Liability:
Although these data have been processed successfully on a computer system at the National
Oceanic and Atmospheric Administration (NOAA), no warranty, expressed or implied, is
made by NOAA regarding the utility of the data on any other system, nor shall the act of
distribution constitute any such warranty. NOAA warrants the delivery of this product in
computer-readable format, and will offer a replacement copy of the product when the
product is determined unreadable by computer-input peripherals, or when the physical
medium is delivered in damaged condition.
Custom_Order_Process:
Contact NOAA for distribution options (see Distributor). ESI data are processed into
multiple formats to make them useful to the widest community of GIS/mapping users. Distribution formats include Geodatabase; ARC export, MOSS, and Shape files; and
MARPLOT map folders. An ArcMap .mxd file, an ArcView 3.x ESI project, and an
ESI_Viewer product for use with the MARPLOT data are also included on the distribution
CDs/DVDs for ease of use of the ESI data. The database files are distributed both in the
NOAA standard relational database format (see NOAA Technical Memorandum NOS
ORCA 115) and in a simplified desktop flat file format. This metadata document includes
information on both of these database formats.

Metadata_Reference_Information:
Metadata_Date: 200905
Metadata_Review_Date: 200905
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
Coastal Resources Atlas: Long Island: MGT (Management Area Polygons)

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

Metadata:

- Identification Information
- Data Quality Information
- Spatial Data Organization Information
- Spatial Reference Information
- Entity and Attribute Information
- Distribution Information
- Metadata Reference Information

Identification Information:

Citation:

Citation Information:

Originator:


Publication Date: 200903
Title: Coastal Resources Atlas: Long Island: MGT (Management Area Polygons)
Edition: First
Geospatial Data Presentation Form: Vector digital data
Series Information:

Series Name: NONE
Issue Identification: Long Island, New York
Publication Information:

Publication Place: Seattle, Washington
Publisher:


Other Citation Details:


Description:

Abstract:

This data set contains human-use data for management areas, National Park Service
properties, State Parks, and National Wildlife Refuges in Long Island, New York. 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 Long Island. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources. See also the SOCECON (Socioeconomic Resource Points and Lines) data layer, part of the larger Long Island 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:** 1997
- **Ending_Date:** 2007

**Currentness_Reference:**
The MGT data were compiled during 2007-2009. The currentness dates for the data range from 1997 to 2007 and are documented in the Lineage section.

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

**Spatial_Domain:**

**Bounding_Coordinates:**
- **West_Bounding_Coordinate:** 73.75000
- **East_Bounding_Coordinate:** 71.79000
- **North_Bounding_Coordinate:** 41.37500
- **South_Bounding_Coordinate:** 40.50000

**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
- **Theme_Keyword:** Human use resources

**Place:**
- **Place_Keyword_Thesaurus:** None
- **Place_Keyword:** Long Island
- **Place_Keyword:** New York

**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 Long Island 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, Emergency Response Division, Seattle, Washington and Department of Homeland Security, U.S. Coast Guard, Office of Incident Management and Preparedness, Washington, D.C.

Native_Data_Set_Environment:

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO® (version 9.2) and SQL SERVER® (version 2000). The hardware configuration is PCs with Windows Operating System (2000/XP/2003). The Spatial_Data_Organization_Information section refers only to the source files in the ARC export format. The following files are included in the data set: birds.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, mgt.e00, reptiles.e00, socecon.e00, t_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biorefs, 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 a synthesis of digital boundaries for management areas. See also the
SOCECON (Socioeconomic Resource Points and Lines) data layer, part of the larger Long
Island ESI database, for additional human-use information. These data do not necessarily
represent all management areas in Long Island.

Positional_Accuracy:

Horizontal_Positional_Accuracy_Report:
Spatial components for the human-use data layers can come from expert
interviews, hardcopy, or digital sources. Most of the spatial components of the
human-use data layers are developed from pre-existing digital or hardcopy
sources and reflect the positional accuracy of these original data. Some of the
spatial components of the human-use data layers are compiled on hardcopy
base maps with a scale of 1:24,000. See the Lineage and Process_Description
sections for more information on the original data source and how these data
were integrated or manipulated to create the final data set.

Lineage:

Source_Information:
Source_Citation:

Citation_Information:
Originator: FIRE ISLAND NATIONAL PARK SERVICE
Publication_Date: 19971016
Title: BOUNDARY OF WILLIAM FLOYD ESTATE, GPS SWAT
TEAM, 1997
Geospatial_Data_Presentation_Form: VECTOR DIGITAL DATA
Other_Citation_Details: UNPUBLISHED
Source_Scale_Denominator: VARIES
Type_of_Source_Media: hard drive
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 1997
Source_Currentness_Reference: DATE OF PUBLICATION
Source_CitationAbbreviation: NONE
Source_Contribution: MGT INFORMATION
Source_Information:
Source_Citation:

Citation_Information:
Originator: FIRE ISLAND NATIONAL PARK SERVICE
Publication_Date: 2006
Title: NPS-OWNED LAND ON FIRE ISLAND (OTIS PIKE
WILDERNESS AREA)
Geospatial_Data_Presentation_Form: VECTOR DIGITAL DATA &
HARDCOPY MAP
Other_Citation_Details: FIRE ISLAND NATIONAL PARK SERVICE
BROCHURE
BOUNDARIES
Geospatial_Data_Presentation_Form: VECTOR DIGITAL DATA
Other_Citation_Details: NYS DEPARTMENT OF STATE, ALBANY, NY
Source_Scale_Denominator: 24,000
Type_of_Source_Media: ONLINE
Source_Time_Period_of_Content:
  Time_Period_Information:
    Single_Date/Time:
      Calendar_Date: 2006
Source_Currentness_Reference: DATE OF PUBLICATION
Source_Citation Abbreviation: NONE
Source_Contribution: MGT INFORMATION
Source_Information:
Source_Citation:
  Citation_Information:
    Originator:
      NYS OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION (OPRHP)
Publication_Date: 2007
Title: STATE PARK BOUNDARIES: OPRHP07.SHP
Geospatial_Data_Presentation_Form: VECTOR DIGITAL DATA
Other_Citation_Details: NYS OPRHP, ALBANY, NY
Source_Scale_Denominator: 24,000
Type_of_Source_Media: EMAIL
Source_Time_Period_of_Content:
  Time_Period_Information:
    Single_Date/Time:
      Calendar_Date: 2007
Source_Currentness_Reference: DATE OF PUBLICATION
Source_Citation Abbreviation: NONE
Source_Contribution: MGT INFORMATION
Source_Information:
Source_Citation:
  Citation_Information:
    Originator:
      USFWS, REGION 9, INFORMATION TECHNOLOGY MANAGEMENT, BRANCH OF DATA AND SYSTEMS SERVICES
Publication_Date: 2001
Title: USFWS REVISED REFUGE BOUNDARIES
Geospatial_Data_Presentation_Form: VECTOR DIGITAL DATA
Other_Citation_Details: REGION 9, INFORMATION RESOURCE MANAGEMENT, USFWS, DENVER, CO
Source_Scale_Denominator: 24,000
Type_of_Source_Media: ONLINE
Source_Time_Period_of_Content:
  Time_Period_Information:
    Single_Date/Time:
      Calendar_Date: 2001
Source_Currentness_Reference: DATE OF PUBLICATION
Numerous digital coverages were used to depict the management data layer. Data was provided by: U.S. Fish and Wildlife Service (USFWS), New York State Department of State (NYS DOS), New York State Department of Environmental Conservation (NYS DEC), New York State Office of Parks, Recreation and Historic Preservation (NYS OPRHP), and others. See the Lineage Section of the metadata document for a detailed list of data providers. The above digital and/or hardcopy sources were compiled by the project biologist to create the MGT data layer. Depending on the type of source data, three general approaches are used for compiling the data layer: 1) information gathered during initial interviews and from hardcopy sources is compiled onto U.S. Geological Survey (USGS) 1:24,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; and/or 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews is conducted to review the maps. If necessary, edits to the MGT data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

Process Date: 200903

Contact Information:
Contact Organization Primary:
Contact Organization: NOAA, Office of Response and Restoration
Contact Person: Jill Petersen
Contact Address:
Address Type: Physical address
Address: 7600 Sand Point Way, N.E.
City: Seattle
State or Province: Washington
Postal Code: 98115-6349
Contact Voice Telephone: (206) 526-6944
Contact Facsimile Telephone: (206) 526-6329
Contact Electronic Mail Address: Jill.Petersen@noaa.gov

Spatial Data Organization Information:
Direct Spatial Reference Method: Vector
Point and Vector Object Information:
SDTS Terms Description:
SDTS Point and Vector Object Type: GT-polygon composed of chains
Point and Vector Object Count: 488
SDTS Terms Description:
SDTS Point and Vector Object Type: Area point
**Point_and_Vector_Object_Count:** 487

**SDTS_Terms_Description:**
- **SDTS_Point_and_Vector_Object_Type:** Complete chain
- **Point_and_Vector_Object_Count:** 904

**SDTS_Terms_Description:**
- **SDTS_Point_and_Vector_Object_Type:** Link
- **Point_and_Vector_Object_Count:** 88989

**SDTS_Terms_Description:**
- **SDTS_Point_and_Vector_Object_Type:** Node, planar graph
- **Point_and_Vector_Object_Count:** 677

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**Spatial_Reference_Information:**

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

**Geodetic_Model:**
- **Horizontal_Datum_Name:** North American Datum of 1927
- **Ellipsoid_Name:** Clark 1866
- **Semi-major_Axis:** 6378206.400000
- **Denominator_of_Flattening_Ratio:** 294.978698

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**Entity_and_Attribute_Information:**

**Overview_Description:**

In addition to the geographic data layers, two relational attribute or data tables, SOC_DAT and SOURCES, are used to store the complex socioeconomic data in the ESI data structure. The geographic data layer containing socioeconomic data resource information (in this case, MGT) is linked to the Socioeconomic Resources table (SOC_DAT) using the unique ID and the lookup table SOC_LUT, or it can be linked directly using HUNUM. HUNUM is a unique reference number concatenated with the atlas number (for Long Island, the number is 53). ID is a unique combination of the atlas number (53), 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 management areas, national parks, regional or State parks, and wildlife refuges. Note that all attribute information is stored in a series of relational files, described below. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the relationships between
attribute tables in the ESI data structure.

**Entity_Type Definition Source:** 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:** MA
  **Enumerated Domain Value Definition:** Management Area
  **Enumerated Domain Value Definition Source:** Research Planning, Inc.

**Attribute Domain Values:**

**Enumerated Domain:**

- **Enumerated Domain Value:** MR
  **Enumerated Domain Value Definition:** Multiple Records - Signifies that multiple types overlap in the polygon
  **Enumerated Domain Value Definition Source:** Research Planning, Inc.

**Attribute Domain Values:**

**Enumerated Domain:**

- **Enumerated Domain Value:** NP
  **Enumerated Domain Value Definition:** National Park
  **Enumerated Domain Value Definition Source:** Research Planning, Inc.

**Attribute Domain Values:**

**Enumerated Domain:**

- **Enumerated Domain Value:** P
  **Enumerated Domain Value Definition:** Regional or State Park
  **Enumerated Domain Value Definition Source:** Research Planning, Inc.

**Attribute Domain Values:**

**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 (53), 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:** 0531100002
- **Range Domain Maximum:** 0531100497

**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:** 053000001
- **Range Domain Maximum:** 0531000497

**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 Definition Source:** NOAA

**Attribute Domain Values:**

**Range Domain:**

- **Range Domain Minimum:** 053000001
- **Range Domain Maximum:** 0531000497

**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 (53), element number (SOCECON=10; MGT=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:** 0531000001
- **Range Domain Maximum:** 0531100497

**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:** 053000001
- **Range Domain Maximum:** 053000733

**Attribute:**

**Attribute Label:** TYPE
**Attribute Definition:** Identifies the feature type
**Attribute Definition Source:** Research Planning, Inc.

**Attribute Domain Values:**

**Enumerated Domain:**
- **Enumerated Domain Value:** AQUACULTURE
  - **Enumerated Domain Value Definition:** Aquaculture site
  - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

**Attribute Domain Values:**

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

**Attribute Domain Values:**

**Enumerated Domain:**
- **Enumerated Domain Value:** COMMERCIAL FISHING
  - **Enumerated Domain Value Definition:** Commercial Fishing
  - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

**Attribute Domain Values:**

**Enumerated Domain:**
- **Enumerated Domain Value:** HISTORICAL SITE
  - **Enumerated Domain Value Definition:** Historical Site
  - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

**Attribute Domain Values:**

**Enumerated Domain:**
- **Enumerated Domain Value:** MANAGEMENT AREA
  - **Enumerated Domain Value Definition:** Management Area
  - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

**Attribute Domain Values:**

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

**Attribute Domain Values:**

**Enumerated Domain:**
- **Enumerated Domain Value:** NATIONAL PARK
  - **Enumerated Domain Value Definition:** National Park
  - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

**Attribute Domain Values:**

**Enumerated Domain:**
- **Enumerated Domain Value:** RECREATIONAL FISHING
  - **Enumerated Domain Value Definition:** Recreational Fishing
Attribute:  
Attribute_Label: NAME  
Attribute_Definition: The feature name  
Attribute_Definition_Source: Research Planning, Inc.  
Attribute_Domain_Values:  
Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:  
Attribute_Label: CONTACT  
 Attribute_Definition: Contact person or entity  
Attribute_Definition_Source: Research Planning, Inc.  
Attribute_Domain_Values:  
Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:  
Attribute_Label: PHONE  
Attribute_Definition: Contact telephone number  
Attribute_Definition_Source: Research Planning, Inc.  
Attribute_Domain_Values:  
Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:  
Attribute_Label: G_SOURCE  
Attribute_Definition: Geographic source identifier that links records in the SOC_DAT data table to records in the SOURCES data table.  
Attribute_Definition_Source: 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 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; G_SOURCE and S_SOURCE in the BIORES table; and SOURCE_ID in the ESI and HYDRO data layers.
- 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:
  - Unrepresentable Domain: Acceptable values change from atlas to atlas.

Attribute:
- Attribute Label: DATE_PUB
- Attribute Definition: Date of source material, publication, or date of personal communication with expert source.
- Attribute Definition Source: Research Planning, Inc.
- Attribute Domain Values:
  - Enumerated Domain:
    - Enumerated Domain Value: YYYYMM
    - Enumerated Domain Value Definition: YYYY for year and optionally MM for month
    - Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:
- Attribute Label: TITLE
- Attribute Definition: Title of source material or data.
- Attribute Definition Source: Research Planning, Inc.
- Attribute Domain Values:
  - Unrepresentable Domain: Acceptable values change from atlas to atlas.

Attribute:
- Attribute Label: DATA_FORMAT
- Attribute Definition: The format of the source material.
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values: Unrepresentable Domain: Acceptable values change from atlas to atlas.

Attribute:
Attribute Label: PUBLICATION
Attribute Definition: Additional citation information.
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values: Unrepresentable Domain: Acceptable values change from atlas to atlas.

Attribute:
Attribute Label: SCALE
Attribute Definition: Description of the source scale.
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values: Unrepresentable Domain: Acceptable values change from atlas to atlas.

Attribute:
Attribute Label: TIME_PERIOD
Attribute Definition: Date(s) of data collection that the source material is based upon.
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values: Unrepresentable Domain: Acceptable values change from atlas to atlas.

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

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

Custom Order Process:
Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to the widest community of GIS/mapping users.
Distribution formats include Geodatabase; ARC export, MOSS, and Shape files; and MARPLOT map folders. An ArcMap .mxd file, an ArcView 3.x ESI project, and an ESI_Viewer product for use with the MARPLOT data are also included on the distribution CDs/DVDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

Metadata_Reference_Information:
Metadata_Date: 200905
Metadata_Review_Date: 200905
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 2.9.8 on Thu May 28 13:17:25 2009
Coastal Resources Atlas: Long Island: SOCECON (Socioeconomic Resource Points and Lines)

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

Metadata:

- Identification Information
- Data Quality Information
- Spatial Data Organization Information
- Spatial Reference Information
- Entity and Attribute Information
- Distribution Information
- Metadata Reference Information

Identification Information:

Citation:

Citation Information:

Originator:


Publication Date: 200903

Title:

Coastal Resources Atlas: Long Island: SOCECON (Socioeconomic Resource Points and Lines)

Edition: First

Geospatial Data Presentation Form: Vector digital data

Series Information:

Series Name: NONE

Issue Identification: Long Island, New York

Publication Information:

Publication Place: Seattle, Washington

Publisher:


Other Citation Details:

Description:

Abstract: This data set contains human-use resource data for aquaculture sites, beaches, commercial fishing, historic sites, marinas, recreational fishing areas, and water intakes for Long Island, New York. Vector points and lines in this data set represent the human-use site locations. Location-specific type and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer.

This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for Long Island. 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 Long Island 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: 1998
Ending_Date: 2008

Currentness_Reference: The SOCECON data were compiled during 2007-2009. The currentness dates for the data range from 1998 to 2008 and are documented in the Lineage section.

Status:

Progress: Complete
Maintenance_and_Update_Frequency: None Scheduled

Spatial_Domain:

Bounding_Coordinates:

West_BoundingCoordinate: 73.75000
East_BoundingCoordinate: 71.79000
North_BoundingCoordinate: 41.37500
South_BoundingCoordinate: 40.50000

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
Theme_Keyword: Human use resources

Place:

Place_Keyword_Thesaurus: None
Place_Keyword: Long Island
Place_Keyword: New York
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 Long Island 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, Emergency Response Division, Seattle, Washington and Department of Homeland Security, U.S. Coast Guard, Office of Incident Management and Preparedness, Washington, D.C.

Native Data Set Environment:
The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO® (version 9.2) and SQL SERVER® (version 2000). The hardware configuration is PCs with Windows Operating System (2000/XP/2003). The Spatial Data Organization Information section refers only to the source files in the ARC export format. The following files are included in the data set: birds.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, mgt.e00, reptiles.e00, soccon.e00, t_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biores, 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 a synthesis of expert knowledge and available hardcopy reports and digital data on socio-economic resources. These data do not necessarily represent all human-use sites in Long Island. See also the MGT (Management Area Polygons) data layer, part of the larger Long Island ESI database, for additional human-use information.

Positional_Accuracy:

Horizontal_Positional_Accuracy:

Horizontal_Positional_Accuracy_Report:
Spatial components for the human-use data layers can come from expert interviews, hardcopy, or digital sources. Most of the spatial components of the human-use data layers are developed from pre-existing digital or hardcopy sources and reflect the positional accuracy of these original data. Some of the spatial components of the human-use data layers are compiled on hardcopy base maps with a scale of 1:24,000. See the Lineage and Process_Description sections for more information on the original data source and how these data were integrated or manipulated to create the final data set.

Lineage:
Source_Information:

Source_Citation:

Citation_Information:
Originator: DELORME
Publication_Date: 1998
Title: NEW YORK STATE ATLAS AND GAZETTEER
Geospatial_Data_Presentation_Form: HARDCOPY MAP
Other_Citation_Details: DELORME, YARMOUTH, MAINE

Source_Scale_Denominator: 24,000
Type_of_Source_Media: PAPER
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 1998
Source_Currentness_Reference: DATE OF PUBLICATION
Source_Citation_Abbreviation: NONE
Source_Contribution: SOCECON INFORMATION

Source_Information:
Source_Citation:

Citation_Information:
Originator: DIANE ABELL, NATIONAL PARK SERVICE (NPS)
Publication_Date: 2007
Title: NATURAL AND HISTORIC RESOURCES OF FIRE ISLAND NATIONAL SEASHORE
Geospatial_Data_Presentation_Form: EXPERT KNOWLEDGE
Other_Citation_Details: N/A
Type_of_Source_Media: PERSONAL COMMUNICATION
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 2007
Source_Currentness_Reference: DATE OF COMMUNICATION
Source_Citation_Abbreviation: NONE
Source_Contribution: SOCECON INFORMATION
Source_Information:
Source_Citation:
Citation_Information:
Originator: JOSH THIELE, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYS DEC)
Publication_Date: 2007
Title: DISTRIBUTION AND ABUNDANCE DATA FOR INVERTEBRATES OF LONG ISLAND
Geospatial_Data_Presentation_Form: EXPERT KNOWLEDGE
Other_Citation_Details: UNPUBLISHED
Type_of_Source_Media: PERSONAL COMMUNICATION
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 2007
Source_Currentness_Reference: DATE OF COMMUNICATION
Source_Citation_Abbreviation: NONE
Source_Contribution: SOCECON INFORMATION
Source_Information:
Source_Citation:
Citation_Information:
Originator: MICHAEL BILECKI, NPS
Publication_Date: 2008
Title: MARINAS ON FIRE ISLAND NATIONAL SEASHORE
Geospatial_Data_Presentation_Form: EXPERT KNOWLEDGE
Other_Citation_Details: N/A
Type_of_Source_Media: PERSONAL COMMUNICATION
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 2008
Source_Currentness_Reference: DATE OF COMMUNICATION
Source_Citation_Abbreviation: NONE
Source_Contribution: SOCECON INFORMATION
Source_Information:
Source_Citation:
Citation_Information:
Originator: NYS DEC
Publication_Date: 2007
Title: NYS DEC LOCATIONS OF SHELLFISH AQUACULTURE
SITES INCLUDING HATCHERIES, PRIVATELY CONTROLLED UNDERWATER LANDS AND TEMPORARY MARINE AREA USE ASSIGNMENTS

Geospatial Data Presentation Form: HARDCOPY MAP
Other Citation Details: N/A
Type of Source Media: PAPER
Source Time Period of Content:
Time Period Information:
Single Date/Time:
Calendar Date: 2006
Source Currentness Reference: DATE OF COMMUNICATION
Source Citation Abbreviation: NONE
Source Contribution: SOCECON INFORMATION
Source Information:
Source Citation:
Citation Information:
Originator: NYS DEC
Publication Date: 2007
Title: LOCATIONS OF SHELLFISH AQUACULTURE SITES WITHIN GREAT SOUTH BAY
Geospatial Data Presentation Form: HARDCOPY MAP
Other Citation Details: N/A

Type of Source Media: PAPER
Source Time Period of Content:
Time Period Information:
Single Date/Time:
Calendar Date: 2007
Source Currentness Reference: DATE OF COMMUNICATION
Source Citation Abbreviation: NONE
Source Contribution: SOCECON INFORMATION
Source Information:
Source Citation:
Citation Information:
Originator: NYS DEPT. OF STATE (DOS)
Publication Date: 2004
Title: SIGNIFICANT COASTAL FISH AND WILDLIFE HABITATS
Geospatial Data Presentation Form: DOCUMENT
Other Citation Details: NYS DOS, ALBANY, NY

Type of Source Media: ONLINE
Source Time Period of Content:
Time Period Information:
Single Date/Time:
Calendar Date: 2004
Source Currentness Reference: DATE OF PUBLICATION
Source Citation Abbreviation: NONE
Source Contribution: SOCECON INFORMATION
Source Information:
Source Citation:
Citation Information:
Originator: NYS DOS AND U.S. FISH AND WILDLIFE SERVICE (USFWS)
Publication Date: 1998
Title: MOLLUSCAN SHELLFISH
Geospatial Data Presentation Form: DOCUMENT
Other Citation Details:
SOUTH SHORE ESTUARY RESERVE COUNCIL
TECHNICAL REPORT SERIES, SOUTHERN NEW ENGLAND-NEW YORK BIGHT COASTAL ECOSYSTEMS PROGRAM
Type of Source Media: ONLINE
Source Time Period of Content:
Time Period Information:
   Single Date/Time:
       Calendar Date: 1998
Source Currentness Reference: DATE OF PUBLICATION
Source Citation Abbreviation: NONE
Source Contribution: SOCECON INFORMATION
Source Information:
Source Citation:
   Citation Information:
       Originator:
           NYS OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION (OPRHP)
Publication Date: 2007
Title: NATIONAL REGISTER SITES: ALLNR.SHP
Geospatial Data Presentation Form: VECTOR DIGITAL DATA
Other Citation Details: NYS OPRHP, ALBANY, NY
Source Scale Denominator: 24,000
Type of Source Media: EMAIL
Source Time Period of Content:
Time Period Information:
   Single Date/Time:
       Calendar Date: 2007
Source Currentness Reference: DATE OF PUBLICATION
Source Citation Abbreviation: NONE
Source Contribution: SOCECON INFORMATION
Source Information:
Source Citation:
   Citation Information:
       Originator:
           USFWS, REGION 9, INFORMATION TECHNOLOGY MANAGEMENT, BRANCH OF DATA AND SYSTEMS SERVICES
Publication Date: 2001
Title: USFWS REVISED REFUGE BOUNDARIES
Geospatial Data Presentation Form: VECTOR DIGITAL DATA
Other Citation Details: REGION 9, INFORMATION RESOURCE MANAGEMENT, USFWS, DENVER, CO
Source Scale Denominator: 24,000
Type of Source Media: ONLINE
Source Time Period of Content:
Time Period Information:
Three main sources of data were used to depict human-use resources for this data layer: 1) personal interviews with resource experts from the New York State Department of Environmental Conservation (NYS DEC); 2) the New York State Office of Parks, Recreation and Historic Preservation (NYS OPRHP); and 3) the National Park Service (NPS). Bridges were located using U.S. Geological Survey (USGS) topographic maps. State borders were taken from the 2001 Rhode Island, Connecticut, New York/New Jersey Metropolitan Area ESI atlas. See the Lineage section for additional information on the type of source data for this data layer.

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

Process_Date: 200903

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_Referencex_Method: Vector
  Point_and_Vector_Object_Information:
SDTS_Terms_Description:
  SDTS_Point_and_Vector_Object_Type: Entity Point
  Point_and_Vector_Object_Count: 550

SDTS_Terms_Description:
  SDTS_Point_and_Vector_Object_Type: Complete chain
  Point_and_Vector_Object_Count: 4

SDTS_Terms_Description:
  SDTS_Point_and_Vector_Object_Type: Link
  Point_and_Vector_Object_Count: 62

SDTS_Terms_Description:
  SDTS_Point_and_Vector_Object_Type: Node, planar graph
  Point_and_Vector_Object_Count: 6

Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Geographic:
      Latitude_Resolution: 0.0000001
      Longitude_Resolution: 0.0000001
      Geographic_Coordinate_Units: Decimal degrees
    Geodetic_Model:
      Horizontal_Datum_Name: North American Datum of 1927
      Ellipsoid_Name: Clark 1866
      Semi-major_Axis: 6378206.400000
      Denominator_of_Flattening_Ratio: 294.978698

Entity_and_Attribute_Information:
  Overview_Description:
    Entity_and_Attribute_Overview:
    In addition to the geographic data layers, two relational attribute or data tables,
    SOC_DAT and SOURCES, are used to store the complex socioeconomic data in the
    ESI data structure. The geographic data layer containing socioeconomic data resource
    information (in this case, SOCECON) is linked to the Socioeconomic Resources table
    (SOC_DAT) using the unique ID and the lookup table SOC_LUT, or it can be linked
directly using HUNUM. HUNUM is a unique reference number concatenated with
the atlas number (for Long Island, the number is 53). ID is a unique combination of
the atlas number (53), 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 aquaculture sites, beaches, commercial fishing, historic sites,
    marinas, recreational fishing, and water intakes. Note that all attribute
information is stored in a series of relational files, described below. See the
Browse_Graphic section for a link to the entity-relationship diagram, which
describes the relationships between attribute tables in the ESI data structure.

Entity_Type_Definition_Source: 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: AQ
  Enumerated_Domain_Value_Definition: Aquaculture site
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
  Enumerated_Domain_Value: B
  Enumerated_Domain_Value_Definition: Beach
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
  Enumerated_Domain_Value: CF
  Enumerated_Domain_Value_Definition: Commercial Fishing
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
  Enumerated_Domain_Value: HS
  Enumerated_Domain_Value_Definition: Historical Site
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
  Enumerated_Domain_Value: M
  Enumerated_Domain_Value_Definition: Marina
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
  Enumerated_Domain_Value: RF
  Enumerated_Domain_Value_Definition: Recreational Fishing
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
  Enumerated_Domain_Value: WI
  Enumerated_Domain_Value_Definition: Water Intake
  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 (53), element
number (10), and record number.
**Attribute Definition Source:** NOAA  
**Attribute Domain Values:**  
**Range Domain:**  
  - Range Domain Minimum: 0531000001  
  - Range Domain Maximum: 0531000550

**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: 053000001  
  - Range Domain Maximum: 053000676

**Detailed Description:**  
**Entity Type:**  
**Entity Type Label:** SOCECON.AAT  
**Entity Type Definition:**  
The SOCECON.AAT table contains attribute information for the vector lines representing bridges and state borders. 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: R  
  - Enumerated Domain Value Definition: Road, Transportation, or Bridge  
  - Enumerated Domain Value Definition Source: Research Planning, Inc.

**Attribute Domain Values:**  
**Enumerated Domain:**  
  - Enumerated Domain Value: SB  
  - Enumerated Domain Value Definition: State Border  
  - Enumerated Domain Value Definition Source: Research Planning, Inc.

**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 Definition Source:** NOAA

**Attribute Domain Values:**

- **Range Domain:**
  - **Range Domain Minimum:** 053000001
  - **Range Domain Maximum:** 053000733

**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 (53), element number (SOCECON=10; MGT=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:** 0531000001
  - **Range Domain Maximum:** 0531100497

**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:** 053000001
  - **Range Domain Maximum:** 053000733

**Attribute:**

**Attribute Label:** TYPE

**Attribute Definition:** Identifies the feature type

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

**Attribute Domain Values:**

- **Enumerated Domain:**
  - **Enumerated Domain Value:** AQUACULTURE
  - **Enumerated Domain Value Definition:** Aquaculture site
  - **Enumerated Domain Value Definition Source:** Research Planning, Inc.
Enumerated_Domain:
  Enumerated_Domain_Value: BEACH
  Enumerated_Domain_Value_Definition: Beach
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: COMMERCIAL FISHING
    Enumerated_Domain_Value_Definition: Commercial Fishing
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: HISTORICAL SITE
    Enumerated_Domain_Value_Definition: Historical Site
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: MANAGEMENT AREA
    Enumerated_Domain_Value_Definition: Management Area
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: MARINA
    Enumerated_Domain_Value_Definition: Marina
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: NATIONAL PARK
    Enumerated_Domain_Value_Definition: National Park
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: RECREATIONAL FISHING
    Enumerated_Domain_Value_Definition: Recreational Fishing
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: REGIONAL OR STATE PARK
    Enumerated_Domain_Value_Definition: Regional or State Park
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: WATER INTAKE
    Enumerated_Domain_Value_Definition: Water Intake
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  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**

**Attribute_Definition:** The feature name
**Attribute_Definition_Source:** Research Planning, Inc.
**Attribute_Domain_Values:**
  
  **Unrepresentable_Domain:** Acceptable values change from atlas to atlas.

**Attribute:**

**Attribute_Label:** CONTACT
**Attribute_Definition:** Contact person or entity
**Attribute_Definition_Source:** Research Planning, Inc.
**Attribute_Domain_Values:**
  
  **Unrepresentable_Domain:** Acceptable values change from atlas to atlas.

**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 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 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; G_SOURCE and S_SOURCE in the BIORES table; and SOURCE_ID in the ESI and HYDRO data layers.

**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:**

- **Unrepresentable Domain:** Acceptable values change from atlas to atlas.

**Attribute:**

**Attribute Label:** DATE_PUB

**Attribute Definition:** Date of source material, publication, or date of personal communication with expert source.

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

**Attribute Domain Values:**

- **Enumerated Domain:**
  - Enumerated Domain Value: YYYYMM
  - Enumerated Domain Value Definition: YYYY for year and optionally MM for month
  - Enumerated Domain Value Definition Source: Research Planning, Inc.

**Attribute:**

**Attribute Label:** TITLE

**Attribute Definition:** Title of source material or data.

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

**Attribute Domain Values:**

- **Unrepresentable Domain:** Acceptable values change from atlas to atlas.

**Attribute:**

**Attribute Label:** DATA_FORMAT

**Attribute Definition:** The format of the source material.

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

**Attribute Domain Values:**

- **Unrepresentable Domain:** Acceptable values change from atlas to atlas.

**Attribute:**

**Attribute Label:** PUBLICATION

**Attribute Definition:** Additional citation information.

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

**Attribute Domain Values:**

- **Unrepresentable Domain:** Acceptable values change from atlas to atlas.

**Attribute:**

**Attribute Label:** SCALE

**Attribute Definition:** Description of the source scale.

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

**Attribute Domain Values:**

- **Unrepresentable Domain:** Acceptable values change from atlas to atlas.
**Attribute:**

**Attribute_Label:** TIME_PERIOD  
**Attribute_Definition:**  
Date(s) of data collection that the source material is based upon.  
**Attribute_Definition_Source:** Research Planning, Inc.  
**Attribute_Domain_Values:**

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

---

**Distribution Information:**

**Distributor:**

**Contact Information:**

**Contact Person Primary:**

**Contact Person:** John Kaperick  
**Contact Organization:** NOAA, Office of Response and Restoration

**Contact Address:**

**Address Type:** Physical Address  
**Address:** 7600 Sand Point Way N.E.  
**City:** Seattle  
**State or Province:** Washington  
**Postal Code:** 98115-6349

**Contact Voice Telephone:** (206) 526-6400  
**Contact Facsimile Telephone:** (206) 526-6329

**Resource Description:** ESI Atlas for Long Island

**Distribution Liability:**

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

**Custom Order Process:**

Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to the widest community of GIS/mapping users. Distribution formats include Geodatabase; ARC export, MOSS, and Shape files; and MARPLOT map folders. An ArcMap .mxd file, an ArcView 3.x ESI project, and an ESI Viewer product for use with the MARPLOT data are also included on the distribution CDs/DVDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

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**Metadata Reference Information:**

**Metadata Date:** 200905  
**Metadata Review Date:** 200905  
**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

Coastal Resources Atlas: Long Island: BIRDS (Bird Polygons)

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

Metadata:

- Identification Information
- Data Quality Information
- Spatial Data Organization Information
- Spatial Reference Information
- Entity and Attribute Information
- Distribution Information
- Metadata Reference Information

Identification Information:

Citation:

Citation Information:

Originator:


Publication Date: 200903

Title: Coastal Resources Atlas: Long Island: BIRDS (Bird Polygons)

Edition: First

Geospatial Data Presentation Form: Vector digital data

Series Information:

Series Name: NONE

Issue Identification: Long Island, New York

Publication Information:

Publication Place: Seattle, Washington

Publisher:


Other Citation Details:


Description:

Abstract:

This data set contains sensitive biological resource data for wading birds, shorebirds, waterfowl, raptors, diving birds, seabirds, passerine birds, and gulls and terns in Long
Island, New York. Vector polygons in this data set represent bird nesting, migratory staging, and wintering sites. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for Long Island. 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:**
- **Begining_Date:** 1998
- **Ending_Date:** 2008

**Currentness_Reference:**
The biological data were compiled during 2007-2009. The currentness dates for the data range from 1998 to 2008 and are documented in the Lineage section.

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

**Spatial_Domain:**
**Bounding_Coordinates:**
- **West_Bounding_Coordinate:** 73.75000
- **East_Bounding_Coordinate:** 71.79000
- **North_Bounding_Coordinate:** 41.37500
- **South_Bounding_Coordinate:** 40.50000

**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:** Long Island
- **Place_Keyword:** New York

**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.

**BrowseGraphic:**

*BrowseGraphic_File_Name: datafig.jpg*

*BrowseGraphic_File_Description:*

Depicts the relationships between spatial data layers and attribute data tables for the Long Island ESI data.

*BrowseGraphic_File_Type: JPEG*

**DataSet_Credit:**

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Emergency Response Division, Seattle, Washington and Department of Homeland Security, U.S. Coast Guard, Office of Incident Management and Preparedness, Washington, D.C.

**NativeDataSet_Environment:**

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO® (version 9.2) and SQL SERVER® (version 2000). The hardware configuration is PCs with Windows Operating System (2000/XP/2003). The Spatial_Data_Organization_Information section refers only to the source files in the ARC export format. The following files are included in that data set: birds.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, mgt.e00, reptiles.e00, socecon.e00, t_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biore, breed, breed_dt, seasonal, soc_dat, soc_lut, sources, species, and status.

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**DataQualityInformation:**

**AttributeAccuracy:**

*AttributeAccuracy_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.

**LogicalConsistencyReport:**

A multi-stage error checking process, described in the above AttributeAccuracy_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
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 IDs and RARNUMs or HUNUMs are also generated. The new IDs are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUMs are also modified to include the atlas number, so multiple atlases can be combined and RARNUMs remain unique. RARNUMs are redefined on an element basis, so "resource at risk" groupings will contain only a single element. HUNUMs are also modified to include the atlas number.

Completeness_Report:
These data represent a synthesis of expert knowledge, available hardcopy documents, survey data, maps, and digital data on bird nesting, wintering, migratory staging and other spatial/temporal concentration areas. These data do not necessarily represent all bird occurrences in Long Island. The following species are included in this data set:
(Species_ID, Common Name, Scientific Name [n/a if not applicable]): 1, Common loon, Gavia immer; 3, Red-throated loon, Gavia stellata; 4, Red-necked grebe, Podiceps grisegena; 5, Horned grebe, Podiceps auritus; 8, Double-crested cormorant, Phalacrocorax auritus; 11, Tundra swan, Cygnus columbianus; 12, Canada goose, Branta canadensis; 13, Brant, Branta bernicla; 15, Snow goose, Chen caerulescens; 16, Mallard, Anas platyrhyynchos; 17, Northern pintail, Anas acuta; 18, Green-winged teal, Anas crecca; 20, Northern shoveler, Anas clypeata; 21, Canvasback, Aythya valisineria; 22, Greater scaup, Aythya marila; 23, Lesser scaup, Aythya affinis; 24, Common goldeneye, Bucephala clangula; 25, Barrow's goldeneye, Bucephala islandica; 26, Bufflehead, Bucephala albeola; 27, Long-tailed duck, Clangula hyemalis; 28, Harlequin duck, Histrionicus histrionicus; 29, White-winged scoter, Melanitta fusca; 30, Surf scoter, Melanitta perspicillata; 32, Common merganser, Mergus merganser; 33, Red-breasted merganser, Mergus serrator; 38, Herring gull, Larus argentatus; 40, Ring-billed gull, Larus delawarensis; 42, Bonaparte's gull, Larus philadelphia; 45, Common tern, Sterna hirundo; 53, Red-necked phalarope, Phalaropus lobatus; 54, Great blue heron, Ardea herodias; 55, Whimbrel, Numenius phaeopus; 56, Spotted sandpiper, Actitis macularia; 58, Greater yellowlegs, Tringa melanoleuca; 59, Lesser yellowlegs, Tringa flavipes; 60, Red knot, Calidris canutus; 62, Least sandpiper, Calidris minutilla; 63, Dunlin, Calidris alpina; 64, Short-billed dowitcher, Limnodromus griseus; 65, Long-billed dowitcher, Limnodromus scolopaces; 66, Western sandpiper, Calidris mauri; 67, Sanderling, Calidris alba; 69, Semipalmated plover, Charadrius semipalmatus; 71, Black-bellied plover, Pluvialis squatarola; 73, Ruddy turnstone, Arenaria interpres; 76, Bald eagle, Haliaeetus leucocephalus; 77, Osprey, Pandion haliaetus; 86, Least tern, Sterna antillarum; 87, Little blue heron, Egretta caerulea; 88, Great egret, Ardea alba; 89, Snowy egret, Egretta thula; 90, Black-crowned night-heron, Nycticorax nycticorax; 91, Glossy ibis, Plegadis falcinellus; 92, Great black-backed gull, Larus marinus; 94, Tricolored heron, Egretta tricolor; 95, Roseate tern, Sterna dougallii; 97, Green heron, Butorides virescens; 98, Laughing gull, Larus atricilla; 103, Common eider, Somateria mollissima; 107, Peregrine falcon, Falco peregrinus; 120, Yellow-crowned night-heron, Nyctanassa violacea; 124, Redhead, Aythya americana; 125, Clapper rail, Rallus longirostris; 133, Black skimmer, Rhynchops niger; 134, Gull-billed tern, Sterna nilotica; 138, Forster's tern, Sterna forsteri; 141, American avocet, Recurvirostra americana; 142, Black-necked stilt, Himantopus mexicanus; 148, Ruddy duck, Oxyura jamaicensis; 150, Black rail, Laterallus jacamelus; 152, American oystercatcher, Haematopus palliatus; 153,
Piping plover, Charadrius melodus; 155, Willet, Catoptrophorus semipalmatus; 156, Semipalmated sandpiper, Calidris pusilla; 158, King eider, Somateria spectabilis; 162, Gadwall, Anas strepera; 167, Northern gannet, Morus bassanus; 169, American wigeon, Anas americana; 176, Short-eared owl, Asio flammeus; 178, Least bittern, Ixobrychus exilis; 179, Pied-billed grebe, Podilymbus podiceps; 180, Ring-necked duck, Aythya collaris; 181, Northern harrier, Circus cyaneus; 182, American kestrel, Falco sparverius; 184, King rail, Rallus elegans; 185, American bittern, Botaurus lentiginosus; 186, American black duck, Anas rubripes; 187, Virginia rail, Rallus limicola; 189, Yellow rail, Coturnicops noveboracensis; 190, Blue-winged teal, Anas discors; 191, Wood duck, Aix sponsa; 195, American woodcock, Scolopax minor; 197, Common scoter, Melanitta nigra; 198, Hooded merganser, Lophodytes cinctus; 216, Belted kingfisher, Ceryle alcyon; 217, Mute swan, Cygnus olor; 219, Sharp-shinned hawk, Accipiter striatus; 220, Merlin, Falco columbarius; 221, Cooper's hawk, Accipiter cooperii; 223, Upland sandpiper, Bartramia longicauda; 230, Red-tailed hawk, Buteo jamaicensis; 240, Northern goshawk, Accipiter gentilis; 275, Great cormorant, Phalacrocorax carbo; 277, Seaside sparrow, Ammodramus maritimus; 278, Saltmarsh sharp-tailed sparrow, Ammodramus caudacutus; 313, Rare raptor, n/a; 385, Barn owl, Tyto alba; 445, Wilson's storm-petrel, Oceanites oceanicus; 529, Cory's shearwater, Calonectris diomedea; 801, Tree swallow, Tachycineta bicolor; 850, White-throated sparrow, Zonotrichia albicollis; 1002, Shorebirds, n/a; 1004, Wading birds, n/a; 1005, Raptors, n/a.

Positional Accuracy:

Horizontal Positional Accuracy:

Spatial components for the biological data layers can come from expert interviews, hardcopy, or digital sources. Some of the spatial components of the biological data layers may have been developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy base maps with a scale of 1:24,000. Some of the spatial components of the biological data sets are developed from pre-existing digital or hardcopy sources and reflect the positional accuracy of these original data. See the Lineage and Process_Description sections for more information on the original data source 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: ALEX CHMIELEWSKI, U.S. FISH & WILDLIFE SERVICE (USFWS)
Publication Date: 2008
Title: BIRD SPECIES IN NATIONAL WILDLIFE REFUGES OF LONG ISLAND
Geospatial Data Presentation Form: EXPERT KNOWLEDGE
Other Citation Details: N/A

Type of Source Media: EMAIL
Source Time Period of Content:
Time Period Information:
Single Date/Time:
Calendar_Date: 2008
Source_Currentness_Reference: DATE OF COMMUNICATION
Source_Citation_Abbreviation: NONE
Source_Contribution: BIRDS INFORMATION
Source_Information:
Source_Citation:
Citation_Information:
Originator:
DANIEL ROSENBLATT, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYS DEC)
Publication_Date: 2007
Title: SEASONALITY DATA FOR BREEDING BIRDS OF LONG ISLAND
Geospatial_Data_Presentation_Form: EXPERT KNOWLEDGE
Other_Citation_Details: UNPUBLISHED
Type_of_Source_Media: PERSONAL COMMUNICATION
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 2007
Source_Currentness_Reference: DATE OF COMMUNICATION
Source_Citation_Abbreviation: NONE
Source_Contribution: BIRDS INFORMATION
Source_Information:
Source_Citation:
Citation_Information:
Originator:
DIANE ABELL, NATIONAL PARK SERVICE (NPS)
Publication_Date: 2007
Title: NATURAL AND HISTORIC RESOURCES OF FIRE ISLAND NATIONAL SEASHORE
Geospatial_Data_Presentation_Form: EXPERT KNOWLEDGE
Other_Citation_Details: N/A
Type_of_Source_Media: PERSONAL COMMUNICATION
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 2007
Source_Currentness_Reference: DATE OF COMMUNICATION
Source_Citation_Abbreviation: NONE
Source_Contribution: BIRDS INFORMATION
Source_Information:
Source_Citation:
Citation_Information:
Originator:
DR. ARTHUR KOPELMAN, COASTAL RESEARCH AND EDUCATION SOCIETY OF LONG ISLAND (CRESLI)
Publication_Date: 2007
Title:
ABUNDANCE AND DISTRIBUTION OF MARINE MAMMALS, SEA TURTLES, AND SEABIRDS
Geospatial_Data_Presentation_Form: EXPERT KNOWLEDGE
Other_Citation_Details: UNPUBLISHED
Type_of_Source_Media: PERSONAL COMMUNICATION
Source_Time_Period_of_Content:
  Time_Period_Information:
    Single_Date/Time:
      Calendar_Date: 2007
Source_Currentness_Reference: DATE OF COMMUNICATION
Source_Citation_Abbreviation: NONE
Source_Contribution: BIRDS INFORMATION
Source_Information:
  Source_Citation:
    Citation_Information:
      Originator: EMANUEL LEVINE, ED.
      Publication_Date: 1998
      Title: BULL’S BIRDS OF NEW YORK STATE
      Geospatial_Data_Presentation_Form: HARDCOPY TEXT
    Other_Citation_Details: COMSTOCK PUBLISHING ASSOCIATES, CORNELL UNIVERSITY PRESS, ITHACA, NY
Type_of_Source_Media: PAPER
Source_Time_Period_of_Content:
  Time_Period_Information:
    Single_Date/Time:
      Calendar_Date: 1998
Source_Currentness_Reference: DATE OF PUBLICATION
Source_Citation_Abbreviation: NONE
Source_Contribution: BIRDS INFORMATION
Source_Information:
  Source_Citation:
    Citation_Information:
      Originator: JAY LIPPERT, FIRE ISLAND NATIONAL SEASHORE
      Publication_Date: 2007
      Title: ABUNDANCE AND DISTRIBUTION DATA FOR NESTING BIRDS ON FIRE ISLAND
      Geospatial_Data_Presentation_Form: EXPERT KNOWLEDGE
    Other_Citation_Details: N/A
Type_of_Source_Media: PERSONAL COMMUNICATION
Source_Time_Period_of_Content:
  Time_Period_Information:
    Single_Date/Time:
      Calendar_Date: 2007
Source_Currentness_Reference: DATE OF COMMUNICATION
Source_Citation_Abbreviation: NONE
Source_Contribution: BIRDS INFORMATION
Source_Information:
  Source_Citation:
    Citation_Information:
      Originator: LISA MASSI, NYS DEC
      Publication_Date: 2007
      Title: ABUNDANCE AND DISTRIBUTION OF WATERFOWL ON
Geospatial_Data_Presentation_Form: SPREADSHEET
Other_Citation_Details: N/A
Type_of_Source_Media: EMAIL
Source_Time_Period_of_Content:
  Time_Period_Information:
    Single_Date/Time:
      Calendar_Date: 2007
Source_Currentness_Reference: DATE OF COMMUNICATION
Source_Citation_Abbreviation: NONE
Source_Contribution: BIRDS INFORMATION
Source_Information:
  Source_Citation:
    Citation_Information:
      Originator: TOWN OF HEMPSTEAD, DEPT OF CONSERVATION AND WATERWAYS
      Publication_Date: 2008
      Title: DISTRIBUTION AND ABUNDANCE OF BIOLOGICAL RESOURCES IN HEMPSTEAD BAYS
    Geospatial_Data_Presentation_Form: EXPERT KNOWLEDGE
    Other_Citation_Details: N/A
    Type_of_Source_Media: PERSONAL COMMUNICATION
    Source_Time_Period_of_Content:
      Time_Period_Information:
        Single_Date/Time:
          Calendar_Date: 2008
    Source_Currentness_Reference: DATE OF COMMUNICATION
    Source_Citation_Abbreviation: NONE
    Source_Contribution: BIRDS INFORMATION
Source_Information:
  Source_Citation:
    Citation_Information:
      Originator: USFWS, REGION 9, INFORMATION TECHNOLOGY MANAGEMENT, BRANCH OF DATA AND SYSTEMS SERVICES
      Publication_Date: 2001
      Title: USFWS REVISED REFUGE BOUNDARIES
    Geospatial_Data_Presentation_Form: VECTOR DIGITAL DATA
    Other_Citation_Details: REGION 9, INFORMATION RESOURCE MANAGEMENT, USFWS, DENVER, CO
    Source_Scale_Denominator: 24,000
    Type_of_Source_Media: ONLINE
    Source_Time_Period_of_Content:
      Time_Period_Information:
        Single_Date/Time:
          Calendar_Date: 2001
    Source_Currentness_Reference: DATE OF PUBLICATION
    Source_Citation_Abbreviation: NONE
    Source_Contribution: BIRDS INFORMATION
Process_Step:
Process Description:

Four main sources of data were used to depict bird distribution and seasonality for this data layer: 1) personal interviews with resource experts from the New York Department of Environmental Conservation (NYS DEC), U.S. Fish and Wildlife Service (USFWS) Long Island National Wildlife Refuge Complex, National Park Service (NPS), Fire Island National Seashore (FINS), Coastal Research and Education Society of Long Island (CRESLI), and several Long Island townships; 2) digital breeding bird data set provided by NYS DEC; 3) digital data provided by New York Natural Heritage Program (NYS NHP); and 4) numerous published and unpublished reports. The above digital and/or hardcopy sources were compiled by the project biologist to create the BIRDS data layer. Depending on the type of source data, three general approaches are used for compiling a biology data layer: 1) information gathered during initial interviews and from hardcopy sources is compiled onto U.S. Geological Survey 1:24,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; and/or 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews is conducted to review the maps. If necessary, edits to the BIRDS data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

Process Date: 200903

Process Contact:

Contact Information:

Contact Organization Primary:

Contact Organization: NOAA, Office of Response and Restoration
Contact Person: Jill Petersen

Contact Address:
Address Type: Physical address
Address: 7600 Sand Point Way, N.E.
City: Seattle
State or Province: Washington
Postal Code: 98115-6349

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

Spatial Data Organization Information:

Direct Spatial Reference Method: Vector

Point and Vector Object Information:

SDTS Terms Description:
SDTS_Point and Vector_Object_Type: GT-polygon composed of chains
SDTS_Point and Vector_Object_Count: 7865

SDTS Terms Description:
SDTS_Point and Vector_Object_Type: Area point
Point and Vector Object Count: 7864
SDTS Terms Description:
  SDTS Point and Vector Object Type: Complete chain
  Point and Vector Object Count: 18228
SDTS Terms Description:
  SDTS Point and Vector Object Type: Link
  Point and Vector Object Count: 724514
SDTS Terms Description:
  SDTS Point and Vector Object Type: Node, planar graph
  Point and Vector Object Count: 12431

Spatial Reference Information:
  Horizontal Coordinate System Definition:
    Geographic:
      Latitude Resolution: 0.0000001
      Longitude Resolution: 0.0000001
    Geographic Coordinate Units: Decimal degrees
  Geodetic Model:
    Horizontal Datum Name: North American Datum of 1927
    Ellipsoid Name: Clark 1866
    Semi-major Axis: 6378206.400000
    Denominator of Flattening Ratio: 294.978698

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 Long Island atlas, the number is 53), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN_SPEC, S, F, NHP, DATE_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC,
BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G_SOURCE, S_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed_Description of the BREED data table. The link to the BIOFILE may be made through the BIO_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED_DT is an auxiliary support data table to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to BREED_DT is the BREED item.

A second supporting data table is SOURCES. This is the same as the source file described above, and the link from the flat file is both G_SOURCE and S_SOURCE. It should be noted that although the flat file eases data query, it is not a normalized database structure, and actual updates performed by the states and other responsible agencies should be done using the relational data tables. The entity-relationship diagram, describing relationships between attribute tables in the ESI data structure, does NOT include the BIOFILE data table, and this data table is NOT described in detail below.

**Detailed_Description:**

**Entity_Type:**

**Entity_Type_Label:** BIRDS.PAT

**Entity_Type_Definition:**

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

**Entity_Type Definition Source:** 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 (53), 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:** 0530100002

**Range_Domain_Maximum:** 0530109257

**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
BIRDS

**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:** 053000001
- **Range_Domain_Maximum:** 053000643

**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 (53), 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:** 0530100002
- **Range_Domain_Maximum:** 0530900714

**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:** 053000001
- **Range_Domain_Maximum:** 053000905

**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 values, and may contain counts of individuals for each species present at a particular nesting or wintering site, or a term that describes relative abundance of birds at a particular site. The field may contain counts of individuals (XX BIRDS) or a range of individuals (XX-XXX BIRDS). In cases where no quantitative count data were available, the field may contain descriptive terms, such as "ABUNDANT" or "COMMON", or a concentration approximation, such as "100s." If no concentration information was available from any source, the field is populated with "-". Counts were derived from a variety of surveys, and may range in date (see Lineage).

**Attribute_Definition_Source:** Research Planning, Inc.

**Attribute_Domain_Values:**

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

**Attribute:**

**Attribute_Label:** SEASON_ID

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

**Attribute_Definition_Source:** 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:
Enumrated_Domain:
  Enumrated_Domain_Value: E####
  Enumrated_Domain_Value_Definition:
    Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (e.g. ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').
  Enumrated_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:
Enumrated_Domain:
  Enumrated_Domain_Value: E######
  Enumrated_Domain_Value_Definition:
    Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the last two characters are SEASON_ID (e.g. ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
  Enumrated_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 for the entire ESI data set.
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
Unrepresentable Domain: Acceptable values change from atlas to atlas.
Attribute:
Attribute Label: GEN_SPEC
Attribute Definition: Species scientific name for the entire ESI data set.
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
Unrepresentable Domain: Acceptable values change from atlas to atlas.
Attribute:
Attribute Label: ELEMENT
Attribute Definition: Major categories of biological data.
Attribute Definition Source: 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 Domain Source: Research Planning, Inc.

Enumerated Domain:
- Enumerated Domain Value: amphibian
  Enumerated Domain Value Definition: Amphibian
  Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:
- Enumerated Domain Value: bivalve
  Enumerated Domain Value Definition: Bivalve
  Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:
- Enumerated Domain Value: cephalopod
  Enumerated Domain Value Definition: Cephalopod
  Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:
- Enumerated Domain Value: crab
  Enumerated Domain Value Definition: Crab
  Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:
- Enumerated Domain Value: diadromous
  Enumerated Domain Value Definition: Diadromous fish
  Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:
- Enumerated Domain Value: diving
  Enumerated Domain Value Definition: Diving bird
  Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:
- Enumerated Domain Value: dolphin
  Enumerated Domain Value Definition: Dolphin
  Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:
- Enumerated Domain Value: e_nursery
  Enumerated Domain Value Definition: Estuarine nursery fish
  Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:
- Enumerated Domain Value: e_resident
  Enumerated Domain Value Definition: Estuarine resident
  Enumerated Domain Value Definition Source: Research Planning, Inc.

Enumerated Domain:
- Enumerated Domain Value: fav
  Enumerated Domain Value Definition: Floating aquatic vegetation
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: lobster
    Enumerated_Domain_Value_Definition: Lobster
    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: pelagic
    Enumerated_Domain_Value_Definition: Pelagic bird
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: pinniped
    Enumerated_Domain_Value_Definition: Pinniped
    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: Submerged 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: 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_Domain_Values:
**Enumerated_Domain:**

- **Enumerated_Domain_Value:** whale
- **Enumerated_Domain_Value_Definition:** Whale
- **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:** YYYYMM
    - **Enumerated_Domain_Value_Definition:** YYYY for year and optionally MM for month
    - **Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.
  - **Enumerated_Domain:**
    - **Enumerated_Domain_Value:** 0
    - **Enumerated_Domain_Value_Definition:** Date unspecified
    - **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 (e.g. 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: 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
- Present in June
- Present in August
- Present in September
- Present in October
- Present in November

#### Attribute Definitions
<table>
<thead>
<tr>
<th>Label</th>
<th>Definition</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>JUN</td>
<td>June</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>JUL</td>
<td>July</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>AUG</td>
<td>August</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>SEP</td>
<td>September</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>OCT</td>
<td>October</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>NOV</td>
<td>November</td>
<td>Research Planning, Inc.</td>
</tr>
</tbody>
</table>
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 (e.g. 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 (e.g. 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 = hatching; if ELEMENT is "M_MAMMAL" then BREED1 = 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 or not reported
  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_Value: N
Enumerated_Domain_Value_Definition: Life-history stage or activity not present or not reported
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: 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:

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 or not reported
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: 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 or not reported
    - **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:** 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 or not reported
    - **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; G_SOURCE and S_SOURCE in the BIORES table; and SOURCE_ID in the ESI and HYDRO data layers.

**Attribute_Definition_Source:** Research Planning, Inc.

**Attribute_Domain_Values:**

**Range_Domain:**

<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:** ORIGINATOR

**Attribute_Definition:** Author or developer of source material or data set.

**Attribute_Definition_Source:** Research Planning, Inc.

**Attribute_Domain_Values:**

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

**Attribute:**

**Attribute_Label:** DATE_PUB

**Attribute_Definition:**

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

**Attribute_Definition_Source:** Research Planning, Inc.

**Attribute_Domain_Values:**

**Enumerated_Domain:**

<table>
<thead>
<tr>
<th>Enumerated_Domain_Value</th>
<th>Enumerated_Domain_Value_Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>YYYYMM</td>
<td>YYYY for year and optionally MM for month</td>
</tr>
</tbody>
</table>

**Attribute_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:**

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

**Attribute:**

**Attribute_Label:** DATA_FORMAT

**Attribute_Definition:** The format of the source material.

**Attribute_Definition_Source:** Research Planning, Inc.

**Attribute_Domain_Values:**

**Unrepresentable_Domain:** Acceptable values change from atlas to atlas.
Attribute:
  Attribute_Label: PUBLICATION
  Attribute_Definition: Additional citation information.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:
  Attribute_Label: SCALE
  Attribute_Definition: Description of the source scale.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:
  Attribute_Label: TIME_PERIOD
  Attribute_Definition: Date(s) of data collection that the source material is based upon.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Unrepresentable_Domain: Acceptable values change from atlas to atlas.

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

Attribute:
  Attribute_Label: COUNTRY
  Attribute_Definition: Three-letter country abbreviation.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:
  Attribute_Label: S
  Attribute_Definition: State threatened or endangered status.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: E
      Enumerated_Domain_Value_Definition: Endangered on state list
      Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines
  Enumerated_Domain:
    Enumerated_Domain_Value: T
Enumerated_Domain_Value_Definition: Threatened on state list
Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines

Attribute
Attribute_Label: F
Attribute_Definition: Federal threatened or endangered status.
Attribute_Definition_Source: Research Planning, Inc.

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

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

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

Attribute
Attribute_Label: I
Attribute_Definition: International threatened or endangered status.
Attribute_Definition_Source: Research Planning, Inc.

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

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

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

Attribute
Attribute_Label: S_DATE
Attribute_Definition:
Publication date of source material used to assign state status values for each species, if used.
Attribute_Definition_Source: Research Planning, Inc.
Long Island: BIRDS

Attribute Domain Values:
Enumerated Domain:
   Enumerated Domain Value: YYYYMM
   Enumerated Domain Value Definition: YYYY for year and optionally MM for month
   Enumerated Domain Value Definition Source: Research Planning, Inc.

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

Attribute Domain Values:
Enumerated Domain:
   Enumerated Domain Value: YYYYMM
   Enumerated Domain Value Definition: YYYY for year and optionally MM for month
   Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:
   Attribute Label: I_DATE
   Attribute Definition:
       Publication date of source material used to assign international status values for each species, if used.
   Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:
Enumerated Domain:
   Enumerated Domain Value: YYYYMM
   Enumerated Domain Value Definition: YYYY for year and optionally MM for month
   Enumerated Domain Value Definition Source: 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 (e.g. 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 Kaperic  
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 Long Island  

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

Custom Order Process:  
Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to the widest community of GIS/mapping users. Distribution formats include Geodatabase; ARC export, MOSS, and Shape files; and MARPLOT map folders. An ArcMap .mxd file, an ArcView 3.x ESI project, and an ESI Viewer product for use with the MARPLOT data are also included on the distribution CDs/DVDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.  

Metadata Reference Information:  
Metadata Date: 200905  
Metadata Review Date: 200905  

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
Coastal Resources Atlas: Long Island: FISH (Fish Polygons)

Metadata:

- Identification Information
- Data Quality Information
- Spatial Data Organization Information
- Spatial Reference Information
- Entity and Attribute Information
- Distribution Information
- Metadata Reference Information

**Identification Information:**

**Citation:**

**Publication Date:** 200903

**Title:** Coastal Resources Atlas: Long Island: FISH (Fish Polygons)

**Edition:** First

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

**Series Information:**

**Series Name:** NONE

**Issue Identification:** Long Island, New York

**Publication Information:**

**Publication Place:** Seattle, Washington

**Publisher:**


**Other Citation Details:**


**Description:**

**Abstract:**

This data set contains sensitive biological resource data for marine, estuarine, anadromous, and freshwater fish species for Long Island, New York. Vector polygons...
in this data set represent fish distribution, concentration areas, and spawning areas. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for Long Island. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources.

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

Time_Period_of_Content:
Time_Period_Information:
Range_of_Dates/Times:
Beginning_Date: 1994
Ending_Date: 2008

Currentness_Reference:
The biological data were compiled during 2007-2009. The currentness dates for the data range from 1994 to 2008 and are documented in the Lineage section.

Status:
Progress: Complete
Maintenance_and_Update_Frequency: None Scheduled

Spatial_Domain:
Bounding_Coordinates:
West_BoundingCoordinate: 73.75000
East_BoundingCoordinate: 71.79000
North_BoundingCoordinate: 41.37500
South_BoundingCoordinate: 40.50000

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: Long Island
Place_Keyword: New York

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 Long Island 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, Emergency Response Division, Seattle, Washington and Department of Homeland Security, U.S. Coast Guard, Office of Incident Management and Preparedness, Washington, D.C.

**Native Data Set Environment:**
The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO® (version 9.2) and SQL SERVER® (version 2000). The hardware configuration is PCs with Windows Operating System (2000/XP/2003).

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

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**Data Quality Information:**

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

**Logical Consistency Report:**
A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary 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. In the process of checking for topological and database consistencies, new IDs and RARNUMs or HUNUMs are also generated. The new IDs are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUMs are also modified to include the atlas number, so multiple atlases can be combined and RARNUMs remain unique. RARNUMs are redefined on an element basis, so "resource at risk" groupings will contain only a single element. HUNUMs are also modified to include the atlas number.

Completeness Report:

These data represent a synthesis of expert knowledge, survey data, and hardcopy maps. These data do not necessarily represent all fish occurrences in Long Island. The following species are included in this data set: (Species_ID, Common Name, Scientific Name [n/a if not applicable]): 65, Bluefish, Pomatomus saltatrix; 74, Rainbow trout, Oncorhynchus mykiss; 81, Spiny dogfish, Squalus acanthias; 84, Rainbow smelt, Osmerus mordax; 85, Alewife, Alosa pseudoharengus; 86, Blueback herring, Alosa aestivalis; 87, American shad, Alosa sapidissima; 88, Winter flounder, Pleuronectes americanus; 89, Cunner, Tautogolabrus adspersus; 93, Striped killifish, Fundulus majalis; 95, Mummichog, Fundulus heteroclitus; 97, Tautog, Tautoga onitis; 98, American eel, Anguilla rostrata; 99, Atlantic tomcod, Microgadus tomcod; 100, Brown trout, Salmo trutta; 101, Shortnose sturgeon, Acipenser brevostrum; 102, Atlantic sturgeon, Acipenser oxyrinchus; 104, Striped bass, Morone saxatilis; 105, Hickory shad, Alosa mediocris; 106, Summer flounder, Paralichthys dentatus; 110, Black sea bass, Centropristis striata; 113, Bay anchovy, Anchoa mitchilli; 115, Atlantic menhaden, Brevoortia tyrannus; 121, Spot, Leiostomus xanthurus; 127, Spanish mackerel, Scomberomorus maculatus; 138, Weakfish, Cynoscion regalis; 142, Creville jack, Caranx hippos; 144, Atlantic salmon, Salmo salar; 145, White perch, Morone americana; 146, Atlantic herring, Clupea harengus; 147, Atlantic mackerel, Scomber scombrus; 148, Silver hake, Merluccius bilinearis; 149, Atlantic cod, Gadus morhua; 150, Scup, Stenotomus chrysops; 151, Northern puffer, Sphoeroides acanthias; 152, Yellow perch, Perca flavescens; 153, Northern kingfish, Menticirrhus saxatilis; 154, Pollock, Pollachius virens; 155, Red hake, Urophycis chuss; 156, American sand lance, Ammodytes americanus; 158, Butterfish, Peprilus triacanthus; 160, Windowpane, Scophthalmus aquosus; 162, Common carp, Cyprinus carpio; 163, Gizzard shad, Dorosoma cepedianum; 166, Brook trout, Salvelinus fontinalis; 173, White mullet, Mugil curema; 179, Largemouth bass, Micropterus salmoides; 180, Smallmouth bass, Micropterus dolomieu; 181, Black crappie, Pomoxis nigromaculatus; 182, Bluegill, Lepomis macrochirus; 211, Brown bullhead, Ameiurus nebulosus; 212, Pumpkinseed, Lepomis gibbosus; 274, Sheepshead minnow, Cyprinodon variegatus; 278, False albacore, Euthynus alletteratus; 282, Mullet, Mugil spp.; 292, Chain pickerel, Esox niger; 294, Spotted hake, Urophycis regia; 311, Atlantic bonito, Sarda sarda; 335, Silversides, n/a; 353, Golden shiner, Notemigonus crysoleucas; 366, Hogchoker, Trinectes maculatus; 469, Pirate perch, Aphredoderus sayanus; 477, Cownose ray, Rhinoptera bonasus; 482, Northern pipefish, Syngnathus fuscus; 483, Northern sea robin, Prionotus carolinus; 485, Oyster toadfish, Opsanus tau; 487, Skates, Raja spp.; 506, White catfish, Ameiurus nebulosus; 614, Mudminnow, Umbra limi; 999, Redfin pickerel, Esox americanus americanus; 1029, Gobies, n/a; 1044, Conger eels, n/a; 1087, White shark, Carcharodon
carcharias; 1088, Lined seahorse, Hippocampus erectus; 1089, Little skate, Leucoraja erinacea; 1107, Sand tiger shark, Carcharias taurus; 1108, Smooth dogfish, Mustelus canis; 1109, Striped searobin, Prionotus evolans; 1126, Shortfin mako, Isurus oxyrinchus; 1127, Swamp darter, Etheostoma fusiforme; 1128, Banded sunfish, Enneacanthus obesus; 1129, Barndoor skate, Dipturus laevis; 1130, Dusky shark, Carcharhinus obscurus; 1131, Winter skate, Leucoraja ocellata.

Positional_Accuracy:

Horizontal_Positional_Accuracy_Report:
Spatial components for the biological data layers can come from expert interviews, hardcopy, or digital sources. Some of the spatial components of the biological data layers may have been developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy base maps with a scale of 1:24,000. Some of the spatial components of the biological data sets are developed from pre-existing digital or hardcopy sources and reflect the positional accuracy of these original data. See the Lineage and Process_Description sections for more information on the original data source 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:
A. WEBER, C. GRAHN, AND B. HAVENS, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYS DEC)
Publication_Date: 1998
Title: SPECIES COMPOSITION, SEASONAL OCCURRENCE, AND RELATIVE ABUNDANCE OF FINFISH AND MACROINVERTS TAKEN BY SMALL-MESH OTTER TRAWL IN PECONIC BAY, NY
Geospatial_Data_Presentation_Form: HARDCOPY TEXT
Other_Citation_Details:
NYS DEC, DIVISION OF FISH, WILDLIFE, AND MARINE RESOURCES, MARINE FINFISH UNIT, EAST SETAUKET, NY
Type_of_Source_Media: PAPER
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 1998
Source_Currentness_Reference: DATE OF PUBLICATION
Source_Citation_Abbreviation: NONE
Source_Contribution: FISH INFORMATION
Source_Information:
Source_Citation:
Citation Information:
Originator: CHARLES GUTHRIE, NYS DEC
Publication Date: 2007
Title: ABUNDANCE AND DISTRIBUTION OF FRESHWATER FISH
Geospatial Data Presentation Form: EXPERT KNOWLEDGE
Other Citation Details: N/A
Type of Source Media: PERSONAL COMMUNICATION
Source Time Period of Content:
Time Period Information:
Single Date/Time:
Calendar Date: 2007
Source Currentness Reference: DATE OF COMMUNICATION
Source Citation Abbreviation: NONE
Source Contribution: FISH INFORMATION
Source Information:
Source Citation:
Citation Information:
Originator: CHRISTINA GRUHN, NYS DEC
Publication Date: 2007
Title: ABUNDANCE AND DISTRIBUTION OF FINFISH IN NEARSHORE WATERS
Geospatial Data Presentation Form: EXPERT KNOWLEDGE
Other Citation Details: UNPUBLISHED
Type of Source Media: PERSONAL COMMUNICATION
Source Time Period of Content:
Time Period Information:
Single Date/Time:
Calendar Date: 2007
Source Currentness Reference: DATE OF COMMUNICATION
Source Citation Abbreviation: NONE
Source Contribution: FISH INFORMATION
Source Information:
Source Citation:
Citation Information:
Originator:
DR. ARTHUR KOPELMAN, COASTAL RESEARCH AND EDUCATION SOCIETY OF LONG ISLAND (CRESLI)
Publication Date: 2007
Title: ABUNDANCE AND DISTRIBUTION OF MARINE MAMMALS, SEA TURTLES, AND SEABIRDS
Geospatial Data Presentation Form: EXPERT KNOWLEDGE
Other Citation Details: UNPUBLISHED
Type of Source Media: PERSONAL COMMUNICATION
Source Time Period of Content:
Time Period Information:
Single Date/Time:
Calendar Date: 2007
Source Currentness Reference: DATE OF COMMUNICATION
Source Citation Abbreviation: NONE
Source Contribution: FISH INFORMATION
Source Information:
Source Citation:
Citation Information:
Originator: H. O'RIORDAN, NYS DEC
Publication Date: 2008
Title: DISTRIBUTION AND ABUNDANCE OF FRESHWATER FISH IN LONG ISLAND SOUND
Geospatial Data Presentation Form: EXPERT KNOWLEDGE
Other Citation Details: N/A
Type of Source Media: PERSONAL COMMUNICATION
Source Time Period of Content:
Time Period Information:
Single Date/Time:
Calendar Date: 2008
Source Currentness Reference: DATE OF COMMUNICATION
Source Citation Abbreviation: NONE
Source Contribution: FISH INFORMATION
Source Information:
Source Citation:
Citation Information:
Originator: KIM MCKOWN, NYS DEC
Publication Date: 2007
Title: ABUNDANCE AND DISTRIBUTION OF FISH AND SHELLFISH IN NEARSHORE WATERS
Geospatial Data Presentation Form: EXPERT KNOWLEDGE
Other Citation Details: UNPUBLISHED
Type of Source Media: PERSONAL COMMUNICATION
Source Time Period of Content:
Time Period Information:
Single Date/Time:
Calendar Date: 2007
Source Currentness Reference: DATE OF COMMUNICATION
Source Citation Abbreviation: NONE
Source Contribution: FISH INFORMATION
Source Information:
Source Citation:
Citation Information:
Originator: NOAA'S ESTUARINE LIVING MARINE RESOURCES PROGRAM
Publication Date: 1994
Title: DISTRIBUTION AND ABUNDANCE OF FISHES AND INVERTEBRATES IN MID-ATLANTIC ESTUARIES
Geospatial Data Presentation Form: HARDCOPY TEXT
Other Citation Details: ELMR REPORT NO. 12, NOAA/NOS STRATEGIC ENVIRONMENTAL ASSESSMENTS DIVISION, SILVER SPRING, MD
Type of Source Media: PAPER
Type of Source Media: ONLINE
Source Time Period of Content:
  Time Period Information:
    Single Date/Time:
      Calendar Date: 2004
Source Currentness Reference: DATE OF PUBLICATION
Source Citation Abbreviation: NONE
Source Contribution: FISH INFORMATION
Source Information:
  Source Citation:
    Citation Information:
      Originator: NYS DOS AND U.S. FISH AND WILDLIFE (USFWS)
      Publication Date: 1998
      Title: ESTUARINE FISHES
      Geospatial Data Presentation Form: DOCUMENT
      Other Citation Details:
      SOUTH SHORE ESTUARY RESERVE COUNCIL
      TECHNICAL REPORT SERIES, SOUTHERN NEW ENGLAND-NEW YORK BIGHT COASTAL ECOSYSTEMS PROGRAM
      Type of Source Media: ONLINE
      Source Time Period of Content:
        Time Period Information:
          Single Date/Time:
            Calendar Date: 1998
        Source Currentness Reference: DATE OF PUBLICATION
      Source Citation Abbreviation: NONE
      Source Contribution: FISH INFORMATION
    Source Information:
      Source Citation:
        Citation Information:
          Originator: NYS DEC
          Publication Date: 2008
          Title: LARGER UNUSUAL FISH THAT ANGLERS MAY ENCOUNTER
          Geospatial Data Presentation Form: DOCUMENT
          Other Citation Details:
          NYS DEC, BUREAU OF FISHERIES, ALBANY, NY;
          AVAILABLE: <http://www.dec.ny.gov/animals/7014.html>
          (Contact the site webmaster if this URL is no longer active.)
      Type of Source Media: ONLINE
      Source Time Period of Content:
        Time Period Information:
          Single Date/Time:
            Calendar Date: 2008
        Source Currentness Reference: DATE OF PUBLICATION
      Source Citation Abbreviation: NONE
      Source Contribution: FISH INFORMATION
    Source Information:
      Source Citation:
        Citation Information:
Originator: PECONIC ESTUARY PROGRAM (PEP)
Publication_Date: 2005
Title: PECONIC RIVER FISHWAYS: MAKING THE
INSURMOUNTABLE SURMOUNTABLE
Geospatial_Data_Presentation_Form: DOCUMENT
Other_Citation_Details:
PEP OFFICE, YAPHANK, NY; AVAILABLE:
<http://www.peconicestuary.org/Fishways.html> (Contact the site
webmaster if this URL is no longer active.)

Type_of_Source_Media: ONLINE
Source_Time_Period_of_Content:
Time_Period_Information:
  Single_Date/Time:
    Calendar_Date: 2005
Source_Currentness_Reference: DATE OF PUBLICATION
Source_Citation_Abbreviation: NONE
Source_Contribution: FISH INFORMATION
Source_Information:
Source_Citation:
Citation_Information:
  Originator: STEVE HEINS, NYS DEC
  Publication_Date: 2007
  Title: ABUNDANCE AND DISTRIBUTION OF FISH IN WATERS OF
LONG ISLAND
  Geospatial_Data_Presentation_Form: EXPERT KNOWLEDGE
  Other_Citation_Details: N/A
Type_of_Source_Media: PERSONAL COMMUNICATION
Source_Time_Period_of_Content:
Time_Period_Information:
  Single_Date/Time:
    Calendar_Date: 2007
Source_Currentness_Reference: DATE OF COMMUNICATION
Source_Citation_Abbreviation: NONE
Source_Contribution: FISH INFORMATION
Source_Information:
Source_Citation:
Citation_Information:
  Originator: TIM GREEN, BROOKHAVEN NATIONAL
LABORATORY
  Publication_Date: 2007
  Title: ABUNDANCE AND DISTRIBUTION DATA FOR REPTILES,
AMPHIBIANS, AND TERRESTRIAL MAMMALS ON LONG
ISLAND
  Geospatial_Data_Presentation_Form: EXPERT KNOWLEDGE
  Other_Citation_Details: N/A
Type_of_Source_Media: PERSONAL COMMUNICATION
Source_Time_Period_of_Content:
Time_Period_Information:
  Single_Date/Time:
    Calendar_Date: 2007
Two main sources of data were used to depict fish distribution and seasonality for this data layer: 1) personal interviews with resource experts from the New York State Department of Environmental Conservation (NYS DEC), Town of Hempstead, and East Hampton Town, and 2) numerous published and unpublished reports. Seasonality was based on the National Oceanic and Atmospheric Administration's (NOAA) Estuarine Living Marine Resources (ELMR) Program. The above digital and/or hardcopy sources were compiled by the project biologist to create the FISH data layer. Depending on the type of source data, three general approaches are used for compiling a biology data layer: 1) information gathered during initial interviews and from hardcopy sources is compiled onto U.S. Geological Survey 1:24,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; and/or 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews is conducted to review the maps. If necessary, edits to the FISH data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

Process 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.
Spatial Data Organization Information:
Direct Spatial Reference Method: Vector

Point and Vector Object Information:
SDTS_Terms_Description:
  SDTS_Point and Vector_Object_Type: GT-polygon composed of chains
  Point and Vector_Object_Count: 1084

SDTS_Terms_Description:
  SDTS_Point and Vector_Object_Type: Area point
  Point and Vector_Object_Count: 1083

SDTS_Terms_Description:
  SDTS_Point and Vector_Object_Type: Complete chain
  Point and Vector_Object_Count: 1626

SDTS_Terms_Description:
  SDTS_Point and Vector_Object_Type: Link
  Point and Vector_Object_Count: 266725

SDTS_Terms_Description:
  SDTS_Point and Vector_Object_Type: Node, planar graph
  Point and Vector_Object_Count: 1586

Spatial Reference Information:
Horizontal Coordinate System Definition:
Geographic:
  Latitude Resolution: 0.0000001
  Longitude Resolution: 0.0000001
  Geographic Coordinate Units: Decimal degrees

Geodetic Model:
  Horizontal Datum Name: North American Datum of 1927
  Ellipsoid Name: Clark 1866
  Semi-major Axis: 6378206.400000
  Denominator of Flattening Ratio: 294.978698

Entity and Attribute Information:
Overview Description:
Entity and Attribute Overview:
In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, FISH) is linked to the
Biological Resources table (BIORES) using the unique ID and the lookup table BIO_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (for the Long Island atlas, the number is 53), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN_SPEC, S, F, NHP, DATE_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G_SOURCE, S_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed_Description of the BREED data table. The link to the BIOFILE may be made through the BIO_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED_DT is an auxiliary support data table to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to BREED_DT is the BREED item.

A second supporting data table is SOURCES. This is the same as the source file described above, and the link from the flat file is both G_SOURCE and S_SOURCE.

It should be noted that although the flat file eases data query, it is not a normalized database structure, and actual updates performed by the states and other responsible agencies should be done using the relational data tables. The entity-relationship diagram, describing relationships between attribute tables in the ESI data structure, does NOT include the BIOFILE data table, and this data table is NOT described in detail below.

**Detailed_Description:**

**Entity_Type:**

**Entity_Type_Label:** FISH.PAT

**Entity_Type_Definition:**

The FISH.PAT table contains attribute information for the vector polygons in this data set representing fish distribution, concentration areas, and spawning areas. Note that all attribute information is stored in a series of relational files, described below. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

**Entity_Type_Definition_Source:** 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 (53), 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: 0530200002
  - Range Domain Maximum: 0530200907

**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 (53), element number (2), and record number. ID values of 9999 are holes in polygons and do not contain information.
- **Attribute Definition Source:** NOAA

**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: 053000001
  - Range Domain Maximum: 053000905

**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: 053000644
  - Range Domain Maximum: 053000675
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.

**Attribute 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**: 053000001
    - **Range Domain Maximum**: 053000905

**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 values of a species at a particular location. No concentration data were available for fish, so the CONC field is populated with ".-".
- **Attribute Definition Source**: Research Planning, Inc.
- **Attribute Domain Values**:
  - **Unrepresentable Domain**: Acceptable values change from atlas to atlas.

**Attribute**:

- **Attribute Label**: SEASON_ID
- **Attribute Definition**: Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.
- **Attribute Definition Source**: 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.

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.

Enumerated Domain:

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

Enumerated Domain:

- Enumerated Domain Value: E#####
  Enumerated Domain Value Definition: Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the last two characters are SEASON_ID (e.g. ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
  Enumerated Domain Value Definition Source: 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 for the entire ESI data set.
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
  Unrepresentable Domain: Acceptable values change from atlas to atlas.

Attribute:
Attribute Label: GEN_SPEC
Attribute Definition: Species scientific name for the entire ESI data set.
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
  Unrepresentable Domain: Acceptable values change from atlas to atlas.

Attribute:
Attribute Label: ELEMENT
Attribute Definition: Major categories of biological data.
Attribute Definition Source: 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 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: amphibian
Enumerated Domain Value Definition: Amphibian
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: 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: dolphin
Enumerated Domain Value Definition: Dolphin
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
Long Island: FISH

Attribute Domain Values:

Enumerated Domain:
Enumerated Domain Value: e_resident
Enumerated Domain Value Definition: Estuarine resident
Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:
Enumerated Domain Value: fav
Enumerated Domain Value Definition: Floating aquatic vegetation
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: lobster
Enumerated Domain Value Definition: Lobster
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 bird
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: pelagic
Enumerated Domain Value Definition: Pelagic bird
Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: pinniped
Enumerated_Domain_Value_Definition: Pinniped
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

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

Enumerated_Domain:

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

Enumerated_Domain:

Enumerated_Domain_Value: sav
Enumerated_Domain_Value_Definition: Submerged aquatic vegetation
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

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

Enumerated_Domain:

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

Enumerated_Domain:

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

Enumerated_Domain:

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

Enumerated_Domain:

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

Enumerated_Domain:

Enumerated_Domain_Value: wading
Enumerated_Domain_Value_Definition: Wading bird
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
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_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: whale
Enumerated_Domain_Value_Definition: Whale
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: YYYYMM
Enumerated_Domain_Value_Definition: YYYY for year and optionally MM for month
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 (e.g. 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: 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 (e.g. 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 (e.g., 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 or not reported

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

<table>
<thead>
<tr>
<th>Enumerated Domain Value: -</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enumerated Domain Value Definition:</td>
</tr>
<tr>
<td>Breed category not used or not appropriate for record(s) in question</td>
</tr>
</tbody>
</table>

**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:**

<table>
<thead>
<tr>
<th>Enumerated Domain:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enumerated Domain Value: Y</td>
</tr>
<tr>
<td>Enumerated Domain Value Definition: Life-history stage or activity present</td>
</tr>
<tr>
<td>Enumerated Domain Value Definition Source: Research Planning, Inc.</td>
</tr>
<tr>
<td>Enumerated Domain:</td>
</tr>
<tr>
<td>Enumerated Domain Value: N</td>
</tr>
<tr>
<td>Enumerated Domain Value Definition: Life-history stage or activity not present or not reported</td>
</tr>
<tr>
<td>Enumerated Domain Value Definition Source: Research Planning, Inc.</td>
</tr>
<tr>
<td>Enumerated Domain:</td>
</tr>
<tr>
<td>Enumerated Domain Value: -</td>
</tr>
<tr>
<td>Enumerated Domain Value Definition: Breed category not used or not appropriate for record(s) in question</td>
</tr>
<tr>
<td>Enumerated Domain Value Definition Source: Research Planning, Inc.</td>
</tr>
</tbody>
</table>

**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:**

<table>
<thead>
<tr>
<th>Enumerated Domain:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enumerated Domain Value: Y</td>
</tr>
<tr>
<td>Enumerated Domain Value Definition: Life-history stage or activity present</td>
</tr>
<tr>
<td>Enumerated Domain Value Definition Source: Research Planning, Inc.</td>
</tr>
<tr>
<td>Enumerated Domain:</td>
</tr>
<tr>
<td>Enumerated Domain Value: N</td>
</tr>
</tbody>
</table>
**Enumerated_Domain_Value_Definition**: Life-history stage or activity not present or not reported

**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; G_SOURCE and S_SOURCE in the BIORES table; and SOURCE_ID in the ESI and HYDRO data layers.

**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**:

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

**Attribute**:

- **Attribute_Label**: DATE_PUB

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

**Attribute_Definition_Source**: Research Planning, Inc.

**Attribute_Domain_Values**:

- **Enumerated_Domain**: 
  - **Enumerated_Domain_Value**: YYYYMM
  - **Enumerated_Domain_Value_Definition**: YYYY for year and optionally MM for month

**Enumerated_Domain_Value_Definition_Source**: Research Planning, Inc.

**Attribute**:

- **Attribute_Label**: TITLE
Attribute_Definition: Title of source material or data.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:
Attribute_Label: DATA_FORMAT
Attribute_Definition: The format of the source material.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:
Attribute_Label: PUBLICATION
Attribute_Definition: Additional citation information.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:
Attribute_Label: SCALE
Attribute_Definition: Description of the source scale.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:
Attribute_Label: TIME_PERIOD
Attribute_Definition: Date(s) of data collection that the source material is based upon.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Unrepresentable_Domain: Acceptable values change from atlas to atlas.

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

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:
Unrepresentable Domain: Acceptable values change from atlas to atlas.

Attribute:
Attribute Label: COUNTRY
Attribute Definition: Three-letter country abbreviation.
Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:
Unrepresentable Domain: Acceptable values change from atlas to atlas.

Attribute:
Attribute Label: S
*Attribute Definition:* State threatened or endangered status.
*Attribute Definition Source:* Research Planning, Inc.
*Attribute Domain Values:*
  
  Enumerated Domain:
  
  Enumerated Domain Value: E
  Enumerated Domain Value Definition: Endangered on state list
  Enumerated Domain Value Definition Source: NOAA ESI Guidelines

*Attribute Domain Values:*

  Enumerated Domain:
  
  Enumerated Domain Value: T
  Enumerated Domain Value Definition: Threatened on state list
  Enumerated Domain Value Definition Source: NOAA ESI Guidelines

*Attribute Domain Values:*

  Enumerated Domain:
  
  Enumerated Domain Value: C
  Enumerated Domain Value Definition: Species of Special Concern
  Enumerated Domain Value Definition Source: NOAA ESI Guidelines

*Attribute:*

  *Attribute Label:* F
  *Attribute Definition:* Federal threatened or endangered status.
  *Attribute Definition Source:* Research Planning, Inc.
  *Attribute Domain Values:*

  Enumerated Domain:

  Enumerated Domain Value: E
  Enumerated Domain Value Definition: Endangered on federal list
  Enumerated Domain Value Definition Source: NOAA ESI Guidelines

*Attribute Domain Values:*

  Enumerated Domain:

  Enumerated Domain Value: T
  Enumerated Domain Value Definition: Threatened on federal list
  Enumerated Domain Value Definition Source: NOAA ESI Guidelines

*Attribute Domain Values:*

  Enumerated Domain:

  Enumerated Domain Value: C
  Enumerated Domain Value Definition: Species of Special Concern
  Enumerated Domain Value Definition Source: NOAA ESI Guidelines

*Attribute:*

  *Attribute Label:* I
  *Attribute Definition:* International threatened or endangered status.
  *Attribute Definition Source:* Research Planning, Inc.
  *Attribute Domain Values:*

  Enumerated Domain:

  Enumerated Domain Value: E
  Enumerated Domain Value Definition: Endangered on international list
  Enumerated Domain Value Definition Source: NOAA ESI Guidelines

*Attribute Domain Values:*

  Enumerated Domain:

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

*Attribute Domain Values:*

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

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

Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: YYYYMM
        Enumerated_Domain_Value_Definition: YYYY for year and optionally MM for month
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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

Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: YYYYMM
        Enumerated_Domain_Value_Definition: YYYY for year and optionally MM for month
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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

Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: YYYYMM
        Enumerated_Domain_Value_Definition: YYYY for year and optionally MM for month
        Enumerated_Domain_Value_Definition_Source: 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 (e.g. 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 Long Island

Distribution_Liability:

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

Custom_Order_Process:

Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to the widest community of GIS/mapping users. Distribution formats include Geodatabase; ARC export, MOSS, and Shape files; and MARPLOT map folders. An ArcMap .mxd file, an ArcView 3.x ESI project, and an ESI_Viewer product for use with the MARPLOT data are also included on the distribution CDs/DVDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

Metadata_Reference_Information:

Metadata_Date: 200905

Metadata_Review_Date: 200905

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 2.9.8 on Fri May 29 11:34:26 2009
Coastal Resources Atlas: Long Island: 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:**


**Publication Date:** 200903

**Title:**

Coastal Resources Atlas: Long Island: INVERT (Invertebrate Polygons)

**Edition:** First

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

**Series Information:**

**Series Name:** NONE

**Issue Identification:** Long Island, New York

**Publication Information:**

**Publication Place:** Seattle, Washington

**Publisher:**


**Other Citation Details:**


**Description:**

**Abstract:**

This data set contains sensitive biological resource data for coastal, estuarine, and
marine invertebrate species for Long Island, New York. Vector polygons in this data set represent invertebrate distribution and concentration areas. Species specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for Long Island. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources.

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

**Time_Period_of_Content:**
**Time_Period_Information:**
**Range_of_Dates/Times:**
**Beginning_Date:** 1994
**Ending_Date:** 2008

**Currentness_Reference:**
The biological data were compiled during 2007-2009. The currentness dates for the data range from 1994 to 2008 and are documented in the Lineage section.

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

**Spatial_Domain:**
**Bounding_Coordinates:**
**West_Bounding_Coordinate:** 73.75000
**East_Bounding_Coordinate:** 71.79000
**North_Bounding_Coordinate:** 41.37500
**South_Bounding_Coordinate:** 40.50000

**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:** Long Island
**Place_Keyword:** New York

**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 Long Island 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, Emergency Response Division, Seattle, Washington and Department of Homeland Security, U.S. Coast Guard, Office of Incident Management and Preparedness, Washington, D.C.

**Native Data Set Environment:**  
The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO® (version 9.2) and SQL SERVER® (version 2000). The hardware configuration is PCs with Windows Operating System (2000/XP/2003). The Spatial Data Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: birds.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, mgt.e00, reptiles.e00, socecon.e00, t_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biorec, breed, breed_dt, seasonal, soc_dat, soc_lut, sources, species, and status.

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**Data Quality Information:**

**Attribute Accuracy:**

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

**Logical Consistency Report:**

A multi-stage error checking process, described in the above Attribute Accuracy Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary 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
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 IDs and RARNUMs or HUNUMs are also generated. The new IDs are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUMs are also modified to include the atlas number, so multiple atlases can be combined and RARNUMs remain unique. RARNUMs are redefined on an element basis, so "resource at risk" groupings will contain only a single element. HUNUMs are also modified to include the atlas number.

Completeness_Report:
These data represent a synthesis of expert knowledge, available hardcopy documents, survey data, maps, and digital data on invertebrate distribution and concentration areas. These data do not necessarily represent all invertebrate occurrences in Long Island. The following species are included in this data set: (Species_ID, Common Name, Scientific Name [n/a if not applicable]): 19, Blue mussel, Mytilus edulis; 25, Softshell clam, Mya arenaria; 41, Bay scallop, Argopecten irradians; 42, Northern quahog, Mercenaria mercenaria; 43, American oyster, Crassostrea virginica; 44, Horseshoe crab, Limulus polyphemus; 45, American lobster, Homarus americanus; 49, Blue crab, Callinectes sapidus; 73, Longfin squid, Loligo pealeii; 80, Ribbed mussel, Geukensia demissa; 276, Sevenspine bay shrimp, Crangon septemspinosa; 286, Ocean quahog, Arctica islandica; 287, Atlantic surfclam, Spisula solidissima; 289, Daggerblade grass shrimp, Palaemonetes pugio; 303, Atlantic rock crab, Cancer irroratus; 304, Green crab, Carcinus maenas; 305, Jonah crab, Cancer borealis; 378, Rare insect, n/a; 397, Mantis shrimp, Gonadactylus falcatus; 505, Monarch butterfly, Danaus plexippus; 571, Lady crab, Ovalipes ocellatus; 585, Coastal barrens buckmoth, Hemileuca maia ssp. 5; 586, Pine Barrens underwing, Catocala herodias gerhardi; 588, Atlantic razor, Siliqua costata; 1060, Spider crabs, Libinia spp.

Positional_Accuracy:
Horizontal_Positional_Accuracy:
Horizontal_Positional_Accuracy_Report:
Spatial components for the biological data layers can come from expert interviews, hardcopy, or digital sources. Some of the spatial components of the biological data layers may have been developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy base maps with a scale of 1:24,000. Some of the spatial components of the biological data sets are developed from pre-existing digital or hardcopy sources and reflect the positional accuracy of these original data. See the Lineage and Process_Description sections for more information on the original data source 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:
A. WEBER, C. GRAHN, AND B. HAVENS, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYS DEC)
Publication_Date: 1998
Title:
SPECIES COMPOSITION, SEASONAL OCCURRENCE, AND RELATIVE ABUNDANCE OF FINFISH AND MACROINVERTS TAKEN BY SMALL-MESH OTTER TRAWL IN PECONIC BAY, NY
Geospatial_Data_Presentation_Form: HARDCOPY TEXT
Other_Citation_Details:
NYS DEC, DIVISION OF FISH, WILDLIFE, AND MARINE RESOURCES, MARINE FINFISH UNIT, EAST SETAUKET, NY
Type_of_Source_Media: PAPER
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 1998
Source_Currentness_Reference: DATE OF PUBLICATION
Source_Citation_Abbreviation: NONE
Source_Contribution: INVERT INFORMATION
Source_Information:
Source_Citation:
Citation_Information:
Originator: CHRISTINA GRUHN, NYS DEC
Publication_Date: 2007
Title: ABUNDANCE AND DISTRIBUTION OF FINFISH IN NEARSHORE WATERS
Geospatial_Data_Presentation_Form: EXPERT KNOWLEDGE
Other_Citation_Details: UNPUBLISHED
Type_of_Source_Media: PERSONAL COMMUNICATION
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 2007
Source_Currentness_Reference: DATE OF COMMUNICATION
Source_Citation_Abbreviation: NONE
Source_Contribution: INVERT INFORMATION
Source_Information:
Source_Citation:
Citation_Information:
Originator: DEBBIE BARNES, NYS DEC
Publication_Date: 2008
Title:
DISTRIBUTION AND ABUNDANCE DATA FOR INVERTEBRATES OF LONG ISLAND
Geospatial_Data_Presentation_Form: EXPERT KNOWLEDGE
Other_Citation_Details: N/A
Type_of_Source_Media: PERSONAL COMMUNICATION
Source_Time_Period_of_Content:
  Time_Period_Information:
    Single_Date/Time:
      Calendar_Date: 2008
  Source_Currentness_Reference: DATE OF COMMUNICATION
Source_Citation_Abbreviation: NONE
Source_Contribution: INVERT INFORMATION
Source_Information:
  Source_Citation:
    Citation_Information:
      Originator: DIANE ABELL, NATIONAL PARK SERVICE (NPS)
      Publication_Date: 2007
      Title: NATURAL AND HISTORIC RESOURCES OF FIRE ISLAND NATIONAL SEASHORE
      Geospatial_Data_Presentation_Form: EXPERT KNOWLEDGE
      Other_Citation_Details: N/A
    Type_of_Source_Media: PERSONAL COMMUNICATION
Source_Time_Period_of_Content:
  Time_Period_Information:
    Single_Date/Time:
      Calendar_Date: 2007
  Source_Currentness_Reference: DATE OF COMMUNICATION
Source_Citation_Abbreviation: NONE
Source_Contribution: INVERT INFORMATION
Source_Information:
  Source_Citation:
    Citation_Information:
      Originator: JOSH THIELE, NYS DEC
      Publication_Date: 2007
      Title: DISTRIBUTION AND ABUNDANCE DATA FOR INVERTEBRATES OF LONG ISLAND
      Geospatial_Data_Presentation_Form: EXPERT KNOWLEDGE
      Other_Citation_Details: UNPUBLISHED
    Type_of_Source_Media: PERSONAL COMMUNICATION
Source_Time_Period_of_Content:
  Time_Period_Information:
    Single_Date/Time:
      Calendar_Date: 2007
  Source_Currentness_Reference: DATE OF COMMUNICATION
Source_Citation_Abbreviation: NONE
Source_Contribution: INVERT INFORMATION
Source_Information:
  Source_Citation:
    Citation_Information:
      Originator: KIM MCKOWN, NYS DEC
      Publication_Date: 2007
      Title: ABUNDANCE AND DISTRIBUTION OF FISH AND SHELLFISH IN NEARSHORE WATERS
      Geospatial_Data_Presentation_Form: EXPERT KNOWLEDGE
Publication_Date: 2007
Title: NHP SPECIES 07
Geospatial_Data_Presentation_Form: VECTOR DIGITAL DATA
Other_Citation_Details: NYS DEC, ALBANY, NY
Source_Scale_Denominator: 24,000
Type_of_Source_Media: EMAIL
Source_Time_Period_of_Content:
  Time_Period_Information:
    Single_Date/Time:
      Calendar_Date: 2007
Source_Currentness_Reference: DATE OF PUBLICATION
Source_Citation_Abbreviation: NONE
Source_Contribution: INVERT INFORMATION
Source_Information:
Source_Citation:
  Citation_Information:
    Originator: NYS DOS
    Publication_Date: 2004
    Title: SIGNIFICANT COASTAL FISH AND WILDLIFE HABITATS
    Geospatial_Data_Presentation_Form: DOCUMENT
    Other_Citation_Details: NYS DOS, ALBANY, NY
Type_of_Source_Media: ONLINE
Source_Time_Period_of_Content:
  Time_Period_Information:
    Single_Date/Time:
      Calendar_Date: 2004
Source_Currentness_Reference: DATE OF PUBLICATION
Source_Citation_Abbreviation: NONE
Source_Contribution: INVERT INFORMATION
Source_Information:
Source_Citation:
  Citation_Information:
    Originator: TOWN OF EAST HAMPTON
    Publication_Date: 2007
    Title: NATURAL RESOURCES ACCESS DATABASE
    Geospatial_Data_Presentation_Form: SPREADSHEET
    Other_Citation_Details: N/A
Type_of_Source_Media: EMAIL
Source_Time_Period_of_Content:
  Time_Period_Information:
    Single_Date/Time:
      Calendar_Date: 2007
Source_Currentness_Reference: DATE OF COMMUNICATION
Source_Citation_Abbreviation: NONE
Source_Contribution: INVERT INFORMATION
Source_Information:
Source_Citation:
  Citation_Information:
    Originator: TOWN OF HEMPSTEAD, DEPT OF CONSERVATION AND WATERWAYS
    Publication_Date: 2008
Two main sources of data were used to depict invertebrate distribution and seasonality for this data layer: 1) personal interviews with resource experts from the New York State Department of Environmental Conservation (NYS DEC) and the National Park Service, Fire Island National Seashore, 2) digital data provided by the New York State Natural Heritage Program (NHP), and 3) numerous published and unpublished reports. The above digital and/or hardcopy sources were compiled by the project biologist to create the INVERT data layer. Depending on the type of source data, three general approaches are used for compiling a biology data layer: 1) information gathered during initial interviews and from hardcopy sources is compiled onto U.S. Geological Survey 1:24,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; and/or 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews is conducted to review the maps. If necessary, edits to the INVERT data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

Process Date: 200903
Process Contact:

Contact Information:

Contact Organization Primary:
Contact Organization: NOAA, Office of Response and Restoration
Contact Person: Jill Petersen

Contact Address:
Address Type: Physical address
Address: 7600 Sand Point Way, N.E.
City: Seattle
State or Province: Washington
Postal Code: 98115-6349
Contact Voice Telephone: (206) 526-6944
Contact Facsimile Telephone: (206) 526-6329
Contact Electronic Mail Address: Jill.Petersen@noaa.gov
Spatial Data Organization Information:
Direct Spatial Reference Method: Vector
Point and Vector Object Information:

SDTS Terms Description:
SDTS Point and Vector Object Type: GT-polygon composed of chains
Point and Vector Object Count: 1072

SDTS Terms Description:
SDTS Point and Vector Object Type: Area point
Point and Vector Object Count: 1071

SDTS Terms Description:
SDTS Point and Vector Object Type: Complete chain
Point and Vector Object Count: 1770

SDTS Terms Description:
SDTS Point and Vector Object Type: Link
Point and Vector Object Count: 278060

SDTS Terms Description:
SDTS Point and Vector Object Type: Node, planar graph
Point and Vector Object Count: 1639

Spatial Reference Information:
Horizontal Coordinate System Definition:
Geographic:
Latitude Resolution: 0.0000001
Longitude Resolution: 0.0000001
Geographic Coordinate Units: Decimal degrees

Geodetic Model:
Horizontal Datum Name: North American Datum of 1927
Ellipsoid Name: Clark 1866
Semi-major Axis: 6378206.400000
Denominator of Flattening Ratio: 294.978698

Entity and Attribute Information:
Overview Description:
Entity and Attribute Overview:
In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, INVERT) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (for the Long Island atlas, the number is 53), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a
"resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN_SPEC, S, F, NHP, DATE_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G_SOURCE, S_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed_Description of the BREED data table. The link to the BIOFILE may be made through the BIO_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer’s attribute data tables. As mentioned, BREED_DT is an auxiliary support data table to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to BREED_DT is the BREED item.

A second supporting data table is SOURCES. This is the same as the source file described above, and the link from the flat file is both G_SOURCE and S_SOURCE. It should be noted that although the flat file eases data query, it is not a normalized database structure, and actual updates performed by the states and other responsible agencies should be done using the relational data tables. The entity-relationship diagram, describing relationships between attribute tables in the ESI data structure, does NOT include the BIOFILE data table, and this data table is NOT described in detail below.

**Detailed_Description:**

**Entity_Type:**

**Entity_Type_Label:** INVERT.PAT

**Entity_Type_Definition:**

The INVERT.PAT table contains attribute information for the vector polygons in this data set representing invertebrate distribution and concentration areas. Note that all attribute information is stored in a series of relational files, described below. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

**Entity_Type_Definition_Source:** 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 (53), 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: 0530700002
  Range_Domain_Maximum: 0530700956

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: 053000785
      Range_Domain_Maximum: 053000833

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: 053000001
        Range_Domain_Maximum: 053000905
  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 (53), 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: 0530100002
        Range_Domain_Maximum: 0530900714

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: 053000001
    - Range Domain Maximum: 053000905

**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 values, and may contain counts of a species at a particular location. No quantitative count data were available for invertebrates, so the field may contain descriptive terms, such as "ABUNDANT" or "COMMON", to describe the relative abundance of particular invertebrate species at specific locations. In cases where no concentration information was available from any source, the field is populated with ".".
- **Attribute Definition Source:** Research Planning, Inc.
- **Attribute Domain Values:**
  - Unrepresentable Domain: Acceptable values change from atlas to atlas.

**Attribute:**
- **Attribute Label:** SEASON_ID
- **Attribute Definition:** Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.
- **Attribute Definition Source:** Research Planning, Inc.
- **Attribute Domain Values:**
  - Range Domain:
    - Range Domain Minimum: 1
    - Range Domain Maximum: N
Attribute Label: G_SOURCE
Attribute Definition:
Geographic source identifier that links records in the BIORES data table to records in the SOURCES data table.
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
Range Domain:
  Range Domain Minimum: 1
  Range Domain Maximum: N

Attribute Label: S_SOURCE
Attribute Definition:
Seasonality source identifier that links records in the BIORES data table to records in the SOURCES data table.
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
Range Domain:
  Range Domain Minimum: 1
  Range Domain Maximum: N

Attribute Label: ELEMENT
Attribute Definition: Major categories of biological data.
Attribute Definition Source: 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 (e.g. 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 (e.g. 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 for the entire ESI data set.
  Attribute Definition Source: Research Planning, Inc.
  Attribute Domain Values:
    Unrepresentable Domain: Acceptable values change from atlas to atlas.
Attribute:
  Attribute Label: GEN_SPEC
  Attribute Definition: Species scientific name for the entire ESI data set.
  Attribute Definition Source: Research Planning, Inc.
  Attribute Domain Values:
    Unrepresentable Domain: Acceptable values change from atlas to atlas.
Attribute:
  Attribute Label: ELEMENT
  Attribute Definition: Major categories of biological data.
  Attribute Definition Source: 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: amphibian
Enumerated Domain Value Definition: Amphibian
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: 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: dolphin
Enumerated Domain Value Definition: Dolphin
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
Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:
Enumerated Domain:
Enumerated Domain Value: fav
Enumerated Domain Value Definition: Floating aquatic vegetation
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: lobster
Enumerated Domain Value Definition: Lobster
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: pelagic
Enumerated Domain Value Definition: Pelagic
Enumerated Domain Value Definition Source: Research Planning, Inc.

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

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

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

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

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

Attribute Domain Values:
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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: 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
**Attribute Domain Values:**

**Enumerated Domain:**
- **Enumerated Domain Value:** wetland
  **Enumerated Domain Value Definition:** Wetland
- **Enumerated Domain Value:** whale
  **Enumerated Domain Value Definition:** Whale

**Attribute Domain Values:**

**Enumerated Domain:**
- **Enumerated Domain Value:** YYYYMM
  **Enumerated Domain Value Definition:** YYYY for year and optionally MM for month
- **Enumerated Domain Value:** 0
  **Enumerated Domain Value Definition:** Date unspecified

**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:** YYYYMM
  **Enumerated Domain Value Definition:** YYYY for year and optionally MM for month
- **Enumerated Domain Value:** 0
  **Enumerated Domain Value Definition:** Date unspecified

**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 (e.g. ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').

**Detailed Description:**

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

Entity_Type_Definition_Source: 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.
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<th>Attribute_Definition</th>
<th>Attribute_Definition_Source</th>
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<td>Research Planning, Inc.</td>
<td>Enumerated_Domain</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Enumerated_Domain_Value: X</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Enumerated_Domain_Value_Definition: Present in October</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.</td>
</tr>
</tbody>
</table>
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 (e.g. 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**

**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 or not reported
  **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:
Enumerated Domain Value: N
Enumerated Domain Value Definition: Life-history stage or activity not present or not reported
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:
Enumerated Domain Value: N
Enumerated Domain Value Definition: Life-history stage or activity not present or not reported
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:** 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 or not reported
  - **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:** 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 or not reported
  - **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 BrowseGraphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.
  
  **Entity Type Definition Source:** 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; G_SOURCE and S_SOURCE in the BIORES table; and SOURCE_ID in the ESI and HYDRO data layers.
  
  **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:**
- **Unrepresentable Domain:** Acceptable values change from atlas to atlas.

**Attribute:**
- **Attribute Label:** DATE_PUB
- **Attribute Definition:** Date of source material, publication, or date of personal communication with expert source.
- **Attribute Definition Source:** Research Planning, Inc.

**Attribute Domain Values:**
- **Enumerated Domain:**
  - **Enumerated Domain Value:** YYYYMM
  - **Enumerated Domain Value Definition:** YYYY for year and optionally MM for month
- **Enumerated Domain Value Definition Source:** Research Planning, Inc.

**Attribute:**
- **Attribute Label:** TITLE
- **Attribute Definition:** Title of source material or data.
- **Attribute Definition Source:** Research Planning, Inc.

**Attribute Domain Values:**
Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:
  Attribute_Label: DATA_FORMAT  
  Attribute_Definition: The format of the source material.  
  Attribute_Definition_Source: Research Planning, Inc.  
  Attribute_Domain_Values:  
    Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:
  Attribute_Label: PUBLICATION  
  Attribute_Definition: Additional citation information.  
  Attribute_Definition_Source: Research Planning, Inc.  
  Attribute_Domain_Values:  
    Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:
  Attribute_Label: SCALE  
  Attribute_Definition: Description of the source scale.  
  Attribute_Definition_Source: Research Planning, Inc.  
  Attribute_Domain_Values:  
    Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:
  Attribute_Label: TIME_PERIOD  
  Attribute_Definition: Date(s) of data collection that the source material is based upon.  
  Attribute_Definition_Source: Research Planning, Inc.  
  Attribute_Domain_Values:  
    Unrepresentable_Domain: Acceptable values change from atlas to atlas.

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

Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:

**Attribute_Label**: COUNTRY

**Attribute_Definition**: Three-letter country abbreviation.

**Attribute_Definition_Source**: Research Planning, Inc.

Attribute_Domain_Values:

Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:

**Attribute_Label**: S

**Attribute_Definition**: State threatened or endangered status.

**Attribute_Definition_Source**: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated Domain:
  Enumerated Domain Value: E
  Enumerated Domain Value Definition: Endangered on state list
  Enumerated Domain Value Definition Source: NOAA ESI Guidelines

Attribute Domain Values:
  Enumerated Domain:
    Enumerated Domain Value: T
    Enumerated Domain Value Definition: Threatened on state list
    Enumerated Domain Value Definition Source: NOAA ESI Guidelines

Attribute Domain Values:
  Enumerated Domain:
    Enumerated Domain Value: C
    Enumerated Domain Value Definition: Species of Special Concern
    Enumerated Domain Value Definition Source: NOAA ESI Guidelines

Attribute:
  Attribute Label: F
  Attribute Definition: Federal threatened or endangered status.
  Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:
  Enumerated Domain:
    Enumerated Domain Value: E
    Enumerated Domain Value Definition: Endangered on federal list
    Enumerated Domain Value Definition Source: NOAA ESI Guidelines

Attribute Domain Values:
  Enumerated Domain:
    Enumerated Domain Value: T
    Enumerated Domain Value Definition: Threatened on federal list
    Enumerated Domain Value Definition Source: NOAA ESI Guidelines

Attribute Domain Values:
  Enumerated Domain:
    Enumerated Domain Value: C
    Enumerated Domain Value Definition: Species of Special Concern
    Enumerated Domain Value Definition Source: NOAA ESI Guidelines

Attribute:
  Attribute Label: I
  Attribute Definition: International threatened or endangered status.
  Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:
  Enumerated Domain:
    Enumerated Domain Value: E
    Enumerated Domain Value Definition: Endangered on international list
    Enumerated Domain Value Definition Source: NOAA ESI Guidelines

Attribute Domain Values:
  Enumerated Domain:
    Enumerated Domain Value: T
    Enumerated Domain Value Definition: Threatened on international list
    Enumerated Domain Value Definition Source: NOAA ESI Guidelines

Attribute Domain Values:
  Enumerated Domain:
    Enumerated Domain Value: C
    Enumerated Domain Value Definition: Species of Special Concern
**Enumerated_Domain_Value_Definition_Source:** NOAA ESI Guidelines

**Attribute:**

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

**Attribute Domain Values:**

*Enumerated_Domain:*  
*Enumerated_Domain_Value:* YYYYMM  
*Enumerated_Domain_Value_Definition:* YYYY for year and optionally MM for month  
*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

**Attribute:**

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

**Attribute Domain Values:**

*Enumerated_Domain:*  
*Enumerated_Domain_Value:* YYYYMM  
*Enumerated_Domain_Value_Definition:* YYYY for year and optionally MM for month  
*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

**Attribute:**

*Attribute_Label:* I_DATE  
*Attribute_Definition:*  
Publication date of source material used to assign international status values for each species, if used.  
*Attribute_Definition_Source:* Research Planning, Inc.

**Attribute Domain Values:**

*Enumerated_Domain:*  
*Enumerated_Domain_Value:* YYYYMM  
*Enumerated_Domain_Value_Definition:* YYYY for year and optionally MM for month  
*Enumerated_Domain_Value_Definition_Source:* 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 (e.g. 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 Long Island

**Distribution Liability:**

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

**Custom Order Process:**

Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to the widest community of GIS/mapping users. Distribution formats include Geodatabase; ARC export, MOSS, and Shape files; and MARPLOT map folders. An ArcMap .mxd file, an ArcView 3.x ESI project, and an ESI Viewer product for use with the MARPLOT data are also included on the distribution CDs/DVDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

---

**Metadata Reference Information:**

**Metadata Date:** 200905

**Metadata Review Date:** 200905

**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 2.9.8 on Fri May 29 11:55:48 2009
Coastal Resources Atlas: Long Island: REPTILES (Reptile and Amphibian Polygons)

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

**Metadata:**

- Identification Information
- Data Quality Information
- Spatial Data Organization Information
- Spatial Reference Information
- Entity and Attribute Information
- Distribution Information
- Metadata Reference Information

**Identification Information:**

**Citation:**

**Citation Information:**

**Originator:**

**Publication Date:** 200903

**Title:**
Coastal Resources Atlas: Long Island: REPTILES (Reptile and Amphibian Polygons)

**Edition:** First

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

**Series Information:**

**Series Name:** NONE

**Issue Identification:** Long Island, New York

**Publication Information:**

**Publication Place:** Seattle, Washington

**Publisher:**

**Other Citation Details:**

**Description:**

**Abstract:**
This data set contains sensitive biological resource data for sea turtles, estuarine turtles, and amphibians for Long Island, New York. Vector polygons in this data set represent turtle and amphibian 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 Long Island. 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:** 1998
  - **Ending_Date:** 2008

**Currentness Reference:**
The biological data were compiled during 2007-2009. The currentness dates for the data range from 1998 to 2008 and are documented in the Lineage section.

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

**Spatial_Domain:**
**Bounding_Coordinates:**
  - **West_BoundingCoordinate:** 73.75000
  - **East_BoundingCoordinate:** 71.79000
  - **North_BoundingCoordinate:** 41.37500
  - **South_BoundingCoordinate:** 40.50000

**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:** Reptile
  - **Theme_Keyword:** Amphibian

**Place:**
  - **Place_Keyword_Thesaurus:** None
  - **Place_Keyword:** Long Island
  - **Place_Keyword:** New York

**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 Description:** Depicts the relationships between spatial data layers and attribute data tables for the Long Island 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, Emergency Response Division, Seattle, Washington and Department of Homeland Security, U.S. Coast Guard, Office of Incident Management and Preparedness, Washington, D.C.

**Native Data Set Environment:**
The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO® (version 9.2) and SQL SERVER® (version 2000). The hardware configuration is PCs with Windows Operating System (2000/XP/2003). The Spatial Data Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: birds.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, mgt.e00, reptiles.e00, soccon.e00, t_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biores, 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® 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. In the process of checking for topological and database consistencies, new IDs and RARNUMs or HUNUMs are also generated. The new IDs are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUMs are also modified to include the atlas number, so multiple atlases can be combined and RARNUMs remain unique. RARNUMs are redefined on an element basis, so "resource at risk" groupings will contain only a single element. HUNUMs are also modified to include the atlas number.

Completeness_Report:
These data represent a synthesis of expert knowledge, available hardcopy documents, survey data, maps, and digital data on turtle and amphibian distribution. These data do not necessarily represent all reptile occurrences in Long Island. The following species are included in this data set: (Species_ID, Common Name, Scientific Name [n/a if not applicable]): 2, Green sea turtle, Chelonia mydas; 4, Kemp's ridley sea turtle, Lepidochelys kempii; 5, Leatherback sea turtle, Dermochelys coriacea; 6, Loggerhead sea turtle, Caretta caretta; 7, Diamondback terrapin, Malaclemys terrapin; 32, Spotted turtle, Clemmys guttata; 36, Rare salamander, n/a; 112, Rare amphibian, n/a; 183, Rare reptile, n/a; 184, Southern leopard frog, Lithobates sphenoecephalus; 185, Eastern mud turtle, Kinosternon subrubrum; 186, Eastern spadefoot, Scaphiopus holbrookii.

Positional_Accuracy:
Horizontal_Positional_Accuracy:

Horizontal_Positional_Accuracy_Report:
Spatial components for the biological data layers can come from expert interviews, hardcopy, or digital sources. Some of the spatial components of the biological data layers may have been developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy base maps with a scale of 1:24,000. Some of the spatial components of the biological data sets are developed from pre-existing digital or hardcopy sources and reflect the positional accuracy of these original data. See the Lineage and Process_Description sections for more information on the original data source 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: ALEX CHMIELEWSKI, U.S. FISH & WILDLIFE SERVICE (USFWS)
Publication_Date: 2008
Title: BIRD SPECIES IN NATIONAL WILDLIFE REFUGES OF LONG ISLAND
Citation Information:
Originator: NYS DEPARTMENT OF STATE (DOS)
Publication Date: 2004
Title: SIGNIFICANT COASTAL FISH AND WILDLIFE HABITATS
Geospatial Data Presentation Form: DOCUMENT
Other Citation Details: NYS DOS, ALBANY, NY
Type of Source Media: ONLINE
Source Time Period of Content:
  Time Period Information:
    Single Date/Time:
      Calendar Date: 2004
Source Currentness Reference: DATE OF PUBLICATION
Source Citation Abbreviation: NONE
Source Contribution: REPTILES INFORMATION

Source Information:
Source Citation:
Citation Information:
Originator: NYS DOS AND USFWS
Publication Date: 1998
Title: MARINE TURTLES, DIAMONDBACK TERRAPIN, MUD TURTLES, AND SEALS
Geospatial Data Presentation Form: DOCUMENT
Other Citation Details:
  SOUTH SHORE ESTUARY RESERVE COUNCIL
  TECHNICAL REPORT SERIES, SOUTHERN NEW ENGLAND-NEW YORK BIGHT COASTAL ECOSYSTEMS PROGRAM
Type of Source Media: ONLINE
Source Time Period of Content:
  Time Period Information:
    Single Date/Time:
      Calendar Date: 1998
Source Currentness Reference: DATE OF PUBLICATION
Source Citation Abbreviation: NONE
Source Contribution: REPTILES INFORMATION

Source Information:
Source Citation:
Citation Information:
Originator: TIM GREEN, BROOKHAVEN NATIONAL LABORATORY
Publication Date: 2007
Title:
  ABUNDANCE AND DISTRIBUTION DATA FOR REPTILES, AMPHIBIANS, AND TERRESTRIAL MAMMALS ON LONG ISLAND
Geospatial Data Presentation Form: EXPERT KNOWLEDGE
Other Citation Details: N/A
Type of Source Media: PERSONAL COMMUNICATION
Source Time Period of Content:
  Time Period Information:
    Single Date/Time:
Two main sources of data were used to depict reptile distribution and seasonality for this data layer: 1) personal interviews with resource experts from the New York State Department of Environmental Conservation (NYS DEC), Coastal Research and Education Society of Long Island (CRESLI), The Friends of Flax Pond, and Riverhead Foundation; 2) digital data provided by the New York State Natural Heritage Program (NYS NHP); and 3) numerous published and unpublished reports. Amphibian distribution was depicted from digital data provided by the New York State Natural Heritage Program. The above digital and/or hardcopy sources were compiled by the project biologist to create the REPTILES data layer. Depending on the type of source data, three general approaches are used for compiling a biology data layer: 1) information gathered during initial interviews and from hardcopy sources is compiled onto
U.S. Geological Survey 1:24,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; and/or 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews is conducted to review the maps. If necessary, edits to the REPTILES data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

Process_Date: 200903
Process_Contact:
  Contact_Information:
    Contact_Organization_Primary:
      Contact_Organization: NOAA, Office of Response and Restoration
      Contact_Person: Jill Petersen
    Contact_Address:
      Address_Type: Physical address
      Address: 7600 Sand Point Way, N.E.
      City: Seattle
      State_or_Province: Washington
      Postal_Code: 98115-6349
    Contact_Voice_Telephone: (206) 526-6944
    Contact_Facsimile_Telephone: (206) 526-6329
    Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

Spatial_Data_Organization_Information:
  Direct_Spatial_Reference_Method: Vector
  Point_and_Vector_Object_Information:
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: GT-polygon composed of chains
      Point_and_Vector_Object_Count: 2545
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Area point
      Point_and_Vector_Object_Count: 2544
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Complete chain
      Point_and_Vector_Object_Count: 4585
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Link
      Point_and_Vector_Object_Count: 404801
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Node, planar graph
      Point_and_Vector_Object_Count: 3425

Spatial_Reference_Information:
**Horizontal Coordinate System Definition:**

**Geographic:**
- **Latitude Resolution:** 0.0000001
- **Longitude Resolution:** 0.0000001
- **Geographic Coordinate Units:** Decimal degrees

**Geodetic Model:**
- **Horizontal Datum Name:** North American Datum of 1927
- **Ellipsoid Name:** Clark 1866
- **Semi-major Axis:** 6378206.400000
- **Denominator of Flattening Ratio:** 294.978698

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**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 Long Island atlas, the number is 53), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN_SPEC, S, F, NHP, DATE_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G_SOURCE, S_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed Description of the BREED data table. The link to the BIOFILE may be made through the BIO_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED_DT is an auxiliary support data table to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to BREED_DT is the BREED item.

A second supporting data table is SOURCES. This is the same as the source file
described above, and the link from the flat file is both G_SOURCE and S_SOURCE. It should be noted that although the flat file eases data query, it is not a normalized database structure, and actual updates performed by the states and other responsible agencies should be done using the relational data tables. The entity-relationship diagram, describing relationships between attribute tables in the ESI data structure, does NOT include the BIOFILE data table, and this data table is NOT described in detail below.

**Detailed Description:**

**Entity Type:**
- **Entity Type Label:** REPTILES.PAT
- **Entity Type Definition:**
  The REPTILES.PAT table contains attribute information for the vector polygons in this data set representing turtle and amphibian 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 (53), 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: 0530600002
  - Range Domain Maximum: 0530602650

**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: 053000876
  - Range Domain Maximum: 053000903

**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**: 053000001
  - **Range Domain Maximum**: 053000905

**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 (53), 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**: 0530100002
  - **Range Domain Maximum**: 0530900714

**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**: 053000001
  - **Range Domain Maximum**: 053000905

**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 values. No concentration data were available for terrestrial mammals, so this field is populated with "-".  
- **Attribute_Definition_Source**: Research Planning, Inc.  
- **Attribute_Domain_Values**:  
  - **Unrepresentable_Domain**: Acceptable values change from atlas to atlas.

**Attribute:**  
- **Attribute_Label**: SEASON_ID  
- **Attribute_Definition**: Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.  
- **Attribute_Definition_Source**: 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 (e.g. 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:**

<table>
<thead>
<tr>
<th>Enumerated Domain Value: E#######</th>
</tr>
</thead>
</table>

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

**Enumerated Domain Value Definition Source:** 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:**

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

---

**Attribute:**

**Attribute Label:** NAME

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

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

**Attribute Domain Values:**

<table>
<thead>
<tr>
<th>Unrepresentable Domain:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acceptable values change from atlas to atlas.</td>
</tr>
</tbody>
</table>

---

**Attribute:**

**Attribute Label:** GEN_SPEC

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

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

**Attribute Domain Values:**

<table>
<thead>
<tr>
<th>Unrepresentable Domain:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acceptable values change from atlas to atlas.</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:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enumerated Domain Value: BIRD</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Enumerated Domain Value Definition:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birds</td>
</tr>
</tbody>
</table>

**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.

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: amphibian
Enumerated Domain Value Definition: Amphibian
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
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: dolphin
  Enumerated Domain Value Definition: Dolphin
  Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:
Enumerated Domain:
  Enumerated Domain Value: estuarine nursery
  Enumerated Domain Value Definition: Estuarine nursery fish
  Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:
Enumerated Domain:
  Enumerated Domain Value: estuarine resident
  Enumerated Domain Value Definition: Estuarine resident
  Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:
Enumerated Domain:
  Enumerated Domain Value: floating aquatic vegetation
  Enumerated Domain Value Definition: Floating aquatic vegetation
  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 or 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: lobster
  Enumerated Domain Value Definition: Lobster
  Enumerated Domain Value Definition Source: Research Planning, Inc.
Long Island: REPTILES

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: pelagic
Enumerated Domain Value Definition: Pelagic bird
Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:
Enumerated Domain Value: pinniped
Enumerated Domain Value Definition: Pinniped
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: Submerged 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: 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_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: whale
        Enumerated_Domain_Value_Definition: Whale
        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: YYYYMM
            Enumerated_Domain_Value_Definition: YYYY for year and optionally
            MM for month
Long Island: REPTILES

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: 0
Enumerated_Domain_Value_Definition: Date unspecified
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 (e.g. 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.
Enter_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
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 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 (e.g. 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 (e.g. 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 Value:* N
  
  *Enumerated Domain Value Definition:* Life-history stage or activity not present or not reported
  
  *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 or not reported
  
  *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:* 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 or not reported
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 or not reported
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_Value: N*
  - *Enumerated_Domain_Value_Definition: Life-history stage or activity not present or not reported*
  - *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.*

**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; G_SOURCE and S_SOURCE in the BIORES table; and SOURCE_ID in the ESI and HYDRO data layers.

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

Attribute:

Attribute_Label: DATE_PUB
Attribute_Definition: Date of source material, publication, or date of personal communication with expert source.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: YYYYMM
 Enumerated_Domain_Value_Definition: YYYY for year and optionally MM for month
 Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: TITLE
Attribute_Definition: Title of source material or data.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:

Attribute_Label: DATA_FORMAT
Attribute_Definition: The format of the source material.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:

Attribute_Label: PUBLICATION
Attribute_Definition: Additional citation information.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:

Attribute_Label: SCALE
Attribute_Definition: Description of the source scale.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:

Attribute_Label: TIME_PERIOD
Attribute_Definition: Date(s) of data collection that the source material is based upon.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Detailed_Description:

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

<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:**

**Attribute Label:** STATE

**Attribute Definition:** Two-letter state abbreviation.

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

**Attribute Domain Values:**

- **Unrepresentable Domain:** Acceptable values change from atlas to atlas.

**Attribute:**

**Attribute Label:** COUNTRY

**Attribute Definition:** Three-letter country abbreviation.

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

**Attribute Domain Values:**

- **Unrepresentable Domain:** Acceptable values change from atlas to atlas.

**Attribute:**

**Attribute Label:** S

**Attribute Definition:** State threatened or endangered status.

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

**Attribute Domain Values:**

- **Enumerated Domain:**
  - **Enumerated Domain Value:** E
    - **Enumerated Domain Value Definition:** Endangered on state list
    - **Enumerated Domain Value Definition Source:** NOAA ESI Guidelines
  - **Enumerated Domain Value:** T
    - **Enumerated Domain Value Definition:** Threatened on state list
    - **Enumerated Domain Value Definition Source:** NOAA ESI Guidelines
  - **Enumerated Domain Value:** C
    - **Enumerated Domain Value Definition:** Species of Special Concern
    - **Enumerated Domain Value Definition Source:** NOAA ESI Guidelines

**Attribute:**

**Attribute Label:** F

**Attribute Definition:** Federal threatened or endangered status.

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

**Attribute Domain Values:**

- **Enumerated Domain:**
  - **Enumerated Domain Value:** E
    - **Enumerated Domain Value Definition:** Endangered on federal list
    - **Enumerated Domain Value Definition Source:** NOAA ESI Guidelines
  - **Enumerated Domain Value:** T
    - **Enumerated Domain Value Definition:** Threatened on federal list
    - **Enumerated Domain Value Definition Source:** NOAA ESI Guidelines
Attribute Domain Values:

Enumerated Domain:
   Enumerated Domain Value: C
   Enumerated Domain Value Definition: Species of Special Concern
   Enumerated Domain Value Definition Source: NOAA ESI Guidelines

Attribute:

Attribute Label: I
Attribute Definition: International threatened or endangered status.
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:

Enumerated Domain:
   Enumerated Domain Value: E
   Enumerated Domain Value Definition: Endangered on international list
   Enumerated Domain Value Definition Source: NOAA ESI Guidelines

Attribute Domain Values:

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

Attribute Domain Values:

Enumerated Domain:
   Enumerated Domain Value: C
   Enumerated Domain Value Definition: Species of Special Concern
   Enumerated Domain Value Definition Source: NOAA ESI Guidelines

Attribute:

Attribute Label: S_DATE
Attribute Definition:
   Publication date of source material used to assign state status values for each species, if used.
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:

Enumerated Domain:
   Enumerated Domain Value: YYYYMM
   Enumerated Domain Value Definition: YYYY for year and optionally MM for month
   Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: F_DATE
Attribute Definition:
   Publication date of source material used to assign federal status values for each species, if used.
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:

Enumerated Domain:
   Enumerated Domain Value: YYYYMM
   Enumerated Domain Value Definition: YYYY for year and optionally MM for month
   Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: I_DATE
Attribute Definition:
Publication date of source material used to assign international status values for each species, if used.

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

**Attribute Domain Values:**
- **Enumerated_Domain:**
  - **Enumerated_Domain_Value:** YYYYMM
  - **Enumerated_Domain_Value_Definition:** YYYY for year and optionally MM for month
  - **Enumerated_Domain_Value_Definition Source:** 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 (e.g. 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 Long Island

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

**Custom Order Process:**
Contact NOAA for distribution options (see Distributor). ESI data are processed into
multiple formats to make them useful to the widest community of GIS/mapping users. Distribution formats include Geodatabase; ARC export, MOSS, and Shape files; and MARPLOT map folders. An ArcMap .mxd file, an ArcView 3.x ESI project, and an ESI_Viewer product for use with the MARPLOT data are also included on the distribution CDs 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:** 200905
- **Metadata Review Date:** 200905
- **Metadata Contact:**
  - **Contact Information:**
    - **Contact Person Primary:**
      - **Contact Person:** Jill Petersen
      - **Contact Organization:** NOAA, Office of Response and Restoration
    - **Contact Position:** GIS Manager
  - **Contact Address:**
    - **Address Type:** Physical Address
    - **Address:** 7600 Sand Point Way, N.E.
    - **City:** Seattle
    - **State or Province:** Washington
    - **Postal Code:** 98115-6349
  - **Contact Voice Telephone:** (206) 526-6944
  - **Contact Facsimile Telephone:** (206) 526-6329
  - **Contact Electronic Mail Address:** Jill.Petersen@noaa.gov
- **Metadata Standard Name:** Content Standards for Digital Geospatial Metadata
- **Metadata Standard Version:** FGDC-STD-001-1998

Generated by mp version 2.9.8 on Fri May 29 12:26:37 2009
Coastal Resources Atlas: Long Island: M_MAMMAL (Marine Mammal Polygons)

Metadata:

- Identification Information
- Data Quality Information
- Spatial Data Organization Information
- Spatial Reference Information
- Entity and Attribute Information
- Distribution Information
- Metadata Reference Information

Identification Information:

Citation:

Originator:

Publication Date: 200903
Title:
Coastal Resources Atlas: Long Island: M_MAMMAL (Marine Mammal Polygons)
Edition: First
Geospatial Data Presentation Form: Vector digital data
Series Information:
Series Name: NONE
Issue Identification: Long Island, New York

Publication Information:
Publication Place: Seattle, Washington
Publisher:

Other Citation Details:

Description:

Abstract:
This data set contains sensitive biological resource data for seals, whales, and porpoises for Long Island, New York. Vector polygons in this data set represent marine mammal distribution, haul-out sites, and concentration areas. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer.

This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for Long Island. 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_County:**

**Time_Period_Information:**
- **Range_of_Dates/Times:**
  - **Beginning_Date:** 1998
  - **Ending_Date:** 2007

**Currentness_Reference:**
The biological data were compiled during 2007-2009. The currentness dates for the data range from 1998 to 2007 and are documented in the Lineage section.

**Status:**

**Progress:** Complete

**Maintenance_and_Update_Frequency:** None Scheduled

**Spatial_Domain:**

**Bounding_Coordinates:**
- **West_Bounding_Coordinate:** 73.75000
- **East_Bounding_Coordinate:** 71.79000
- **North_Bounding_Coordinate:** 41.37500
- **South_Bounding_Coordinate:** 40.50000

**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:** Marine Mammal

**Place:**
- **Place_Keyword_Thesaurus:** None
- **Place_Keyword:** Long Island
- **Place_Keyword:** New York

**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 Long Island 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, Emergency Response Division, Seattle, Washington and Department of Homeland Security, U.S. Coast Guard, Office of Incident Management and Preparedness, Washington, D.C.

**Native_Data_Set_Environment:**

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO® (version 9.2) and SQL SERVER® (version 2000). The hardware configuration is PCs with Windows Operating System (2000/XP/2003). The Spatial_Data_Organization_Information section refers only to the source files in the ARC export format. The following files are included in that data set: birds.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, mgt.e00, reptiles.e00, socecon.e00, sources.e00, species.e00, status.e00, t_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biores, breed, breed_dt, seasonal, soc_dat, soc_lut, sources, species, and status.

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**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® 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. In the process of checking for topological and database consistencies, new IDs and RARNUMs or HUNUMs are also generated. The new IDs are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUMs are also modified to include the atlas number, so multiple atlases can be combined and RARNUMs remain unique. RARNUMs are redefined on an element basis, so "resource at risk" groupings will contain only a single element. HUNUMs are also modified to include the atlas number.

Completeness_Report:
These data represent a synthesis of expert knowledge, available hardcopy documents, survey data, and maps on marine mammal distribution, haul-out sites, and concentration areas. These data do not necessarily represent all marine mammal occurrences in Long Island. The following species are included in this data set: (Species_ID, Common Name, Scientific Name [n/a if not applicable]): 2, Harbor seal, Phoca vitulina; 6, Harbor porpoise, Phocoena phocoena; 11, Fin whale, Balaenoptera physalus; 12, Minke whale, Balaenoptera acutorostrata; 13, Humpback whale, Megaptera novaeangliae; 14, Gray seal, Halichoerus grypus; 17, Bottlenose dolphin, Tursiops truncatus; 48, Sperm whale, Physeter macrocephalus; 60, Common dolphin, Delphinus delphis; 81, North Atlantic right whale, Eubalaena glacialis; 83, Long-finned pilot whale, Globicephala melaena; 84, Hooded seal, Cystophora cristata; 85, Harp seal, Pagophilus groenlandicus.

Positional_Accuracy:

Horizontal_Positional_Accuracy_Report:
Spatial components for the biological data layers can come from expert interviews, hardcopy, or digital sources. Some of the spatial components of the biological data layers may have been developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy base maps with a scale of 1:24,000. Some of the spatial components of the biological data sets are developed from pre-existing digital or hardcopy sources and reflect the positional accuracy of these original data. See the Lineage and Process_Description sections for more information on the original data source 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: DIANE ABELL, NATIONAL PARK SERVICE (NPS)
Publication_Date: 2007
Title: NATURAL AND HISTORIC RESOURCES OF FIRE ISLAND NATIONAL SEASHORE
Long Island: M_MAMMAL

Geospatial Data Presentation Form: EXPERT KNOWLEDGE
Other Citation Details: N/A
Type of Source Media: PERSONAL COMMUNICATION
Source Time Period of Content:
  Time Period Information:
    Single Date/Time:
      Calendar Date: 2007
Source Currentness Reference: DATE OF COMMUNICATION
Source Citation Abbreviation: NONE
Source Contribution: M_MAMMAL INFORMATION
Source Information:
Source Citation:
  Citation Information:
    Originator:
      DR. ARTHUR KOPELMAN, Coastal Research and Education
      Society of Long Island (CRESLI)
    Publication Date: 2007
    Title:
      ABUNDANCE AND DISTRIBUTION OF MARINE
      MAMMALS, SEA TURTLES, AND SEABIRDS
    Geospatial Data Presentation Form: EXPERT KNOWLEDGE
    Other Citation Details: UNPUBLISHED
Type of Source Media: PERSONAL COMMUNICATION
Source Time Period of Content:
  Time Period Information:
    Single Date/Time:
      Calendar Date: 2007
Source Currentness Reference: DATE OF COMMUNICATION
Source Citation Abbreviation: NONE
Source Contribution: M_MAMMAL INFORMATION
Source Information:
Source Citation:
  Citation Information:
    Originator:
      NICOLE MIHNOVETS, NEW YORK STATE DEPARTMENT
      OF ENVIRONMENTAL CONSERVATION (NYS DEC)
    Publication Date: 2007
    Title:
      ABUNDANCE AND DISTRIBUTION INFORMATION ON
      MARINE MAMMALS AND SEA TURTLES
    Geospatial Data Presentation Form: EXPERT KNOWLEDGE
    Other Citation Details: N/A
Type of Source Media: PERSONAL COMMUNICATION
Source Time Period of Content:
  Time Period Information:
    Single Date/Time:
      Calendar Date: 2007
Source Currentness Reference: DATE OF COMMUNICATION
Source Citation Abbreviation: NONE
Source Contribution: M_MAMMAL INFORMATION
Source Information:
Source Citation:
Citation Information:
Originator: NYS DEPARTMENT OF STATE (DOS) AND U.S. FISH & WILDLIFE SERVICE (USFWS)
Publication Date: 1998
Title: MARINE TURTLES, DIAMONDBACK TERRAPIN, MUD TURTLES, AND SEALS
Geospatial Data Presentation Form: DOCUMENT
Other Citation Details:
SOURCE SHORE ESTUARY RESERVE COUNCIL TECHNICAL REPORT SERIES, SOUTHERN NEW ENGLAND-NEW YORK BIGHT COASTAL ECOSYSTEMS PROGRAM
Type of Source Media: ONLINE
Source Time Period of Content:
Time Period Information:
Single Date/Time:
Calendar Date: 1998
Source Currentness Reference: DATE OF PUBLICATION
Source Citation Abbreviation: NONE
Source Contribution: M_MAMMAL INFORMATION
Source Information:
Source Citation:
Citation Information:
Originator: ROBERT DIGIOVANNI, RIVERHEAD FOUNDATION
Publication Date: 2007
Title: ABUNDANCE AND DISTRIBUTION INFORMATION FOR MARINE MAMMALS AND SEA TURTLES
Geospatial Data Presentation Form: EXPERT KNOWLEDGE
Other Citation Details: N/A
Type of Source Media: PERSONAL COMMUNICATION
Source Time Period of Content:
Time Period Information:
Single Date/Time:
Calendar Date: 2007
Source Currentness Reference: DATE OF COMMUNICATION
Source Citation Abbreviation: NONE
Source Contribution: M_MAMMAL INFORMATION
Source Information:
Source Citation:
Citation Information:
Originator: WENDY FIDAO, FRIENDS OF FLAX POND
Publication Date: 2007
Title: ABUNDANCE AND DISTRIBUTION DATA FOR REPTILES AND MARINE MAMMALS
Geospatial Data Presentation Form: EXPERT KNOWLEDGE
Other Citation Details: N/A
Type of Source Media: PERSONAL COMMUNICATION
Source Time Period of Content:
Two main sources of data were used to depict marine mammal distribution and seasonality for this data layer: 1) personal interviews with resource experts from the New York State Department of Environmental Conservation (NYS DEC), Riverhead Foundation, and the Coastal Research and Education Society of Long Island (CRESLI), and 2) numerous published and unpublished reports. The above digital and/or hardcopy sources were compiled by the project biologist to create the M_MAMMAL data layer. Depending on the type of source data, three general approaches are used for compiling a biology data layer: 1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:24,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; and/or 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the M_MAMMAL data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

Process_Date: 200903

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

Direct_Spatial_Reference_Method: Vector

Point_and_Vector_Object_Term_Description:
  SDTS_Point_and_Vector_Object_Type: GT-polygon composed of chains
Point_and_Vector_Object_Count: 782
SDTS_Terms_Description:
  SDTS_Point_and_Vector_Object_Type: Area point
  Point_and_Vector_Object_Count: 781
SDTS_Terms_Description:
  SDTS_Point_and_Vector_Object_Type: Complete chain
  Point_and_Vector_Object_Count: 1158
SDTS_Terms_Description:
  SDTS_Point_and_Vector_Object_Type: Link
  Point_and_Vector_Object_Count: 160467
SDTS_Terms_Description:
  SDTS_Point_and_Vector_Object_Type: Node, planar graph
  Point_and_Vector_Object_Count: 1158

Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Geographic:
      Latitude_Resolution: 0.0000001
      Longitude_Resolution: 0.0000001
      Geographic_Coordinate_Units: Decimal degrees
    Geodetic_Model:
      Horizontal_Datum_Name: North American Datum of 1927
      Ellipsoid_Name: Clark 1866
      Semi-major_Axis: 6378206.400000
      Denominator_of_Flatening_Ratio: 294.978698

Entity_and_Attribute_Information:
  Overview_Description:
    Entity_and_Attribute_Overview:
      In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, M_MAMMAL) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (for the Long Island atlas, the number is 53), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

      Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of
the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN_SPEC, S, F, NHP, DATE_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G_SOURCE, S_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed_Description of the BREED data table. The link to the BIOFILE may be made through the BIO_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer’s attribute data tables.

As mentioned, BREED_DT is an auxiliary support data table to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to BREED_DT is the BREED item.

A second supporting data table is SOURCES. This is the same as the source file described above, and the link from the flat file is both G_SOURCE and S_SOURCE. It should be noted that although the flat file eases data query, it is not a normalized database structure, and actual updates performed by the states and other responsible agencies should be done using the relational data tables. The entity-relationship diagram, describing relationships between attribute tables in the ESI data structure, does NOT include the BIOFILE data table, and this data table is NOT described in detail below.

**Detailed_Description:**

**Entity_Type:**

- **Entity_Type_Label:** M_MAMMAL.PAT
- **Entity_Type_Definition:**
  The M_MAMMAL.PAT table contains attribute information for the vector polygons in this data set representing marine mammal distribution, haul-out sites, 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 (53), element number (4), and record number. ID values of 9999 are holes in polygons and do not contain information.

**Attribute_Definition_Source:** NOAA

**Attribute_Domain_Values:**

- **Range_Domain:**
  - **Range_Domain_Minimum:** 0530400002
  - **Range_Domain_Maximum:** 0530400807

**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: 0530000834
  - Range_Domain_Maximum: 053000875

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: 053000001
  - Range_Domain_Maximum: 053000905

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 (53), element number (4), and record number. ID values of 9999 are holes in polygons and do not contain information.

Attribute_Definition_Source: NOAA

Attribute_Domain_Values:
- Range_Domain:
  - Range_Domain_Minimum: 0530100002
  - Range_Domain_Maximum: 0530900714

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: 053000001
      Range_Domain_Maximum: 053000905

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 values. The
  field may contain counts of marine mammal individuals (XX IND) or a range
  of counts of individuals (XX-XX IND). In cases where no quantitative count
  data were available, the field may contain descriptive terms, such as "HIGH",
  or a concentration approximation, such as "100s" or ">100 IND". If no
  concentration information was available from any source, the field is populated
  with ".".
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:
  Attribute_Label: SEASON_ID
  Attribute_Definition:
  Numeric identifier for the unique monthly presence and life history
  characteristics of each species at a given location.
  Attribute_Definition_Source: 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 (e.g. 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 (e.g. 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:** SPECIES

**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 for the entire ESI data set.
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
  Unrepresentable Domain: Acceptable values change from atlas to atlas.
Attribute:
  Attribute Label: GEN_SPEC
  Attribute Definition: Species scientific name for the entire ESI data set.
  Attribute Definition Source: Research Planning, Inc.
  Attribute Domain Values:
    Unrepresentable Domain: Acceptable values change from atlas to atlas.
Attribute:
  Attribute Label: ELEMENT
  Attribute Definition: Major categories of biological data.
  Attribute Definition Source: 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**:

<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>amphibian</td>
<td></td>
<td>Amphibian</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>bivalve</td>
<td></td>
<td>Bivalve</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>cephalopod</td>
<td></td>
<td>Cephalopod</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>crab</td>
<td></td>
<td>Crab</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>diadromous</td>
<td></td>
<td>Diadromous fish</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>diving</td>
<td></td>
<td>Diving bird</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>dolphin</td>
<td></td>
<td>Dolphin</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>e_nursery</td>
<td></td>
<td>Estuarine nursery fish</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>e_resident</td>
<td></td>
<td>Estuarine resident</td>
<td>Research Planning, Inc.</td>
</tr>
<tr>
<td>fav</td>
<td></td>
<td>Floating aquatic vegetation</td>
<td></td>
</tr>
</tbody>
</table>
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: lobster
  Enumerated_Domain_Value_Definition: Lobster
  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: pelagic
  Enumerated_Domain_Value_Definition: Pelagic bird
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:
- Enumerated_Domain_Value: pinniped
  Enumerated_Domain_Value_Definition: Pinniped
  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: Submerged 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: 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.
Enumerated_Domain:
  Enumerated_Domain_Value: whale
  Enumerated_Domain_Value_Definition: Whale
  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: YYYYMM
      Enumerated_Domain_Value_Definition: YYYY for year and optionally MM for month
      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 (e.g. 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
- 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 (e.g. 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 (e.g. ELEMENT = 'BIRD', SPECIES_ID = 1 and SEASON_ID = 1; EL_SPE_SEA = 'B0000101').
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 or not reported
  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 or not reported
  - **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 Domain 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 or not reported
  - **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 or not reported
  - **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:** 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 or not reported
  - **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; G_SOURCE and S_SOURCE in the BIORES table; and SOURCE_ID in the ESI and HYDRO data layers.

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:

Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:

Attribute_Label: DATE_PUB

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: YYYYMM
Enumerated_Domain_Value_Definition: YYYY for year and optionally MM for month

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: TITLE

Attribute_Definition: Title of source material or data.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:

Attribute_Label: DATA_FORMAT

Attribute_Definition: The format of the source material.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Unrepresentable_Domain: Acceptable values change from atlas to atlas.
Attribute:
  Attribute_Label: PUBLICATION
  Attribute_Definition: Additional citation information.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:
  Attribute_Label: SCALE
  Attribute_Definition: Description of the source scale.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:
  Attribute_Label: TIME_PERIOD
  Attribute_Definition: Date(s) of data collection that the source material is based upon.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Unrepresentable_Domain: Acceptable values change from atlas to atlas.

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

Attribute:
  Attribute_Label: COUNTRY
  Attribute_Definition: Three-letter country abbreviation.
  Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:
  Attribute_Label: S
  Attribute_Definition: State threatened or endangered status.
  Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: E
  Enumerated_Domain_Value_Definition: Endangered on state list
  Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines
Attribute_Domain_Values:
  Enumerated_Domain:
  Enumerated_Domain_Value: T
**Attribute**

**Attribute Label:** F
**Attribute Definition:** Federal threatened or endangered status.
**Attribute Definition Source:** Research Planning, Inc.

**Attribute Domain Values:**

**Enumerated Domain:**

**Enumerated Domain Value:** E
**Enumerated Domain Value Definition:** Endangered on federal list
**Enumerated Domain Value Definition Source:** NOAA ESI Guidelines

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

**Enumerated Domain Value:** C
**Enumerated Domain Value Definition:** Species of Special Concern
**Enumerated Domain Value Definition Source:** NOAA ESI Guidelines

**Attribute:**

**Attribute Label:** I
**Attribute Definition:** International threatened or endangered status.
**Attribute Definition Source:** Research Planning, Inc.

**Attribute Domain Values:**

**Enumerated Domain:**

**Enumerated Domain Value:** E
**Enumerated Domain Value Definition:** Endangered on international list
**Enumerated Domain Value Definition Source:** NOAA ESI Guidelines

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

**Enumerated Domain Value:** C
**Enumerated Domain Value Definition:** Species of Special Concern
**Enumerated Domain Value Definition Source:** NOAA ESI Guidelines

**Attribute:**

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

Enumerated Domain:

Enumerated Domain Value: YYYYMM
Enumerated Domain Value Definition: YYYY for year and optionally MM for month
Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

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

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: YYYYMM
Enumerated Domain Value Definition: YYYY for year and optionally MM for month
Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute:

Attribute Label: I_DATE
Attribute Definition:
Publication date of source material used to assign international status values for each species, if used.
Attribute Definition Source: Research Planning, Inc.

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: YYYYMM
Enumerated Domain Value Definition: YYYY for year and optionally MM for month
Enumerated Domain Value Definition Source: 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 (e.g. 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 Kaperic  
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 Long Island  

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

Custom_Order_Process:  
Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to the widest community of GIS/mapping users. Distribution formats include Geodatabase; ARC export, MOSS, and Shape files; and MARPLOT map folders. An ArcMap .mxd file, an ArcView 3.x ESI project, and an ESIViewer product for use with the MARPLOT data are also included on the distribution CDs/DVDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

Metadata_Reference_Information:  
Metadata_Date: 200905  
Metadata_Review_Date: 200905  
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
Coastal Resources Atlas: Long Island: T_MAMMAL (Terrestrial Mammal Polygons)

Metadata:

- Identification Information
- Data Quality Information
- Spatial Data Organization Information
- Spatial Reference Information
- Entity and Attribute Information
- Distribution Information
- Metadata Reference Information

Identification Information:

Citation:

Originator:

Publication Date: 200903

Title:
Coastal Resources Atlas: Long Island: T_MAMMAL (Terrestrial Mammal Polygons)

Edition: First

Geospatial Data Presentation Form: Vector digital data

Series Information:
Series Name: NONE
Issue Identification: Long Island, New York

Publication Information:
Publication Place: Seattle, Washington

Publisher:

Other Citation Details:

Description:
Abstract:
This data set contains sensitive biological resource data for northern river otter, mink, muskrat, and beaver for Long Island, New York. 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 Long Island. 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: 2007
  Ending_Date: 2008

Currentness Reference:
The biological data were compiled during 2007-2009. The currentness dates for the data range from 2007 to 2008 and are documented in the Lineage section.

Status:
  Progress: Complete
  Maintenance_and_Update_Frequency: None Scheduled

Spatial_Domain:
Bounding_Coordinates:
  West_Bounding_Coordinate: 73.75000
  East_Bounding_Coordinate: 71.79000
  North_Bounding_Coordinate: 41.37500
  South_Bounding_Coordinate: 40.50000

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 Mammal

Place:
  Place_Keyword_Thesaurus: None
  Place_Keyword: Long Island
  Place_Keyword: New York

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 Long Island 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, Emergency Response Division, Seattle, Washington and Department of Homeland Security, U.S. Coast Guard, Office of Incident Management and Preparedness, Washington, D.C.

**Native Data Set Environment:**
The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO® (version 9.2) and SQL SERVER® (version 2000). The hardware configuration is PCs with Windows Operating System (2000/XP/2003). The Spatial Data Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: birds.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, mgt.e00, reptiles.e00, soccon.e00, t_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biore, 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. In the process of checking for topological and database consistencies, new IDs and RARNUMs or HUNUMs are also generated. The new IDs are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUMs are also modified to include the atlas number, so multiple atlases can be combined and RARNUMs remain unique. RARNUMs are redefined on an element basis, so "resource at risk" groupings will contain only a single element. HUNUMs are also modified to include the atlas number.

Completeness_Report:
These data represent a synthesis of expert knowledge and available hardcopy documents on terrestrial mammal distribution. These data do not necessarily represent all terrestrial mammal occurrences in Long Island. The following species are included in this data set: (Species_ID, Common Name, Scientific Name [n/a if not applicable]): 36, Beaver, Castor canadensis; 37, Muskrat, Ondatra zibethicus; 38, Mink, Mustela vison.

Positional_Accuracy:
Horizontal_Positional_Accuracy:

Spatial components for the biological data layers can come from expert interviews, hardcopy, or digital sources. Some of the spatial components of the biological data layers may have been developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy base maps with a scale of 1:24,000. Some of the spatial components of the biological data sets are developed from pre-existing digital or hardcopy sources and reflect the positional accuracy of these original data. See the Lineage and Process_Description sections for more information on the original data source 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: TIM GREEN, BROOKHAVEN NATIONAL LABORATORY
Publication_Date: 2007
Title: ABUNDANCE AND DISTRIBUTION DATA FOR REPTILES, AMPHIBIANS, AND TERRESTRIAL MAMMALS ON LONG ISLAND
Geospatial_Data_Presentation_Form: EXPERT KNOWLEDGE
Other_Citation_Details: N/A
Type_of_Source_Media: PERSONAL COMMUNICATION
Source_Time_Period_of_Content:
Time_Period_Information:
Two main sources of data were used to depict terrestrial mammal distribution and seasonality for this data layer: 1) personal interviews with resource experts from the Brookhaven National Laboratory, and 2) numerous published and unpublished reports. The above digital and/or hardcopy sources were compiled by the project biologist to create the T_MAMMAL data layer. Depending on the type of source data, three general approaches are used for compiling a biology data layer: 1) information gathered during initial interviews and from hardcopy sources is compiled onto U.S. Geological Survey 1:24,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; and/or 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews is conducted to review the maps. If necessary, edits to the T_MAMMAL data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

Contact Information:

Process Contact:
Contact Person: Jill Petersen
Contact Address:
Address Type: Physical address
Address: 7600 Sand Point Way, N.E.
City: Seattle
State or Province: Washington
Postal Code: 98115-6349
Contact Voice Telephone: (206) 526-6944
Contact Facsimile Telephone: (206) 526-6329
Contact Electronic Mail Address: Jill.Petersen@noaa.gov

Spatial Data Organization Information:
Direct Spatial Reference Method: Vector

Point and Vector Object Information:
SDTS Terms Description:
SDTS Point and Vector Object Type: GT-polygon composed of chains
Point and Vector Object Count: 713
SDTS Terms Description:
SDTS Point and Vector Object Type: Area point
Point and Vector Object Count: 712
SDTS Terms Description:
SDTS Point and Vector Object Type: Complete chain
Point and Vector Object Count: 861
SDTS Terms Description:
SDTS Point and Vector Object Type: Link
Point and Vector Object Count: 141939
SDTS Terms Description:
SDTS Point and Vector Object Type: Node, planar graph
Point and Vector Object Count: 856

Spatial Reference Information:
Horizontal Coordinate System Definition:
Geographic:
Latitude Resolution: 0.0000001
Longitude Resolution: 0.0000001
Geographic Coordinate Units: Decimal degrees
Geodetic Model:
Horizontal Datum Name: North American Datum of 1927
Ellipsoid Name: Clark 1866
Semi-major Axis: 6378206.400000
Denominator of Flattening Ratio: 294.978698

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 Long Island atlas, the number is 53), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN_SPEC, S, F, NHP, DATE_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G_SOURCE, S_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed_Description of the BREED data table. The link to the BIOFILE may be made through the BIO_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED_DT is an auxiliary support data table to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to BREED_DT is the BREED item.

A second supporting data table is SOURCES. This is the same as the source file described above, and the link from the flat file is both G_SOURCE and S_SOURCE. It should be noted that although the flat file eases data query, it is not a normalized database structure, and actual updates performed by the states and other responsible agencies should be done using the relational data tables. The entity-relationship diagram, describing relationships between attribute tables in the ESI data structure, does NOT include the BIOFILE data table, and this data table is NOT described in detail below.

**Detailed_Description:**

**Entity_Type:**

**Entity_Type_Label:** T_MAMMAL.PAT

**Entity_Type_Definition:**

The T_MAMMAL.PAT table contains attribute information for the vector polygons in this data set representing terrestrial mammal distribution. Note that all attribute information is stored in a series of relational files, described below. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.
**Entity_Type_Definition_Source:** 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 (53), 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:** 0530900002
  - **Range_Domain_Maximum:** 0530900714

**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:** 053000001
  - **Range_Domain_Maximum:** 053000905

**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:** 053000001
  - **Range_Domain_Maximum:** 053000905

**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 (53), element number (9), and record number. ID values of 9999 are holes in polygons and do not contain information.
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: 0530100002
    Range_Domain_Maximum: 0530900714

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: 053000001
      Range_Domain_Maximum: 053000905

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 values. No concentration data were available for terrestrial mammals, so this field is populated with ",-".
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:
  Attribute_Label: SEASON_ID
  Attribute_Definition:
    Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.
Attribute Definition Source: 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 Values:
      Enumerated Domain:
        Enumerated Domain Value: FISH
        Enumerated Domain Value Definition: Fish
        Enumerated Domain Value Definition Source: Research Planning, Inc.
    Enumerated Domain Values:
      Enumerated Domain:
        Enumerated Domain Value: HABITAT
        Enumerated Domain Value Definition: Habitats and Plants
        Enumerated Domain Value Definition Source: Research Planning, Inc.
    Enumerated 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 (e.g. 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 (e.g. 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 for the entire ESI data set.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Unrepresentable_Domain: Acceptable values change from atlas to atlas.

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

Attribute:
Attribute_Label: ELEMENT
Attribute_Definition: Major categories of biological data.
Attribute_Definition_Source: 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 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: amphibian
  Enumerated Domain Value Definition: Amphibian
  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: 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: dolphin
  Enumerated Domain Value Definition: Dolphin
  Enumerated Domain Value Definition Source: Research Planning, Inc.
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
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
  Enumerated_Domain_Value: fav
  Enumerated_Domain_Value_Definition: Floating aquatic vegetation
  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: lobster
  Enumerated_Domain_Value_Definition: Lobster
  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.
Enumerated Domain Value: pelagic
Enumerated Domain Value Definition: Pelagic bird
Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:
Attributes Domain:
Enumerated Domain Value: pinniped
Enumerated Domain Value Definition: Pinniped
Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:
Attributes Domain:
Enumerated Domain Value: plant
Enumerated Domain Value Definition: Plant
Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:
Attributes Domain:
Enumerated Domain Value: raptor
Enumerated Domain Value Definition: Raptor
Enumerated Domain Value Definition Source: Research Planning, Inc.

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

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

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

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

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

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

Attribute Domain Values:
Attributes 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_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: whale
Enumerated_Domain_Value_Definition: Whale
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: YYYYMM
Enumerated_Domain_Value_Definition: YYYY for year and optionally MM for month
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: 0
Enumerated_Domain_Value_Definition: Date unspecified
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 (e.g. ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').

Detailed_Description:

Entity_Type:

Entity_Type_Label: SEASONAL
Entity_Type_Definition: The data table SEASONAL contains information on the seasonal presence of each species associated with each spatial vector object. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.
Entity_Type_Definition_Source: 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
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: \texttt{MAY}
\begin{itemize}
\item \texttt{Attribute\_Label}: MAY
\item \texttt{Attribute\_Definition}: May
\item \texttt{Attribute\_Definition\_Source}: Research Planning, Inc.
\item \texttt{Attribute\_Domain\_Values}:
\begin{itemize}
\item \texttt{Enumerated\_Domain}:
\begin{itemize}
\item \texttt{Enumerated\_Domain\_Value}: X
\item \texttt{Enumerated\_Domain\_Value\_Definition}: Present in May
\item \texttt{Enumerated\_Domain\_Value\_Definition\_Source}: Research Planning, Inc.
\end{itemize}
\end{itemize}
\end{itemize}

Attribute: \texttt{JUL}
\begin{itemize}
\item \texttt{Attribute\_Label}: JUL
\item \texttt{Attribute\_Definition}: July
\item \texttt{Attribute\_Definition\_Source}: Research Planning, Inc.
\item \texttt{Attribute\_Domain\_Values}:
\begin{itemize}
\item \texttt{Enumerated\_Domain}:
\begin{itemize}
\item \texttt{Enumerated\_Domain\_Value}: X
\item \texttt{Enumerated\_Domain\_Value\_Definition}: Present in July
\item \texttt{Enumerated\_Domain\_Value\_Definition\_Source}: Research Planning, Inc.
\end{itemize}
\end{itemize}
\end{itemize}

Attribute: \texttt{AUG}
\begin{itemize}
\item \texttt{Attribute\_Label}: AUG
\item \texttt{Attribute\_Definition}: August
\item \texttt{Attribute\_Definition\_Source}: Research Planning, Inc.
\item \texttt{Attribute\_Domain\_Values}:
\begin{itemize}
\item \texttt{Enumerated\_Domain}:
\begin{itemize}
\item \texttt{Enumerated\_Domain\_Value}: X
\item \texttt{Enumerated\_Domain\_Value\_Definition}: Present in August
\item \texttt{Enumerated\_Domain\_Value\_Definition\_Source}: Research Planning, Inc.
\end{itemize}
\end{itemize}
\end{itemize}

Attribute: \texttt{SEP}
\begin{itemize}
\item \texttt{Attribute\_Label}: SEP
\item \texttt{Attribute\_Definition}: September
\item \texttt{Attribute\_Definition\_Source}: Research Planning, Inc.
\item \texttt{Attribute\_Domain\_Values}:
\begin{itemize}
\item \texttt{Enumerated\_Domain}:
\begin{itemize}
\item \texttt{Enumerated\_Domain\_Value}: X
\item \texttt{Enumerated\_Domain\_Value\_Definition}: Present in September
\item \texttt{Enumerated\_Domain\_Value\_Definition\_Source}: Research Planning, Inc.
\end{itemize}
\end{itemize}
\end{itemize}
**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 (e.g. 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 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 (e.g. 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 or not reported
    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_Value:** N
  
  **Enumerated_Domain_Value_Definition:** Life-history stage or activity not present or not reported

**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:** 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 or not reported

**Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.
not present or not reported

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

Attribute: 
_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 or not reported
    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; G_SOURCE and S_SOURCE in the BIORES table; and SOURCE_ID in the ESI and HYDRO data layers.
  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:
    Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:
  Attribute_Label: DATE_PUB
  Attribute_Definition:
    Date of source material, publication, or date of personal communication with expert source.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: YYYYMM
      Enumerated_Domain_Value_Definition: YYYY for year and optionally MM for month
**Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.

**Attribute:**

- **Attribute_Label:** TITLE
- **Attribute_Definition:** Title of source material or data.
- **Attribute_Definition_Source:** Research Planning, Inc.
- **Attribute_Domain_Values:**
  - **Unrepresentable_Domain:** Acceptable values change from atlas to atlas.

**Attribute:**

- **Attribute_Label:** DATA_FORMAT
- **Attribute_Definition:** The format of the source material.
- **Attribute_Definition_Source:** Research Planning, Inc.
- **Attribute_Domain_Values:**
  - **Unrepresentable_Domain:** Acceptable values change from atlas to atlas.

**Attribute:**

- **Attribute_Label:** PUBLICATION
- **Attribute_Definition:** Additional citation information.
- **Attribute_Definition_Source:** Research Planning, Inc.
- **Attribute_Domain_Values:**
  - **Unrepresentable_Domain:** Acceptable values change from atlas to atlas.

**Attribute:**

- **Attribute_Label:** SCALE
- **Attribute_Definition:** Description of the source scale.
- **Attribute_Definition_Source:** Research Planning, Inc.
- **Attribute_Domain_Values:**
  - **Unrepresentable_Domain:** Acceptable values change from atlas to atlas.

**Attribute:**

- **Attribute_Label:** TIME_PERIOD
- **Attribute_Definition:** Date(s) of data collection that the source material is based upon.
- **Attribute_Definition_Source:** Research Planning, Inc.
- **Attribute_Domain_Values:**
  - **Unrepresentable_Domain:** Acceptable values change from atlas to atlas.

**Detailed_Description:**

**Entity_Type:**

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

Unrepresentable Domain: Acceptable values change from atlas to atlas.

Attribute: 

Attribute Label: COUNTRY
Attribute Definition: Three-letter country abbreviation.
Attribute Definition Source: Research Planning, Inc.
Attribute Domain Values:
Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:
  Attribute_Label: S
  Attribute_Definition: State threatened or endangered status.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: E
      Enumerated_Domain_Value_Definition: Endangered on state list
      Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: T
      Enumerated_Domain_Value_Definition: Threatened on state list
      Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: C
      Enumerated_Domain_Value_Definition: Species of Special Concern
      Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines

Attribute:
  Attribute_Label: F
  Attribute_Definition: Federal threatened or endangered status.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: E
      Enumerated_Domain_Value_Definition: Endangered on federal list
      Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: T
      Enumerated_Domain_Value_Definition: Threatened on federal list
      Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: C
      Enumerated_Domain_Value_Definition: Species of Special Concern
      Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines

Attribute:
  Attribute_Label: I
  Attribute_Definition: International threatened or endangered status.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: E
      Enumerated_Domain_Value_Definition: Endangered on international list
      Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: T
Enumerated_Domain_Value_Definition: Threatened on international list
Enumerated_Domain_Value_Definition_Source: NOAA ESI Guidelines

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

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

Attribute: I_DATE
Attribute_Definition:
Publication date of source material used to assign international status values for each species, if used.
Attribute_Definition_Source: Research Planning, Inc.

Attribute: 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.
Enumerated_Domain_Value: E#####
Enumerated_Domain_Value_Definition:
Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (e.g. ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').
Enumerated_Domain_Value_Definition_Source: 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 Long Island
Distribution Liability:
Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration (NOAA), no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer-input peripherals, or when the physical medium is delivered in damaged condition.
Custom Order Process:
Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to the widest community of GIS/mapping users. Distribution formats include Geodatabase; ARC export, MOSS, and Shape files; and MARPLOT map folders. An ArcMap .mxd file, an ArcView 3.x ESI project, and an ESI Viewer product for use with the MARPLOT data are also included on the distribution CDs/DVDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

Metadata Reference Information:
Metadata Date: 200905
Metadata Review Date: 200905
Metadata Contact:
Contact Information:
Contact Person Primary:
Coastal Resources Atlas: Long Island: HABITATS (Habitat Polygons)

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

Metadata:

- Identification Information
- Data Quality Information
- Spatial Data Organization Information
- Spatial Reference Information
- Entity and Attribute Information
- Distribution Information
- Metadata Reference Information

Identification Information:

Citation:

Citation Information:

Originator:


Publication Date: 200903

Title:

Coastal Resources Atlas: Long Island: HABITATS (Habitat Polygons)

Edition: First

Geospatial Data Presentation Form: Vector digital data

Series Information:

Series Name: NONE

Issue Identification: Long Island, New York

Publication Information:

Publication Place: Seattle, Washington

Publisher:


Other Citation Details:


Description:

Abstract:

This data set contains sensitive biological resource data for sensitive/rare coastal
plants and submerged aquatic vegetation (SAV) for Long Island, New York. Vector polygons in this data set represent sensitive/rare coastal plants recognized by the Natural Heritage Program (NHP) and eelgrass 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 Long Island. 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:** 2000
   - **Ending_Date:** 2007

**Currentness Reference:**
The biological data were compiled during 2007-2009. The currentness dates for the data range from 2000 to 2007 and are documented in the Lineage section.

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

**Spatial_Domain:**
**Bounding_Coordinates:**
   - **West_Bounding_Coordinate:** 73.75000
   - **East_Bounding_Coordinate:** 71.79000
   - **North_Bounding_Coordinate:** 41.37500
   - **South_Bounding_Coordinate:** 40.50000

**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

**Place:**
   - **Place_Keyword_Thesaurus:** None
   - **Place_Keyword:** Long Island
   - **Place_Keyword:** New York

**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 Description:*

Depicts the relationships between spatial data layers and attribute data tables for the Long Island 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, Emergency Response Division, Seattle, Washington and Department of Homeland Security, U.S. Coast Guard, Office of Incident Management and Preparedness, Washington, D.C.

**Native Data Set Environment:**

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO® (version 9.2) and SQL SERVER® (version 2000). The hardware configuration is PCs with Windows Operating System (2000/XP/2003). The Spatial Data Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: birds.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, mgt.e00, reptiles.e00, soccon.e00, t_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio_lut, biofile, biores, 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. In the process of checking for topological and database consistencies, new IDs and RARNUMs or HUNUMs are also generated. The new IDs are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped.

In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUMs are also modified to include the atlas number, so multiple atlases can be combined and RARNUMs remain unique. RARNUMs are redefined on an element basis, so "resource at risk" groupings will contain only a single element.

HUNUMs are also modified to include the atlas number.

Completeness_Report:
These data represent a synthesis of digital data on rare/sensitive coastal plants and eelgrass distribution. These data do not necessarily represent all habitats occurrences in Long Island. The following species are included in this data set: (Species_ID, Common Name, Scientific Name [n/a if not applicable]): 40, Silverweed, Potentilla anserina; 41, Scirpus-like rush, Juncus scirpoides; 51, Spotted pondweed, Potamogeton pulcher; 145, Seabeach amaranth, Amaranthus pumilus; 163, Green parrot's feather, Myriophyllum pinnatum; 165, Featherfoil, Hottonia inflata; 176, Minute duckweed, Lemna perpusilla; 183, Red pigweed, Chenopodium rubrum; 187, Seabeach knotweed, Polygonum glaucum; 206, Saltmarsh spikerush, Eleocharis halophila; 214, Rare plant, n/a; 268, Seaside bulrush, Schoenoplectus maritimus; 318, Sandplain gerardia, Agalinis acuta; 319, Bushy rockrose, Helianthemum dunnosum; 502, Northern gamma grass, Tripsacum dactyloides; 503, Sea pink, Sabatia stellaris; 609, Submerged aquatic vegetation, n/a; 627, Long's bittercress, Cardamine longii; 628, Marsh straw sedge, Carex hormathodes; 630, Eastern grasswort, Lilaecopsis chinsenis; 648, Swamp cottonwood, Populus heterophylla; 649, Terrestrial starwort, Callitriche terrestris; 651, Water pygmyweed, Crassula aquatica; 653, Yellow flatsedge, Cyperus flavescens; 678, Darkgreen sedge, Carex venusta; 680, Dwarf glasswort, Salicornia bigelovii; 697, False China-root, Smilax pseudochina; 707, Salt-meadow grass, Leptochloa fusca ssp. Fascicularis; 709, Lance-leaved loosestrife, Lysimachia hybridra; 712, Mitchell's sedge, Carex michelliana; 733, Saltmarsh bulrush, Schoenoplectus novae-angliae; 740, Sea purslane, Sesuvium maritimum; 747, Slender blue flag, Iris prismatica; 760, Straw sedge, Carex straminea; 853, Northern gamma grass, Tripsacum dactyloides; 855, Scotch lovage, Ligusticum scoticum ssp. Scoticum; 856, Yellow giant hyssop, Agastache nepetoides; 857, Cattail sedge, Carex typhina; 858, Fibrous bladderwort, Utricularia striata; 859, Slender spikerush, Eleocharis tenuis var. pseudoptera; 869, Angled spikerush, Eleocharis quadrangulata; 870, Atlantic white cedar, Chamaecyparis thyoides; 871, Blunt mountain-mint, Pycnanthemum muticum; 872, Button sedge, Carex bullata; 873, Carolina clubmoss, Lycopodiella caroliniana var. caroliniana; 874, Clustered blues, Oldenlandia uniflora; 875, Coast flatsedge, Cyperus polystachyos var. texensis; 876, Coastal goldenrod, Solidago latissimifolia; 877, Collins' sedge, Carex collinsii; 878, Creeping spikerush, Eleocharis fallax; 879, Doubtful toad-rush, Juncus ambiguus; 880, Dune sandspur, Cenchrus tribuloides; 881, Dwarf bulrush, Lipocarpha micrantha; 882, Engelmann's spikerush, Eleocharis engelmannii; 883, Field beadgrass, Paspalum laeve; 884, Fireweed, Erechtites hieracifolia var. megalocarpa; 885, Fringed boneset, Eupatorium hyssopifolium var. laciniatum; 886, Golden dock, Rumex maritimus; 887, Heart sorrel, Rumex hastatus; 888, Large calyx goosefoot, Chenopodium berlandieri var. macrocalycium; 889, Large grass-leaved rush, Juncus biflorus; 890, Late
boneset, Eupatorium serotinum; 891, Long-tubercled spikerush, Eleocharis tuberculosa; 892, Marsh fimbry, Fimbristylis castanea; 893, Michaux's blue-eyed-grass, Sisyrinchium mucronatum; 894, Midland sedge, Carex mesochorea; 895, Nantucket juneberry, Amelanchier nantucketensis; 896, Narrow-leaf sea-blite, Suaeda linearis; 897, Northern blazing-star, Liatris scariosa var. nova-angliae; 898, Oakes' evening primrose, Oenothera oakesiana; 899, Opelousa smartweed, Polygonum hydropiperoides; 900, Possumhaw, Viburnum nudum L. var. nudum; 901, Primrose-leaf violet, Viola x primulifolia; 902, Purple everlasting, Gamochaeta purpurea; 903, Retrorse flatsedge, Cyperus retrorsus var. retrorsus; 904, Roland's seablite, Suaeda rolandii; 905, Rough rush-grass, Sporobolus clandestinus; 906, Saltmarsh aster, Symphyotrichum subulatum var. subulatum; 907, Saltmarsh loosestrife, Lythrum lineare; 908, Sandplain wild flax, Linum intercursum; 909, Screw-stem, Bartonia paniculata ssp. Paniculata; 910, Seacoast angelica, Angelica lucida; 911, Seaside orach, Atriplex glabriuscula; 912, Seaside plantain, Plantago maritima var. juncoides; 913, Serrate round-leaf boneset, Eupatorium rotundifolium var. ovatum; 914, Slender crabgrass, Digitaria filiformis; 915, Slender marsh-pink, Sabatia campanulata; 916, Slender spikegrass, Chasmanthium laxum; 917, Small floating bladderwort, Utricularia radiata; 918, Small-flowered pearlwort, Sagina decumbens ssp. decumbens; 919, Small's knotweed, Polygonum aviculare ssp. buxiforme; 920, Southern arrowwood, Viburnum dentatum var. venosum; 921, St. Andrew's cross, Hypericum hypericoides ssp. multicaule; 922, Swamp sunflower, Helianthus angustifolius; 923, Sweetbay, Magnolia virginiana; 924, Velvety bush-clover, Lespedeza stuevei; 925, Whip nutrush, Scleria triglomerata; 926, White boneset, Eupatorium album var. subvenosum; 927, White milkweed, Asclepias variegata; 928, Whorled mountainmint, Pycnanthemum verticillatum var. verticillatum; 929, Whorled-pennywort, Hydrocotyle verticillata.

Positional_Accuracy:

Horizontal_Positional_Accuracy_Report:
Spatial components for the biological data layers can come from expert interviews, hardcopy, or digital sources. Some of the spatial components of the biological data layers may have been developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy base maps with a scale of 1:24,000. Some of the spatial components of the biological data sets are developed from pre-existing digital or hardcopy sources and reflect the positional accuracy of these original data. See the Lineage and Process_Description sections for more information on the original data source 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: FIRE ISLAND NATIONAL PARK SERVICE
Publication_Date: 2005
Title: FIIS_SAV_Quickbird
Geospatial_Data_Presentation_Form: RASTER DIGITAL DATA
Other_Citation_Details: UNPUBLISHED
Source_Scale_Denominator: 24,000
Type_of_Source_Media: hard drive
Two main sources of data were used to depict habitat distribution and seasonality for this data layer: 1) digital data depicting rare/sensitive coastal...
plants provided by the New York State Natural Heritage Program (NYS NHP) and 2) digital data depicting eelgrass provided by National Park Service (NPS) Fire Island National Seashore, South Shore Estuary Reserve, Peconic Estuary Reserve, and U.S. Fish and Wildlife Service (USFWS) Long Island Sound. The above digital and/or hardcopy sources were compiled by the project biologist to create the HABITATS data layer. Depending on the type of source data, three general approaches are used for compiling a biology data layer: 1) information gathered during initial interviews and from hardcopy sources is compiled onto U.S. Geological Survey 1:24,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; and/or 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews is conducted to review the maps. If necessary, edits to the HABITATS data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

Process_Date: 200903
Process_Contact:
Contact_Information:
  Contact_Organization_Primary:
    Contact_Organization: NOAA, Office of Response and Restoration
    Contact_Person: Jill Petersen
  Contact_Address:
    Address_Type: Physical address
    Address: 7600 Sand Point Way, N.E.
    City: Seattle
    State_or_Province: Washington
    Postal_Code: 98115-6349
  Contact_Voice_Telephone: (206) 526-6944
  Contact_Facsimile_Telephone: (206) 526-6329
  Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
  SDTS_Terms_Description:
    SDTS_Point_and_Vector_Object_Type: GT-polygon composed of chains
    Point_and_Vector_Object_Count: 8729
  SDTS_Terms_Description:
    SDTS_Point_and_Vector_Object_Type: Area point
    Point_and_Vector_Object_Count: 8728
  SDTS_Terms_Description:
    SDTS_Point_and_Vector_Object_Type: Complete chain
    Point_and_Vector_Object_Count: 8771
  SDTS_Terms_Description:
    SDTS_Point_and_Vector_Object_Type: Link
Point_and_Vector_Object_Count: 441705

SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Node, planar graph
Point_and_Vector_Object_Count: 7880

Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Geographic:
  Latitude_Resolution: 0.0000001
  Longitude_Resolution: 0.0000001
  Geographic_Coordinate_Units: Decimal degrees
Geodetic_Model:
  Horizontal_Datum_Name: North American Datum of 1927
  Ellipsoid_Name: Clark 1866
  Semi-major_Axis: 6378206.400000
  Denominator_of_Flattening_Ratio: 294.978698

Entity_and_Attribute_Information:
Overview_Description:
Entity_and_Attribute_Overview:
In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, HABITATS) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (for the Long Island atlas, the number is 53), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN_SPEC, S, F, NHP, DATE_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G_SOURCE, S_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the
associated map object. The life stages referred to are the same as those listed in the Detailed_Description of the BREED data table. The link to the BIOFILE may be made through the BIO_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED_DT is an auxiliary support data table to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to BREED_DT is the BREED item.

A second supporting data table is SOURCES. This is the same as the source file described above, and the link from the flat file is both G_SOURCE and S_SOURCE. It should be noted that although the flat file eases data query, it is not a normalized database structure, and actual updates performed by the states and other responsible agencies should be done using the relational data tables. The entity-relationship diagram describing relationships between attribute tables in the ESI data structure does NOT include the BIOFILE data table, and this data table is NOT described in detail below.

**Detailed_Description:**

**Entity_Type:**

**Entity_Type_Label:** HABITATS.PAT

**Entity_Type_Definition:**

The HABITATS.PAT table contains attribute information for the vector polygons in this data set representing sensitive/rare coastal plants recognized by the Natural Heritage Program and eelgrass 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 (53), 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:** 0530300002
- **Range_Domain_Maximum:** 0530306451

**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:** 053000676
- **Range_Domain_Maximum:** 053000784

**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:** 053000001
- **Range Domain Maximum:** 053000905

**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 (53), 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:** 0530100002
- **Range Domain Maximum:** 0530900714

**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: 053000001
Range_Domain_Maximum: 053000905

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 at a particular location. No quantitative or qualitative information on
  concentrations of eelgrass or coastal plants was available, so this field is
  populated with "."
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:
  Attribute_Label: SEASON_ID
  Attribute_Definition:
  Numeric identifier for the unique monthly presence and life history
  characteristics of each species at a given location.
  Attribute_Definition_Source: 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 (e.g. 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 (e.g. 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 for the entire ESI data set.

*Attribute_Definition_Source:* Research Planning, Inc.

**Attribute_Domain_Values:**

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

**Attribute:**

**Attribute_Label:** GEN_SPEC

**Attribute_Definition:** Species scientific name for the entire ESI data set.

*Attribute_Definition_Source:* Research Planning, Inc.

**Attribute_Domain_Values:**

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

**Attribute:**
**Attribute Label:** ELEMENT
**Attribute Definition:** Major categories of biological data.
**Attribute Definition Source:** 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:** amphibian
  - **Enumerated Domain Value Definition:** Amphibian
  - **Enumerated Domain Value Definition Source:** Research Planning, Inc.

**Attribute Domain Values:**
- **Enumerated Domain:**
  - **Enumerated Domain Value:** bivalve
  - **Enumerated Domain Value Definition:** Bivalve
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: 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: dolphin
  Enumerated Domain Value Definition: Dolphin
  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
  Enumerated Domain Value Definition Source: Research Planning, Inc.
Attribute Domain Values:
Enumerated Domain:
  Enumerated Domain Value: fav
  Enumerated Domain Value Definition: Floating aquatic vegetation
  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.

Enumerated_Domain:

Enumerated_Domain_Value: lobster
Enumerated_Domain_Value_Definition: Lobster
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

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

Enumerated_Domain:

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

Enumerated_Domain:

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

Enumerated_Domain:

Enumerated_Domain_Value: pelagic
Enumerated_Domain_Value_Definition: Pelagic bird
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated_Domain_Value: pinniped
Enumerated_Domain_Value_Definition: Pinniped
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

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

Enumerated_Domain:

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

Enumerated_Domain:

Enumerated_Domain_Value: sav
Enumerated_Domain_Value_Definition: Submerged 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: 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_Domain_Values:
  Enumerated_Domain:
    Enumerated_Domain_Value: whale
    Enumerated_Domain_Value_Definition: Whale
    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:** YYYYMM
    - **Enumerated_Domain_Value_Definition:** YYYY for year and optionally MM for month
    - **Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.
  - **Enumerated_Domain_Value:** 0
    - **Enumerated_Domain_Value_Definition:** Date unspecified
    - **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 (e.g. 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 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:**

<table>
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<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>X</td>
<td>Present in January</td>
<td>Research Planning, Inc.</td>
</tr>
</tbody>
</table>

**Attribute:**

**Attribute Label:** FEB

**Attribute Definition:** February

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

**Attribute Domain Values:**

<table>
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<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>X</td>
<td>Present in February</td>
<td>Research Planning, Inc.</td>
</tr>
</tbody>
</table>

**Attribute:**

**Attribute Label:** MAR

**Attribute Definition:** March

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

**Attribute Domain Values:**

<table>
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<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>X</td>
<td>Present in March</td>
<td>Research Planning, Inc.</td>
</tr>
</tbody>
</table>

**Attribute:**

**Attribute Label:** APR

**Attribute Definition:** April

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

**Attribute Domain Values:**

<table>
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<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>X</td>
<td>Present in April</td>
<td>Research Planning, Inc.</td>
</tr>
</tbody>
</table>

**Attribute:**

**Attribute Label:** MAY

**Attribute Definition:** May

**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>X</td>
<td>Present in May</td>
<td>Research Planning, Inc.</td>
</tr>
</tbody>
</table>

**Attribute:**

**Attribute Label:** JUN

**Attribute Definition:** June

**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>X</td>
<td>Present in June</td>
<td>Research Planning, Inc.</td>
</tr>
</tbody>
</table>
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:
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 (e.g. 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 (e.g. 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_Value:** N
  - **Enumerated_Domain_Value_Definition:** Life-history stage or activity not present or not reported
  - **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 or not reported
Enumerated Domain Value Definition Source: Research Planning, Inc.

Attribute Domain Values:

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

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:

- Life-history stage or activity present

Attribute: BREED4

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:

- Life-history stage or activity present
Attribute

Attribute Domain Values:

Enumerated Domain:

Enumerated Domain Value: N
Enumerated Domain Value Definition: Life-history stage or activity not present or not reported
Enumerated Domain Value Definition Source: 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 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 or not reported
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; G_SOURCE and S_SOURCE in the BIORES table; and SOURCE_ID in the ESI and HYDRO data layers.

**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:**

Unrepresentable_Domain: Acceptable values change from atlas to atlas.

**Attribute:**

**Attribute_Label:** DATE_PUB

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

**Attribute_Definition_Source:** Research Planning, Inc.

**Attribute_Domain_Values:**

**Enumerated_Domain:**

- **Enumerated_Domain_Value:** YYYYMM
- **Enumerated_Domain_Value_Definition:** YYYY for year and optionally MM for month

**Enumerated_Domain_Value_Definition_Source:** Research Planning, Inc.

**Attribute:**

**Attribute_Label:** TITLE

**Attribute_Definition:** Title of source material or data.

**Attribute_Definition_Source:** Research Planning, Inc.

**Attribute_Domain_Values:**

Unrepresentable_Domain: Acceptable values change from atlas to atlas.

**Attribute:**

**Attribute_Label:** DATA_FORMAT

**Attribute_Definition:** The format of the source material.

**Attribute_Definition_Source:** Research Planning, Inc.

**Attribute_Domain_Values:**

Unrepresentable_Domain: Acceptable values change from atlas to atlas.

**Attribute:**

**Attribute_Label:** PUBLICATION

**Attribute_Definition:** Additional citation information.

**Attribute_Definition_Source:** Research Planning, Inc.

**Attribute_Domain_Values:**

Unrepresentable_Domain: Acceptable values change from atlas to atlas.

**Attribute:**

**Attribute_Label:** SCALE

**Attribute_Definition:** Description of the source scale.

**Attribute_Definition_Source:** Research Planning, Inc.

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

Attribute:

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

Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Detailed_Description:
Entity_Type:

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

Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:

Attribute_Label: COUNTRY
Attribute_Definition: Three-letter country abbreviation.
Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Unrepresentable_Domain: Acceptable values change from atlas to atlas.

Attribute:

Attribute_Label: S
Attribute_Definition: State threatened or endangered status.
Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

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

Attribute_Domain_Values:

Enumerated_Domain:

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

Attribute_Domain_Values:

Enumerated_Domain:

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

Attribute:

Attribute_Label: F
Attribute_Definition: Federal threatened or endangered status.
Attribute_Definition_Source: Research Planning, Inc.
Attribute\_Domain\_Values:
  Enumerated\_Domain:
    Enumerated\_Domain\_Value: E
    Enumerated\_Domain\_Value\_Definition: Endangered on federal list
    Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines

Attribute\_Domain\_Values:
  Enumerated\_Domain:
    Enumerated\_Domain\_Value: T
    Enumerated\_Domain\_Value\_Definition: Threatened on federal list
    Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines

Attribute\_Domain\_Values:
  Enumerated\_Domain:
    Enumerated\_Domain\_Value: C
    Enumerated\_Domain\_Value\_Definition: Species of Special Concern
    Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines

Attribute:
  Attribute\_Label: I
  Attribute\_Definition: International threatened or endangered status.
  Attribute\_Definition\_Source: Research Planning, Inc.

Attribute\_Domain\_Values:
  Enumerated\_Domain:
    Enumerated\_Domain\_Value: E
    Enumerated\_Domain\_Value\_Definition: Endangered on international list
    Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines

Attribute\_Domain\_Values:
  Enumerated\_Domain:
    Enumerated\_Domain\_Value: T
    Enumerated\_Domain\_Value\_Definition: Threatened on international list
    Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines

Attribute\_Domain\_Values:
  Enumerated\_Domain:
    Enumerated\_Domain\_Value: C
    Enumerated\_Domain\_Value\_Definition: Species of Special Concern
    Enumerated\_Domain\_Value\_Definition\_Source: NOAA ESI Guidelines

Attribute:
  Attribute\_Label: S\_DATE
  Attribute\_Definition: Publication date of source material used to assign state status values for each species, if used.
  Attribute\_Definition\_Source: Research Planning, Inc.

Attribute\_Domain\_Values:
  Enumerated\_Domain:
    Enumerated\_Domain\_Value: YYYYMM
    Enumerated\_Domain\_Value\_Definition: YYYY for year and optionally MM for month
    Enumerated\_Domain\_Value\_Definition\_Source: Research Planning, Inc.

Attribute:
  Attribute\_Label: F\_DATE
  Attribute\_Definition: Publication date of source material used to assign federal status values for each species, if used.
Attribute_Definition_Source: Research Planning, Inc.

Attribute: I_DATE
Attribute_Definition:
Publication date of source material used to assign international status values for each species, if used.
Attribute_Definition_Source: Research Planning, Inc.

Attribute Domain Values:
Enumerated_Domain:
- Enumerated_Domain_Value: YYYYMM
  Enumerated_Domain_Value_Definition: YYYY for year and optionally MM for month
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute: 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 (e.g. ELEMENT = 'BIRD' and SPECIES_ID = 1; EL_SPE = 'B00001').
  Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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

Custom Order Process:
Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to the widest community of GIS/mapping users. Distribution formats include Geodatabase; ARC export, MOSS, and Shape files; and MARPLOT map folders. An ArcMap .mxd file, an ArcView 3.x ESI project, and an ESI_Viewer product for use with the MARPLOT data are also included on the distribution CDs/DVDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

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Metadata Reference Information:
Metadata Date: 200905
Metadata Review Date: 200905
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 2.9.8 on Fri May 29 13:38:34 2009
(The BIO_LUT table can be bypassed by linking the biology tables to BIORES using RARNUM.)

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

Data Tables

- SOURCES
  - SOURCE_ID (6, 6, I)
  - ORIGINATOR (255, 255, C)
  - DATE_PUB (10, 10, I)
  - TITLE (255, 255, C)
  - DATA_FORMAT (80, 80, C)
  - PUBLICATION (255, 255, C)
  - SCALE (20, 20, C)
  - TIME_PERIOD (22, 22, C)

- 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)
  - ELEMENT (10, 10, C)
  - EL_SPE (6, 6, C)
  - EL_SPE_SEA (8, 8, 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)
  - EL_SPE_SEA (8, 8, C)

- STATUS
  - ELEMENT (10, 10, C)
  - SPECIES_ID (5, 5, I)
  - STATE (2, 2, C)
  - COUNTRY (3, 3, C)
  - S_DATE (10, 10, I)
  - F_DATE (10, 10, I)
  - I_DATE (10, 10, I)
  - EL_SPE (6, 6, C)

- BREED
  - EL_SPE_SEA (8, 8, C)
  - MONTH (2, 2, I)
  - BREED1 (1, 1, C)
  - BREED2 (1, 1, C)
  - BREED3 (1, 1, C)
  - BREED4 (1, 1, C)
  - BREED5 (1, 1, C)
Long Island ESI

Entity Relationship Diagram for the Desktop/Flat File Approach

Relationships between spatial data layers and desktop data tables

**Geographic Themes**

- ESI (LINES)
  - ID (10, 10, I)
  - SOURCE_ID (6, 6, I)
  - ENVIR (1, 1, C)
- ESI (POLYS)
  - ID (10, 10, I)
  - 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)
- HYDRO (LINES)
  - ID (1, 1, C)
- 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)
  - SOCECON (LINES)
  - TYPE (2, 2, C)
- BIRDS (POLYS)
  - ID (10, 10, I)
  - RARNUM (9, 9, I)
- FISH (POLYS)
  - ID (10, 10, I)
  - RARNUM (9, 9, I)
- INVERT (POLYS)
  - ID (10, 10, I)
  - RARNUM (9, 9, I)
- M_MAMMAL (POLYS)
  - ID (10, 10, I)
  - RARNUM (9, 9, I)
- T_MAMMAL (POLYS)
  - ID (10, 10, I)
  - RARNUM (9, 9, I)
- REPTILES (POLYS)
  - ID (10, 10, I)
  - RARNUM (9, 9, I)
- HABITATS (POLYS)
  - ID (10, 10, I)
  - RARNUM (9, 9, I)
- 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)

**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**

- SOURCES
  - SOURCE_ID (6, 6, I)
  - ORIGINATOR (255, 255, C)
  - DATE_PUB (10, 10, I)
  - TITLE (255, 255, C)
  - DATA_FORMAT (80, 80, C)
  - PUBLICATION (255, 255, C)
  - SCALE (20, 20, C)
  - TIME_PERIOD (22, 22, C)

- 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)

- BIOFILE
  - ELEMENT (10, 10, C)
  - SUBELEMENT (10, 10, C)
  - NAME (35, 35, C)
  - GEN_SPEC (45, 45, C)
  - S_F (3, 3, C)
  - T_E (3, 3, C)
  - NHP (10, 10, I)
  - DATE_PUB (10, 10, I)
  - CONC (20, 20, C)
  - 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)
  - BREED1 (8, 8, C)
  - BREED2 (8, 8, C)
  - BREED3 (8, 8, C)
  - BREED4 (8, 8, C)
  - BREED5 (8, 8, C)

- BREED
  - BREED (4, 4, I)
  - MONTH (2, 2, I)
  - BREED1 (8, 8, C)
  - BREED2 (8, 8, C)
  - BREED3 (8, 8, C)
  - BREED4 (8, 8, C)
  - BREED5 (8, 8, C)

(The BIO_LUT table can be bypassed by linking the biology tables to BIORES using RARNUM.)

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