

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

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

Metadata:

- [Identification Information](#)
- [Data Quality Information](#)
- [Spatial Data Organization Information](#)
- [Spatial Reference Information](#)
- [Entity and Attribute Information](#)
- [Distribution Information](#)
- [Metadata Reference Information](#)

Identification_Information:

Citation:

Citation_Information:

Originator:

New Hampshire Department of Environmental Services, Concord, New Hampshire and the New Hampshire Estuaries Project, Portsmouth, New Hampshire.

Publication_Date: 200403

Title:

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

Edition: First

Geospatial_Data_Presentation_Form: Vector digital data

Series_Information:

Series_Name: None

Issue_Identification: New Hampshire

Publication_Information:

Publication_Place: Concord, New Hampshire

Publisher:

New Hampshire Department of Environmental Services and the New Hampshire Estuaries Project.

Other_Citation_Details:

Prepared by Research Planning, Inc., Columbia, South Carolina for the New Hampshire Department of Environmental Services, Concord, New Hampshire and the New Hampshire Estuaries Project, Portsmouth, New Hampshire. Formatted to national Environmental Sensitivity Index standards by National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington.

Description:

Abstract:

This data set contains vector lines and polygons representing coastal hydrography used in the creation of the Environmental Sensitivity Index (ESI) for New Hampshire. The Hydro data layer contains all annotation used in producing the atlas. The annotation features are categorized into three subclasses in order to simplify the mapping and quality control procedures: GEOG or geographic features, SOC or socioeconomic features, and HYDRO or water features. This data set comprises a portion of the ESI for New Hampshire. 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:

This data was collected, mapped, and digitized to provide environmental data for the New Hampshire Department of Environmental Services and the New Hampshire Estuaries Project response plans for immediate and effective protection of sensitive resources.

Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date: 2003

Ending_Date: 2004

Currentness_Reference:

The data were compiled during 2003. The currentness dates for these data ranges from 1948 to 2003 and are documented in the Source_Information section.

Status:

Progress: Complete

Maintenance_and_Update_Frequency: None Scheduled

Spatial_Domain:

Bounding_Coordinates:

West_Bounding_Coordinate: -71.000

East_Bounding_Coordinate: -70.533

North_Bounding_Coordinate: 43.250

South_Bounding_Coordinate: 42.867

Keywords:

Theme:

Theme_Keyword_Thesaurus: None

Theme_Keyword: ESI

Theme_Keyword: Sensitivity maps

Theme_Keyword: Hydrography

Theme_Keyword: Coastal resources

Theme_Keyword: Oil spill planning

Theme_Keyword: Coastal Zone Management

Theme_Keyword: Wildlife

Place:

Place_Keyword_Thesaurus: None

Place_Keyword: New Hampshire

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 New Hampshire ESI data.

Browse_Graphic_File_Type: JPEG

Data_Set_Credit:

The New Hampshire Department of Environmental Services and the New Hampshire Estuaries Project supported this project. Steve Croce with New Hampshire Department of Environmental Services served as contract manager for the project. Carroll Brown, Jr. and Lynn Woodard with New Hampshire Department of Environmental Services contributed significantly to the project, as did Phil Trowbridge with the New Hampshire Estuaries Project and individuals from several state and federal

agencies and other organizations. At Research Planning, Inc. (RPI), Heidi Hinkeldey was the project manager. Lee Diveley performed the data processing under the supervision of Mark White, GIS Manager. Heidi Hinkeldey, Chris Locke, and Vermell Pyatt prepared the final metadata.

Native_Data_Set_Environment:

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) and SQL SERVER(r) (version 7.0). The hardware configuration is PC's with Windows Operating System (NT4.0/2000). The Spatial_Data_Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: bio_lut.e00, birds.e00, biofile.e00, biores.e00, breed.e00, breed_dt.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, mgt.e00, nests.e00, reptiles.e00, seasonal.e00, soc_dat.e00, soc_lut.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, socecon, 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 node, etc.), and SQL SERVER(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks.

Completeness_Report:

These data represent linear and polygonal hydrography for New Hampshire.

Positional_Accuracy:

Horizontal_Positional_Accuracy:

Horizontal_Positional_Accuracy_Report:

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

Lineage:

Source_Information:

Source_Citation:

Citation_Information:

Originator:

Complex Systems research Center, University of New Hampshire (CSRC, UNH)

Publication_Date: 1992

Title: Hydrography

Geospatial_Data_Presentation_Form: Digital Vector Data

Publication_Information:

Publication_Place: Durham, New Hampshire

Publisher:

Complex Systems research Center, University of New
Hampshire (CSRC, UNH)

Type_of_Source_Media: Online
Source_Time_Period_of_Content:
 Time_Period_Information:
 Range_of_Dates/Times:
 Beginning_Date: 1956
 Ending_Date: 1992
 Source_Currentness_Reference: Date of publication
Source_Scale_Denominator: 24000
Source_Citation_Abbreviation: None
Source_Contribution: Hydrology information
Source_Information:
 Source_Citation:
 Citation_Information:
 Originator:
 U.S. Geology Survey (USGS), Maine Office of Geographic
 Information Systems (MEGIS)
 Publication_Date: Unknown
 Title: Coast
 Geospatial_Data_Presentation_Form: Digital Vector Data
 Publication_Information:
 Publication_Place: Augusta, Maine
 Publisher:
 U.S. Geology Survey (USGS), Maine Office of
 Geographic Information Systems (MEGIS)

Type_of_Source_Media: Online
Source_Time_Period_of_Content:
 Time_Period_Information:
 Range_of_Dates/Times:
 Beginning_Date: 1948
 Ending_Date: 1990
 Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: Hydrology information
Source_Information:
 Source_Citation:
 Citation_Information:
 Originator: US Geological Survey
 Publication_Date: Unknown
 Title: Topographic Quadrangles
 Geospatial_Data_Presentation_Form: Map
 Publication_Information:
 Publication_Place: Denver, CO or Reston, VA
 Publisher: U.S. Geological Survey
 Source_Scale_Denominator: 24000
Type_of_Source_Media: Paper
Source_Time_Period_of_Content:
 Time_Period_Information:
 Single_Date/Time:
 Calendar_Date: Varies
 Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: Hydrology information
Source_Information:
 Source_Citation:
 Citation_Information:
 Originator: Colin Plank, Research Planning Inc.
 Publication_Date: Unpublished material
 Title: ESI Overflight

Geospatial_Data_Presentation_Form: Map
*Publication_Information:**Publication_Place:* Unknown*Publisher:* U.S. Geological Survey*Source_Scale_Denominator:* 24000*Type_of_Source_Media:* Paper*Source_Time_Period_of_Content:**Time_Period_Information:**Single_Date/Time:**Calendar_Date:* 2003*Source_Currentness_Reference:* Date of overflight*Source_Citation_Abbreviation:* None*Source_Contribution:* Hydrography information*Process_Step:**Process_Description:*

The shoreline was derived primarily from digital coastline data from the Complex Systems research Center, University of New Hampshire (CSRC, UNH). In some cases, minor shoreline changes or additional hydrography polygons were sketched during overflights conducted during October 2003. Overflight changes were digitized from the scanned and registered hardcopy field maps. After the initial shoreline classification, these data were edgematched and checked for logical consistency errors. Review maps were plotted at 1:24,000 scale for verification of polygonal and linear attributes.

Process_Date: 200403*Process_Contact:**Contact_Information:**Contact_Organization_Primary:**Contact_Organization:* Research Planning, Inc.*Contact_Person:*Heidi Hinkeldey - Biologist and Project Manager; Mark
A. White - GIS Department Manager*Contact_Address:**Address_Type:* Physical address*Address:* 1121 Park Street*City:* Columbia*State_or_Province:* SC*Postal_Code:* 29201*Contact_Voice_Telephone:* (803) 256-7322*Contact_Facsimile_Telephone:* (803) 254-6445*Contact_Electronic_Mail_Address:* hhinkeldey@researchplanning.com;
mwhite@researchplanning.com*Spatial_Data_Organization_Information:**Direct_Spatial_Reference_Method:* Vector*Point_and_Vector_Object_Information:**SDTS_Terms_Description:**SDTS_Point_and_Vector_Object_Type:* GT-polygon composed of rings*Point_and_Vector_Object_Count:* 1261*SDTS_Terms_Description:**SDTS_Point_and_Vector_Object_Type:* Area point*Point_and_Vector_Object_Count:* 1261*SDTS_Terms_Description:**SDTS_Point_and_Vector_Object_Type:* Complete chain*Point_and_Vector_Object_Count:* 5906*SDTS_Terms_Description:**SDTS_Point_and_Vector_Object_Type:* Link*Point_and_Vector_Object_Count:* 70310*SDTS_Terms_Description:*

SDTS_Point_and_Vector_Object_Type: Label Point
Point_and_Vector_Object_Count: 91
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Node, planar graph
Point_and_Vector_Object_Count: 5336

Spatial_Reference_Information:*Horizontal_Coordinate_System_Definition*:*Geographic*:

Latitude_Resolution: 0.00005
Longitude_Resolution: 0.00005
Geographic_Coordinate_Units: Decimal degrees

Geodetic_Model:

Horizontal_Datum_Name: D_North_American_1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137
Denominator_of_Flattening_Ratio: 298.257222

Entity_and_Attribute_Information:*Detailed_Description*:*Entity_Type*:

Entity_Type_Label: HYDRO.AAT

Entity_Type_Definition:

The HYDRO.AAT table contains attribute information for the vector lines representing linear hydrography features in the HYDRO data layer.

Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: LINE

Attribute_Definition: Type of geographic feature.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:*Enumerated_Domain*:

Enumerated_Domain_Value: B

Enumerated_Domain_Value_Definition: Breakwater

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:*Enumerated_Domain*:

Enumerated_Domain_Value: F

Enumerated_Domain_Value_Definition: Flat

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated_Domain_Value: H

Enumerated_Domain_Value_Definition: Hydrography

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated_Domain_Value: I

Enumerated_Domain_Value_Definition: Index

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated_Domain_Value: S

Enumerated_Domain_Value_Definition: Shoreline

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: SOURCE_ID

Attribute_Definition: Data source of the ESI arcs

Attribute_Definition_Source: Research Planning, Inc.

*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* 1*Enumerated_Domain_Value_Definition:* Original Digital Data (CSRC, UNH)*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Enumerated_Domain:**Enumerated_Domain_Value:* 2*Enumerated_Domain_Value_Definition:* Low-altitude overflight field sketches and oblique photography*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Enumerated_Domain:**Enumerated_Domain_Value:* 5*Enumerated_Domain_Value_Definition:* Digitized from scanned 1; 24,000-USGS topographic quadrangle*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Enumerated_Domain:**Enumerated_Domain_Value:* 7*Enumerated_Domain_Value_Definition:* Digital USGS Index*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Enumerated_Domain:**Enumerated_Domain_Value:* 8*Enumerated_Domain_Value_Definition:*

Digital Shoreline from Maine Office of Geographic Information Systems (MEGIS)

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.*Detailed_Description:**Entity_Type:**Entity_Type_Label:* HYDRO.PAT*Entity_Type_Definition:*

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

Entity_Type_Definition_Source: Research Planning, Inc.*Attribute:**Attribute_Label:* WATER_CODE*Attribute_Definition:* Specifies a polygon as either water or land*Attribute_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* L*Enumerated_Domain_Value_Definition:* Land*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Enumerated_Domain:**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.GEOG*Entity_Type_Definition:*

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

Entity_Type_Definition_Source: Research Planning, Inc.*Detailed_Description:**Entity_Type:**Entity_Type_Label:* ANNO.HYDRO*Entity_Type_Definition:*

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

Entity_Type_Definition_Source: Research Planning, Inc.

*Detailed_Description:**Entity_Type:**Entity_Type_Label:* ANNO.SOC*Entity_Type_Definition:*

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

Entity_Type_Definition_Source: Research Planning, Inc.*Distribution_Information:**Distributor:**Contact_Information:**Contact_Person_Primary:**Contact_Person:* John Kaperick*Contact_Organization:* NOAA, Office of Response and Restoration*Contact_Address:**Address_Type:* Physical Address*Address:* 7600 Sand Point Way N.E.*City:* Seattle*State_or_Province:* Washington*Postal_Code:* 98115-6349*Contact_Voice_Telephone:* (206) 526-6400*Contact_Facsimile_Telephone:* (206) 526-6329*Resource_Description:* ESI Atlas for New Hampshire*Distribution_Liability:*

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

Custom_Order_Process:

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

*Metadata_Reference_Information:**Metadata_Date:* 200403*Metadata_Review_Date:* 200403*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 2.7.10 on Fri May 21 14:27:56 2004

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

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

Metadata:

- [Identification Information](#)
- [Data Quality Information](#)
- [Spatial Data Organization Information](#)
- [Spatial Reference Information](#)
- [Entity and Attribute Information](#)
- [Distribution Information](#)
- [Metadata Reference Information](#)

Identification_Information:

Citation:

Citation_Information:

Originator:

New Hampshire Department of Environmental Services, Concord, New Hampshire and the New Hampshire Estuaries Project, Portsmouth, New Hampshire.

Publication_Date: 200403

Title:

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

Edition: First

Geospatial_Data_Presentation_Form: Vector digital data

Series_Information:

Series_Name: None

Issue_Identification: New Hampshire

Publication_Information:

Publication_Place: Concord, New Hampshire

Publisher:

New Hampshire Department of Environmental Services and the New Hampshire Estuaries Project.

Other_Citation_Details:

Prepared by Research Planning, Inc., Columbia, South Carolina for the New Hampshire Department of Environmental Services, Concord, New Hampshire and the New Hampshire Estuaries Project, Portsmouth, New Hampshire. Formatted to national Environmental Sensitivity Index standards by National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington.

Description:

Abstract:

This data set contains vector lines and polygons representing the shoreline and coastal habitats of New Hampshire classified according to the Environmental Sensitivity Index (ESI) classification system. This data set comprises a portion of the ESI for New Hampshire. 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:

This data was collected, mapped, and digitized to provide environmental data for the New Hampshire Department of Environmental Services and the New Hampshire Estuaries Project response plans for immediate and effective protection of sensitive resources.

*Time_Period_of_Content:**Time_Period_Information:**Range_of_Dates/Times:*

Beginning_Date: 2003

Ending_Date: 2004

Currentness_Reference:

The data were compiled during 2003. The currentness dates for this data ranges from 1956 to 2003 and is documented in the Source_Information section.

Status:

Progress: Complete

Maintenance_and_Update_Frequency: None Scheduled

*Spatial_Domain:**Bounding_Coordinates:*

West_Bounding_Coordinate: -71.000

East_Bounding_Coordinate: -70.533

North_Bounding_Coordinate: 43.250

South_Bounding_Coordinate: 42.867

*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: New Hampshire

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 New Hampshire ESI data.

Browse_Graphic_File_Type: JPEG

Data_Set_Credit:

The New Hampshire Department of Environmental Services and the New Hampshire Estuaries Project supported this project. Steve Croce with New Hampshire Department of Environmental Services served as contract manager for the project. Carroll Brown, Jr. and Lynn Woodard with New Hampshire Department of Environmental Services contributed significantly to the project, as did Phil Trowbridge with the New Hampshire Estuaries Project and individuals from several state and federal agencies and other organizations. At Research Planning, Inc. (RPI), Heidi Hinkeldey was the project manager. Lee Diveley performed the data processing under the supervision of Mark White, GIS

Manager. Heidi Hinkeldey, Chris Locke, and Vermell Pyatt prepared the final metadata.

Native_Data_Set_Environment:

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) and SQL SERVER(r) (version 7.0). The hardware configuration is PC's with Windows Operating System (NT4.0/2000). The Spatial_Data_Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: bio_lut.e00, birds.e00, biofile.e00, biores.e00, breed.e00, breed_dt.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, mgt.e00, nests.e00, reptiles.e00, seasonal.e00, soc_dat.e00, soc_lut.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, socecon, 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 node, etc.), and SQL SERVER(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks.

Completeness_Report:

These data represent coastal shorelines and habitats classified according to the Environmental Sensitivity Index (ESI) classification system.

Positional_Accuracy:

Horizontal_Positional_Accuracy:

Horizontal_Positional_Accuracy_Report:

The ESI data set 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 when mapping is conducted using 1:24,000 hardcopy fieldmaps. Field verification has shown that the absolute positional accuracy of breaks between shoreline ESI types with a 95-percent error bound is approximately 58 meters. See the Lineage and Process_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

Lineage:

Source_Information:

Source_Citation:

Citation_Information:

Originator: Colin Plank, Research Planning Inc.

Publication_Date: Unpublished material

Title: ESI Overflight

Geospatial_Data_Presentation_Form: Hardcopy Map

Source_Scale_Denominator: 24000

Type_of_Source_Media: Paper

Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 2003
Source_Currentness_Reference: Date of overflight
Source_Citation_Abbreviation: None
Source_Contribution: Shoreline Classification
Source_Information:
Source_Citation:
Citation_Information:
Originator:
 Complex Systems research Center, University of New Hampshire
 (CSRC, UNH)
Publication_Date: 1992
Title: Hydrography
Geospatial_Data_Presentation_Form: Digital Vector Data
Publication_Information:
Publication_Place: Durham, New Hampshire
Publisher:
 Complex Systems research Center, University of New
 Hampshire (CSRC, UNH)
Source_Scale_Denominator: 24000
Type_of_Source_Media: Online
Source_Time_Period_of_Content:
Time_Period_Information:
Range_of_Dates/Times:
Beginning_Date: 1956
Ending_Date: 1992
Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: Hydrology information
Process_Step:
Process_Description:
 The intertidal shoreline habitats of New Hampshire were mapped during overflights and ground surveys conducted by an experienced coastal geologist in October 2003. The overflights of New Hampshire were conducted using a fixed-wing aircraft, flying at elevations of 400-600 feet and slow air speed. During this work, the ESI rankings of observed intertidal shoreline habitats was denoted directly onto the shoreline depicted on 1:24,000-scale USGS topographic maps. Where appropriate, revisions to the existing shoreline were made; where necessary multiple habitats were described for each shoreline segment. In addition to the ESI shoreline habitats, wetland data for New Hampshire are also depicted on the maps. The Complex Systems Research Center, University of New Hampshire delineated wetlands for the study area. The coastal geologist classified the wetlands based on overflight and ground survey experience.
Process_Date: 200403
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: Research Planning, Inc.
Contact_Person:
 Heidi Hinkeldey - Biologist and Project Manager; Mark
 A. White - GIS Department Manager
Contact_Address:
Address_Type: Physical address
Address: 1121 Park Street
City: Columbia
State_or_Province: SC
Postal_Code: 29201
Contact_Voice_Telephone: (803) 256-7322

Contact_Facsimile_Telephone: (803) 254-6445
Contact_Electronic_Mail_Address: hhinkeldey@researchplanning.com;
 mwhite@researchplanning.com

Spatial_Data_Organization_Information:

Direct_Spatial_Reference_Method: Vector

Point_and_Vector_Object_Information:

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: GT-polygon composed of rings

Point_and_Vector_Object_Count: 1151

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: Area point

Point_and_Vector_Object_Count: 1151

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: Complete chain

Point_and_Vector_Object_Count: 4280

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: Link

Point_and_Vector_Object_Count: 56206

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: Node, planar graph

Point_and_Vector_Object_Count: 3820

Spatial_Reference_Information:

Horizontal_Coordinate_System_Definition:

Geographic:

Latitude_Resolution: 0.00005

Longitude_Resolution: 0.00005

Geographic_Coordinate_Units: Decimal degrees

Geodetic_Model:

Horizontal_Datum_Name: D_North_American_1983

Ellipsoid_Name: Geodetic Reference System 80

Semi-major_Axis: 6378137

Denominator_of_Flattening_Ratio: 298.257222

Entity_and_Attribute_Information:

Detailed_Description:

Entity_Type:

Entity_Type_Label: ESI.AAT

Entity_Type_Definition:

The ESI.AAT table contains attribute information for the vector arcs 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: 1A

Enumerated_Domain_Value_Definition: Exposed rocky shores

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated_Domain_Value: 1B

Enumerated_Domain_Value_Definition: Exposed, Solid Man-made Structures

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated_Domain_Value: 2A

Enumerated_Domain_Value_Definition: Exposed, Wave-cut Platforms in Bedrock

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated_Domain_Value: 3A

Enumerated_Domain_Value_Definition: Fine- to Medium-grained Sand Beaches

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated_Domain_Value: 5

Enumerated_Domain_Value_Definition: Mixed Sand and Gravel Beaches

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated_Domain_Value: 6A

Enumerated_Domain_Value_Definition: Gravel Beaches

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated_Domain_Value: 6B

Enumerated_Domain_Value_Definition: Riprap

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated_Domain_Value: 7

Enumerated_Domain_Value_Definition: Exposed Tidal Flats

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated_Domain_Value: 8A

Enumerated_Domain_Value_Definition: Sheltered Rocky Shores

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated_Domain_Value: 8B

Enumerated_Domain_Value_Definition: Sheltered, Solid Man-made Structures

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated_Domain_Value: 8C
Enumerated_Domain_Value_Definition: Sheltered Riprap
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: 9A
Enumerated_Domain_Value_Definition: Sheltered Tidal Flats
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: 10A
Enumerated_Domain_Value_Definition: Salt- and Brackish-water Marsh
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: 10D
Enumerated_Domain_Value_Definition: Scrub-Shrub Wetlands
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: U
Enumerated_Domain_Value_Definition: Unranked
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: LINE
Attribute_Definition: Type of geographic feature.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: B
Enumerated_Domain_Value_Definition: Breakwater
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: E
Enumerated_Domain_Value_Definition: Extent of Digital Data
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: F
Enumerated_Domain_Value_Definition: Flat
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: H
Enumerated_Domain_Value_Definition: Hydrography
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: I
Enumerated_Domain_Value_Definition: Index
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: M
Enumerated_Domain_Value_Definition: Marsh
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: S
Enumerated_Domain_Value_Definition: Shoreline
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: SOURCE_ID
Attribute_Definition: Data source of the ESI arcs
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: 2
Enumerated_Domain_Value_Definition: Low-altitude overflight field

sketches and oblique photography

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated_Domain_Value: 5

Enumerated_Domain_Value_Definition: Digitized from scanned 1:24,000-USGS topographic quadrangle

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated_Domain_Value: 1

Enumerated_Domain_Value_Definition: Original Digital Data (CSRC, UNH)

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated_Domain_Value: 7

Enumerated_Domain_Value_Definition: Digital USGS Index

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: 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: 2A

Enumerated_Domain_Value_Definition: Exposed Wave-cut Platforms in Bedrock

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated_Domain_Value: 7

Enumerated_Domain_Value_Definition: Exposed Tidal Flats

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated_Domain_Value: 9A

Enumerated_Domain_Value_Definition: Sheltered Tidal Flats

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated_Domain_Value: 10A

Enumerated_Domain_Value_Definition: Salt- and Brackish-water Marsh

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated_Domain_Value: 10B
Enumerated_Domain_Value_Definition: Freshwater Marshes
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: 10C
Enumerated_Domain_Value_Definition: Swamps
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: 10D
Enumerated_Domain_Value_Definition: Scrub-Shrub Wetlands
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: U
Enumerated_Domain_Value_Definition: Unranked
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: 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:
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.
Enumerated_Domain:
Enumerated_Domain_Value: U
Enumerated_Domain_Value_Definition: Unranked
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 New Hampshire

Distribution_Liability:

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

Custom_Order_Process:

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

Metadata_Reference_Information:

Metadata_Date: 200403

Metadata_Review_Date: 200403

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 2.7.10 on Fri May 21 14:27:51 2004

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

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

Metadata:

- [Identification Information](#)
- [Data Quality Information](#)
- [Spatial Data Organization Information](#)
- [Spatial Reference Information](#)
- [Entity and Attribute Information](#)
- [Distribution Information](#)
- [Metadata Reference Information](#)

Identification_Information:

Citation:

Citation_Information:

Originator:

New Hampshire Department of Environmental Services, Concord, New Hampshire and the New Hampshire Estuaries Project, Portsmouth, New Hampshire.

Publication_Date: 200403

Title:

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

Edition: First

Geospatial_Data_Presentation_Form: Vector digital data

Series_Information:

Series_Name: None

Issue_Identification: New Hampshire

Publication_Information:

Publication_Place: Concord, New Hampshire

Publisher:

New Hampshire Department of Environmental Services and the New Hampshire Estuaries Project.

Other_Citation_Details:

Prepared by Research Planning, Inc., Columbia, South Carolina for the New Hampshire Department of Environmental Services, Concord, New Hampshire and the New Hampshire Estuaries Project, Portsmouth, New Hampshire. Formatted to national Environmental Sensitivity Index standards by National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington.

Description:

Abstract:

This data set contains vector polygons representing the boundaries of all the hardcopy cartographic products produced as part of the Environmental Sensitivity Index (ESI) for New Hampshire, as well as digital data extents. This data set comprises a portion of the ESI data for New Hampshire. 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:

This data was collected, mapped, and digitized to provide environmental data for the New Hampshire Department of Environmental Services and the New Hampshire Estuaries Project response plans for immediate and effective protection of sensitive resources.

*Time_Period_of_Content:**Time_Period_Information:**Range_of_Dates/Times:**Beginning_Date:* 2003*Ending_Date:* 2004*Currentness_Reference:*

The data were compiled during 2003. The currentness dates for this data is 2003 and is documented in the Source_Information section.

*Status:**Progress:* Complete*Maintenance_and_Update_Frequency:* None Scheduled*Spatial_Domain:**Bounding_Coordinates:**West_Bounding_Coordinate:* -71.000*East_Bounding_Coordinate:* -70.533*North_Bounding_Coordinate:* 43.250*South_Bounding_Coordinate:* 42.867*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:* New Hampshire*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 New Hampshire ESI data.

Browse_Graphic_File_Type: JPEG*Data_Set_Credit:*

The New Hampshire Department of Environmental Services and the New Hampshire Estuaries Project supported this project. Steve Croce with New Hampshire Department of Environmental Services served as contract manager for the project. Carroll Brown, Jr. and Lynn Woodard with New Hampshire Department of Environmental Services contributed significantly to the project, as did Phil Trowbridge with the New Hampshire Estuaries Project and individuals from several state and federal agencies and other organizations. At Research Planning, Inc. (RPI), Heidi Hinkeldey was the project manager. Lee Diveley performed the data processing under the supervision of Mark White, GIS Manager. Heidi Hinkeldey, Chris Locke, and Vermell Pyatt prepared the final metadata.

Native_Data_Set_Environment:

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) and SQL SERVER(r) (version 7.0). The hardware configuration is PC's

with Windows Operating System (NT4.0/2000). The Spatial_Data_Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: bio_lut.e00, birds.e00, biofile.e00, biores.e00, breed.e00, breed_dt.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, mgt.e00, nests.e00, reptiles.e00, seasonal.e00, soc_dat.e00, soc_lut.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, socecon, 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 node, etc.), and SQL SERVER(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks.

Completeness_Report:

These data represent the boundaries of all the hardcopy cartographic products produced as part of the Environmental Sensitivity Index (ESI) for New Hampshire, as well as digital data extents. Primarily, 1:24,000 USGS topographic maps were used to provide boundaries for cartographic products. In most cases the polygons represent U.S. Geological Survey (USGS) topographic maps that were re-tiled, moved, or extended to provide better cartographic coverage of the study area.

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: US Geological Survey

Publication_Date: Unknown

Title: Topographic Quadrangles

Geospatial_Data_Presentation_Form: Map

Publication_Information:

Publication_Place: Denver, CO or Reston, VA

Publisher: U.S. Geological Survey

Source_Scale_Denominator: 24000

Type_of_Source_Media: Paper

Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: Varies
Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: Map index

Process_Step:

Process_Description:
 The index polygons in this data layer were generated in ArcInfo from the coordinates of the USGS map corners, or appropriate coordinates.
Process_Date: 200403
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: Research Planning, Inc.
Contact_Person:
 Heidi Hinkeldey - Biologist and Project Manager; Mark
 A. White - GIS Department Manager
Contact_Address:
Address_Type: Physical address
Address: 1121 Park Street
City: Columbia
State_or_Province: SC
Postal_Code: 29201
Contact_Voice_Telephone: (803) 256-7322
Contact_Facsimile_Telephone: (803) 254-6445
Contact_Electronic_Mail_Address: hhinkeldey@researchplanning.com;
 mwhite@researchplanning.com

*Spatial_Data_Organization_Information:**Direct_Spatial_Reference_Method:* Vector*Point_and_Vector_Object_Information:**SDTS_Terms_Description:**SDTS_Point_and_Vector_Object_Type:* GT-polygon composed of rings*Point_and_Vector_Object_Count:* 8*SDTS_Terms_Description:**SDTS_Point_and_Vector_Object_Type:* Area point*Point_and_Vector_Object_Count:* 8*SDTS_Terms_Description:**SDTS_Point_and_Vector_Object_Type:* Complete chain*Point_and_Vector_Object_Count:* 18*SDTS_Terms_Description:**SDTS_Point_and_Vector_Object_Type:* Link*Point_and_Vector_Object_Count:* 1325*SDTS_Terms_Description:**SDTS_Point_and_Vector_Object_Type:* Node, planar graph*Point_and_Vector_Object_Count:* 11*Spatial_Reference_Information:**Horizontal_Coordinate_System_Definition:**Geographic:**Latitude_Resolution:* 0.00005*Longitude_Resolution:* 0.00005*Geographic_Coordinate_Units:* Decimal degrees*Geodetic_Model:*

Horizontal_Datum_Name: D_North_American_1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137
Denominator_of_Flattening_Ratio: 298.257222

Entity_and_Attribute_Information:

Detailed_Description:

Entity_Type:

Entity_Type_Label: INDEX.PAT

Entity_Type_Definition:

The INDEX.PAT table contains attribute information for the vector polygons representing the boundaries of the maps and digital data boundaries used in the creation of the Environmental Sensitivity Index (ESI) for New Hampshire.

Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: TILE-NAME

Attribute_Definition:

The TILE-NAME contains the map number according to the specified layout of the atlas. The values for each polygon are unique and range from 1 through 7.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: 7

Attribute:

Attribute_Label: TOPO-NAME

Attribute_Definition: Topographic map names

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: DOVER EAST, N.H. (1990)

Enumerated_Domain_Value_Definition: USGS 1:24,000 Topographic map name

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: DOVER WEST, N.H. (1990)

Enumerated_Domain_Value_Definition: USGS 1:24,000 Topographic map name

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: HAMPTON, N.H. (1985)

Enumerated_Domain_Value_Definition: USGS 1:24,000 Topographic map name

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: ISLES OF SHOALS, ME. -N.H. (1973)

Enumerated_Domain_Value_Definition: USGS 1:24,000 Topographic map name

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: KITTERY, ME. -N.H. (1995)

Enumerated_Domain_Value_Definition: USGS 1:24,000 Topographic map name

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* PORTSMOUTH, ME. -N.H. (1990)*Enumerated_Domain_Value_Definition:* USGS 1:24,000 Topographic map name*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* NEWMARKET, N.H. (1990)*Enumerated_Domain_Value_Definition:* USGS 1:24,000 Topographic map name*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute:**Attribute_Label:* SCALE*Attribute_Definition:*

SCALE contains the value of the denominator of the scale at which the map is plotted in the final map product.

Attribute_Definition_Source: Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* 45,000*Enumerated_Domain_Value_Definition:* Scale = 1:45,000*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute:**Attribute_Label:* MAPANGLE*Attribute_Definition:*

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

Attribute_Definition_Source: Research Planning, Inc.*Attribute_Domain_Values:**Range_Domain:**Range_Domain_Minimum:* -0.743*Range_Domain_Maximum:* -0.500*Attribute_Units_of_Measure:* Degree*Attribute:**Attribute_Label:* PAGESIZE*Attribute_Definition:*

PAGESIZE contains the value of the width and height of the map in the final map product

Attribute_Definition_Source: Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* 11,17*Enumerated_Domain_Value_Definition:* Page size = 11" by 17"*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Distribution_Information:**Distributor:**Contact_Information:**Contact_Person_Primary:**Contact_Person:* John Kaperick*Contact_Organization:* NOAA, Office of Response and Restoration*Contact_Address:**Address_Type:* Physical Address*Address:* 7600 Sand Point Way N.E.*City:* Seattle*State_or_Province:* Washington*Postal_Code:* 98115-6349

Contact_Voice_Telephone: (206) 526-6400

Contact_Facsimile_Telephone: (206) 526-6329

Resource_Description: ESI Atlas for New Hampshire

Distribution_Liability:

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

Custom_Order_Process:

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

Metadata_Reference_Information:

Metadata_Date: 200403

Metadata_Review_Date: 200403

Metadata_Contact:

Contact_Information:

Contact_Person_Primary:

Contact_Person: Jill Petersen

Contact_Organization: NOAA, Office of Response and Restoration

Contact_Position: GIS Manager

Contact_Address:

Address_Type: Physical Address

Address: 7600 Sand Point Way, N.E.

City: Seattle

State_or_Province: Washington

Postal_Code: 98115-6349

Contact_Voice_Telephone: (206) 526-6944

Contact_Facsimile_Telephone: (206) 526-6329

Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

Metadata_Standard_Name: Content Standards for Digital Geospatial Metadata

Metadata_Standard_Version: FGDC-STD-001-1998

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

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

Metadata:

- [Identification Information](#)
- [Data Quality Information](#)
- [Spatial Data Organization Information](#)
- [Spatial Reference Information](#)
- [Entity and Attribute Information](#)
- [Distribution Information](#)
- [Metadata Reference Information](#)

Identification_Information:

Citation:

Citation_Information:

Originator:

New Hampshire Department of Environmental Services, Concord, New Hampshire and the New Hampshire Estuaries Project, Portsmouth, New Hampshire.

Publication_Date: 200403

Title:

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

Edition: First

Geospatial_Data_Presentation_Form: Vector digital data

Series_Information:

Series_Name: None

Issue_Identification: New Hampshire

Publication_Information:

Publication_Place: Concord, New Hampshire

Publisher:

New Hampshire Department of Environmental Services and the New Hampshire Estuaries Project.

Other_Citation_Details:

Prepared by Research Planning, Inc., Columbia, South Carolina for the New Hampshire Department of Environmental Services, Concord, New Hampshire and the New Hampshire Estuaries Project, Portsmouth, New Hampshire. Formatted to national Environmental Sensitivity Index standards by National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington.

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 New Hampshire. Vector polygons in this data set represent locations of 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 New Hampshire. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources. See also the NESTS data layer, part of the larger New

Hampshire ESI database, for additional bird information.

Purpose:

This data was collected, mapped, and digitized to provide environmental data for the New Hampshire Department of Environmental Services and the New Hampshire Estuaries Project response plans for immediate and effective protection of sensitive resources.

Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date: 2003

Ending_Date: 2004

Currentness_Reference:

The biological data were compiled during 2003. The currentness date for this data is 2003 and is documented in the Source_Information section.

Status:

Progress: Complete

Maintenance_and_Update_Frequency: None Scheduled

Spatial_Domain:

Bounding_Coordinates:

West_Bounding_Coordinate: -71.000

East_Bounding_Coordinate: -70.533

North_Bounding_Coordinate: 43.250

South_Bounding_Coordinate: 42.867

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: New Hampshire

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 New Hampshire ESI data.

Browse_Graphic_File_Type: JPEG

Data_Set_Credit:

The New Hampshire Department of Environmental Services and the New Hampshire Estuaries Project supported this project. Steve Croce with New Hampshire Department of Environmental Services served as contract manager for the project. Carroll Brown, Jr. and Lynn Woodard with New Hampshire Department of Environmental Services contributed significantly to the project, as did Phil Trowbridge with the New Hampshire Estuaries Project and individuals from several state and federal

agencies and other organizations. At Research Planning, Inc. (RPI), Heidi Hinkeldey was the project manager. Lee Diveley performed the data processing under the supervision of Mark White, GIS Manager. Heidi Hinkeldey, Chris Locke, and Vermell Pyatt prepared the final metadata.

Native_Data_Set_Environment:

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) and SQL SERVER(r) (version 7.0). The hardware configuration is PC's with Windows Operating System (NT4.0/2000). The Spatial_Data_Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: bio_lut.e00, birds.e00, biofile.e00, biores.e00, breed.e00, breed_dt.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, mgt.e00, nests.e00, reptiles.e00, seasonal.e00, soc_dat.e00, soc_lut.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, socecon, 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 node, etc.), and SQL SERVER(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resources at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

Completeness_Report:

These data represent a synthesis of expert knowledge and available hardcopy reports and digital data on bird nesting, migratory staging, and wintering concentration areas. See also the NESTS data layer, part of the larger New Hampshire ESI database, for additional bird information. These data do not necessarily represent all bird occurrences in New Hampshire. The following species are included in this data set: (Species_ID, Common Name, Scientific Name, if applicable): 112, Black guillemot, *Cepphus grille*; 1, Common loon, *Gavia immer*; 8, Double-crested cormorant, *Phalacrocorax auritus*; 179, Pied-billed grebe, *Podilymbus podiceps*; 275, Great cormorant, *Phalacrocorax carbo*; 38, Herring gull, *Larus argentatus*; 40, Ring-billed gull, *Larus delawarensis*; 42, Bonaparte's gull, *Larus philadelphia*; 45, Common tern, *Sterna hirundo*; 80, Arctic tern, *Sterna paradisaea*; 86, Least tern, *Sterna antillarum*; 92, Great black-backed gull, *Larus marinus*; 95, Roseate tern, *Sterna dougallii*; 98, Laughing gull, *Larus atricilla*; 225, Marsh wren, *Cistothorus palustris*; 277, Seaside sparrow, *Ammodramus maritimus*; 278, Saltmarsh sharp-tailed sparrow, *Ammodramus caudacutus*; 734, Nelson's sharp-tailed sparrow, *Ammodramus nelsoni*; 76, Bald eagle, *Haliaeetus leucocephalus*; 77,

Osprey, *Pandion haliaetus*; 107, Peregrine falcon, *Falco peregrinus*; 181, Northern harrier, *Circus cyaneus*; 230, Red-tailed hawk, *Buteo jamaicensis*; 55, Whimbrel, *Numenius phaeopus*; 56, Spotted sandpiper, *Actitis macularia*; 58, Greater yellowlegs, *Tringa melanoleuca*; 59, Lesser yellowlegs, *Tringa flavipes*; 62, Least sandpiper, *Calidris minutilla*; 63, Dunlin, *Calidris alpina*; 64, Short-billed dowitcher, *Limnodromus griseus*; 67, Sanderling, *Calidris alba*; 69, Semipalmated plover, *Charadrius semipalmatus*; 71, Black-bellied plover, *Pluvialis squatarola*; 73, Ruddy turnstone, *Arenaria interpres*; 153, Piping plover, *Charadrius melodus*; 155, Willet, *Catoptrophorus semipalmatus*; 156, Semipalmated sandpiper, *Calidris pusilla*; 214, Solitary sandpiper, *Tringa solitaria*; 234, Purple sandpiper, *Calidris maritima*; 238, White-rumped sandpiper, *Calidris fuscicollis*; 289, Hudsonian godwit, *Limosa haemastica*; 54, Great blue heron, *Ardea herodias*; 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*; 94, Tricolored heron, *Egretta tricolor*; 97, Green heron, *Butorides virescens*; 178, Least bittern, *Ixobrychus exilis*; 185, American bittern, *Botaurus lentiginosus*; 187, Virginia rail, *Rallus limicola*; 188, Sora, *Porzana carolina*; 12, Canada goose, *Branta Canadensis*; 16, Mallard, *Anas platyrhynchos*; 17, Northern pintail, *Anas acuta*; 18, Green-winged teal, *Anas crecca*; 21, Canvasback, *Aythya valisineria*; 22, Greater scaup, *Aythya marila*; 24, Common goldeneye, *Bucephala clangula*; 26, Bufflehead, *Bucephala albeola*; 28, Harlequin duck, *Histrionicus histrionicus*; 32, Common merganser, *Mergus merganser*; 33, Red-breasted merganser, *Mergus serrator*; 103, Common eider, *Somateria mollissima*; 162, Gadwall, *Anas strepera*; 169, American wigeon, *Anas americana*; 180, Ring-necked duck, *Aythya collaris*; 186, American black duck, *Anas rubripes*; 190, Blue-winged teal, *Anas discors*; 191, Wood duck, *Aix sponsa*; 198, Hooded merganser, *Lophodytes cucullatus*; 302, Scoters, *Melanitta* spp.

Positional_Accuracy:

Horizontal_Positional_Accuracy:

Horizontal_Positional_Accuracy_Report:

Most of the spatial components of the biological data sets are 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 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: Pam Hunt, Audubon Society of New Hampshire

Publication_Date: 2003

Title:

Summary of Bird Use of New Hampshire Coastal Areas (including Great Bay)

Geospatial_Data_Presentation_Form: Expert Knowledge

Publication_Information:

Publication_Place: Unknown

Publisher: Unknown

Type_of_Source_Media: Paper

Source_Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:

Calendar_Date: 2003

Source_Currentness_Reference: Date of communication

Source_Citation_Abbreviation: None

Source_Contribution: Bird information

Source_Information:

Source_Citation:

Citation_Information:

Originator: Pam Hunt, Audubon Society of New Hampshire
Publication_Date: 2003
Title: New Hampshire Important Bird Area Program, Nomination Form
Geospatial_Data_Presentation_Form: Hardcopy text
Publication_Information:
 Publication_Place: Unknown
 Publisher: Unknown
Type_of_Source_Media: Paper
Source_Time_Period_of_Content:
 Time_Period_Information:
 Single_Date/Time:
 Calendar_Date: 2003
 Source_Currentness_Reference: Date of survey
Source_Citation_Abbreviation: None
Source_Contribution: Bird information
Source_Information:
 Source_Citation:
 Citation_Information:
 Originator: Pam Hunt, Audubon Society of New Hampshire
 Publication_Date: 2003
 Title: Hampton-Seabrook Estuary IBA
 Geospatial_Data_Presentation_Form: Expert Knowledge
 Publication_Information:
 Publication_Place: Unknown
 Publisher: Unknown
 Type_of_Source_Media: Paper
 Source_Time_Period_of_Content:
 Time_Period_Information:
 Single_Date/Time:
 Calendar_Date: 2003
 Source_Currentness_Reference: Date of communication
 Source_Citation_Abbreviation: None
 Source_Contribution: Bird information
 Source_Information:
 Source_Citation:
 Citation_Information:
 Originator: Suzie Van Ottinger, USFWS
 Publication_Date: 2003
 Title: Bird locations in New Hampshire
 Geospatial_Data_Presentation_Form: Expert Knowledge
 Publication_Information:
 Publication_Place: Unknown
 Publisher: Unknown
 Type_of_Source_Media: Personal communication
 Source_Time_Period_of_Content:
 Time_Period_Information:
 Single_Date/Time:
 Calendar_Date: 2003
 Source_Currentness_Reference: Date of communication
 Source_Citation_Abbreviation: None
 Source_Contribution: Bird information
 Source_Information:
 Source_Citation:
 Citation_Information:
 Originator: Jim Reynolds, USFWS
 Publication_Date: 2003
 Title: Birds of Great Bay NWR
 Geospatial_Data_Presentation_Form: Expert Knowledge
 Publication_Information:
 Publication_Place: Unknown

Publisher: Unknown
Type_of_Source_Media: email
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 2003
Source_Currentness_Reference: Date of communication
Source_Citation_Abbreviation: None
Source_Contribution: Bird information
Source_Information:
Source_Citation:
Citation_Information:
Originator: Pam Hunt, Audubon Society of New Hampshire
Publication_Date: 2003
Title: New Hampshire Important Bird Area Program - Isles of Shoals
Geospatial_Data_Presentation_Form: Hardcopy text
Publication_Information:
Publication_Place: Unknown
Publisher: Unknown
Type_of_Source_Media: Paper
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 2003
Source_Currentness_Reference: Date of survey
Source_Citation_Abbreviation: None
Source_Contribution: Bird information
Process_Step:
Process_Description:
 Two main sources of data were used to depict bird distribution and seasonality for this data layer: 1) personal interviews with resource experts from the Audubon Society of New Hampshire, U.S. Fish and Wildlife Service (USFWS) and the New Hampshire Fish and Game (NHFG) and 2) numerous published and unpublished reports. Information gathered during initial interviews and from hardcopy sources was compiled onto U.S. Geological Survey 1:24,000 topographic quadrangles. The compiled data was digitized off of the base maps into an ArcInfo system to create the BIRDS data layer. All ESI, biology, and human-use data was plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews was conducted to review the maps. Edits to the BIRDS data layer were made based on the recommendations of the resource experts, and final hardcopy maps were created. Concentration information varied, and therefore for some species and locations, descriptive terms such as "high" or "low" were used, while for others, numerical counts of individuals or pairs of birds were used. Concentration ranges such as "200-600" or "50-100 pairs" were used in some cases when exact concentrations varied from year to year. Concentration and seasonality information was provided by resource experts, or was extracted from published sources, reports, and survey data.
Process_Date: 200403
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: Research Planning, Inc.
Contact_Person:
 Heidi Hinkeldey - Biologist and Project Manager; Mark
 A. White - GIS Department Manager
Contact_Address:
Address_Type: Physical address
Address: 1121 Park Street
City: Columbia
State_or_Province: SC

Postal_Code: 29201
Contact_Voice_Telephone: (803) 256-7322
Contact_Facsimile_Telephone: (803) 254-6445
Contact_Electronic_Mail_Address: hhinkeldey@researchplanning.com;
 mwhite@researchplanning.com

Spatial_Data_Organization_Information:

Direct_Spatial_Reference_Method: Vector

Point_and_Vector_Object_Information:

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: GT-polygon composed of rings

Point_and_Vector_Object_Count: 681

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: Area point

Point_and_Vector_Object_Count: 681

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: Complete chain

Point_and_Vector_Object_Count: 1048

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: Link

Point_and_Vector_Object_Count: 45632

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: Node, planar graph

Point_and_Vector_Object_Count: 815

Spatial_Reference_Information:

Horizontal_Coordinate_System_Definition:

Geographic:

Latitude_Resolution: 0.00005

Longitude_Resolution: 0.00005

Geographic_Coordinate_Units: Decimal degrees

Geodetic_Model:

Horizontal_Datum_Name: D_North_American_1983

Ellipsoid_Name: Geodetic Reference System 80

Semi-major_Axis: 6378137

Denominator_of_Flattening_Ratio: 298.257222

Entity_and_Attribute_Information:

Overview_Description:

Entity_and_Attribute_Overview:

In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, BIRDS) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (for the New Hampshire atlas, the number is 77), 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 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 (77), 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: 770100002

Range_Domain_Maximum: 770100683

Attribute:

Attribute_Label: RARNUM

Attribute_Definition:

An identifier that links directly to the BIORRES table or the flat format BIOFILE table. RARNUM values of 0 are holes in the polygons and do not contain information.

Attribute_Definition_Source: NOAA

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 77000002

Range_Domain_Maximum: 77000053

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 the polygons and do not contain information.

Attribute_Definition_Source: NOAA

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 77000001

Range_Domain_Maximum: 77000104

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 (77), 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: 770100002

Range_Domain_Maximum: 770900004

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: 077000001

Range_Domain_Maximum: 077000104

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). In cases where no quantitative count data was available, the field may either be blank, or contain descriptive terms such as "HIGH" or "COMMON". Counts were derived from a variety of surveys, and may range in date.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: SEASON_ID

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: G_SOURCE

Attribute_Definition:

Geographic source identifier that links records in the BIORES data table to records in the SOURCES data table.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: S_SOURCE

Attribute_Definition:

Seasonality source identifier that links records in the BIORES data table to records in the SOURCES data table.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: ELEMENT

Attribute_Definition: Major categories of biological data

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: BIRD

Enumerated_Domain_Value_Definition: Birds

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: FISH

Enumerated_Domain_Value_Definition: Fish

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

*Enumerated_Domain:**Enumerated_Domain_Value:* HABITAT*Enumerated_Domain_Value_Definition:* Habitats and plants*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* INVERT*Enumerated_Domain_Value_Definition:* Invertebrates*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* M_MAMMAL*Enumerated_Domain_Value_Definition:* Marine mammals*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* REPTILE*Enumerated_Domain_Value_Definition:* Reptiles and Amphibians*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* T_MAMMAL*Enumerated_Domain_Value_Definition:* Terrestrial mammals*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute:**Attribute_Label:* EL_SPE*Attribute_Definition:*

Concatenation of ELEMENT and SPECIES_ID. This item links records in the BIORES data table to records in the SPECIES and STATUS data tables.

Attribute_Definition_Source: Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* E#####*Enumerated_Domain_Value_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (eg. 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 (eg. 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 list of layer specific species.

Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: SPECIES_ID

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: NAME

Attribute_Definition: Species common name

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Species common name for the entire ESI data set

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: GEN_SPEC

Attribute_Definition: Species scientific name

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Species scientific name for the entire ESI data set.

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: ELEMENT

Attribute_Definition: Major categories of biological data

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: BIRD

Enumerated_Domain_Value_Definition: Birds

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: FISH

Enumerated_Domain_Value_Definition: Fish

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: HABITAT

Enumerated_Domain_Value_Definition: Habitats and plants

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: INVERT

Enumerated_Domain_Value_Definition: Invertebrates

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: M_MAMMAL

Enumerated_Domain_Value_Definition: Marine Mammals
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
 Enumerated_Domain_Value: REPTILE
 Enumerated_Domain_Value_Definition: Reptiles and Amphibians
 Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
 Enumerated_Domain_Value: T_MAMMAL
 Enumerated_Domain_Value_Definition: Terrestrial Mammals
 Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: SUBELEMENT
Attribute_Definition: Element subgroup delineating a logical grouping of species
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
 Enumerated_Domain_Value: alcid
 Enumerated_Domain_Value_Definition: Alcid
 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: 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
 Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
 Enumerated_Domain_Value: diving
 Enumerated_Domain_Value_Definition: Diving
 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: freshwater
 Enumerated_Domain_Value_Definition: Freshwater

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

Attribute:

Attribute_Label: EL_SPE
Attribute_Definition:
Concatenation of ELEMENT and SPECIES_ID. This item links records in the SPECIES data table to records in the BIORES and STATUS data tables.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: E#####
Enumerated_Domain_Value_Definition:
Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (eg. 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 BIORRES 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 (eg. 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 BIORRES 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 (eg. 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.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Y

Enumerated_Domain_Value_Definition: Life-history stage or activity present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: N

Enumerated_Domain_Value_Definition: Life-history stage or activity not present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: -

Enumerated_Domain_Value_Definition:

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

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: BREED2

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Y

Enumerated_Domain_Value_Definition: Life-history stage or activity present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: N

Enumerated_Domain_Value_Definition: Life-history stage or activity not present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: -

Enumerated_Domain_Value_Definition:

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

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: BREED3

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Y

Enumerated_Domain_Value_Definition: Life-history stage or activity present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: N

Enumerated_Domain_Value_Definition: Life-history stage or activity not present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: -

Enumerated_Domain_Value_Definition:

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

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: BREED4

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Y

Enumerated_Domain_Value_Definition: Life-history stage or activity present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: N

Enumerated_Domain_Value_Definition: Life-history stage or activity not present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: -

Enumerated_Domain_Value_Definition:

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

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: BREED5

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Y

Enumerated_Domain_Value_Definition: Life-history stage or activity present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: N

Enumerated_Domain_Value_Definition: Life-history stage or activity not present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: -

Enumerated_Domain_Value_Definition:

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

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Detailed_Description:

Entity_Type:

Entity_Type_Label: SOURCES

Entity_Type_Definition:

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

Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: SOURCE_ID

Attribute_Definition:

Source identifier that links records in the SOURCES data table to the items G_SOURCE and A_SOURCE in the SOC_DAT table, and to G_SOURCE and S_SOURCE in the BIORES table.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: ORIGINATOR

Attribute_Definition: Author or developer of source material or data set

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: DATE_PUB

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Numeric

Enumerated_Domain_Value_Definition: mmyyyy

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: TITLE

Attribute_Definition: Title of source material or data

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: DATA_FORMAT

Attribute_Definition: The format of the source material

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: PUBLICATION

Attribute_Definition: Additional citation information

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

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

Attribute:

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

Attribute:

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

*Detailed_Description:**Entity_Type:*

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

Attribute:

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

Attribute_Domain_Values:

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

Attribute_Domain_Values:

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

Attribute_Domain_Values:

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

Attribute_Domain_Values:

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

*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* REPTILE*Enumerated_Domain_Value_Definition:* Reptiles and Amphibians*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* T_MAMMAL*Enumerated_Domain_Value_Definition:* Terrestrial Mammals*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute:**Attribute_Label:* SPECIES_ID*Attribute_Definition:*

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

Attribute_Definition_Source: Research Planning, Inc.*Attribute_Domain_Values:**Range_Domain:**Range_Domain_Minimum:* 1*Range_Domain_Maximum:* N*Attribute:**Attribute_Label:* STATE*Attribute_Definition:* Two-letter state abbreviation*Attribute_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* Any character*Enumerated_Domain_Value_Definition:* Two-letter state abbreviation*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute:**Attribute_Label:* COUNTRY*Attribute_Definition:* Two-letter country abbreviation*Attribute_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* Any character*Enumerated_Domain_Value_Definition:* Two-letter country abbreviation*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*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:* U.S. Fish and Wildlife Service*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* T*Enumerated_Domain_Value_Definition:* Threatened on state list*Enumerated_Domain_Value_Definition_Source:* U.S. Fish and Wildlife Service*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* C*Enumerated_Domain_Value_Definition:* Species of Special Concern*Enumerated_Domain_Value_Definition_Source:* U.S. Fish and Wildlife Service

*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:* U.S. Fish and Wildlife Service*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* T*Enumerated_Domain_Value_Definition:* Threatened on federal list*Enumerated_Domain_Value_Definition_Source:* U.S. Fish and Wildlife Service*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* C*Enumerated_Domain_Value_Definition:* Species of Special Concern*Enumerated_Domain_Value_Definition_Source:* U.S. Fish and Wildlife Service*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:* U.S. Fish and Wildlife Service*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* T*Enumerated_Domain_Value_Definition:* Threatened on international list*Enumerated_Domain_Value_Definition_Source:* U.S. Fish and Wildlife Service*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* C*Enumerated_Domain_Value_Definition:* Species of Special Concern*Enumerated_Domain_Value_Definition_Source:* U.S. Fish and Wildlife Service*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:* Numeric*Enumerated_Domain_Value_Definition:* mmyyyy*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: Numeric

Enumerated_Domain_Value_Definition: mmyyyy

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: Numeric

Enumerated_Domain_Value_Definition: mmyyyy

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: EL_SPE

Attribute_Definition:

Concatenation of ELEMENT and SPECIES_ID. This item links the STATUS data table to the BIORRES 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 (eg. 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 New Hampshire

Distribution_Liability:

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

Custom_Order_Process:

Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project

and ESI_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

Metadata_Reference_Information:

Metadata_Date: 200403

Metadata_Review_Date: 200403

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 2.7.10 on Fri May 21 14:28:08 2004

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

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

Metadata:

- [Identification Information](#)
- [Data Quality Information](#)
- [Spatial Data Organization Information](#)
- [Spatial Reference Information](#)
- [Entity and Attribute Information](#)
- [Distribution Information](#)
- [Metadata Reference Information](#)

Identification_Information:

Citation:

Citation_Information:

Originator:

New Hampshire Department of Environmental Services, Concord, New Hampshire and the New Hampshire Estuaries Project, Portsmouth, New Hampshire.

Publication_Date: 200403

Title:

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

Edition: First

Geospatial_Data_Presentation_Form: Vector digital data

Series_Information:

Series_Name: None

Issue_Identification: New Hampshire

Publication_Information:

Publication_Place: Concord, New Hampshire

Publisher:

New Hampshire Department of Environmental Services and the New Hampshire Estuaries Project.

Other_Citation_Details:

Prepared by Research Planning, Inc., Columbia, South Carolina for the New Hampshire Department of Environmental Services, Concord, New Hampshire and the New Hampshire Estuaries Project, Portsmouth, New Hampshire. Formatted to national Environmental Sensitivity Index standards by National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington.

Description:

Abstract:

This data set contains sensitive biological resource data for nesting birds in New Hampshire. Vector points in this data set represent locations of nesting osprey and roosting bald eagles. 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 New Hampshire. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources. See also the BIRDS data layer, part of the larger New Hampshire ESI database, for additional bird information.

Purpose:

This data was collected, mapped, and digitized to provide environmental data for the New Hampshire Department of Environmental Services and the New Hampshire Estuaries Project response plans for immediate and effective protection of sensitive resources.

*Time_Period_of_Content:**Time_Period_Information:**Range_of_Dates/Times:*

Beginning_Date: 2003

Ending_Date: 2004

Currentness_Reference:

The biological data were compiled during 2003. The currentness dates for this data is 2003 and is documented in the Source_Information section.

Status:

Progress: Complete

Maintenance_and_Update_Frequency: None Scheduled

*Spatial_Domain:**Bounding_Coordinates:*

West_Bounding_Coordinate: -71.000

East_Bounding_Coordinate: -70.533

North_Bounding_Coordinate: 43.250

South_Bounding_Coordinate: 42.867

*Keywords:**Theme:*

Theme_Keyword_Thesaurus: None

Theme_Keyword: ESI

Theme_Keyword: Sensitivity maps

Theme_Keyword: Coastal resources

Theme_Keyword: Oil spill planning

Theme_Keyword: Coastal Zone Management

Theme_Keyword: Wildlife

Theme_Keyword: Nest

Theme_Keyword: Bird

Place:

Place_Keyword_Thesaurus: None

Place_Keyword: New Hampshire

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 New Hampshire ESI data.

Browse_Graphic_File_Type: JPEG

Data_Set_Credit:

The New Hampshire Department of Environmental Services and the New Hampshire Estuaries Project supported this project. Steve Croce with New Hampshire Department of Environmental Services served as contract manager for the project. Carroll Brown, Jr. and Lynn Woodard with New Hampshire Department of Environmental Services contributed significantly to the project, as did Phil Trowbridge with the New Hampshire Estuaries Project and individuals from several state and federal

agencies and other organizations. At Research Planning, Inc. (RPI), Heidi Hinkeldey was the project manager. Lee Diveley performed the data processing under the supervision of Mark White, GIS Manager. Heidi Hinkeldey, Chris Locke, and Vermell Pyatt prepared the final metadata.

Native_Data_Set_Environment:

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) and SQL SERVER(r) (version 7.0). The hardware configuration is PC's with Windows Operating System (NT4.0/2000). The Spatial_Data_Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: bio_lut.e00, birds.e00, biofile.e00, biores.e00, breed.e00, breed_dt.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, mgt.e00, nests.e00, reptiles.e00, seasonal.e00, soc_dat.e00, soc_lut.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, socecon, 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 node, etc.), and SQL SERVER(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resources at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

Completeness_Report:

These data represent a synthesis of expert knowledge on locations of osprey nesting and bald eagle roosting. See also the BIRDS data layer, part of the larger New Hampshire ESI database, for additional bird information. These data do not necessarily represent all nesting sites present in New Hampshire. The following species are included in this data set: (Species_ID, Common Name, Scientific Name, if applicable): 76, Bald eagle, *Haliaeetus leucocephalus*; 77, Osprey, *Pandion haliaetus*.

Positional_Accuracy:

Horizontal_Positional_Accuracy:

Horizontal_Positional_Accuracy_Report:

Most of the spatial components of the biological data sets are 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 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: Pam Hunt, Audubon Society of New Hampshire

Publication_Date: 2003

Title:

Summary of Bird Use of New Hampshire Coastal Areas (including Great Bay)

Geospatial_Data_Presentation_Form: Expert Knowledge

Publication_Information:

Publication_Place: Unknown

Publisher: Unpublished

Type_of_Source_Media: Paper

Source_Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:

Calendar_Date: 2003

Source_Currentness_Reference: Date of communication

Source_Citation_Abbreviation: None

Source_Contribution: Bird information

Process_Step:

Process_Description:

The main source of data used to depict bird nesting locations for this data layer was expert knowledge from the Audubon Society of New Hampshire and the U.S. Fish and Wildlife Service. Concentration and seasonality information was extracted from these sources as well.

Process_Date: 200403

Process_Contact:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization: Research Planning, Inc.

Contact_Person:

Heidi Hinkeldey - Biologist and Project Manager; Mark A. White - GIS Department Manager

Contact_Address:

Address_Type: Physical address

Address: 1121 Park Street

City: Columbia

State_or_Province: SC

Postal_Code: 29201

Contact_Voice_Telephone: (803) 256-7322

Contact_Facsimile_Telephone: (803) 254-6445

Contact_Electronic_Mail_Address: hhinkeldey@researchplanning.com; mwhite@researchplanning.com

Spatial_Data_Organization_Information:

Direct_Spatial_Reference_Method: Vector

Point_and_Vector_Object_Information:

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: Entity Point

Point_and_Vector_Object_Count: 5

Spatial_Reference_Information:

Horizontal_Coordinate_System_Definition:

Geographic:

Latitude_Resolution: 0.00005

Longitude_Resolution: 0.00005

Geographic_Coordinate_Units: Decimal degrees

Geodetic_Model:

Horizontal_Datum_Name: D_North_American_1983

Ellipsoid_Name: Geodetic Reference System 80

Semi-major_Axis: 6378137

Denominator_of_Flattening_Ratio: 298.257222

Entity_and_Attribute_Information:

Overview_Description:

Entity_and_Attribute_Overview:

In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, NESTS) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (for the New Hampshire atlas, the number is 77), 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: NESTS.PAT

Entity_Type_Definition:

The NESTS.PAT table contains attribute information for the vector points representing locations of nesting osprey and roosting bald eagles. 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 (77), element number (5), and record number.

Attribute_Definition_Source: NOAA

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 770500001

Range_Domain_Maximum: 770500005

Attribute:

Attribute_Label: RARNUM

Attribute_Definition:

An identifier that links directly to the BIORES table or the flat format BIOFILE table.

Attribute_Definition_Source: NOAA

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 77000001

Range_Domain_Maximum: 77000014

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 the polygons and do not contain information.

Attribute_Definition_Source: NOAA

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 77000001

Range_Domain_Maximum: 77000104

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 (77), element number (5), and record number. ID values of 9999 are holes in polygons and do not contain information.

Attribute_Definition_Source: NOAA

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 770100002
Range_Domain_Maximum: 770900004

*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: 077000001

Range_Domain_Maximum: 077000104

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 individuals (XX BIRDS) or (XX PAIRS). In cases where no quantitative count data was available, the field is blank.

Attribute_Definition_Source: Research Planning, Inc.

*Attribute_Domain_Values:**Enumerated_Domain:*

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: SEASON_ID

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

*Attribute_Domain_Values:**Range_Domain:*

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: G_SOURCE

Attribute_Definition:

Geographic source identifier that links records in the BIORES data table to records in the SOURCES data table.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: S_SOURCE

Attribute_Definition:

Seasonality source identifier that links records in the BIORES data table to records in the SOURCES data table.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: ELEMENT

Attribute_Definition: Major categories of biological data

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: BIRD

Enumerated_Domain_Value_Definition: Birds

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: FISH

Enumerated_Domain_Value_Definition: Fish

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: HABITAT

Enumerated_Domain_Value_Definition: Habitats and plants

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: INVERT

Enumerated_Domain_Value_Definition: Invertebrates

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: M_MAMMAL

Enumerated_Domain_Value_Definition: Marine mammals

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: REPTILE

Enumerated_Domain_Value_Definition: Reptiles and Amphibians

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: T_MAMMAL

Enumerated_Domain_Value_Definition: Terrestrial mammals

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: EL_SPE

Attribute_Definition:

Concatenation of ELEMENT and SPECIES_ID. This item links records in the BIORES data table to records in the SPECIES and STATUS data tables.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

*Enumerated_Domain:**Enumerated_Domain_Value:* E#####*Enumerated_Domain_Value_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (eg. 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 (eg. 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 list of layer specific species.

Entity_Type_Definition_Source: Research Planning, Inc.*Attribute:**Attribute_Label:* SPECIES_ID*Attribute_Definition:*

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

Attribute_Definition_Source: Research Planning, Inc.*Attribute_Domain_Values:**Range_Domain:**Range_Domain_Minimum:* 1*Range_Domain_Maximum:* N*Attribute:**Attribute_Label:* NAME*Attribute_Definition:* Species common name*Attribute_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* Species common name for the entire ESI data set*Enumerated_Domain_Value_Definition:* Free text*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute:**Attribute_Label:* GEN_SPEC*Attribute_Definition:* Species scientific name*Attribute_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* Species scientific name for the entire ESI data set.

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: ELEMENT

Attribute_Definition: Major categories of biological data

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: BIRD

Enumerated_Domain_Value_Definition: Birds

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: FISH

Enumerated_Domain_Value_Definition: Fish

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: HABITAT

Enumerated_Domain_Value_Definition: Habitats and plants

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: INVERT

Enumerated_Domain_Value_Definition: Invertebrates

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: M_MAMMAL

Enumerated_Domain_Value_Definition: Marine Mammals

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: REPTILE

Enumerated_Domain_Value_Definition: Reptiles and Amphibians

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: T_MAMMAL

Enumerated_Domain_Value_Definition: Terrestrial Mammals

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: SUBELEMENT

Attribute_Definition: Element subgroup delineating a logical grouping of species

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: alcid

Enumerated_Domain_Value_Definition: Alcid

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: 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
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: diving
Enumerated_Domain_Value_Definition: Diving
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: freshwater
Enumerated_Domain_Value_Definition: Freshwater
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: 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
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
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: 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: Shrimps

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: 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: 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: 0

Enumerated_Domain_Value_Definition: Not ranked

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Numeric

Enumerated_Domain_Value_Definition: mmyyyy

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: EL_SPE

Attribute_Definition:

Concatenation of ELEMENT and SPECIES_ID. This item links records in the SPECIES data table to records in the BIORES and STATUS data tables.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: E#####

Enumerated_Domain_Value_Definition:

Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (eg. 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 BIORRES 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 (eg. 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 BIORRES 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 (eg. 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.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Y

Enumerated_Domain_Value_Definition: Life-history stage or activity present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: N

Enumerated_Domain_Value_Definition: Life-history stage or activity not present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: -

Enumerated_Domain_Value_Definition:

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

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: BREED2

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Y

Enumerated_Domain_Value_Definition: Life-history stage or activity present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: N

Enumerated_Domain_Value_Definition: Life-history stage or activity not present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: -

Enumerated_Domain_Value_Definition:

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

question

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.*Attribute*:*Attribute_Label*: BREED3*Attribute_Definition*:

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

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

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

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.*Attribute*:*Attribute_Label*: BREED4*Attribute_Definition*:

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

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

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

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.*Attribute*:*Attribute_Label*: BREED5

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Y

Enumerated_Domain_Value_Definition: Life-history stage or activity present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: N

Enumerated_Domain_Value_Definition: Life-history stage or activity not present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: -

Enumerated_Domain_Value_Definition:

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

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Detailed_Description:

Entity_Type:

Entity_Type_Label: SOURCES

Entity_Type_Definition:

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

Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: SOURCE_ID

Attribute_Definition:

Source identifier that links records in the SOURCES data table to the items G_SOURCE and A_SOURCE in the SOC_DAT table, and to G_SOURCE and S_SOURCE in the BIORES table.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: ORIGINATOR

Attribute_Definition: Author or developer of source material or data set

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: DATE_PUB

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* Numeric*Enumerated_Domain_Value_Definition:* mmyyyy*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute:**Attribute_Label:* TITLE*Attribute_Definition:* Title of source material or data*Attribute_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* Any character*Enumerated_Domain_Value_Definition:* Free text*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute:**Attribute_Label:* DATA_FORMAT*Attribute_Definition:* The format of the source material*Attribute_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* Any character*Enumerated_Domain_Value_Definition:* Free text*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute:**Attribute_Label:* PUBLICATION*Attribute_Definition:* Additional citation information*Attribute_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* Any character*Enumerated_Domain_Value_Definition:* Free text*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute:**Attribute_Label:* SCALE*Attribute_Definition:* Scale denominator of the source*Attribute_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* integer*Enumerated_Domain_Value_Definition:* Any integer*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute:**Attribute_Label:* TIME_PERIOD*Attribute_Definition:*

Date(s) of data collection that the source material is based upon.

Attribute_Definition_Source: Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* Numeric*Enumerated_Domain_Value_Definition:* yyyy*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Detailed_Description:**Entity_Type:**Entity_Type_Label:* STATUS*Entity_Type_Definition:*

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

Entity_Type_Definition_Source: Research Planning, Inc.

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

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

Attribute_Definition_Source: Research Planning, Inc.*Attribute_Domain_Values:**Range_Domain:**Range_Domain_Minimum:* 1*Range_Domain_Maximum:* N*Attribute:**Attribute_Label:* STATE*Attribute_Definition:* Two-letter state abbreviation*Attribute_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* Any character*Enumerated_Domain_Value_Definition:* Two-letter state abbreviation*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute:**Attribute_Label:* COUNTRY

Attribute_Definition: Two-letter country abbreviation

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Two-letter country abbreviation

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: U.S. Fish and Wildlife Service

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: T

Enumerated_Domain_Value_Definition: Threatened on state list

Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: C

Enumerated_Domain_Value_Definition: Species of Special Concern

Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service

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: U.S. Fish and Wildlife Service

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: T

Enumerated_Domain_Value_Definition: Threatened on federal list

Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: C

Enumerated_Domain_Value_Definition: Species of Special Concern

Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service

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: U.S. Fish and Wildlife Service

Service

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: T

Enumerated_Domain_Value_Definition: Threatened on international list

Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: C

Enumerated_Domain_Value_Definition: Species of Special Concern

Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service

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: Numeric

Enumerated_Domain_Value_Definition: mmyyyy

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: Numeric

Enumerated_Domain_Value_Definition: mmyyyy

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: Numeric

Enumerated_Domain_Value_Definition: mmyyyy

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: EL_SPE

Attribute_Definition:

Concatenation of ELEMENT and SPECIES_ID. This item links the STATUS data table to the BIORRES 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 (eg. 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 New Hampshire*Distribution_Liability:*

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

Custom_Order_Process:

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

*Metadata_Reference_Information:**Metadata_Date:* 200403*Metadata_Review_Date:* 200403*Metadata_Contact:**Contact_Information:**Contact_Person_Primary:**Contact_Person:* Jill Petersen*Contact_Organization:* NOAA, Office of Response and Restoration*Contact_Position:* GIS Manager*Contact_Address:**Address_Type:* Physical Address*Address:* 7600 Sand Point Way, N.E.*City:* Seattle*State_or_Province:* Washington*Postal_Code:* 98115-6349*Contact_Voice_Telephone:* (206) 526-6944*Contact_Facsimile_Telephone:* (206) 526-6329*Contact_Electronic_Mail_Address:* Jill.Petersen@noaa.gov*Metadata_Standard_Name:* Content Standards for Digital Geospatial Metadata*Metadata_Standard_Version:* FGDC-STD-001-1998

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

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

Metadata:

- [Identification Information](#)
- [Data Quality Information](#)
- [Spatial Data Organization Information](#)
- [Spatial Reference Information](#)
- [Entity and Attribute Information](#)
- [Distribution Information](#)
- [Metadata Reference Information](#)

Identification_Information:

Citation:

Citation_Information:

Originator:

New Hampshire Department of Environmental Services, Concord, New Hampshire and the New Hampshire Estuaries Project, Portsmouth, New Hampshire.

Publication_Date: 200403

Title:

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

Edition: First

Geospatial_Data_Presentation_Form: Vector digital data

Series_Information:

Series_Name: None

Issue_Identification: New Hampshire

Publication_Information:

Publication_Place: Concord, New Hampshire

Publisher:

New Hampshire Department of Environmental Services and the New Hampshire Estuaries Project.

Other_Citation_Details:

Prepared by Research Planning, Inc., Columbia, South Carolina for the New Hampshire Department of Environmental Services, Concord, New Hampshire and the New Hampshire Estuaries Project, Portsmouth, New Hampshire. Formatted to national Environmental Sensitivity Index standards by National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington.

Description:

Abstract:

This data set contains sensitive biological resource data for marine, estuarine, and anadromous fish species in New Hampshire. Vector polygons in this data set represent fish 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 New Hampshire. 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:

This data was collected, mapped, and digitized to provide environmental data for the New Hampshire Department of Environmental Services and the New Hampshire Estuaries Project response plans for immediate and effective protection of sensitive resources.

Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date: 2003

Ending_Date: 2004

Currentness_Reference:

The biological data were compiled during 2003. The currentness dates for this data ranges from 1994 to 2003 and is documented in the Source_Information section.

Status:

Progress: Complete

Maintenance_and_Update_Frequency: None Scheduled

Spatial_Domain:

Bounding_Coordinates:

West_Bounding_Coordinate: -71.000

East_Bounding_Coordinate: -70.533

North_Bounding_Coordinate: 43.250

South_Bounding_Coordinate: 42.867

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: New Hampshire

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 New Hampshire ESI data.

Browse_Graphic_File_Type: JPEG

Data_Set_Credit:

The New Hampshire Department of Environmental Services and the New Hampshire Estuaries Project supported this project. Steve Croce with New Hampshire Department of Environmental Services served as contract manager for the project. Carroll Brown, Jr. and Lynn Woodard with New Hampshire Department of Environmental Services contributed significantly to the project, as did Phil Trowbridge with the New Hampshire Estuaries Project and individuals from several state and federal agencies and other organizations. At Research Planning, Inc. (RPI), Heidi Hinkeldey was the project manager. Lee Diveley performed the data processing under the supervision of Mark White, GIS

Manager. Heidi Hinkeldey, Chris Locke, and Vermell Pyatt prepared the final metadata.

Native_Data_Set_Environment:

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) and SQL SERVER(r) (version 7.0). The hardware configuration is PC's with Windows Operating System (NT4.0/2000). The Spatial_Data_Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: bio_lut.e00, birds.e00, biofile.e00, biores.e00, breed.e00, breed_dt.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, mgt.e00, nests.e00, reptiles.e00, seasonal.e00, soc_dat.e00, soc_lut.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, socecon, 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 node, etc.), and SQL SERVER(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resources at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

Completeness_Report:

These data represent a synthesis of expert knowledge, and available hardcopy reports on fish distribution. These data do not represent all fish occurrences in New Hampshire. The following species are included in this data set: (Species_ID, Common Name, Scientific Name, if applicable): 85, Alewife, *Alosa pseudoharengus*; 86, Blueback herring, *Alosa aestivalis*; 87, American shad, *Alosa sapidissima*; 98, American eel, *Anguilla rostrata*; 104, Striped bass, *Morone saxatilis*; 144, Atlantic salmon, *Salmo salar*; 233, Ninespine stickleback, *Pungitius pungitius*; 500, Sea lamprey, *Petromyzon marinus*; 65, Bluefish, *Pomatomus saltatrix*; 88, Winter flounder, *Pleuronectes americanus*; 115, Atlantic menhaden, *Brevoortia tyrannus*; 145, White perch, *Morone americana*; 146, Atlantic herring, *Clupea harengus*; 160, Windowpane flounder, *Scophthalmus aquosus*; 488, Smooth flounder, *Pleuronectes putnami*; 91, Threespine stickleback, *Gasterosteus aculeatus*; 92, Fourspine stickleback, *Apeltes quadracus*; 93, Striped killifish, *Fundulus majalis*; 94, Atlantic silverside, *Menidia menidia*; 95, Mummichog, *Fundulus heteroclitus*; 479, Grubby, *Myoxocephalus aeneus*; 482, Northern pipefish, *Syngnathus fuscus*; 84, Rainbow smelt, *Osmerus mordax*; 89, Cunner, *Tautoglabrus adspersus*; 90, White hake, *Urophycis tenuis*; 99, Atlantic tomcod, *Microgadus tomcod*; 148, Silver hake, *Merluccius bilinearis*; 149, Atlantic cod, *Gadus morhua*; 154, Pollock, *Pollachius virens*; 155,

Red hake, *Urophycis chuss*; 156, American sand lance, *Ammodytes americanus*; 199, Rock gunnel, *Pholis gunnellus*; 467, American plaice, *Hippoglossoides platessoides*; 480, Haddock, *Melanogrammus aeglefinus*; 481, Longhorn sculpin, *Myoxocephalus octodecemspinosus*; 483, Northern searobin, *Prionotus carolinus*; 484, Ocean pout, *Macrozoarces americanus*; 486, Shorthorn sculpin, *Myoxocephalus scorpius*; 489, Yellowtail flounder, *Pleuronectes ferrugineus*; 1016, Skates; 147, Atlantic mackerel, *Scomber scombrus*; 158, Butterfish, *Peprilus triacanthus*.

Positional_Accuracy:

Horizontal_Positional_Accuracy:

Horizontal_Positional_Accuracy_Report:

Most of the spatial components of the biological data sets are 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 sources and reflect the positional accuracy of these original data. See the lineage and process description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources.

Lineage:

Source_Information:

Source_Citation:

Citation_Information:

Originator: Rich Langan, University of New Hampshire

Publication_Date: Unpublished material

Title:

Distribution and Abundance of Fish and Invertebrates in New Hampshire Estuaries

Geospatial_Data_Presentation_Form: Expert Knowledge

Publication_Information:

Publication_Place: Unknown

Publisher: Unknown

Type_of_Source_Media: Personal Communication

Source_Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:

Calendar_Date: 2003

Source_Currentness_Reference: Dates of communication

Source_Citation_Abbreviation: None

Source_Contribution: fish species presence and abundance

Source_Information:

Source_Citation:

Citation_Information:

Originator: Brian Smith, Great Bay NERR

Publication_Date: 2003

Title:

Distribution and Abundance of Fish and Invertebrates in New Hampshire Estuaries

Geospatial_Data_Presentation_Form: Expert Knowledge

Publication_Information:

Publication_Place: Unknown

Publisher: Unpublished

Source_Scale_Denominator: None

Type_of_Source_Media: Personal Communication

Source_Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:

Calendar_Date: 2003

Source_Currentness_Reference: Date of communication

Source_Citation_Abbreviation: None

Source_Contribution: Fish species presence and abundance

Source_Information:

Source_Citation:

Citation_Information:

Originator: NOAA, US Department of Commerce

Publication_Date: 1994

Title:

Distribution and Abundance of Fish and Invertebrates in North Atlantic Estuaries

Geospatial_Data_Presentation_Form: Hardcopy text

Publication_Information:

Publication_Place: NOAA/NOS Strategic Environmental Division, Silver Springs, MD

Publisher: NOAA, US Department of Commerce

Type_of_Source_Media: Paper

Source_Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:

Calendar_Date: 1994

Source_Currentness_Reference: Date of publication

Source_Citation_Abbreviation: None

Source_Contribution: Fish information

Process_Step:

Process_Description:

Two main sources of data were used to depict fish distribution and seasonality for this data layer: 1) personal interviews with resource experts from the New Hampshire Estuaries Program (NHEP), the University of New Hampshire (UNH), the Great Bay National Estuarine Research Reserve, and the New Hampshire Fish and Game (NHFG) and; 2) NOAA's Estuarine Living Marine Resource Program (ELMR) report titled, "Distribution and abundance of fishes and invertebrates in North Atlantic estuaries." Information gathered during initial interviews and from hardcopy reports was compiled onto U.S. Geological Survey 1:24,000 topographic quadrangles. The compiled data was digitized off of the base maps into an ArcInfo system to create the FISH data layer. All ESI, biology, and human-use data was plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews was conducted to review the maps. Edits to the FISH data layer were made based on the recommendations of the resource experts, and final hardcopy maps were created. Resource experts and NOAA's ELMR report provided concentration and seasonality information.

Process_Date: 200403

Process_Contact:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization: Research Planning, Inc.

Contact_Person:

Heidi Hinkeldey - Biologist and Project Manager; Mark A. White - GIS Department Manager

Contact_Address:

Address_Type: Physical address

Address: 1121 Park Street

City: Columbia

State_or_Province: SC

Postal_Code: 29201

Contact_Voice_Telephone: (803) 256-7322

Contact_Facsimile_Telephone: (803) 254-6445

Contact_Electronic_Mail_Address: hhinkeldey@researchplanning.com; mwhite@researchplanning.com

*Spatial_Data_Organization_Information:**Direct_Spatial_Reference_Method:* Vector*Point_and_Vector_Object_Information:**SDTS_Terms_Description:**SDTS_Point_and_Vector_Object_Type:* GT-polygon composed of rings*Point_and_Vector_Object_Count:* 328*SDTS_Terms_Description:**SDTS_Point_and_Vector_Object_Type:* Area point*Point_and_Vector_Object_Count:* 328*SDTS_Terms_Description:**SDTS_Point_and_Vector_Object_Type:* Complete chain*Point_and_Vector_Object_Count:* 399*SDTS_Terms_Description:**SDTS_Point_and_Vector_Object_Type:* Link*Point_and_Vector_Object_Count:* 26846*SDTS_Terms_Description:**SDTS_Point_and_Vector_Object_Type:* Node, planar graph*Point_and_Vector_Object_Count:* 382*Spatial_Reference_Information:**Horizontal_Coordinate_System_Definition:**Geographic:**Latitude_Resolution:* 0.00005*Longitude_Resolution:* 0.00005*Geographic_Coordinate_Units:* Decimal degrees*Geodetic_Model:**Horizontal_Datum_Name:* D_North_American_1983*Ellipsoid_Name:* Geodetic Reference System 80*Semi-major_Axis:* 6378137*Denominator_of_Flattening_Ratio:* 298.257222*Entity_and_Attribute_Information:**Overview_Description:**Entity_and_Attribute_Overview:*

In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, 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 New Hampshire atlas, the number is 77) and element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure. Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN_SPEC, S, F, NHP, DATE_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G_SOURCE, S_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and

BREED items. BREED is a newly generated variable used to link to the BREED_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed_Description of the BREED data table. The link to the BIOFILE may be made through the BIO_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED_DT is an auxiliary support data table to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to BREED_DT is the BREED item. A second supporting data table is SOURCES. This is the same as the source file described above, and the link from the flat file is both G_SOURCE and S_SOURCE. It should be noted that although the flat file eases data query, it is not a normalized database structure, and actual updates performed by the states and other responsible agencies should be done using the relational data tables. The entity-relationship diagram describing relationships between attribute tables in the ESI data structure does NOT include the BIOFILE data table, and this data table is NOT described in detail below.

Detailed_Description:

Entity_Type:

Entity_Type_Label: FISH.PAT

Entity_Type_Definition:

The FISH.PAT table contains attribute information for the vector polygons representing fish 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 (77), 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: 770200002

Range_Domain_Maximum: 770200329

Attribute:

Attribute_Label: RARNUM

Attribute_Definition:

An identifier that links directly to the BIORES table or the flat format BIOFILE table. RARNUM values of 0 are holes in the polygons and do not contain information.

Attribute_Definition_Source: NOAA

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 77000054

Range_Domain_Maximum: 77000065

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 the polygons and do not contain information.

Attribute_Definition_Source: NOAA

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 77000001

Range_Domain_Maximum: 77000104

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 (77), 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: 770100002

Range_Domain_Maximum: 770900004

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: 077000001

Range_Domain_Maximum: 077000104

Attribute:

Attribute_Label: SPECIES_ID

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: CONC

Attribute_Definition:

The field CONC refers to "concentration", abundance, or density value of a species at a particular location. In cases where no quantitative count data was available, the field may either be blank, or contain descriptive terms such as "HIGH". Abundance data was provided by expert knowledge.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: SEASON_ID

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: G_SOURCE

Attribute_Definition:

Geographic source identifier that links records in the BIORES data table to records in the SOURCES data table.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: S_SOURCE

Attribute_Definition:

Seasonality source identifier that links records in the BIORES data table to records in the SOURCES data table.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: ELEMENT

Attribute_Definition: Major categories of biological data

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: BIRD

Enumerated_Domain_Value_Definition: Birds

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: FISH

Enumerated_Domain_Value_Definition: Fish

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: HABITAT

Enumerated_Domain_Value_Definition: Habitats and plants

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: INVERT

Enumerated_Domain_Value_Definition: Invertebrates

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

*Enumerated_Domain:**Enumerated_Domain_Value:* M_MAMMAL*Enumerated_Domain_Value_Definition:* Marine mammals*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* REPTILE*Enumerated_Domain_Value_Definition:* Reptiles and Amphibians*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* T_MAMMAL*Enumerated_Domain_Value_Definition:* Terrestrial mammals*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute:**Attribute_Label:* EL_SPE*Attribute_Definition:*

Concatenation of ELEMENT and SPECIES_ID. This item links records in the BIORES data table to records in the SPECIES and STATUS data tables.

Attribute_Definition_Source: Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* E#####*Enumerated_Domain_Value_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (eg. 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 (eg. 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 list of layer specific species.

Entity_Type_Definition_Source: Research Planning, Inc.*Attribute:**Attribute_Label:* SPECIES_ID*Attribute_Definition:*

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

Attribute_Definition_Source: Research Planning, Inc.*Attribute_Domain_Values:*

*Range_Domain:**Range_Domain_Minimum:* 1*Range_Domain_Maximum:* N*Attribute:**Attribute_Label:* NAME*Attribute_Definition:* Species common name*Attribute_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* Species common name for the entire ESI data set*Enumerated_Domain_Value_Definition:* Free text*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute:**Attribute_Label:* GEN_SPEC*Attribute_Definition:* Species scientific name*Attribute_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* Species scientific name for the entire ESI data set.*Enumerated_Domain_Value_Definition:* Free text*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute:**Attribute_Label:* ELEMENT*Attribute_Definition:* Major categories of biological data*Attribute_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* BIRD*Enumerated_Domain_Value_Definition:* Birds*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* FISH*Enumerated_Domain_Value_Definition:* Fish*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* HABITAT*Enumerated_Domain_Value_Definition:* Habitats and plants*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* INVERT*Enumerated_Domain_Value_Definition:* Invertebrates*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* M_MAMMAL*Enumerated_Domain_Value_Definition:* Marine Mammals*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* REPTILE*Enumerated_Domain_Value_Definition:* Reptiles and Amphibians*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* T_MAMMAL

Enumerated_Domain_Value_Definition: Terrestrial Mammals
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: SUBELEMENT
Attribute_Definition: Element subgroup delineating a logical grouping of species
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
 Enumerated_Domain_Value: alcid
 Enumerated_Domain_Value_Definition: Alcid
 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: 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
 Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
 Enumerated_Domain_Value: diving
 Enumerated_Domain_Value_Definition: Diving
 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: freshwater
 Enumerated_Domain_Value_Definition: Freshwater
 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: 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
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
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: 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: Shrimps
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: 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: 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: 0
Enumerated_Domain_Value_Definition: Not ranked
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

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

Attribute:

Attribute_Label: EL_SPE
Attribute_Definition:
Concatenation of ELEMENT and SPECIES_ID. This item links records in the SPECIES data table to records in the BIORES and STATUS data tables.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: E#####
Enumerated_Domain_Value_Definition:
Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (eg. 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 (eg. 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 BORES 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 (eg. 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.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Y

Enumerated_Domain_Value_Definition: Life-history stage or activity present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: N

Enumerated_Domain_Value_Definition: Life-history stage or activity not present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: -

Enumerated_Domain_Value_Definition:

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

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: BREED2

Attribute_Definition:

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = migrating; if ELEMENT is "FISH" then BREED2 = eggs; if ELEMENT is

"INVERT" then BREED2 = eggs; if ELEMENT is "REPTILE" then BREED2 = hatching; if ELEMENT is "M_MAMMAL" then BREED2 = calving. This attribute is not used for HABITAT or T_MAMMAL elements.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Y

Enumerated_Domain_Value_Definition: Life-history stage or activity present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: N

Enumerated_Domain_Value_Definition: Life-history stage or activity not present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: -

Enumerated_Domain_Value_Definition:

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

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: BREED3

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Y

Enumerated_Domain_Value_Definition: Life-history stage or activity present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: N

Enumerated_Domain_Value_Definition: Life-history stage or activity not present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: -

Enumerated_Domain_Value_Definition:

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

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: BREED4

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

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

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

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.*Attribute:**Attribute_Label:* BREED5*Attribute_Definition:*

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

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

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

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.*Detailed_Description:**Entity_Type:**Entity_Type_Label:* SOURCES*Entity_Type_Definition:*

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

Entity_Type_Definition_Source: Research Planning, Inc.*Attribute:**Attribute_Label:* SOURCE_ID*Attribute_Definition:*

Source identifier that links records in the SOURCES data table to the items G_SOURCE and A_SOURCE in the SOC_DAT table, and to G_SOURCE and

S_SOURCE in the BIORES table.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: ORIGINATOR

Attribute_Definition: Author or developer of source material or data set

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: DATE_PUB

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Numeric

Enumerated_Domain_Value_Definition: mmyyyy

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: TITLE

Attribute_Definition: Title of source material or data

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: DATA_FORMAT

Attribute_Definition: The format of the source material

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: PUBLICATION

Attribute_Definition: Additional citation information

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: SCALE

Attribute_Definition: Scale denominator of the source

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: integer

Enumerated_Domain_Value_Definition: Any integer
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: TIME_PERIOD

Attribute_Definition:

Date(s) of data collection that the source material is based upon.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Numeric

Enumerated_Domain_Value_Definition: yyyy

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

*Detailed_Description:**Entity_Type:*

Entity_Type_Label: STATUS

Entity_Type_Definition:

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

Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: ELEMENT

Attribute_Definition: Major categories of biological data

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: BIRD

Enumerated_Domain_Value_Definition: Birds

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: FISH

Enumerated_Domain_Value_Definition: Fish

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: HABITAT

Enumerated_Domain_Value_Definition: Habitats and Plants

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: INVERT

Enumerated_Domain_Value_Definition: Invertebrates

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: M_MAMMAL

Enumerated_Domain_Value_Definition: Marine Mammals

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: REPTILE

Enumerated_Domain_Value_Definition: Reptiles and Amphibians

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: T_MAMMAL

Enumerated_Domain_Value_Definition: Terrestrial Mammals

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

*Attribute:**Attribute_Label:* SPECIES_ID*Attribute_Definition:*

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

Attribute_Definition_Source: Research Planning, Inc.*Attribute_Domain_Values:**Range_Domain:**Range_Domain_Minimum:* 1*Range_Domain_Maximum:* N*Attribute:**Attribute_Label:* STATE*Attribute_Definition:* Two-letter state abbreviation*Attribute_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* Any character*Enumerated_Domain_Value_Definition:* Two-letter state abbreviation*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute:**Attribute_Label:* COUNTRY*Attribute_Definition:* Two-letter country abbreviation*Attribute_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* Any character*Enumerated_Domain_Value_Definition:* Two-letter country abbreviation*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute:**Attribute_Label:* S*Attribute_Definition:* Threatened and endangered status.*Attribute_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* E*Enumerated_Domain_Value_Definition:* Endangered on state list*Enumerated_Domain_Value_Definition_Source:* U.S. Fish and Wildlife Service*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* T*Enumerated_Domain_Value_Definition:* Threatened on state list*Enumerated_Domain_Value_Definition_Source:* U.S. Fish and Wildlife Service*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* C*Enumerated_Domain_Value_Definition:* Species of Special Concern*Enumerated_Domain_Value_Definition_Source:* U.S. Fish and Wildlife Service*Attribute:**Attribute_Label:* F*Attribute_Definition:* Threatened and endangered status.*Attribute_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* E*Enumerated_Domain_Value_Definition:* Endangered on federal list*Enumerated_Domain_Value_Definition_Source:* U.S. Fish and Wildlife Service

*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* T*Enumerated_Domain_Value_Definition:* Threatened on federal list*Enumerated_Domain_Value_Definition_Source:* U.S. Fish and Wildlife Service*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* C*Enumerated_Domain_Value_Definition:* Species of Special Concern*Enumerated_Domain_Value_Definition_Source:* U.S. Fish and Wildlife Service*Attribute:**Attribute_Label:* I*Attribute_Definition:* Threatened and endangered status.*Attribute_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* E*Enumerated_Domain_Value_Definition:* Endangered on international list*Enumerated_Domain_Value_Definition_Source:* U.S. Fish and Wildlife Service*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* T*Enumerated_Domain_Value_Definition:* Threatened on international list*Enumerated_Domain_Value_Definition_Source:* U.S. Fish and Wildlife Service*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* C*Enumerated_Domain_Value_Definition:* Species of Special Concern*Enumerated_Domain_Value_Definition_Source:* U.S. Fish and Wildlife Service*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:* Numeric*Enumerated_Domain_Value_Definition:* mmyyyy*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:* Numeric*Enumerated_Domain_Value_Definition:* mmyyyy*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: Numeric

Enumerated_Domain_Value_Definition: mmyyyy

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: EL_SPE

Attribute_Definition:

Concatenation of ELEMENT and SPECIES_ID. This item links the STATUS data table to the BIORRES 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 (eg. 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 New Hampshire

Distribution_Liability:

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

Custom_Order_Process:

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

Metadata_Reference_Information:

Metadata_Date: 200403

Metadata_Review_Date: 200403

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 2.7.10 on Fri May 21 14:27:53 2004

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

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

Metadata:

- [Identification Information](#)
- [Data Quality Information](#)
- [Spatial Data Organization Information](#)
- [Spatial Reference Information](#)
- [Entity and Attribute Information](#)
- [Distribution Information](#)
- [Metadata Reference Information](#)

Identification_Information:

Citation:

Citation_Information:

Originator:

New Hampshire Department of Environmental Services, Concord, New Hampshire and the New Hampshire Estuaries Project, Portsmouth, New Hampshire.

Publication_Date: 200403

Title:

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

Edition: First

Geospatial_Data_Presentation_Form: Vector digital data

Series_Information:

Series_Name: None

Issue_Identification: New Hampshire

Publication_Information:

Publication_Place: Concord, New Hampshire

Publisher:

New Hampshire Department of Environmental Services and the New Hampshire Estuaries Project.

Other_Citation_Details:

Prepared by Research Planning, Inc., Columbia, South Carolina for the New Hampshire Department of Environmental Services, Concord, New Hampshire and the New Hampshire Estuaries Project, Portsmouth, New Hampshire. Formatted to national Environmental Sensitivity Index standards by National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington.

Description:

Abstract:

This data set contains sensitive biological resource data for marine, and estuarine invertebrate species in New Hampshire. Vector polygons in this data set represent invertebrate distribution. Species specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for New Hampshire. 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:

This data was collected, mapped, and digitized to provide environmental data for the New Hampshire Department of Environmental Services and the New Hampshire Estuaries Project response plans for immediate and effective protection of sensitive resources.

Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date: 2003

Ending_Date: 2004

Currentness_Reference:

The biological data were compiled during 2003. The currentness dates for this data ranges from 1994 to 2003 and is documented in the Source_Information section.

Status:

Progress: Complete

Maintenance_and_Update_Frequency: None Scheduled

Spatial_Domain:

Bounding_Coordinates:

West_Bounding_Coordinate: -71.000

East_Bounding_Coordinate: -70.533

North_Bounding_Coordinate: 43.250

South_Bounding_Coordinate: 42.867

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: New Hampshire

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 New Hampshire ESI data.

Browse_Graphic_File_Type: JPEG

Data_Set_Credit:

The New Hampshire Department of Environmental Services and the New Hampshire Estuaries Project supported this project. Steve Croce with New Hampshire Department of Environmental Services served as contract manager for the project. Carroll Brown, Jr. and Lynn Woodard with New Hampshire Department of Environmental Services contributed significantly to the project, as did Phil Trowbridge with the New Hampshire Estuaries Project and individuals from several state and federal

agencies and other organizations. At Research Planning, Inc. (RPI), Heidi Hinkeldey was the project manager. Lee Diveley performed the data processing under the supervision of Mark White, GIS Manager. Heidi Hinkeldey, Chris Locke, and Vermell Pyatt prepared the final metadata.

Native_Data_Set_Environment:

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) and SQL SERVER(r) (version 7.0). The hardware configuration is PC's with Windows Operating System (NT4.0/2000). The Spatial_Data_Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: bio_lut.e00, birds.e00, biofile.e00, biores.e00, breed.e00, breed_dt.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, mgt.e00, nests.e00, reptiles.e00, seasonal.e00, soc_dat.e00, soc_lut.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, socecon, 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 node, etc.), and SQL SERVER(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resources at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

Completeness_Report:

These data represent a synthesis of expert knowledge and available hardcopy and digital maps on invertebrate distribution. These data do not necessarily represent all invertebrate occurrences in New Hampshire. The following species are included in this data set: (Species_ID, Common Name, Scientific Name, if applicable): 19, Blue mussel, *Mytilus edulis*; 25, Softshell clam, *Mya arenaria*; 34, Sea scallop, *Placopecten magellanicus*; 42, Northern quahog (hard clam), *Mercenaria mercenaria*; 43, Eastern oyster, *Crassostrea virginica*; 77, Atlantic jackknife clam, *Ensis directus*; 287, Atlantic surfclam, *Spisula solidissima*; 503, European flat oyster, *Ostrea edulis*; 44, Horseshoe crab, *Limulus polyphemus*; 303, Atlantic rock crab, *Cancer irroratus*; 305, Jonah crab, *Cancer borealis*; 45, American lobster, *Homarus americanus*; 6, Northern shrimp, *Pandalus borealis*; 276, Sevenspine bay shrimp, *Crangon septemspinosus*; 289, Daggerblade grass shrimp, *Palaemonetes pugio*.

Positional_Accuracy:

Horizontal_Positional_Accuracy:

Horizontal_Positional_Accuracy_Report:

Some of the spatial components of the biological data sets are 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 basemaps with a scale of 1:24,000. The rest of the spatial components of the biological data sets are developed from pre-existing digital sources and reflect the positional accuracy of these original data. See the Lineage and Process_Description sections for more information on the original data source and how 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: University of New Hampshire; NHF&G

Publication_Date: 2002

Title: Shellfish

Geospatial_Data_Presentation_Form: Digital Vector Data

Publication_Information:

Publication_Place:

University of New Hampshire Jackson Estuaries
Laboratory, Durham, NH

Publisher: University of New Hampshire Jackson Estuaries
Laboratory

Source_Scale_Denominator: None

Type_of_Source_Media: Online

Source_Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:

Calendar_Date: 2002

Source_Currentness_Reference: Date of publication

Source_Citation_Abbreviation: None

Source_Contribution: Fish information

Source_Information:

Source_Citation:

Citation_Information:

Originator: Rich Langan, University of New Hampshire

Publication_Date: Unpublished material

Title:

Distribution and Abundance of Fish and Invertebrates in New
Hampshire Estuaries

Geospatial_Data_Presentation_Form: Expert Knowledge

Publication_Information:

Publication_Place: Unknown

Publisher: Unknown

Type_of_Source_Media: Personal Communication

Source_Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:

Calendar_Date: 2003

Source_Currentness_Reference: Dates of communication

Source_Citation_Abbreviation: None

Source_Contribution: Invertebrate species presence and abundance

Source_Information:

Source_Citation:

Citation_Information:

Originator: Brian Smith, Great Bay NERR

Publication_Date: 2003

Title:

Distribution and Abundance of Fish and Invertebrates in New
Hampshire Estuaries

Geospatial_Data_Presentation_Form: Expert Knowledge

Publication_Information:

Publication_Place: Unknown

Publisher: Unpublished

Source_Scale_Denominator: None

Type_of_Source_Media: Personal Communication

Source_Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:

Calendar_Date: 2003

Source_Currentness_Reference: Date of communication

Source_Citation_Abbreviation: None

Source_Contribution: Invertebrate species presence and abundance

Source_Information:

Source_Citation:

Citation_Information:

Originator: Chris Nash, NH DES

Publication_Date: 2003

Title:

Distribution and Abundance of Invertebrates in New Hampshire
Estuaries

Geospatial_Data_Presentation_Form: Expert Knowledge

Publication_Information:

Publication_Place: Unknown

Publisher: Unpublished

Source_Scale_Denominator: None

Type_of_Source_Media: Personal Communication

Source_Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:

Calendar_Date: 2003

Source_Currentness_Reference: Date of communication

Source_Citation_Abbreviation: None

Source_Contribution: Invertebrate information

Source_Information:

Source_Citation:

Citation_Information:

Originator: NOAA, US Department of Commerce

Publication_Date: 1994

Title:

Distribution and Abundance of Fish and Invertebrates in North
Atlantic Estuaries

Geospatial_Data_Presentation_Form: Hardcopy text

Publication_Information:

Publication_Place: NOAA/NOS Strategic Environmental
Division, Silver Springs, MD

Publisher: NOAA, US Department of Commerce

Type_of_Source_Media: Paper

Source_Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:

Calendar_Date: 1994

Source_Currentness_Reference: Date of publication

Source_Citation_Abbreviation: None

Source_Contribution: Invertebrate information

Source_Information:

Source_Citation:

Citation_Information:

Originator: Win Watson, University of New Hampshire

Publication_Date: 2003

Title:

Distribution and Abundance of American Lobster in New Hampshire Estuaries

Geospatial_Data_Presentation_Form: Expert knowledge

Publication_Information:

Publication_Place: Unknown

Publisher: Unpublished

Type_of_Source_Media: Personal communication

Source_Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:

Calendar_Date: 2003

Source_Currentness_Reference: Date of communication

Source_Citation_Abbreviation: None

Source_Contribution: American lobster presence and abundance

Source_Information:

Source_Citation:

Citation_Information:

Originator: Ray Grizzle, University of New Hampshire

Publication_Date: 2003

Title: Distribution and Abundance of Invertebrates in Great Bay

Geospatial_Data_Presentation_Form: Expert Knowledge

Publication_Information:

Publication_Place: Unknown

Publisher: Unpublished

Type_of_Source_Media: Personal communication

Source_Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:

Calendar_Date: 2003

Source_Currentness_Reference: Date of communication

Source_Citation_Abbreviation: None

Source_Contribution: Invertebrate information

Process_Step:

Process_Description:

Three main sources of data were used to depict invertebrate distribution for this data layer: 1) personal interviews with resource experts from the University of New Hampshire (UNH), the New Hampshire Estuaries Program (NHEP), New Hampshire Department of Environmental Services, and the Great Bay National Estuarine Research Reserve; 2) 2002 digital coverage depicting distribution of softshell clam and Eastern oyster provided by the University of New Hampshire and New Hampshire Fish and Game (NHFG); and 3) NOAA's Estuarine Living Marine Resource Program (ELMR) report titled, "Distribution and abundance of fishes and invertebrates in North Atlantic estuaries." Information gathered from resource experts was compiled onto U.S. Geological Survey 1:24,000 topographic quadrangles. The compiled data was digitized off of the base maps into an ArcInfo system to create the INVERT data layer. The digital coverages were incorporated into this data layer. All ESI, biology, and human-use data was plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews was conducted to review the maps. Edits to the INVERT data layer were made based on recommendations made by the resource experts, and final hardcopy maps were created. Resource experts provided concentration and seasonality information.

Process_Date: 200403

Process_Contact:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization: Research Planning, Inc.

Contact_Person:

Heidi Hinkeldey - Biologist and Project Manager; Mark
A. White - GIS Department Manager

Contact_Address:

Address_Type: Physical address

Address: 1121 Park Street

City: Columbia

State_or_Province: SC

Postal_Code: 29201

Contact_Voice_Telephone: (803) 256-7322

Contact_Facsimile_Telephone: (803) 254-6445

Contact_Electronic_Mail_Address: hhinkeldey@researchplanning.com;
mwhite@researchplanning.com

Spatial_Data_Organization_Information:

Direct_Spatial_Reference_Method: Vector

*Point_and_Vector_Object_Information:**SDTS_Terms_Description:*

SDTS_Point_and_Vector_Object_Type: GT-polygon composed of rings

Point_and_Vector_Object_Count: 195

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: Area point

Point_and_Vector_Object_Count: 195

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: Complete chain

Point_and_Vector_Object_Count: 443

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: Link

Point_and_Vector_Object_Count: 23163

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: Node, planar graph

Point_and_Vector_Object_Count: 337

*Spatial_Reference_Information:**Horizontal_Coordinate_System_Definition:**Geographic:*

Latitude_Resolution: 0.00005

Longitude_Resolution: 0.00005

Geographic_Coordinate_Units: Decimal degrees

Geodetic_Model:

Horizontal_Datum_Name: D_North_American_1983

Ellipsoid_Name: Geodetic Reference System 80

Semi-major_Axis: 6378137

Denominator_of_Flattening_Ratio: 298.257222

*Entity_and_Attribute_Information:**Overview_Description:**Entity_and_Attribute_Overview:*

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

the number is 77), 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 representing invertebrate 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 (77), 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: 770700002

Range_Domain_Maximum: 770700223

Attribute:

Attribute_Label: RARNUM

Attribute_Definition:

An identifier that links directly to the BIORES table or the flat format BIOFILE table. RARNUM values of 0 are holes in the polygons and do not contain information.

Attribute_Definition_Source: NOAA

*Attribute_Domain_Values:**Range_Domain:**Range_Domain_Minimum:* 77000070*Range_Domain_Maximum:* 77000092*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 the polygons and do not contain information.

Attribute_Definition_Source: NOAA*Attribute_Domain_Values:**Range_Domain:**Range_Domain_Minimum:* 77000001*Range_Domain_Maximum:* 77000104*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 (77), 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:* 770100002*Range_Domain_Maximum:* 770900004*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:* 077000001*Range_Domain_Maximum:* 077000104*Attribute:**Attribute_Label:* SPECIES_ID*Attribute_Definition:*

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: CONC

Attribute_Definition:

The field CONC refers to "concentration", abundance, or density value of a species at a particular location. In cases where no quantitative count data was available, the field may either be blank, or contain descriptive terms such as "HIGH" or "MED". Abundance data was provided by expert knowledge.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: SEASON_ID

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: G_SOURCE

Attribute_Definition:

Geographic source identifier that links records in the BIORES data table to records in the SOURCES data table.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: S_SOURCE

Attribute_Definition:

Seasonality source identifier that links records in the BIORES data table to records in the SOURCES data table.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: ELEMENT

Attribute_Definition: Major categories of biological data

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: BIRD

Enumerated_Domain_Value_Definition: Birds

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

*Enumerated_Domain:**Enumerated_Domain_Value:* FISH*Enumerated_Domain_Value_Definition:* Fish*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* HABITAT*Enumerated_Domain_Value_Definition:* Habitats and plants*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* INVERT*Enumerated_Domain_Value_Definition:* Invertebrates*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* M_MAMMAL*Enumerated_Domain_Value_Definition:* Marine mammals*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* REPTILE*Enumerated_Domain_Value_Definition:* Reptiles and Amphibians*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* T_MAMMAL*Enumerated_Domain_Value_Definition:* Terrestrial mammals*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute:**Attribute_Label:* EL_SPE*Attribute_Definition:*

Concatenation of ELEMENT and SPECIES_ID. This item links records in the BIORES data table to records in the SPECIES and STATUS data tables.

Attribute_Definition_Source: Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* E#####*Enumerated_Domain_Value_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (eg. 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 (eg. 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 list of layer specific species.

Entity_Type_Definition_Source: Research Planning, Inc.*Attribute:**Attribute_Label:* SPECIES_ID*Attribute_Definition:*

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

Attribute_Definition_Source: Research Planning, Inc.*Attribute_Domain_Values:**Range_Domain:**Range_Domain_Minimum:* 1*Range_Domain_Maximum:* N*Attribute:**Attribute_Label:* NAME*Attribute_Definition:* Species common name*Attribute_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* Species common name for the entire ESI data set*Enumerated_Domain_Value_Definition:* Free text*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute:**Attribute_Label:* GEN_SPEC*Attribute_Definition:* Species scientific name*Attribute_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* Species scientific name for the entire ESI data set.*Enumerated_Domain_Value_Definition:* Free text*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute:**Attribute_Label:* ELEMENT*Attribute_Definition:* Major categories of biological data*Attribute_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* BIRD*Enumerated_Domain_Value_Definition:* Birds*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* FISH*Enumerated_Domain_Value_Definition:* Fish*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* HABITAT*Enumerated_Domain_Value_Definition:* Habitats and plants*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* INVERT

Enumerated_Domain_Value_Definition: Invertebrates
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
 Enumerated_Domain_Value: M_MAMMAL
 Enumerated_Domain_Value_Definition: Marine Mammals
 Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
 Enumerated_Domain_Value: REPTILE
 Enumerated_Domain_Value_Definition: Reptiles and Amphibians
 Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
 Enumerated_Domain_Value: T_MAMMAL
 Enumerated_Domain_Value_Definition: Terrestrial Mammals
 Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: SUBELEMENT
 Attribute_Definition: Element subgroup delineating a logical grouping of species
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
 Enumerated_Domain:
 Enumerated_Domain_Value: alcid
 Enumerated_Domain_Value_Definition: Alcid
 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: 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
 Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
 Enumerated_Domain:
 Enumerated_Domain_Value: diving
 Enumerated_Domain_Value_Definition: Diving
 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: freshwater
Enumerated_Domain_Value_Definition: Freshwater
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: 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
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
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: 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: Shrimps
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: 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: 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: 0
Enumerated_Domain_Value_Definition: Not ranked
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Numeric
Enumerated_Domain_Value_Definition: mmyyyy
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: EL_SPE
Attribute_Definition:
Concatenation of ELEMENT and SPECIES_ID. This item links records in the SPECIES data table to records in the BIORES and STATUS data tables.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: E#####
Enumerated_Domain_Value_Definition:
Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (eg. 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 (eg. 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 BIORRES 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 (eg. 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.

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

Enumerated_Domain_Value_Definition: Life-history stage or activity not present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: -

Enumerated_Domain_Value_Definition:

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

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: BREED2

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Y

Enumerated_Domain_Value_Definition: Life-history stage or activity present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: N

Enumerated_Domain_Value_Definition: Life-history stage or activity not present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: -

Enumerated_Domain_Value_Definition:

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

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: BREED3

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Y

Enumerated_Domain_Value_Definition: Life-history stage or activity present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: N

Enumerated_Domain_Value_Definition: Life-history stage or activity not present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

*Enumerated_Domain:**Enumerated_Domain_Value:* -*Enumerated_Domain_Value_Definition:*

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

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.*Attribute:**Attribute_Label:* BREED4*Attribute_Definition:*

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

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

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

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.*Attribute:**Attribute_Label:* BREED5*Attribute_Definition:*

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

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

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

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Detailed_Description:

Entity_Type:

Entity_Type_Label: SOURCES

Entity_Type_Definition:

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

Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: SOURCE_ID

Attribute_Definition:

Source identifier that links records in the SOURCES data table to the items G_SOURCE and A_SOURCE in the SOC_DAT table, and to G_SOURCE and S_SOURCE in the BIORES table.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: ORIGINATOR

Attribute_Definition: Author or developer of source material or data set

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: DATE_PUB

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Numeric

Enumerated_Domain_Value_Definition: mmyyyy

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: TITLE

Attribute_Definition: Title of source material or data

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: DATA_FORMAT

Attribute_Definition: The format of the source material

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

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

Attribute:

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

Attribute:

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

*Detailed_Description:**Entity_Type:*

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

Attribute:

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

Attribute_Domain_Values:

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

Attribute_Domain_Values:

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

Attribute_Domain_Values:

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

*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* M_MAMMAL*Enumerated_Domain_Value_Definition:* Marine Mammals*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* REPTILE*Enumerated_Domain_Value_Definition:* Reptiles and Amphibians*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* T_MAMMAL*Enumerated_Domain_Value_Definition:* Terrestrial Mammals*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute:**Attribute_Label:* SPECIES_ID*Attribute_Definition:*

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

Attribute_Definition_Source: Research Planning, Inc.*Attribute_Domain_Values:**Range_Domain:**Range_Domain_Minimum:* 1*Range_Domain_Maximum:* N*Attribute:**Attribute_Label:* STATE*Attribute_Definition:* Two-letter state abbreviation*Attribute_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* Any character*Enumerated_Domain_Value_Definition:* Two-letter state abbreviation*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute:**Attribute_Label:* COUNTRY*Attribute_Definition:* Two-letter country abbreviation*Attribute_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* Any character*Enumerated_Domain_Value_Definition:* Two-letter country abbreviation*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*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:* U.S. Fish and Wildlife Service*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* T*Enumerated_Domain_Value_Definition:* Threatened on state list*Enumerated_Domain_Value_Definition_Source:* U.S. Fish and Wildlife Service*Attribute_Domain_Values:*

*Enumerated_Domain:**Enumerated_Domain_Value:* C*Enumerated_Domain_Value_Definition:* Species of Special Concern*Enumerated_Domain_Value_Definition_Source:* U.S. Fish and Wildlife Service*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:* U.S. Fish and Wildlife Service*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* T*Enumerated_Domain_Value_Definition:* Threatened on federal list*Enumerated_Domain_Value_Definition_Source:* U.S. Fish and Wildlife Service*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* C*Enumerated_Domain_Value_Definition:* Species of Special Concern*Enumerated_Domain_Value_Definition_Source:* U.S. Fish and Wildlife Service*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:* U.S. Fish and Wildlife Service*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* T*Enumerated_Domain_Value_Definition:* Threatened on international list*Enumerated_Domain_Value_Definition_Source:* U.S. Fish and Wildlife Service*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* C*Enumerated_Domain_Value_Definition:* Species of Special Concern*Enumerated_Domain_Value_Definition_Source:* U.S. Fish and Wildlife Service*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:* Numeric*Enumerated_Domain_Value_Definition:* mmyyyy*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:* Numeric*Enumerated_Domain_Value_Definition:* mmyyyy*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:* Numeric*Enumerated_Domain_Value_Definition:* mmyyyy*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute:**Attribute_Label:* EL_SPE*Attribute_Definition:*

Concatenation of ELEMENT and SPECIES_ID. This item links the STATUS data table to the BIORRES 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 (eg. 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 New Hampshire*Distribution_Liability:*

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

when the physical medium is delivered in damaged condition.

Custom_Order_Process:

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

Metadata_Reference_Information:

Metadata_Date: 200403

Metadata_Review_Date: 200403

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 2.7.10 on Fri May 21 14:27:58 2004

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

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

Metadata:

- [Identification Information](#)
- [Data Quality Information](#)
- [Spatial Data Organization Information](#)
- [Spatial Reference Information](#)
- [Entity and Attribute Information](#)
- [Distribution Information](#)
- [Metadata Reference Information](#)

Identification_Information:

Citation:

Citation_Information:

Originator:

New Hampshire Department of Environmental Services, Concord, New Hampshire and the New Hampshire Estuaries Project, Portsmouth, New Hampshire.

Publication_Date: 200403

Title:

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

Edition: First

Geospatial_Data_Presentation_Form: Vector digital data

Series_Information:

Series_Name: None

Issue_Identification: New Hampshire

Publication_Information:

Publication_Place: Concord, New Hampshire

Publisher:

New Hampshire Department of Environmental Services and the New Hampshire Estuaries Project.

Other_Citation_Details:

Prepared by Research Planning, Inc., Columbia, South Carolina for the New Hampshire Department of Environmental Services, Concord, New Hampshire and the New Hampshire Estuaries Project, Portsmouth, New Hampshire. Formatted to national Environmental Sensitivity Index standards by National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington.

Description:

Abstract:

This data set contains sensitive biological resource data for estuarine turtles in New Hampshire. Vector polygons in this data set represent turtle 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 New Hampshire. 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:

This data was collected, mapped, and digitized to provide environmental data for the New Hampshire Department of Environmental Services and the New Hampshire Estuaries Project response plans for immediate and effective protection of sensitive resources.

*Time_Period_of_Content:**Time_Period_Information:**Range_of_Dates/Times:*

Beginning_Date: 2003

Ending_Date: 2004

Currentness_Reference:

The biological data were compiled during 2004. The currentness date for this data is 2004 and is documented in the Source_Information section.

Status:

Progress: Complete

Maintenance_and_Update_Frequency: None Scheduled

*Spatial_Domain:**Bounding_Coordinates:*

West_Bounding_Coordinate: -71.000

East_Bounding_Coordinate: -70.533

North_Bounding_Coordinate: 43.250

South_Bounding_Coordinate: 42.867

*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: Reptiles

Place:

Place_Keyword_Thesaurus: None

Place_Keyword: New Hampshire

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 New Hampshire ESI data.

Browse_Graphic_File_Type: JPEG

Data_Set_Credit:

The New Hampshire Department of Environmental Services and the New Hampshire Estuaries Project supported this project. Steve Croce with New Hampshire Department of Environmental Services served as contract manager for the project. Carroll Brown, Jr. and Lynn Woodard with New Hampshire Department of Environmental Services contributed significantly to the project, as did Phil Trowbridge with the New Hampshire Estuaries Project and individuals from several state and federal agencies and other organizations. At Research Planning, Inc. (RPI), Heidi Hinkeldey was the project

manager. Lee Diveley performed the data processing under the supervision of Mark White, GIS Manager. Heidi Hinkeldey, Chris Locke, and Vermell Pyatt prepared the final metadata.

Native_Data_Set_Environment:

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) and SQL SERVER(r) (version 7.0). The hardware configuration is PC's with Windows Operating System (NT4.0/2000). The Spatial_Data_Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: bio_lut.e00, birds.e00, biofile.e00, biores.e00, breed.e00, breed_dt.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, mgt.e00, nests.e00, reptiles.e00, seasonal.e00, soc_dat.e00, soc_lut.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, socecon, 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 node, etc.), and SQL SERVER(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resources at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

Completeness_Report:

These data represent a synthesis of expert knowledge on turtle distribution. These data do not necessarily represent all reptile occurrences in New Hampshire. The following species are included in this data set: (Species_ID, Common Name, Scientific Name, if applicable): 32, Spotted turtle, *Clemmys guttata*; 149, Blanding's turtle, *Emydoidea blandingii*; 150, Wood turtle, *Glyptemys insculpta*.

Positional_Accuracy:

Horizontal_Positional_Accuracy:

Horizontal_Positional_Accuracy_Report:

Some of the spatial components of the biological data sets are 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. Most of the spatial components of the biological data sets are developed from pre-existing digital sources and reflect the positional accuracy of these original data. See the Lineage and Process_Description sections

for more information on the original data source and how 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: Michael Marchand, NHF&G

Publication_Date: 2004

Title:

Distribution and Abundance of Estuarine Turtles in New Hampshire

Geospatial_Data_Presentation_Form: Expert Knowledge

Publication_Information:

Publication_Place: Unknown

Publisher: Unpublished

Type_of_Source_Media: Email

Source_Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:

Calendar_Date: 2004

Source_Currentness_Reference: Date of communication

Source_Citation_Abbreviation: None

Source_Contribution: Reptile information

Process_Step:

Process_Description:

The main source of data used to depict distributions of turtles for this data layer was personal communications with New Hampshire Fish and Game resource experts. The New Hampshire Fish and Game also provided concentration and seasonality information.

Process_Date: 200403

Process_Contact:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization: Research Planning, Inc.

Contact_Person:

Heidi Hinkeldey - Biologist and Project Manager; Mark A. White - GIS Department Manager

Contact_Address:

Address_Type: Physical address

Address: 1121 Park Street

City: Columbia

State_or_Province: SC

Postal_Code: 29201

Contact_Voice_Telephone: (803) 256-7322

Contact_Facsimile_Telephone: (803) 254-6445

Contact_Electronic_Mail_Address: hhinkeldey@researchplanning.com; mwhite@researchplanning.com

Spatial_Data_Organization_Information:

Direct_Spatial_Reference_Method: Vector

Point_and_Vector_Object_Information:

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: GT-polygon composed of rings

Point_and_Vector_Object_Count: 3

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: Area point

Point_and_Vector_Object_Count: 3
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Complete chain
Point_and_Vector_Object_Count: 6
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Link
Point_and_Vector_Object_Count: 1828
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: 0.00005
Longitude_Resolution: 0.00005
Geographic_Coordinate_Units: Decimal degrees

Geodetic_Model:

Horizontal_Datum_Name: D_North_American_1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137
Denominator_of_Flattening_Ratio: 298.257222

*Entity_and_Attribute_Information:**Overview_Description:**Entity_and_Attribute_Overview:*

In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, 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 New Hampshire atlas, the number is 77) 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 representing turtle 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 (74), 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: 770600002

Range_Domain_Maximum: 770600004

Attribute:

Attribute_Label: RARNUM

Attribute_Definition:

An identifier that links directly to the BIORES table or the flat format BIOFILE table. RARNUM values of 0 are holes in the polygons and do not contain information.

Attribute_Definition_Source: NOAA

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 77000101

Range_Domain_Maximum: 77000101

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 the polygons and do not contain information.

Attribute_Definition_Source: NOAA

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 77000101

Range_Domain_Maximum: 77000104

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 (77), 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: 770100002

Range_Domain_Maximum: 770900004

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: 077000001

Range_Domain_Maximum: 077000104

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. In cases where no quantitative count data was available, the field may either be blank, or contain descriptive terms such as "MED" or "LOW". Abundance data was provided by expert knowledge.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: SEASON_ID

Attribute_Definition:

Numeric identifier for the unique monthly presence and life history characteristics of

each species at a given location.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: G_SOURCE

Attribute_Definition:

Geographic source identifier that links records in the BIORES data table to records in the SOURCES data table.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: S_SOURCE

Attribute_Definition:

Seasonality source identifier that links records in the BIORES data table to records in the SOURCES data table.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: ELEMENT

Attribute_Definition: Major categories of biological data

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: BIRD

Enumerated_Domain_Value_Definition: Birds

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: FISH

Enumerated_Domain_Value_Definition: Fish

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: HABITAT

Enumerated_Domain_Value_Definition: Habitats and plants

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: INVERT

Enumerated_Domain_Value_Definition: Invertebrates

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: M_MAMMAL

Enumerated_Domain_Value_Definition: Marine mammals

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: REPTILE

Enumerated_Domain_Value_Definition: Reptiles and Amphibians

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* T_MAMMAL*Enumerated_Domain_Value_Definition:* Terrestrial mammals*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute:**Attribute_Label:* EL_SPE*Attribute_Definition:*

Concatenation of ELEMENT and SPECIES_ID. This item links records in the BIORES data table to records in the SPECIES and STATUS data tables.

Attribute_Definition_Source: Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* E#####*Enumerated_Domain_Value_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (eg. 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 (eg. 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 list of layer specific species.

Entity_Type_Definition_Source: Research Planning, Inc.*Attribute:**Attribute_Label:* SPECIES_ID*Attribute_Definition:*

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

Attribute_Definition_Source: Research Planning, Inc.*Attribute_Domain_Values:**Range_Domain:**Range_Domain_Minimum:* 1*Range_Domain_Maximum:* N*Attribute:**Attribute_Label:* NAME*Attribute_Definition:* Species common name*Attribute_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:*

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

Attribute:

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

Enumerated_Domain:

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

Attribute:

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

Enumerated_Domain:

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

*Attribute_Domain_Values:**Enumerated_Domain:*

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

*Attribute_Domain_Values:**Enumerated_Domain:*

Enumerated_Domain_Value: HABITAT
Enumerated_Domain_Value_Definition: Habitats and plants
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

*Attribute_Domain_Values:**Enumerated_Domain:*

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

*Attribute_Domain_Values:**Enumerated_Domain:*

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

*Attribute_Domain_Values:**Enumerated_Domain:*

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

*Attribute_Domain_Values:**Enumerated_Domain:*

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

Attribute:

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

Enumerated_Domain:

Enumerated_Domain_Value: alcid

Enumerated_Domain_Value_Definition: Alcid
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: 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
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: diving
Enumerated_Domain_Value_Definition: Diving
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: freshwater
Enumerated_Domain_Value_Definition: Freshwater
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: 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
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
 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: 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: Shrimps
 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: 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: 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: 0

Enumerated_Domain_Value_Definition: Not ranked

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Numeric

Enumerated_Domain_Value_Definition: mmyyyy

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: EL_SPE

Attribute_Definition:

Concatenation of ELEMENT and SPECIES_ID. This item links records in the SPECIES data table to records in the BIORES and STATUS data tables.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: E#####

Enumerated_Domain_Value_Definition:

Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (eg. 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 BIORRES 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 (eg. 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 BIORRES 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 (eg. 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.

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

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

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.*Attribute:**Attribute_Label:* BREED2*Attribute_Definition:*

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

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

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

Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: -
Enumerated_Domain_Value_Definition:
 Breed category not used or not appropriate for record(s) in question
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: BREED3

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Y

Enumerated_Domain_Value_Definition: Life-history stage or activity present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: N

Enumerated_Domain_Value_Definition: Life-history stage or activity not present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: -

Enumerated_Domain_Value_Definition:

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

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: BREED4

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Y

Enumerated_Domain_Value_Definition: Life-history stage or activity present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: N

Enumerated_Domain_Value_Definition: Life-history stage or activity not present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: -

Enumerated_Domain_Value_Definition:

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

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: BREED5

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Y

Enumerated_Domain_Value_Definition: Life-history stage or activity present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: N

Enumerated_Domain_Value_Definition: Life-history stage or activity not present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: -

Enumerated_Domain_Value_Definition:

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

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Detailed_Description:

Entity_Type:

Entity_Type_Label: SOURCES

Entity_Type_Definition:

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

Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: SOURCE_ID

Attribute_Definition:

Source identifier that links records in the SOURCES data table to the items G_SOURCE and A_SOURCE in the SOC_DAT table, and to G_SOURCE and S_SOURCE in the BIORES table.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: ORIGINATOR

Attribute_Definition: Author or developer of source material or data set

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: DATE_PUB

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Numeric

Enumerated_Domain_Value_Definition: mmyyyy

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: TITLE

Attribute_Definition: Title of source material or data

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: DATA_FORMAT

Attribute_Definition: The format of the source material

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: PUBLICATION

Attribute_Definition: Additional citation information

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: SCALE

Attribute_Definition: Scale denominator of the source

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: integer

Enumerated_Domain_Value_Definition: Any integer

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: TIME_PERIOD

Attribute_Definition:

Date(s) of data collection that the source material is based upon.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

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

*Detailed_Description:**Entity_Type:*

Entity_Type_Label: STATUS

Entity_Type_Definition:

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

Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: ELEMENT

Attribute_Definition: Major categories of biological data

Attribute_Definition_Source: Research Planning, Inc.

*Attribute_Domain_Values:**Enumerated_Domain:*

Enumerated_Domain_Value: BIRD

Enumerated_Domain_Value_Definition: Birds

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

*Attribute_Domain_Values:**Enumerated_Domain:*

Enumerated_Domain_Value: FISH

Enumerated_Domain_Value_Definition: Fish

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

*Attribute_Domain_Values:**Enumerated_Domain:*

Enumerated_Domain_Value: HABITAT

Enumerated_Domain_Value_Definition: Habitats and Plants

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

*Attribute_Domain_Values:**Enumerated_Domain:*

Enumerated_Domain_Value: INVERT

Enumerated_Domain_Value_Definition: Invertebrates

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

*Attribute_Domain_Values:**Enumerated_Domain:*

Enumerated_Domain_Value: M_MAMMAL

Enumerated_Domain_Value_Definition: Marine Mammals

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

*Attribute_Domain_Values:**Enumerated_Domain:*

Enumerated_Domain_Value: REPTILE

Enumerated_Domain_Value_Definition: Reptiles and Amphibians

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

*Attribute_Domain_Values:**Enumerated_Domain:*

Enumerated_Domain_Value: T_MAMMAL

Enumerated_Domain_Value_Definition: Terrestrial Mammals

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: SPECIES_ID

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

*Attribute_Domain_Values:**Range_Domain:*

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: STATE

Attribute_Definition: Two-letter state abbreviation

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Two-letter state abbreviation

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: COUNTRY

Attribute_Definition: Two-letter country abbreviation

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Two-letter country abbreviation

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: U.S. Fish and Wildlife Service

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: T

Enumerated_Domain_Value_Definition: Threatened on state list

Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: C

Enumerated_Domain_Value_Definition: Species of Special Concern

Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service

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: U.S. Fish and Wildlife Service

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: T

Enumerated_Domain_Value_Definition: Threatened on federal list

Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: C

Enumerated_Domain_Value_Definition: Species of Special Concern
Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service

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: U.S. Fish and Wildlife Service

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: T

Enumerated_Domain_Value_Definition: Threatened on international list

Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: C

Enumerated_Domain_Value_Definition: Species of Special Concern

Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service

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: Numeric

Enumerated_Domain_Value_Definition: mmyyyy

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: Numeric

Enumerated_Domain_Value_Definition: mmyyyy

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: Numeric

Enumerated_Domain_Value_Definition: mmyyyy

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: EL_SPE

Attribute_Definition:

Concatenation of ELEMENT and SPECIES_ID. This item links the STATUS data table to the BIORRES 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 (eg. 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 New Hampshire

Distribution_Liability:

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

Custom_Order_Process:

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

Metadata_Reference_Information:

Metadata_Date: 200403

Metadata_Review_Date: 200403

Metadata_Contact:

Contact_Information:

Contact_Person_Primary:

Contact_Person: Jill Petersen

Contact_Organization: NOAA, Office of Response and Restoration

Contact_Position: GIS Manager

Contact_Address:

Address_Type: Physical Address

Address: 7600 Sand Point Way, N.E.

City: Seattle

State_or_Province: Washington

Postal_Code: 98115-6349

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Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

Metadata_Standard_Name: Content Standards for Digital Geospatial Metadata

Metadata_Standard_Version: FGDC-STD-001-1998

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Sensitivity of Coastal Environments and Wildlife to Spilled Oil: New Hampshire: M_MAMMAL (Marine Mammal Polygons)

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

Metadata:

- [Identification Information](#)
- [Data Quality Information](#)
- [Spatial Data Organization Information](#)
- [Spatial Reference Information](#)
- [Entity and Attribute Information](#)
- [Distribution Information](#)
- [Metadata Reference Information](#)

Identification_Information:

Citation:

Citation_Information:

Originator:

New Hampshire Department of Environmental Services, Concord, New Hampshire and the New Hampshire Estuaries Project, Portsmouth, New Hampshire.

Publication_Date: 200403

Title:

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: New Hampshire: M_MAMMAL (Marine Mammal Polygons)

Edition: First

Geospatial_Data_Presentation_Form: Vector digital data

Series_Information:

Series_Name: None

Issue_Identification: New Hampshire

Publication_Information:

Publication_Place: Concord, New Hampshire

Publisher:

New Hampshire Department of Environmental Services and the New Hampshire Estuaries Project.

Other_Citation_Details:

Prepared by Research Planning, Inc., Columbia, South Carolina for the New Hampshire Department of Environmental Services, Concord, New Hampshire and the New Hampshire Estuaries Project, Portsmouth, New Hampshire. Formatted to national Environmental Sensitivity Index standards by National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington.

Description:

Abstract:

This data set contains sensitive biological resource data for seals, porpoise, and whales in New Hampshire. Vector polygons in this data set represent marine mammal distribution and haul-out 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 New Hampshire. 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: 2003

Ending_Date: 2004

Currentness_Reference:

The biological data were compiled during 2003. The currentness dates for this data ranges from 1980 to 2003 and is documented in the Source_Information section.

Status:

Progress: Complete

Maintenance_and_Update_Frequency: None Scheduled

Spatial_Domain:

Bounding_Coordinates:

West_Bounding_Coordinate: -71.000

East_Bounding_Coordinate: -70.533

North_Bounding_Coordinate: 43.250

South_Bounding_Coordinate: 42.867

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: New Hampshire

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 New Hampshire ESI data.

Browse_Graphic_File_Type: JPEG

Data_Set_Credit:

The New Hampshire Department of Environmental Services and the New Hampshire Estuaries Project supported this project. Steve Croce with New Hampshire Department of Environmental Services served as contract manager for the project. Carroll Brown, Jr. and Lynn Woodard with New Hampshire Department of Environmental Services contributed significantly to the project, as did Phil Trowbridge with the New Hampshire Estuaries Project and individuals from several state and federal

agencies and other organizations. At Research Planning, Inc. (RPI), Heidi Hinkeldey was the project manager. Lee Diveley performed the data processing under the supervision of Mark White, GIS Manager. Heidi Hinkeldey, Chris Locke, and Vermell Pyatt prepared the final metadata.

Native_Data_Set_Environment:

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) and SQL SERVER(r) (version 7.0). The hardware configuration is PC's with Windows Operating System (NT4.0/2000). The Spatial_Data_Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: bio_lut.e00, birds.e00, biofile.e00, biores.e00, breed.e00, breed_dt.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, mgt.e00, nests.e00, reptiles.e00, seasonal.e00, soc_dat.e00, soc_lut.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, socecon, 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 node, etc.), and SQL SERVER(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resources at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

Completeness_Report:

These data represent a synthesis of expert knowledge, hardcopy maps, and published documents on marine mammal distribution and haul-out sites. These data do not necessarily represent all marine mammal occurrences in New Hampshire. The following species are included in this data set: (Species_ID, Common Name, Scientific Name, if applicable): 6, Harbor porpoise, Phocoena phocoena; 2, Harbor seal, Phoca vitulina; 14, Gray seal, Halichoerus grypus; 12, Minke whale, Balaenoptera acutorostrata; 81, Northern right whale, Eubalaena glacialis; 83, Long-finned pilot whale, Globicephala melaena.

Positional_Accuracy:

Horizontal_Positional_Accuracy:

Horizontal_Positional_Accuracy_Report:

Most of the spatial components of the biological data sets are 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 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: Ed Lyman, Ma Div. Of Marine Fisheries

Publication_Date: 2003

Title: Seal haulout Locations in New Hampshire

Geospatial_Data_Presentation_Form: Expert Knowledge

Publication_Information:

Publication_Place: Unknown

Publisher: Unpublished

Type_of_Source_Media: Personal Communication

Source_Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:

Calendar_Date: 2003

Source_Currentness_Reference: Date of communication

Source_Citation_Abbreviation: None

Source_Contribution: Marine mammal information

Source_Information:

Source_Citation:

Citation_Information:

Originator: Northeast Fisheries Science Center

Publication_Date: Unpublished material

Title: NEFSC Aerial Surveys of Seals in New Hampshire (1999-2000)

Geospatial_Data_Presentation_Form: Hardcopy Text

Publication_Information:

Publication_Place: Unknown

Publisher: Unpublished

Type_of_Source_Media: Paper

Source_Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:

Calendar_Date: 1999

Source_Currentness_Reference: Dates of survey

Source_Citation_Abbreviation: None

Source_Contribution: Marine mammal information

Source_Information:

Source_Citation:

Citation_Information:

Originator: Scott Kraus, New England Aquarium

Publication_Date: 1980

Title:

The Population of Harbor Seals (*Phoca vitulina*) in Southern New England, Winter

Geospatial_Data_Presentation_Form: Hardcopy Text

Publication_Information:

Publication_Place: Boston, MA

Publisher: New England Aquarium, Boston, MA.

Type_of_Source_Media: Paper

Source_Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:
Calendar_Date: 1980
Source_Currentness_Reference: Dates of publication
Source_Citation_Abbreviation: None
Source_Contribution: Marine Mammal Information
Source_Information:
Source_Citation:
Citation_Information:
Originator: Rich Langan, University of New Hampshire
Publication_Date: Unpublished material
Title:
 Distribution and Abundance of Marine Mammals in New Hampshire Estuaries
Geospatial_Data_Presentation_Form: Expert Knowledge
Publication_Information:
Publication_Place: Unknown
Publisher: Unknown
Type_of_Source_Media: Personal Communication
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 2003
Source_Currentness_Reference: Dates of communication
Source_Citation_Abbreviation: None
Source_Contribution: Marine Mammal Information
Source_Information:
Source_Citation:
Citation_Information:
Originator: Peter Duley, WHOI
Publication_Date: 2003
Title: Northern Right Whale Concentration Areas
Geospatial_Data_Presentation_Form: Expert Knowledge
Publication_Information:
Publication_Place: Unknown
Publisher: Unpublished
Type_of_Source_Media: Email
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 2003
Source_Currentness_Reference: Dates of communication
Source_Citation_Abbreviation: None
Source_Contribution: Marine Mammal Information
Source_Information:
Source_Citation:
Citation_Information:
Originator: Steve Jones, University of New Hampshire
Publication_Date: 2003
Title: Wildlife Concentration Areas for New Hampshire Estuaries
Geospatial_Data_Presentation_Form: Expert Knowledge
Publication_Information:
Publication_Place: Unknown
Publisher: Unpublished
Type_of_Source_Media: Personal Communication
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 2003
Source_Currentness_Reference: Dates of communication
Source_Citation_Abbreviation: None

Source_Contribution: Marine Mammal Information

Process_Step:

Process_Description:

Three main sources of data were used to depict distributions of marine mammals for this data layer, including: 1) aerial survey data from the Northeast Fisheries Science Center (NEFSC); 2) personal interviews with resource experts from the University of New Hampshire (UNH), Woods Hole Oceanographic Institute (WHOI), the New England Aquarium, and the Massachusetts Division of Marine Fisheries (MADMF); and 3) published reports, and stranding records provided by National Oceanographic and Atmospheric Administration (NOAA) Fisheries Northeast Region Stranding Program. Information gathered during a set of interviews and reports was compiled onto U.S. Geological Survey 1:24,000 topographic quadrangles. The compiled data was digitized off of the base maps into an ArcInfo system to create the M_MAMMAL data layer. All ESI, biology, and human-use data was plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews was conducted to review the maps. Edits to the M_MAMMAL data layer were made based on the recommendations of the resource experts, and final hardcopy maps were created. Concentration and seasonality information was provided by resource experts or was extracted from published sources.

Process_Date: 200403

Process_Contact:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization: Research Planning, Inc.

Contact_Person:

Heidi Hinkeldey - Biologist and Project Manager; Mark
A. White - GIS Department Manager

Contact_Address:

Address_Type: Physical address

Address: 1121 Park Street

City: Columbia

State_or_Province: SC

Postal_Code: 29201

Contact_Voice_Telephone: (803) 256-7322

Contact_Facsimile_Telephone: (803) 254-6445

Contact_Electronic_Mail_Address: hhinkeldey@researchplanning.com;
mwhite@researchplanning.com

Spatial_Data_Organization_Information:

Direct_Spatial_Reference_Method: Vector

Point_and_Vector_Object_Information:

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: GT-polygon composed of rings

Point_and_Vector_Object_Count: 40

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: Area point

Point_and_Vector_Object_Count: 40

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: Complete chain

Point_and_Vector_Object_Count: 43

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: Link

Point_and_Vector_Object_Count: 4434

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: Node, planar graph

Point_and_Vector_Object_Count: 43

*Spatial_Reference_Information:**Horizontal_Coordinate_System_Definition:**Geographic:**Latitude_Resolution:* 0.00005*Longitude_Resolution:* 0.00005*Geographic_Coordinate_Units:* Decimal degrees*Geodetic_Model:**Horizontal_Datum_Name:* D_North_American_1983*Ellipsoid_Name:* Geodetic Reference System 80*Semi-major_Axis:* 6378137*Denominator_of_Flattening_Ratio:* 298.257222*Entity_and_Attribute_Information:**Overview_Description:**Entity_and_Attribute_Overview:*

In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, 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 New Hampshire, it is 77), 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 representing marine mammal distribution and haul-out 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 (77), 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: 770400002

Range_Domain_Maximum: 770400041

Attribute:

Attribute_Label: RARNUM

Attribute_Definition:

An identifier that links directly to the BIORES table or the flat format BIOFILE table. RARNUM values of 0 are holes in the polygons and do not contain information.

Attribute_Definition_Source: NOAA

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 77000093

Range_Domain_Maximum: 77000100

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 the polygons and do not contain information.

Attribute_Definition_Source: NOAA

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 77000001

Range_Domain_Maximum: 77000104

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 (77), 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: 770100002
Range_Domain_Maximum: 770900004

*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:* 077000001*Range_Domain_Maximum:* 077000104*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 potentially present at a particular haul-out site. The field may contain counts of individuals (XX MARINE MAMMALS). In cases where no quantitative count data was available, the field may either be blank, or contain descriptive terms such as "HIGH" or "COMMON".

Counts were derived from a variety of surveys, and may range in date.

Attribute_Definition_Source: Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* Any character*Enumerated_Domain_Value_Definition:* Free text*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute:**Attribute_Label:* SEASON_ID*Attribute_Definition:*

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

Attribute_Definition_Source: Research Planning, Inc.*Attribute_Domain_Values:**Range_Domain:**Range_Domain_Minimum:* 1*Range_Domain_Maximum:* N*Attribute:**Attribute_Label:* G_SOURCE*Attribute_Definition:*

Geographic source identifier that links records in the BIORES data table to records in the SOURCES data table.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: S_SOURCE

Attribute_Definition:

Seasonality source identifier that links records in the BIORES data table to records in the SOURCES data table.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: ELEMENT

Attribute_Definition: Major categories of biological data

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: BIRD

Enumerated_Domain_Value_Definition: Birds

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: FISH

Enumerated_Domain_Value_Definition: Fish

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: HABITAT

Enumerated_Domain_Value_Definition: Habitats and plants

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: INVERT

Enumerated_Domain_Value_Definition: Invertebrates

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: M_MAMMAL

Enumerated_Domain_Value_Definition: Marine mammals

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: REPTILE

Enumerated_Domain_Value_Definition: Reptiles and Amphibians

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: T_MAMMAL

Enumerated_Domain_Value_Definition: Terrestrial mammals

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: EL_SPE

Attribute_Definition:

Concatenation of ELEMENT and SPECIES_ID. This item links records in the

BIORES data table to records in the SPECIES and STATUS data tables.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: E#####

Enumerated_Domain_Value_Definition:

Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (eg. 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 BIORRES 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 (eg. 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 list of layer specific species.

Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: SPECIES_ID

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: NAME

Attribute_Definition: Species common name

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Species common name for the entire ESI data set

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: GEN_SPEC

Attribute_Definition: Species scientific name

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

*Enumerated_Domain:**Enumerated_Domain_Value:* Species scientific name for the entire ESI data set.*Enumerated_Domain_Value_Definition:* Free text*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute:**Attribute_Label:* ELEMENT*Attribute_Definition:* Major categories of biological data*Attribute_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* BIRD*Enumerated_Domain_Value_Definition:* Birds*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* FISH*Enumerated_Domain_Value_Definition:* Fish*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* HABITAT*Enumerated_Domain_Value_Definition:* Habitats and plants*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* INVERT*Enumerated_Domain_Value_Definition:* Invertebrates*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* M_MAMMAL*Enumerated_Domain_Value_Definition:* Marine Mammals*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* REPTILE*Enumerated_Domain_Value_Definition:* Reptiles and Amphibians*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* T_MAMMAL*Enumerated_Domain_Value_Definition:* Terrestrial Mammals*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute:**Attribute_Label:* SUBELEMENT*Attribute_Definition:* Element subgroup delineating a logical grouping of species*Attribute_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* alcid*Enumerated_Domain_Value_Definition:* Alcid*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: 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
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: diving
Enumerated_Domain_Value_Definition: Diving
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: freshwater
Enumerated_Domain_Value_Definition: Freshwater
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: 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
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
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: 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: Shrimps
 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: 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: 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:* 0*Enumerated_Domain_Value_Definition:* Not ranked*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* Numeric*Enumerated_Domain_Value_Definition:* mmyyyy*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute:**Attribute_Label:* EL_SPE*Attribute_Definition:*

Concatenation of ELEMENT and SPECIES_ID. This item links records in the SPECIES data table to records in the BIORES and STATUS data tables.

Attribute_Definition_Source: Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* E#####*Enumerated_Domain_Value_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (eg. 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 BIORRES 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 (eg. 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 BIORRES 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 (eg. 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.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Y

Enumerated_Domain_Value_Definition: Life-history stage or activity present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: N

Enumerated_Domain_Value_Definition: Life-history stage or activity not present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: -

Enumerated_Domain_Value_Definition:

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

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: BREED2

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Y

Enumerated_Domain_Value_Definition: Life-history stage or activity present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: N

Enumerated_Domain_Value_Definition: Life-history stage or activity not present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: -
Enumerated_Domain_Value_Definition:
 Breed category not used or not appropriate for record(s) in question
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: BREED3

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Y

Enumerated_Domain_Value_Definition: Life-history stage or activity present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: N

Enumerated_Domain_Value_Definition: Life-history stage or activity not present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: -

Enumerated_Domain_Value_Definition:

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

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: BREED4

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Y

Enumerated_Domain_Value_Definition: Life-history stage or activity present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: N

Enumerated_Domain_Value_Definition: Life-history stage or activity not present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: -

Enumerated_Domain_Value_Definition:

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

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: BREED5

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Y

Enumerated_Domain_Value_Definition: Life-history stage or activity present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: N

Enumerated_Domain_Value_Definition: Life-history stage or activity not present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: -

Enumerated_Domain_Value_Definition:

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

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Detailed_Description:

Entity_Type:

Entity_Type_Label: SOURCES

Entity_Type_Definition:

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

Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: SOURCE_ID

Attribute_Definition:

Source identifier that links records in the SOURCES data table to the items G_SOURCE and A_SOURCE in the SOC_DAT table, and to G_SOURCE and S_SOURCE in the BIORES table.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: ORIGINATOR

Attribute_Definition: Author or developer of source material or data set

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: DATE_PUB

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Numeric

Enumerated_Domain_Value_Definition: mmyyyy

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: TITLE

Attribute_Definition: Title of source material or data

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: DATA_FORMAT

Attribute_Definition: The format of the source material

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: PUBLICATION

Attribute_Definition: Additional citation information

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: SCALE

Attribute_Definition: Scale denominator of the source

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: integer

Enumerated_Domain_Value_Definition: Any integer

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: TIME_PERIOD

Attribute_Definition:

Date(s) of data collection that the source material is based upon.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Numeric

Enumerated_Domain_Value_Definition: yyyy

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Detailed_Description:

Entity_Type:

Entity_Type_Label: STATUS

Entity_Type_Definition:

The data table STATUS identifies the species that are listed as either threatened or endangered by a state or federal authority. See the Browse_Graphic section for a

link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: ELEMENT

Attribute_Definition: Major categories of biological data

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: BIRD

Enumerated_Domain_Value_Definition: Birds

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: FISH

Enumerated_Domain_Value_Definition: Fish

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: HABITAT

Enumerated_Domain_Value_Definition: Habitats and Plants

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: INVERT

Enumerated_Domain_Value_Definition: Invertebrates

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: M_MAMMAL

Enumerated_Domain_Value_Definition: Marine Mammals

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: REPTILE

Enumerated_Domain_Value_Definition: Reptiles and Amphibians

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: T_MAMMAL

Enumerated_Domain_Value_Definition: Terrestrial Mammals

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: SPECIES_ID

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: STATE

Attribute_Definition: Two-letter state abbreviation

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Two-letter state abbreviation

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: COUNTRY

Attribute_Definition: Two-letter country abbreviation

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Two-letter country abbreviation

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: U.S. Fish and Wildlife Service

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: T

Enumerated_Domain_Value_Definition: Threatened on state list

Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: C

Enumerated_Domain_Value_Definition: Species of Special Concern

Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service

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: U.S. Fish and Wildlife Service

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: T

Enumerated_Domain_Value_Definition: Threatened on federal list

Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: C

Enumerated_Domain_Value_Definition: Species of Special Concern

Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service

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: U.S. Fish and Wildlife Service

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: T
Enumerated_Domain_Value_Definition: Threatened on international list
Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: C
Enumerated_Domain_Value_Definition: Species of Special Concern
Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service

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

Attribute:

Attribute_Label: EL_SPE

Attribute_Definition:

Concatenation of ELEMENT and SPECIES_ID. This item links the STATUS data table to the BIORRES 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 (eg. 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 New Hampshire*Distribution_Liability:*

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

Custom_Order_Process:

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

*Metadata_Reference_Information:**Metadata_Date*: 200403*Metadata_Review_Date*: 200403*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 2.7.10 on Fri May 21 14:28:00 2004

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: New Hampshire: T_MAMMAL (Terrestrial Mammal Polygons)

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

Metadata:

- [Identification Information](#)
- [Data Quality Information](#)
- [Spatial Data Organization Information](#)
- [Spatial Reference Information](#)
- [Entity and Attribute Information](#)
- [Distribution Information](#)
- [Metadata Reference Information](#)

Identification_Information:

Citation:

Citation_Information:

Originator:

New Hampshire Department of Environmental Services, Concord, New Hampshire and the New Hampshire Estuaries Project, Portsmouth, New Hampshire.

Publication_Date: 200403

Title:

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: New Hampshire: T_MAMMAL (Terrestrial Mammal Polygons)

Edition: First

Geospatial_Data_Presentation_Form: Vector digital data

Series_Information:

Series_Name: None

Issue_Identification: New Hampshire

Publication_Information:

Publication_Place: Concord, New Hampshire

Publisher:

New Hampshire Department of Environmental Services and the New Hampshire Estuaries Project.

Other_Citation_Details:

Prepared by Research Planning, Inc., Columbia, South Carolina for the New Hampshire Department of Environmental Services, Concord, New Hampshire and the New Hampshire Estuaries Project, Portsmouth, New Hampshire. Formatted to national Environmental Sensitivity Index standards by National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington.

Description:

Abstract:

This data set contains sensitive biological resource data for northern river otters, beavers, and muskrats in New Hampshire. 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 New Hampshire. 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:

This data was collected, mapped, and digitized to provide environmental data for the New Hampshire Department of Environmental Services and the New Hampshire Estuaries Project response plans for immediate and effective protection of sensitive resources.

Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date: 2003

Ending_Date: 2004

Currentness_Reference:

The biological data were compiled during 2003. The currentness date for this data is 2003 and is documented in the Source_Information section.

Status:

Progress: Complete

Maintenance_and_Update_Frequency: None Scheduled

Spatial_Domain:

Bounding_Coordinates:

West_Bounding_Coordinate: -71.000

East_Bounding_Coordinate: -70.533

North_Bounding_Coordinate: 43.250

South_Bounding_Coordinate: 42.867

Keywords:

Theme:

Theme_Keyword_Thesaurus: None

Theme_Keyword: ESI

Theme_Keyword: Sensitivity maps

Theme_Keyword: Coastal resources

Theme_Keyword: Oil spill planning

Theme_Keyword: Coastal Zone Management

Theme_Keyword: Wildlife

Theme_Keyword: Terrestrial Mammals

Place:

Place_Keyword_Thesaurus: None

Place_Keyword: New Hampshire

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 New Hampshire ESI data.

Browse_Graphic_File_Type: JPEG

Data_Set_Credit:

The New Hampshire Department of Environmental Services and the New Hampshire Estuaries Project supported this project. Steve Croce with New Hampshire Department of Environmental Services served as contract manager for the project. Carroll Brown, Jr. and Lynn Woodard with New Hampshire Department of Environmental Services contributed significantly to the project, as did Phil Trowbridge with the New Hampshire Estuaries Project and individuals from several state and federal

agencies and other organizations. At Research Planning, Inc. (RPI), Heidi Hinkeldey was the project manager. Lee Diveley performed the data processing under the supervision of Mark White, GIS Manager. Heidi Hinkeldey, Chris Locke, and Vermell Pyatt prepared the final metadata.

Native_Data_Set_Environment:

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) and SQL SERVER(r) (version 7.0). The hardware configuration is PC's with Windows Operating System (NT4.0/2000). The Spatial_Data_Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: bio_lut.e00, birds.e00, biofile.e00, biores.e00, breed.e00, breed_dt.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, mgt.e00, nests.e00, reptiles.e00, seasonal.e00, soc_dat.e00, soc_lut.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, socecon, 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 node, etc.), and SQL SERVER(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resources at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

Completeness_Report:

These data represent a synthesis of information depicted on hardcopy maps on terrestrial mammal distribution. These data do not represent all terrestrial mammal concentration areas in New Hampshire. The following species are included in this data set: (Species_ID, Common Name, Scientific Name, if applicable): 8, Northern river otter, *Lutra canadensis*; 36, Beaver, *Castor canadensis*; 37, Muskrat, *Ondatra zibethicus*.

Positional_Accuracy:

Horizontal_Positional_Accuracy:

Horizontal_Positional_Accuracy_Report:

Most of the spatial components of the biological data sets are 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 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: Jim Reynolds, USFWS

Publication_Date: 2003

Title: Mammals of Great Bay NWR

Geospatial_Data_Presentation_Form: Expert Knowledge

Publication_Information:

Publication_Place: Unknown

Publisher: Unpublished

Type_of_Source_Media: Personal communication

Source_Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:

Calendar_Date: 2003

Source_Currentness_Reference: Date of communication

Source_Citation_Abbreviation: None

Source_Contribution: T_Mammal information

Source_Information:

Source_Citation:

Citation_Information:

Originator: Steve Jones, University of New Hampshire

Publication_Date: 2003

Title: Wildlife Concentration Areas for New Hampshire Estuaries

Geospatial_Data_Presentation_Form: Expert Knowledge

Publication_Information:

Publication_Place: Unknown

Publisher: Unpublished

Type_of_Source_Media: Personal communication

Source_Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:

Calendar_Date: 2003

Source_Currentness_Reference: Date of communication

Source_Citation_Abbreviation: None

Source_Contribution: T_Mammal information

Process_Step:

Process_Description:

The main source of data used to depict terrestrial mammal distributions for this data layer was expert knowledge provided by U.S. Fish and Wildlife Service (USFWS), New Hampshire Fish and Game (NHFG) and the University of New Hampshire (UNH). Information gathered from these sources was compiled onto U.S. Geological Survey (USGS) 1:24,000 topographic quadrangles. The compiled data was digitized off of the base maps into an ArcInfo system to create the T_MAMMAL data layer. All ESI, biology, and human-use data was plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews was conducted to review the maps. Edits to the T_MAMMAL data layer were made based on the recommendations of the resource experts, and final hardcopy maps were created.

Process_Date: 200403

Process_Contact:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization: Research Planning, Inc.

Contact_Person:

Heidi Hinkeldey - Biologist and Project Manager; Mark
A. White - GIS Department Manager

Contact_Address:

Address_Type: Physical address

Address: 1121 Park Street

City: Columbia

State_or_Province: SC

Postal_Code: 29201

Contact_Voice_Telephone: (803) 256-7322

Contact_Facsimile_Telephone: (803) 254-6445

Contact_Electronic_Mail_Address: hhinkeldey@researchplanning.com;
mwhite@researchplanning.com

Spatial_Data_Organization_Information:

Direct_Spatial_Reference_Method: Vector

Point_and_Vector_Object_Information:

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: GT-polygon composed of rings

Point_and_Vector_Object_Count: 3

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: Area point

Point_and_Vector_Object_Count: 3

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: Complete chain

Point_and_Vector_Object_Count: 6

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: Link

Point_and_Vector_Object_Count: 2256

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: 0.00005

Longitude_Resolution: 0.00005

Geographic_Coordinate_Units: Decimal degrees

Geodetic_Model:

Horizontal_Datum_Name: D_North_American_1983

Ellipsoid_Name: Geodetic Reference System 80

Semi-major_Axis: 6378137

Denominator_of_Flattening_Ratio: 298.257222

Entity_and_Attribute_Information:

Overview_Description:

Entity_and_Attribute_Overview:

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

using RARNUM. The ID is a unique combination of the atlas number (for the New Hampshire atlas, the number is 77), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORRES and the other relational data tables are described below in detail. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure. Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN_SPEC, S, F, NHP, DATE_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G_SOURCE, S_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed_Description of the BREED data table. The link to the BIOFILE may be made through the BIO_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED_DT is an auxiliary support data table to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to BREED_DT is the BREED item. A second supporting data table is SOURCES. This is the same as the source file described above, and the link from the flat file is both G_SOURCE and S_SOURCE. It should be noted that although the flat file eases data query, it is not a normalized database structure, and actual updates performed by the states and other responsible agencies should be done using the relational data tables. The entity-relationship diagram describing relationships between attribute tables in the ESI data structure does NOT include the BIOFILE data table, and this data table is NOT described in detail below.

Detailed_Description:

Entity_Type:

Entity_Type_Label: T_MAMMAL.PAT

Entity_Type_Definition:

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

Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: ID

Attribute_Definition:

An identifier that links vector objects in the biology data layers to records in the BIO_LUT data table. ID is a concatenation of atlas number (77), 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: 770900002

Range_Domain_Maximum: 770900004

Attribute:

Attribute_Label: RARNUM

Attribute_Definition:

An identifier that links directly to the BIORRES table or the flat format BIOFILE table. RARNUM values of 0 are holes in the polygons and do not contain information.

Attribute_Definition_Source: NOAA

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 77000102

Range_Domain_Maximum: 77000104

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 the polygons and do not contain information

Attribute_Definition_Source: NOAA

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 77000001

Range_Domain_Maximum: 77000104

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 (77), 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: 770100002

Range_Domain_Maximum: 770900004

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: 077000001

Range_Domain_Maximum: 077000104

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 a term that describes relative abundance of terrestrial mammals at a particular site. In cases where no concentration data was available, the field may either be blank, or contain descriptive terms such as "HIGH" or "MED". Abundance data were derived from various resource experts.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: SEASON_ID

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: G_SOURCE

Attribute_Definition:

Geographic source identifier that links records in the BIORES data table to records in the SOURCES data table.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: S_SOURCE

Attribute_Definition:

Seasonality source identifier that links records in the BIORES data table to records in the SOURCES data table.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: ELEMENT

Attribute_Definition: Major categories of biological data

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: BIRD

Enumerated_Domain_Value_Definition: Birds

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: FISH

Enumerated_Domain_Value_Definition: Fish

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: HABITAT

Enumerated_Domain_Value_Definition: Habitats and plants

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: INVERT

Enumerated_Domain_Value_Definition: Invertebrates

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: M_MAMMAL

Enumerated_Domain_Value_Definition: Marine mammals

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: REPTILE

Enumerated_Domain_Value_Definition: Reptiles and Amphibians

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: T_MAMMAL

Enumerated_Domain_Value_Definition: Terrestrial mammals

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

*Attribute:**Attribute_Label:* EL_SPE*Attribute_Definition:*

Concatenation of ELEMENT and SPECIES_ID. This item links records in the BIORES data table to records in the SPECIES and STATUS data tables.

Attribute_Definition_Source: Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* E#####*Enumerated_Domain_Value_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (eg. 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 (eg. 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 list of layer specific species.

Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: SPECIES_ID

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: NAME

Attribute_Definition: Species common name

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Species common name for the entire ESI data set

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: GEN_SPEC

Attribute_Definition: Species scientific name

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Species scientific name for the entire ESI data set.

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: ELEMENT

Attribute_Definition: Major categories of biological data

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: BIRD

Enumerated_Domain_Value_Definition: Birds

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: FISH

Enumerated_Domain_Value_Definition: Fish

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: HABITAT

Enumerated_Domain_Value_Definition: Habitats and plants

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

*Enumerated_Domain:**Enumerated_Domain_Value:* INVERT*Enumerated_Domain_Value_Definition:* Invertebrates*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* M_MAMMAL*Enumerated_Domain_Value_Definition:* Marine Mammals*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* REPTILE*Enumerated_Domain_Value_Definition:* Reptiles and Amphibians*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* T_MAMMAL*Enumerated_Domain_Value_Definition:* Terrestrial Mammals*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute:**Attribute_Label:* SUBELEMENT*Attribute_Definition:* Element subgroup delineating a logical grouping of species*Attribute_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* alcid*Enumerated_Domain_Value_Definition:* Alcid*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:* 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*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* diving*Enumerated_Domain_Value_Definition:* Diving*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: freshwater
Enumerated_Domain_Value_Definition: Freshwater
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: 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
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
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: 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: Shrimps
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: 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: 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: 0
Enumerated_Domain_Value_Definition: Not ranked
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

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

Attribute:

Attribute_Label: EL_SPE

Attribute_Definition:

Concatenation of ELEMENT and SPECIES_ID. This item links records in the SPECIES data table to records in the BIORRES 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 (eg. 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 (eg. 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 BORES 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 (eg. 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.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Y

Enumerated_Domain_Value_Definition: Life-history stage or activity present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

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

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

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.*Attribute:**Attribute_Label:* BREED2*Attribute_Definition:*

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

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

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

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.*Attribute:**Attribute_Label:* BREED3*Attribute_Definition:*

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

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

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: -
Enumerated_Domain_Value_Definition:
 Breed category not used or not appropriate for record(s) in question
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Y

Enumerated_Domain_Value_Definition: Life-history stage or activity present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: N

Enumerated_Domain_Value_Definition: Life-history stage or activity not present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: -

Enumerated_Domain_Value_Definition:

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

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: BREED5

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Y

Enumerated_Domain_Value_Definition: Life-history stage or activity present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: N

Enumerated_Domain_Value_Definition: Life-history stage or activity not present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: -

Enumerated_Domain_Value_Definition:

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

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Detailed_Description:

Entity_Type:

Entity_Type_Label: SOURCES

Entity_Type_Definition:

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

Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: SOURCE_ID

Attribute_Definition:

Source identifier that links records in the SOURCES data table to the items G_SOURCE and A_SOURCE in the SOC_DAT table, and to G_SOURCE and S_SOURCE in the BIORES table.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: ORIGINATOR

Attribute_Definition: Author or developer of source material or data set

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: DATE_PUB

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Numeric

Enumerated_Domain_Value_Definition: mmyyyy

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: TITLE

Attribute_Definition: Title of source material or data

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: DATA_FORMAT

Attribute_Definition: The format of the source material

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: PUBLICATION

Attribute_Definition: Additional citation information

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: SCALE

Attribute_Definition: Scale denominator of the source

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: integer

Enumerated_Domain_Value_Definition: Any integer

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: TIME_PERIOD

Attribute_Definition:

Date(s) of data collection that the source material is based upon.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Numeric

Enumerated_Domain_Value_Definition: yyyy

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Detailed_Description:

Entity_Type:

Entity_Type_Label: STATUS

Entity_Type_Definition:

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

Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: ELEMENT

Attribute_Definition: Major categories of biological data

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: BIRD

Enumerated_Domain_Value_Definition: Birds

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: FISH

Enumerated_Domain_Value_Definition: Fish

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: HABITAT

Enumerated_Domain_Value_Definition: Habitats and Plants

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: INVERT

Enumerated_Domain_Value_Definition: Invertebrates

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: M_MAMMAL

Enumerated_Domain_Value_Definition: Marine Mammals

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: REPTILE

Enumerated_Domain_Value_Definition: Reptiles and Amphibians

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: T_MAMMAL

Enumerated_Domain_Value_Definition: Terrestrial Mammals

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: SPECIES_ID

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: STATE

Attribute_Definition: Two-letter state abbreviation

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Two-letter state abbreviation

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: COUNTRY

Attribute_Definition: Two-letter country abbreviation

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Two-letter country abbreviation

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: U.S. Fish and Wildlife Service

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: T

Enumerated_Domain_Value_Definition: Threatened on state list

Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife

Service

*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* C*Enumerated_Domain_Value_Definition:* Species of Special Concern*Enumerated_Domain_Value_Definition_Source:* U.S. Fish and Wildlife Service*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:* U.S. Fish and Wildlife Service*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* T*Enumerated_Domain_Value_Definition:* Threatened on federal list*Enumerated_Domain_Value_Definition_Source:* U.S. Fish and Wildlife Service*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* C*Enumerated_Domain_Value_Definition:* Species of Special Concern*Enumerated_Domain_Value_Definition_Source:* U.S. Fish and Wildlife Service*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:* U.S. Fish and Wildlife Service*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* T*Enumerated_Domain_Value_Definition:* Threatened on international list*Enumerated_Domain_Value_Definition_Source:* U.S. Fish and Wildlife Service*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* C*Enumerated_Domain_Value_Definition:* Species of Special Concern*Enumerated_Domain_Value_Definition_Source:* U.S. Fish and Wildlife Service*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:* Numeric

Enumerated_Domain_Value_Definition: mmyyyy
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: Numeric

Enumerated_Domain_Value_Definition: mmyyyy

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: Numeric

Enumerated_Domain_Value_Definition: mmyyyy

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: EL_SPE

Attribute_Definition:

Concatenation of ELEMENT and SPECIES_ID. This item links the STATUS data table to the BIORRES 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 (eg. 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 New Hampshire

Distribution_Liability:

Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty.

NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer input peripherals, or when the physical medium is delivered in damaged condition.

Custom_Order_Process:

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

Metadata_Reference_Information:

Metadata_Date: 200403

Metadata_Review_Date: 200403

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 2.7.10 on Fri May 21 14:28:04 2004

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

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

Metadata:

- [Identification Information](#)
- [Data Quality Information](#)
- [Spatial Data Organization Information](#)
- [Spatial Reference Information](#)
- [Entity and Attribute Information](#)
- [Distribution Information](#)
- [Metadata Reference Information](#)

Identification_Information:

Citation:

Citation_Information:

Originator:

New Hampshire Department of Environmental Services, Concord, New Hampshire and the New Hampshire Estuaries Project, Portsmouth, New Hampshire.

Publication_Date: 200403

Title:

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

Edition: First

Geospatial_Data_Presentation_Form: Vector digital data

Series_Information:

Series_Name: None

Issue_Identification: New Hampshire

Publication_Information:

Publication_Place: Concord, New Hampshire

Publisher:

New Hampshire Department of Environmental Services and the New Hampshire Estuaries Project.

Other_Citation_Details:

Prepared by Research Planning, Inc., Columbia, South Carolina for the New Hampshire Department of Environmental Services, Concord, New Hampshire and the New Hampshire Estuaries Project, Portsmouth, New Hampshire. Formatted to national Environmental Sensitivity Index standards by National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington.

Description:

Abstract:

This data set contains sensitive biological resource data for submerged aquatic vegetation (SAV) in New Hampshire. Vector polygons in this data set represent habitat 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 New Hampshire. 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:

This data was collected, mapped, and digitized to provide environmental data for the New Hampshire Department of Environmental Services and the New Hampshire Estuaries Project response plans for immediate and effective protection of sensitive resources.

*Time_Period_of_Content:**Time_Period_Information:**Range_of_Dates/Times:*

Beginning_Date: 2003

Ending_Date: 2004

Currentness_Reference:

The biological data were compiled during 2003. The currentness dates for this data ranges from 1996 to 2003 and is documented in the Source_Information section.

Status:

Progress: Complete

Maintenance_and_Update_Frequency: None Scheduled

*Spatial_Domain:**Bounding_Coordinates:*

West_Bounding_Coordinate: -71.000

East_Bounding_Coordinate: -70.533

North_Bounding_Coordinate: 43.250

South_Bounding_Coordinate: 42.867

*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: New Hampshire

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 New Hampshire ESI data.

Browse_Graphic_File_Type: JPEG

Data_Set_Credit:

The New Hampshire Department of Environmental Services and the New Hampshire Estuaries Project supported this project. Steve Croce with New Hampshire Department of Environmental Services served as contract manager for the project. Carroll Brown, Jr. and Lynn Woodard with New Hampshire Department of Environmental Services contributed significantly to the project, as did Phil Trowbridge with the New Hampshire Estuaries Project and individuals from several state and federal agencies and other organizations. At Research Planning, Inc. (RPI), Heidi Hinkeldey was the project

manager. Lee Diveley performed the data processing under the supervision of Mark White, GIS Manager. Heidi Hinkeldey, Chris Locke, and Vermell Pyatt prepared the final metadata.

Native_Data_Set_Environment:

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) and SQL SERVER(r) (version 7.0). The hardware configuration is PC's with Windows Operating System (NT4.0/2000). The Spatial_Data_Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: bio_lut.e00, birds.e00, biofile.e00, biores.e00, breed.e00, breed_dt.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, mgt.e00, nests.e00, reptiles.e00, seasonal.e00, soc_dat.e00, soc_lut.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, socecon, 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 node, etc.), and SQL SERVER(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resources at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

Completeness_Report:

These data represent a synthesis of expert knowledge on eelgrass distribution. These data do not represent total submerged aquatic vegetation distribution in New Hampshire. The following species are included in this data set: (Species_ID, Common Name, Scientific Name, if applicable): 1, Eelgrass, *Zostera marina*.

Positional_Accuracy:

Horizontal_Positional_Accuracy:

Horizontal_Positional_Accuracy_Report:

Some of the spatial components of the biological data sets are 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 basemaps with a scale of 1:24,000. The rest of the spatial components of the biological data sets are developed from pre-existing digital sources and reflect the positional accuracy of these original data. See the Lineage and Process_Description sections for more information on the original data source and how 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: Fred Short, UNH Seagrass Ecology Group

Publication_Date: 2003

Title:

Distribution and Abundance of Seagrass in New Hampshire
Estauries

Geospatial_Data_Presentation_Form: Expert Knowledge

Publication_Information:

Publication_Place: Unknown

Publisher: Unpublished

Type_of_Source_Media: Personal communication

Source_Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:

Calendar_Date: 2003

Source_Currentness_Reference: Date of communication

Source_Citation_Abbreviation: None

Source_Contribution: Habitat information

Source_Information:

Source_Citation:

Citation_Information:

Originator: Fred Short, UNH Seagrass Ecology Group

Publication_Date: 1996

Title: Eelgrass Beds

Geospatial_Data_Presentation_Form: Digital vector data

Publication_Information:

Publication_Place: Unknown

Publisher: Unpublished

Type_of_Source_Media: email

Source_Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:

Calendar_Date: 1996

Source_Currentness_Reference: Date of survey

Source_Citation_Abbreviation: None

Source_Contribution: Habitat information

Process_Step:

Process_Description:

The main source of data used to depict habitat distribution for this data layer was a 1996 digital data layer provided by Fred Short at the University of New Hampshire Seagrass Ecology Group. The data was incorporated into an ArcInfo system to create the HABITATS data layer. All ESI, biology, and human-use data was plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews was conducted to review the maps. Edits to the HABITATS data layer were made based on the recommendations of the resource experts, and final hardcopy maps were created.

Process_Date: 200403

Process_Contact:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization: Research Planning, Inc.

Contact_Person:

Heidi Hinkeldey - Biologist and Project Manager; Mark

A. White - GIS Department Manager

*Contact_Address:**Address_Type:* Physical address*Address:* 1121 Park Street*City:* Columbia*State_or_Province:* SC*Postal_Code:* 29201*Contact_Voice_Telephone:* (803) 256-7322*Contact_Facsimile_Telephone:* (803) 254-6445*Contact_Electronic_Mail_Address:* hhinkeldey@researchplanning.com;
mwhite@researchplanning.com*Spatial_Data_Organization_Information:**Direct_Spatial_Reference_Method:* Vector*Point_and_Vector_Object_Information:**SDTS_Terms_Description:**SDTS_Point_and_Vector_Object_Type:* GT-polygon composed of rings*Point_and_Vector_Object_Count:* 82*SDTS_Terms_Description:**SDTS_Point_and_Vector_Object_Type:* Area point*Point_and_Vector_Object_Count:* 82*SDTS_Terms_Description:**SDTS_Point_and_Vector_Object_Type:* Complete chain*Point_and_Vector_Object_Count:* 85*SDTS_Terms_Description:**SDTS_Point_and_Vector_Object_Type:* Link*Point_and_Vector_Object_Count:* 4748*SDTS_Terms_Description:**SDTS_Point_and_Vector_Object_Type:* Node, planar graph*Point_and_Vector_Object_Count:* 83*Spatial_Reference_Information:**Horizontal_Coordinate_System_Definition:**Geographic:**Latitude_Resolution:* 0.00005*Longitude_Resolution:* 0.00005*Geographic_Coordinate_Units:* Decimal degrees*Geodetic_Model:**Horizontal_Datum_Name:* D_North_American_1983*Ellipsoid_Name:* Geodetic Reference System 80*Semi-major_Axis:* 6378137*Denominator_of_Flattening_Ratio:* 298.257222*Entity_and_Attribute_Information:**Overview_Description:**Entity_and_Attribute_Overview:*

In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, HABITATS) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (for New Hampshire, the number is 77 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 representing 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. ID values of 9999 are holes in polygons and do not contain information.

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 (77), 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: 770300002

Range_Domain_Maximum: 770300083

Attribute:

Attribute_Label: RARNUM

Attribute_Definition:

An identifier that links directly to the BIORES table or the flat format BIOFILE table. RARNUM values of 0 are holes in the polygons and do not contain information.

Attribute_Definition_Source: NOAA

Attribute_Domain_Values:

*Range_Domain:**Range_Domain_Minimum:* 77000066*Range_Domain_Maximum:* 77000069*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 the polygons and do not contain information.

Attribute_Definition_Source: NOAA*Attribute_Domain_Values:**Range_Domain:**Range_Domain_Minimum:* 77000001*Range_Domain_Maximum:* 77000104*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 (77), 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:* 770100002*Range_Domain_Maximum:* 770900004*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:* 077000001*Range_Domain_Maximum:* 077000104*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 habitat at a particular location. Qualitative information on concentrations of eelgrass was provided in the digital data and are as follows: scarce ("s"), half ("h"), some bottom ("b"), and dense ("d").

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: SEASON_ID

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: G_SOURCE

Attribute_Definition:

Geographic source identifier that links records in the BIORES data table to records in the SOURCES data table.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: S_SOURCE

Attribute_Definition:

Seasonality source identifier that links records in the BIORES data table to records in the SOURCES data table.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: ELEMENT

Attribute_Definition: Major categories of biological data

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: BIRD

Enumerated_Domain_Value_Definition: Birds

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

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

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: HABITAT
Enumerated_Domain_Value_Definition: Habitats and plants
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

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

Attribute_Domain_Values:

Enumerated_Domain:

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

Attribute_Domain_Values:

Enumerated_Domain:

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

Attribute_Domain_Values:

Enumerated_Domain:

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

Attribute:

Attribute_Label: EL_SPE

Attribute_Definition:

Concatenation of ELEMENT and SPECIES_ID. This item links records in the BIORES data table to records in the SPECIES and STATUS data tables.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: E#####

Enumerated_Domain_Value_Definition:

Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (eg. 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 (eg. 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 list of layer specific species.

Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: SPECIES_ID

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: NAME

Attribute_Definition: Species common name

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Species common name for the entire ESI data set

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: GEN_SPEC

Attribute_Definition: Species scientific name

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Species scientific name for the entire ESI data set.

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: ELEMENT

Attribute_Definition: Major categories of biological data

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: BIRD

Enumerated_Domain_Value_Definition: Birds

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: FISH

Enumerated_Domain_Value_Definition: Fish

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: HABITAT

Enumerated_Domain_Value_Definition: Habitats and plants

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: INVERT

Enumerated_Domain_Value_Definition: Invertebrates

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

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

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

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

Attribute_Domain_Values:
 Enumerated_Domain:
 Enumerated_Domain_Value: alcid
 Enumerated_Domain_Value_Definition: Alcid
 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: 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
 Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
 Enumerated_Domain:
 Enumerated_Domain_Value: diving
 Enumerated_Domain_Value_Definition: Diving
 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:* freshwater*Enumerated_Domain_Value_Definition:* Freshwater*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:* 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*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*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:* 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:* Shrimps*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:* 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:* 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:* 0*Enumerated_Domain_Value_Definition:* Not ranked*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* Numeric*Enumerated_Domain_Value_Definition:* mmyyyy*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute:**Attribute_Label:* EL_SPE*Attribute_Definition:*

Concatenation of ELEMENT and SPECIES_ID. This item links records in the SPECIES data table to records in the BIORRES 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 (eg. 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 BIORRES 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 (eg. 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 BIORRES 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 (eg. 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.

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

present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: -

Enumerated_Domain_Value_Definition:

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

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: BREED2

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Y

Enumerated_Domain_Value_Definition: Life-history stage or activity present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: N

Enumerated_Domain_Value_Definition: Life-history stage or activity not present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: -

Enumerated_Domain_Value_Definition:

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

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: BREED3

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Y

Enumerated_Domain_Value_Definition: Life-history stage or activity present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: N

Enumerated_Domain_Value_Definition: Life-history stage or activity not present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: -

Enumerated_Domain_Value_Definition:

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

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: BREED4

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Y

Enumerated_Domain_Value_Definition: Life-history stage or activity present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: N

Enumerated_Domain_Value_Definition: Life-history stage or activity not present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: -

Enumerated_Domain_Value_Definition:

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

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: BREED5

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Y

Enumerated_Domain_Value_Definition: Life-history stage or activity present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: N

Enumerated_Domain_Value_Definition: Life-history stage or activity not present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: -

Enumerated_Domain_Value_Definition:

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

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

*Detailed_Description:**Entity_Type:**Entity_Type_Label:* SOURCES*Entity_Type_Definition:*

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

Entity_Type_Definition_Source: Research Planning, Inc.*Attribute:**Attribute_Label:* SOURCE_ID*Attribute_Definition:*

Source identifier that links records in the SOURCES data table to the items G_SOURCE and A_SOURCE in the SOC_DAT table, and to G_SOURCE and S_SOURCE in the BIORES table.

Attribute_Definition_Source: Research Planning, Inc.*Attribute_Domain_Values:**Range_Domain:**Range_Domain_Minimum:* 1*Range_Domain_Maximum:* N*Attribute:**Attribute_Label:* ORIGINATOR*Attribute_Definition:* Author or developer of source material or data set*Attribute_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* Any character*Enumerated_Domain_Value_Definition:* Free text*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute:**Attribute_Label:* DATE_PUB*Attribute_Definition:*

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

Attribute_Definition_Source: Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* Numeric*Enumerated_Domain_Value_Definition:* mmyyyy*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute:**Attribute_Label:* TITLE*Attribute_Definition:* Title of source material or data*Attribute_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* Any character*Enumerated_Domain_Value_Definition:* Free text*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute:**Attribute_Label:* DATA_FORMAT*Attribute_Definition:* The format of the source material*Attribute_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* Any character*Enumerated_Domain_Value_Definition:* Free text*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute:**Attribute_Label:* PUBLICATION

Attribute_Definition: Additional citation information

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: SCALE

Attribute_Definition: Scale denominator of the source

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: integer

Enumerated_Domain_Value_Definition: Any integer

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: TIME_PERIOD

Attribute_Definition:

Date(s) of data collection that the source material is based upon.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Numeric

Enumerated_Domain_Value_Definition: yyyy

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Detailed_Description:

Entity_Type:

Entity_Type_Label: STATUS

Entity_Type_Definition:

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

Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: ELEMENT

Attribute_Definition: Major categories of biological data

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: BIRD

Enumerated_Domain_Value_Definition: Birds

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: FISH

Enumerated_Domain_Value_Definition: Fish

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: HABITAT

Enumerated_Domain_Value_Definition: Habitats and Plants

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: INVERT

Enumerated_Domain_Value_Definition: Invertebrates

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

*Enumerated_Domain:**Enumerated_Domain_Value:* M_MAMMAL*Enumerated_Domain_Value_Definition:* Marine Mammals*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* REPTILE*Enumerated_Domain_Value_Definition:* Reptiles and Amphibians*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* T_MAMMAL*Enumerated_Domain_Value_Definition:* Terrestrial Mammals*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute:**Attribute_Label:* SPECIES_ID*Attribute_Definition:*

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

Attribute_Definition_Source: Research Planning, Inc.*Attribute_Domain_Values:**Range_Domain:**Range_Domain_Minimum:* 1*Range_Domain_Maximum:* N*Attribute:**Attribute_Label:* STATE*Attribute_Definition:* Two-letter state abbreviation*Attribute_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* Any character*Enumerated_Domain_Value_Definition:* Two-letter state abbreviation*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*Attribute:**Attribute_Label:* COUNTRY*Attribute_Definition:* Two-letter country abbreviation*Attribute_Definition_Source:* Research Planning, Inc.*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* Any character*Enumerated_Domain_Value_Definition:* Two-letter country abbreviation*Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.*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:* U.S. Fish and Wildlife Service*Attribute_Domain_Values:**Enumerated_Domain:**Enumerated_Domain_Value:* T*Enumerated_Domain_Value_Definition:* Threatened on state list*Enumerated_Domain_Value_Definition_Source:* U.S. Fish and Wildlife Service*Attribute_Domain_Values:**Enumerated_Domain:*

Enumerated_Domain_Value: C
Enumerated_Domain_Value_Definition: Species of Special Concern
Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service

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: U.S. Fish and Wildlife Service
 Attribute_Domain_Values:
 Enumerated_Domain:
 Enumerated_Domain_Value: T
 Enumerated_Domain_Value_Definition: Threatened on federal list
 Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service
 Attribute_Domain_Values:
 Enumerated_Domain:
 Enumerated_Domain_Value: C
 Enumerated_Domain_Value_Definition: Species of Special Concern
 Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service

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: U.S. Fish and Wildlife Service
 Attribute_Domain_Values:
 Enumerated_Domain:
 Enumerated_Domain_Value: T
 Enumerated_Domain_Value_Definition: Threatened on international list
 Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service
 Attribute_Domain_Values:
 Enumerated_Domain:
 Enumerated_Domain_Value: C
 Enumerated_Domain_Value_Definition: Species of Special Concern
 Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service

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: Numeric
 Enumerated_Domain_Value_Definition: mmyyyy
 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: Numeric

Enumerated_Domain_Value_Definition: mmyyyy

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: Numeric

Enumerated_Domain_Value_Definition: mmyyyy

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: EL_SPE

Attribute_Definition:

Concatenation of ELEMENT and SPECIES_ID. This item links the STATUS data table to the BIORRES 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 (eg. 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 New Hampshire

Distribution_Liability:

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

Custom_Order_Process:

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

*Metadata_Reference_Information:**Metadata_Date:* 200403*Metadata_Review_Date:* 200403*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 2.7.10 on Fri May 21 14:27:54 2004

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

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

Metadata:

- [Identification Information](#)
- [Data Quality Information](#)
- [Spatial Data Organization Information](#)
- [Spatial Reference Information](#)
- [Entity and Attribute Information](#)
- [Distribution Information](#)
- [Metadata Reference Information](#)

Identification_Information:

Citation:

Citation_Information:

Originator:

New Hampshire Department of Environmental Services, Concord, New Hampshire and the New Hampshire Estuaries Project, Portsmouth, New Hampshire.

Publication_Date: 200403

Title:

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

Edition: First

Geospatial_Data_Presentation_Form: Vector digital data

Series_Information:

Series_Name: None

Issue_Identification: New Hampshire

Publication_Information:

Publication_Place: Concord, New Hampshire

Publisher:

New Hampshire Department of Environmental Services and the New Hampshire Estuaries Project.

Other_Citation_Details:

Prepared by Research Planning, Inc., Columbia, South Carolina for the New Hampshire Department of Environmental Services, Concord, New Hampshire and the New Hampshire Estuaries Project, Portsmouth, New Hampshire. Formatted to national Environmental Sensitivity Index standards by National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington.

Description:

Abstract:

This data set contains management area data for special management areas, nature preserves, state/regional parks, and wildlife refuges in New Hampshire. Vector polygons in this data set represent management boundaries. 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 New Hampshire. 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 New Hampshire ESI database, for additional human-use information.

Purpose:

This data was collected, mapped, and digitized to provide environmental data for the New Hampshire Department of Environmental Services and the New Hampshire Estuaries Project response plans for immediate and effective protection of sensitive resources.

Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date: 2003

Ending_Date: 2004

Currentness_Reference:

The biological data were compiled during 2003. The currentness dates for these data ranges from 1953 to 2003 and is documented in the Source_Information section.

Status:

Progress: Complete

Maintenance_and_Update_Frequency: None Scheduled

Spatial_Domain:

Bounding_Coordinates:

West_Bounding_Coordinate: -71.000

East_Bounding_Coordinate: -70.533

North_Bounding_Coordinate: 43.250

South_Bounding_Coordinate: 42.867

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

Place:

Place_Keyword_Thesaurus: None

Place_Keyword: New Hampshire

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 New Hampshire ESI data.

Browse_Graphic_File_Type: JPEG

Data_Set_Credit:

The New Hampshire Department of Environmental Services and the New Hampshire Estuaries Project supported this project. Steve Croce with New Hampshire Department of Environmental Services served as contract manager for the project. Carroll Brown, Jr. and Lynn Woodard with New Hampshire Department of Environmental Services contributed significantly to the project, as did Phil

Trowbridge with the New Hampshire Estuaries Project and individuals from several state and federal agencies and other organizations. At Research Planning, Inc. (RPI), Heidi Hinkeldey was the project manager. Lee Diveley performed the data processing under the supervision of Mark White, GIS Manager. Heidi Hinkeldey, Chris Locke, and Vermell Pyatt prepared the final metadata.

Native_Data_Set_Environment:

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) and SQL SERVER(r) (version 7.0). The hardware configuration is PC's with Windows Operating System (NT4.0/2000). The Spatial_Data_Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: bio_lut.e00, birds.e00, biofile.e00, biores.e00, breed.e00, breed_dt.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, mgt.e00, nests.e00, reptiles.e00, seasonal.e00, soc_dat.e00, soc_lut.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, socecon, 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 node, etc.), and SQL SERVER(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks.

Completeness_Report:

These data represent a synthesis of digital management boundaries. Refer to the SOCECON data layer for additional human-use information. These data do not necessarily represent all management areas in New Hampshire.

Positional_Accuracy:

Horizontal_Positional_Accuracy:

Horizontal_Positional_Accuracy_Report:

The MGT data set was developed from pre-existing digital sources and reflects 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.

Lineage:

Source_Information:

Source_Citation:

Citation_Information:

Originator: Rich Langan, University of New Hampshire

Publication_Date: 2003

Title:

Distribution and Abundance of Fish and Invertebrates in New Hampshire Estuaries

Geospatial_Data_Presentation_Form: Expert Knowledge

Publication_Information:

Publication_Place: Unknown

Publisher: Unpublished
Type_of_Source_Media: Personal communication
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 2003
Source_Currentness_Reference: Date of communication
Source_Citation_Abbreviation: None
Source_Contribution: Aquaculture location data
Source_Information:
Source_Citation:
Citation_Information:
Originator: UNH, Complex Systems Research Center
Publication_Date: 1995
Title: New Hampshire Conservation/Public Lands at 1:24,000 Scale
Geospatial_Data_Presentation_Form: Digital Vector Data
Publication_Information:
Publication_Place: Durham, New Hampshire
Publisher: UNH, Complex Systems Research Center
Source_Scale_Denominator: 24000
Type_of_Source_Media: Online
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 1953
Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: Management Information
Source_Information:
Source_Citation:
Citation_Information:
Originator: National Park Service
Publication_Date: 1994
Title: National Register of Historical Places
Geospatial_Data_Presentation_Form: Digital Vector Data
Publication_Information:
Publication_Place: Durham, New Hampshire
Publisher: UNH, Complex Systems Research Center
Source_Scale_Denominator: Unknown
Type_of_Source_Media: Online
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 1994
Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: Management Information

*Process_Step:**Process_Description:*

The main sources of data used to depict management areas for this data layer were digital coverages of management area boundaries provided by the New Hampshire Department of Environmental Services and the New Hampshire Geographically Referenced Analysis and Information Transfer System (NH GRANIT). The MGT data layer was incorporated into an ArcInfo system along with the SOCECON and BIO data layers, and hardcopy draft maps were created using U.S. Geological Survey 1:24,000 topographic quadrangles as base maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews was conducted to review the maps. Participants who were unable to attend the meetings were sent a set of maps to review. Edits to the MGT data layer were made based on the recommendations of the resource experts, and final hardcopy maps were created.

Process_Date: 200403

Process_Contact:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization: Research Planning, Inc.

Contact_Person:

Heidi Hinkeldey - Biologist and Project Manager; Mark
A. White - GIS Department Manager

Contact_Address:

Address_Type: Physical address

Address: 1121 Park Street

City: Columbia

State_or_Province: SC

Postal_Code: 29201

Contact_Voice_Telephone: (803) 256-7322

Contact_Facsimile_Telephone: (803) 254-6445

Contact_Electronic_Mail_Address: hhinkeldey@researchplanning.com;
mwhite@researchplanning.com

Spatial_Data_Organization_Information:

Direct_Spatial_Reference_Method: Vector

Point_and_Vector_Object_Information:

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: GT-polygon composed of rings

Point_and_Vector_Object_Count: 39

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: Area point

Point_and_Vector_Object_Count: 39

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: Complete chain

Point_and_Vector_Object_Count: 40

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: Link

Point_and_Vector_Object_Count: 3218

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: Node, planar graph

Point_and_Vector_Object_Count: 40

Spatial_Reference_Information:

Horizontal_Coordinate_System_Definition:

Geographic:

Latitude_Resolution: 0.00005

Longitude_Resolution: 0.00005

Geographic_Coordinate_Units: Decimal degrees

Geodetic_Model:

Horizontal_Datum_Name: D_North_American_1983

Ellipsoid_Name: Geodetic Reference System 80

Semi-major_Axis: 6378137

Denominator_of_Flattening_Ratio: 298.257222

Entity_and_Attribute_Information:

Overview_Description:

Entity_and_Attribute_Overview:

In addition to the geographic data layers, two relational attribute or data tables, SOC_DAT

and SOURCES, are used to store the complex socioeconomic data in the ESI data structure. The geographic data layer containing socioeconomic resource information (in this case, 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 the New Hampshire atlas, the number is 77). ID is a unique combination of the atlas number (73), 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 boundaries. 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 Facility

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated_Domain_Value: HS

Enumerated_Domain_Value_Definition: Historical Site

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated_Domain_Value: MA

Enumerated_Domain_Value_Definition: Management Area

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated_Domain_Value: NC

Enumerated_Domain_Value_Definition: Nature Conservancy

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated_Domain_Value: P

Enumerated_Domain_Value_Definition: Park

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated_Domain_Value: WR

Enumerated_Domain_Value_Definition: Wildlife Refuge

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: 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: 77000004

Range_Domain_Maximum: 77000334

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 (77), element number (11), and record number.

Attribute_Definition_Source: NOAA

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 771100002

Range_Domain_Maximum: 771100040

Detailed_Description:

Entity_Type:

Entity_Type_Label: SOC_LUT

Entity_Type_Definition:

The data table SOC_LUT is a lookup table that contains items necessary for linking vector objects in the human-use data layers with the SOC_DAT data table. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: HUNUM

Attribute_Definition:

An identifier that links records in the SOC_LUT data table to records in the SOC_DAT data table.

Attribute_Definition_Source: NOAA

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 77000001

Range_Domain_Maximum: 77000334

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 (77), element number (11), and record number. ID values of 9999 are holes in the polygon and do not contain information.

Attribute_Definition_Source: NOAA

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 771000001

Range_Domain_Maximum: 771000040

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. HUNUM values of 0 are holes in the polygon and do not contain information.

Attribute_Definition_Source: NOAA

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 77000001

Range_Domain_Maximum: 77000334

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: AQUACULTURE

Enumerated_Domain_Value_Definition: Aquaculture

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated_Domain_Value: HISTORICAL SITE

Enumerated_Domain_Value_Definition: Historical Site

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated_Domain_Value: MANAGEMENT AREA

Enumerated_Domain_Value_Definition: Management Area

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated_Domain_Value: NATURE CONSERVANCY

Enumerated_Domain_Value_Definition: Nature Conservancy

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated_Domain_Value: PARK

Enumerated_Domain_Value_Definition: Park

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated_Domain_Value: WILDLIFE REFUGE

Enumerated_Domain_Value_Definition: Wildlife Refuge

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: NAME

Attribute_Definition: The feature name

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: CONTACT

Attribute_Definition: Contact person or entity

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: PHONE

Attribute_Definition: Contact telephone number

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: G_SOURCE

Attribute_Definition:

Geographic source integer identifier that links records in the SOC_DAT data table to records in the SOURCES data table.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: A_SOURCE

Attribute_Definition:

Attribute source integer identifier that links records in the SOC_DAT data table to records in the SOURCES data table.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Detailed_Description:

Entity_Type:

Entity_Type_Label: SOURCES

Entity_Type_Definition:

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

Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: SOURCE_ID

Attribute_Definition:

Source identifier that links records in the SOURCES data table to the items G_SOURCE and A_SOURCE in the SOC_DAT table, and to G_SOURCE and S_SOURCE in the BIORRES table.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: ORIGINATOR

Attribute_Definition: Author or developer of source material or data set

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: DATE_PUB

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Numeric

Enumerated_Domain_Value_Definition: mmyyyy

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

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

Attribute:

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

Attribute:

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

Attribute:

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

Attribute:

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

*Distribution_Information:**Distributor:**Contact_Information:**Contact_Person_Primary:**Contact_Person:* John Kaperick*Contact_Organization:* NOAA, Office of Response and Restoration*Contact_Address:**Address_Type:* Physical Address*Address:* 7600 Sand Point Way N.E.*City:* Seattle*State_or_Province:* Washington*Postal_Code:* 98115-6349

Contact_Voice_Telephone: (206) 526-6400

Contact_Facsimile_Telephone: (206) 526-6329

Resource_Description: ESI Atlas for New Hampshire

Distribution_Liability:

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

Custom_Order_Process:

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

Metadata_Reference_Information:

Metadata_Date: 200403

Metadata_Review_Date: 200403

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 2.7.10 on Fri May 21 14:27:59 2004

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

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

Metadata:

- [Identification Information](#)
- [Data Quality Information](#)
- [Spatial Data Organization Information](#)
- [Spatial Reference Information](#)
- [Entity and Attribute Information](#)
- [Distribution Information](#)
- [Metadata Reference Information](#)

Identification_Information:

Citation:

Citation_Information:

Originator:

New Hampshire Department of Environmental Services, Concord, New Hampshire and the New Hampshire Estuaries Project, Portsmouth, New Hampshire.

Publication_Date: 200403

Title:

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

Edition: First

Geospatial_Data_Presentation_Form: Vector digital data

Series_Information:

Series_Name: None

Issue_Identification: New Hampshire

Publication_Information:

Publication_Place: Concord, New Hampshire

Publisher:

New Hampshire Department of Environmental Services and the New Hampshire Estuaries Project.

Other_Citation_Details:

Prepared by Research Planning, Inc., Columbia, South Carolina for the New Hampshire Department of Environmental Services, Concord, New Hampshire and the New Hampshire Estuaries Project, Portsmouth, New Hampshire. Formatted to national Environmental Sensitivity Index standards by National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington.

Description:

Abstract:

This data set contains human-use resource data for airports, aquaculture sites, archaeological and historic sites, the U.S. Coast Guard station location, groundwater well sites, lock and dam locations, marinas, recreational beaches, recreational fishing, staging (access) areas, popular surfing locations, water intake sites, bridges, and state borders in New Hampshire. Vector points in this data set represent human-use site locations. Vector lines in this data set represent bridges and state borders. 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 New Hampshire. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources. See also the MGT data layer, part of the larger New Hampshire ESI database, for additional human-use information.

Purpose:

This data was collected, mapped, and digitized to provide environmental data for the New Hampshire Department of Environmental Services and the New Hampshire Estuaries Project response plans for immediate and effective protection of sensitive resources.

Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date: 2003

Ending_Date: 2004

Currentness_Reference:

The biological data were compiled during 2003. The currentness dates for this data ranges from 1994 to 2004 and is documented in the Source_Information section.

Status:

Progress: Complete

Maintenance_and_Update_Frequency: None Scheduled

Spatial_Domain:

Bounding_Coordinates:

West_Bounding_Coordinate: -71.000

East_Bounding_Coordinate: -70.533

North_Bounding_Coordinate: 43.250

South_Bounding_Coordinate: 42.867

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

Place:

Place_Keyword_Thesaurus: None

Place_Keyword: New Hampshire

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 New Hampshire ESI data.

Browse_Graphic_File_Type: JPEG

Data_Set_Credit:

The New Hampshire Department of Environmental Services and the New Hampshire Estuaries

Project supported this project. Steve Croce with New Hampshire Department of Environmental Services served as contract manager for the project. Carroll Brown, Jr. and Lynn Woodard with New Hampshire Department of Environmental Services contributed significantly to the project, as did Phil Trowbridge with the New Hampshire Estuaries Project and individuals from several state and federal agencies and other organizations. At Research Planning, Inc. (RPI), Heidi Hinkeldey was the project manager. Lee Diveley performed the data processing under the supervision of Mark White, GIS Manager. Heidi Hinkeldey, Chris Locke, and Vermell Pyatt prepared the final metadata.

Native_Data_Set_Environment:

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) and SQL SERVER(r) (version 7.0). The hardware configuration is PC's with Windows Operating System (NT4.0/2000). The Spatial_Data_Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: bio_lut.e00, birds.e00, biofile.e00, biores.e00, breed.e00, breed_dt.e00, esi.e00, fish.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m_mammal.e00, mgt.e00, nests.e00, reptiles.e00, seasonal.e00, soc_dat.e00, soc_lut.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, socecon, 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 node, etc.), and SQL SERVER(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks.

Completeness_Report:

These data represent a synthesis of expert knowledge, hardcopy maps, digital data, and reports depicting human-use site locations in New Hampshire. See also the MGT data layer, part of the larger New Hampshire ESI database, for additional human-use information. These data do not necessarily represent all human-use sites in New Hampshire.

Positional_Accuracy:

Horizontal_Positional_Accuracy:

Horizontal_Positional_Accuracy_Report:

The spatial components of the SOCECON data sets are developed from pre-existing digital and hardcopy sources and regional experts. It is difficult to estimate the positional accuracy of such data, except to state that hardcopy data were compiled on 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: New Hampshire Estuaries Project

Publication_Date: 2003

Title: New Hampshire Estuaries Monitoring Plan
Geospatial_Data_Presentation_Form: Digital Map
Publication_Information:
 Publication_Place: Portsmouth, NH
 Publisher: New Hampshire Estuaries Project
Type_of_Source_Media: Online
Source_Time_Period_of_Content:
 Time_Period_Information:
 Single_Date/Time:
 Calendar_Date: 2003
 Source_Currentness_Reference: Date of survey
Source_Citation_Abbreviation: None
Source_Contribution: Recreational beaches
Source_Information:
 Source_Citation:
 Citation_Information:
 Originator: New Hampshire Estuaries Project
 Publication_Date: 2002
 Title: New Hampshire Estuaries Indicator Report: Water Quality
 Geospatial_Data_Presentation_Form: Hardcopy text
 Publication_Information:
 Publication_Place: Portsmouth, NH
 Publisher: New Hampshire Estuaries Project
 Type_of_Source_Media: Online
 Source_Time_Period_of_Content:
 Time_Period_Information:
 Single_Date/Time:
 Calendar_Date: 2002
 Source_Currentness_Reference: Date of publication
 Source_Citation_Abbreviation: None
 Source_Contribution: Recreational beaches
Source_Information:
 Source_Citation:
 Citation_Information:
 Originator: NHDES Water Division, Dam Bureau
 Publication_Date: 2002
 Title: Dams
 Geospatial_Data_Presentation_Form: Digital Vector Data
 Publication_Information:
 Publication_Place: Unpublished
 Publisher: Unpublished
 Type_of_Source_Media: Email
 Source_Time_Period_of_Content:
 Time_Period_Information:
 Single_Date/Time:
 Calendar_Date: 2004
 Source_Currentness_Reference: Date of survey
 Source_Citation_Abbreviation: None
 Source_Contribution: Dam location and attribute information
Source_Information:
 Source_Citation:
 Citation_Information:
 Originator: Rich Langan, University of New Hampshire
 Publication_Date: Unpublished material
 Title:
 Distribution and Abundance of Fish and Invertebrates in New
 Hampshire Estuaries
 Geospatial_Data_Presentation_Form: Expert Knowledge
 Publication_Information:
 Publication_Place: Unknown

Publisher: Unknown
Type_of_Source_Media: Personal Communication
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 2003
Source_Currentness_Reference: Dates of communication
Source_Citation_Abbreviation: None
Source_Contribution:
 Aquaculture, water intakes, and popular surfing location information
Source_Information:
Source_Citation:
Citation_Information:
Originator: Brian Smith, Great Bay NERR
Publication_Date: 2003
Title:
 Distribution and Abundance of Fish and Invertebrates in New Hampshire Estuaries
Geospatial_Data_Presentation_Form: Expert Knowledge
Publication_Information:
Publication_Place: Unknown
Publisher: Unpublished
Source_Scale_Denominator: None
Type_of_Source_Media: Personal Communication
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 2003
Source_Currentness_Reference: Date of communication
Source_Citation_Abbreviation: None
Source_Contribution: Social economic information
Source_Information:
Source_Citation:
Citation_Information:
Originator: US Geological Survey
Publication_Date: 1999
Title: GNIS-Geographic Names Information Systems
Geospatial_Data_Presentation_Form: Digital Vector Map
Publication_Information:
Publication_Place: Durham, NH
Publisher: Complex Systems Research Center, UNH
Source_Scale_Denominator: 24000
Type_of_Source_Media: Online
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 1999
Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: Social economic information
Source_Information:
Source_Citation:
Citation_Information:
Originator: NHDES GIS Section
Publication_Date: 2002
Title: Boat Access and Staging Areas
Geospatial_Data_Presentation_Form: Digital Vector Data
Publication_Information:
Publication_Place: Concord, NH
Publisher: New Hampshire Department of Environmental Services

Type_of_Source_Media: Email
Source_Time_Period_of_Content:
 Time_Period_Information:
 Single_Date/Time:
 Calendar_Date: 2002
 Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: Social economic information
Source_Information:
 Source_Citation:
 Citation_Information:
 Originator: NHDES
 Publication_Date: 2003
 Title: Registered Water Users/Withdrawals
 Geospatial_Data_Presentation_Form: Digital Vector Data
 Publication_Information:
 Publication_Place: Concord, NH
 Publisher: NHDES
 Source_Scale_Denominator: 24000
 Type_of_Source_Media: Email
 Source_Time_Period_of_Content:
 Time_Period_Information:
 Single_Date/Time:
 Calendar_Date: 2003
 Source_Currentness_Reference: Date of publication
 Source_Citation_Abbreviation: None
 Source_Contribution: Social economic information
Source_Information:
 Source_Citation:
 Citation_Information:
 Originator: Graham Chantler, NHDES
 Publication_Date: Unknown
 Title: Pumpouts
 Geospatial_Data_Presentation_Form: Digital Vector Data
 Publication_Information:
 Publication_Place: Unknown
 Publisher: Unpublished
 Type_of_Source_Media: Email
 Source_Time_Period_of_Content:
 Time_Period_Information:
 Single_Date/Time:
 Calendar_Date: 2003
 Source_Currentness_Reference: Date of communication
 Source_Citation_Abbreviation: None
 Source_Contribution: Social economic information
Source_Information:
 Source_Citation:
 Citation_Information:
 Originator: Natinal Park Service
 Publication_Date: 1994
 Title: National Register of Historic Places
 Geospatial_Data_Presentation_Form: Digital vector data
 Publication_Information:
 Publication_Place: Durham, NH
 Publisher: Complex Systems Research Center, UNH
 Source_Scale_Denominator: Unknown
 Type_of_Source_Media: Online
 Source_Time_Period_of_Content:
 Time_Period_Information:
 Single_Date/Time:

Calendar_Date: 1994
Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: Social economic information
Source_Information:
Source_Citation:
Citation_Information:
Originator: NH Division of Historic Resources
Publication_Date: 1996
Title: Historic and Cultural Features Inventory
Geospatial_Data_Presentation_Form: Digital Vector Data
Publication_Information:
Publication_Place: Durham, NH
Publisher: Complex Systems Research Center, UNH
Source_Scale_Denominator: Unknown
Type_of_Source_Media: Online
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 1996
Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: Social economic information
Source_Information:
Source_Citation:
Citation_Information:
Originator: NHDES Water Division, Dam Bureau
Publication_Date: Unknown
Title: Dams
Geospatial_Data_Presentation_Form: Digital Vestor Data
Publication_Information:
Publication_Place: Unknown
Publisher: Unpublished
Type_of_Source_Media: Email
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 2004
Source_Currentness_Reference: Date of survey
Source_Citation_Abbreviation: None
Source_Contribution: Social economic information
Process_Step:
Process_Description:
 Three main sources of data were used to depict human-use resources for this data layer: 1) published maps and reports prepared by the New Hampshire Estuaries Program, 2) digital data provided by the New Hampshire Geographically Referenced Analysis and Information Transfer System (NH GRANIT), University of New Hampshire, National Park Service, U.S. Geological Survey, New Hampshire Department of Environmental Services, and the New Hampshire Division of Historic Resources; and 3) personal interviews with local resource experts.
Process_Date: 200403
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: Research Planning, Inc.
Contact_Person:
 Heidi Hinkeldey - Biologist and Project Manager; Mark
 A. White - GIS Department Manager
Contact_Address:
Address_Type: Physical address

Address: 1121 Park Street
 City: Columbia
 State_or_Province: SC
 Postal_Code: 29201
 Contact_Voice_Telephone: (803) 256-7322
 Contact_Facsimile_Telephone: (803) 254-6445
 Contact_Electronic_Mail_Address: hhinkeldey@researchplanning.com;
 mwhite@researchplanning.com

Spatial_Data_Organization_Information:

Direct_Spatial_Reference_Method: Vector

Point_and_Vector_Object_Information:

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: Complete Chain

Point_and_Vector_Object_Count: 70

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: Link

Point_and_Vector_Object_Count: 807

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: Entity Point

Point_and_Vector_Object_Count: 253

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: Node, planar graph

Point_and_Vector_Object_Count: 119

Spatial_Reference_Information:

Horizontal_Coordinate_System_Definition:

Geographic:

Latitude_Resolution: 0.00005

Longitude_Resolution: 0.00005

Geographic_Coordinate_Units: Decimal degrees

Geodetic_Model:

Horizontal_Datum_Name: D_North_American_1983

Ellipsoid_Name: Geodetic Reference System 80

Semi-major_Axis: 6378137

Denominator_of_Flattening_Ratio: 298.257222

Entity_and_Attribute_Information:

Overview_Description:

Entity_and_Attribute_Overview:

In addition to the geographic data layers, two relational attribute or data tables, SOC_DAT and SOURCES, are used to store the complex socioeconomic data in the ESI data structure. The geographic data layer containing socioeconomic resource information (in this case, 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 the New Hampshire atlas, the number is 77). ID is a unique combination of the atlas number (77), 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.AAT

Entity_Type_Definition:

The SOCECON.AAT table contains attribute information for the 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 or Bridge

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated_Domain_Value: SB

Enumerated_Domain_Value_Definition: State Boarder

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

*Detailed_Description:**Entity_Type:*

Entity_Type_Label: SOCECON.PAT

Entity_Type_Definition:

The SOCECON.PAT table contains attribute information for the vector points representing human-use site locations. Note that all attribute information is stored in a series of relational files, described below. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure

Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: TYPE

Attribute_Definition:

The human-use features depicted on the maps are those that could be impacted by an oil spill or could provide access for response operations

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: A

Enumerated_Domain_Value_Definition: AIRPORT

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated_Domain_Value: AQ

Enumerated_Domain_Value_Definition: AQUACULTURE FACILITY

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc

Enumerated_Domain:

Enumerated_Domain_Value: B

Enumerated_Domain_Value_Definition: BEACH

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc

Enumerated_Domain:

Enumerated_Domain_Value: CG

Enumerated_Domain_Value_Definition: COAST GUARD FACILITY

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc

Enumerated_Domain:

Enumerated_Domain_Value: HP

Enumerated_Domain_Value_Definition: HELIPORT

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc

Enumerated_Domain:

Enumerated_Domain_Value: HS

Enumerated_Domain_Value_Definition: HISTORICAL SITE

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc

Enumerated_Domain:

Enumerated_Domain_Value: LD

Enumerated_Domain_Value_Definition: LOCK AND DAM

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc

Enumerated_Domain:

Enumerated_Domain_Value: M

Enumerated_Domain_Value_Definition: MARINA

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc

Enumerated_Domain:

Enumerated_Domain_Value: RF

Enumerated_Domain_Value_Definition: RECREATIONAL FISHING

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc

Enumerated_Domain:

Enumerated_Domain_Value: S2

Enumerated_Domain_Value_Definition: SURFING

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc

Enumerated_Domain:

Enumerated_Domain_Value: ST

Enumerated_Domain_Value_Definition: STAGING SITE

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc

Enumerated_Domain:

Enumerated_Domain_Value: W

Enumerated_Domain_Value_Definition: WELL

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc

Enumerated_Domain:

Enumerated_Domain_Value: WI

Enumerated_Domain_Value_Definition: WATER INTAKE

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc

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: 77000001

Range_Domain_Maximum: 77000326

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 (77), element number (10), and record number.

Attribute_Definition_Source: NOAA

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 771000001

Range_Domain_Maximum: 771000253

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 the polygon and do not contain information.

Attribute_Definition_Source: NOAA

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 77000001

Range_Domain_Maximum: 77000334

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 (77), element number (10), and record number. ID values of 9999 are holes in the polygon and do not contain information.

Attribute_Definition_Source: NOAA

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 771000001

Range_Domain_Maximum: 771000040

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. HUNUM values of 0 are holes in the polygon and do not contain information.

Attribute_Definition_Source: NOAA

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 77000001

Range_Domain_Maximum: 77000334

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: AIRPORT

Enumerated_Domain_Value_Definition: Airport

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Enumerated_Domain:

Enumerated_Domain_Value: AQUACULTURE

Enumerated_Domain_Value_Definition: Aquaculture

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.
Enumerated_Domain:
Enumerated_Domain_Value: COAST GUARD
Enumerated_Domain_Value_Definition: Coast Guard
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: HELIPORT
Enumerated_Domain_Value_Definition: Heliport
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: HISTORICAL SITE
Enumerated_Domain_Value_Definition: Historical Site
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: LOCK AND DAM
Enumerated_Domain_Value_Definition: Lock and Dam
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: MARINA
Enumerated_Domain_Value_Definition: Marina
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: RECREATIONAL FISHING
Enumerated_Domain_Value_Definition: Recreational Fishing
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: STAGING
Enumerated_Domain_Value_Definition: Staging
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: SURFING
Enumerated_Domain_Value_Definition: Surfing
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: WATER INTAKE
Enumerated_Domain_Value_Definition: Water Intake
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: WELL
Enumerated_Domain_Value_Definition: Well
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: NAME
Attribute_Definition: The feature name
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:

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

Attribute:

Attribute_Label: CONTACT
Attribute_Definition: Contact person or entity
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:

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

Attribute:

Attribute_Label: PHONE

Attribute_Definition: Contact telephone number

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: G_SOURCE

Attribute_Definition:

Geographic source integer identifier that links records in the SOC_DAT data table to records in the SOURCES data table.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: A_SOURCE

Attribute_Definition:

Attribute source integer identifier that links records in the SOC_DAT data table to records in the SOURCES data table.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Detailed_Description:

Entity_Type:

Entity_Type_Label: SOURCES

Entity_Type_Definition:

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

Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: SOURCE_ID

Attribute_Definition:

Source identifier that links records in the SOURCES data table to the items G_SOURCE and A_SOURCE in the SOC_DAT table, and to G_SOURCE and S_SOURCE in the BIORRES table.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: ORIGINATOR

Attribute_Definition: Author or developer of source material or data set

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: DATE_PUB

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Numeric

Enumerated_Domain_Value_Definition: mmyyyy

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: TITLE

Attribute_Definition: Title of source material or data

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: DATA_FORMAT

Attribute_Definition: The format of the source material

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: PUBLICATION

Attribute_Definition: Additional citation information

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Any character

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: SCALE

Attribute_Definition: Scale denominator of the source

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: integer

Enumerated_Domain_Value_Definition: Any integer

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: TIME_PERIOD

Attribute_Definition:

Date(s) of data collection that the source material is based upon.

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Numeric

Enumerated_Domain_Value_Definition: yyyy

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Distribution_Information:

Distributor:

Contact_Information:

*Contact_Person_Primary:**Contact_Person:* John Kaperick*Contact_Organization:* NOAA, Office of Response and Restoration*Contact_Address:**Address_Type:* Physical Address*Address:* 7600 Sand Point Way N.E.*City:* Seattle*State_or_Province:* Washington*Postal_Code:* 98115-6349*Contact_Voice_Telephone:* (206) 526-6400*Contact_Facsimile_Telephone:* (206) 526-6329*Resource_Description:* ESI Atlas for New Hampshire*Distribution_Liability:*

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Custom_Order_Process:

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

*Metadata_Reference_Information:**Metadata_Date:* 200403*Metadata_Review_Date:* 200403*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

NewHampshire ESI Entity Relationship Diagram

March 18, 2004

Geographic Themes

Lookup Tables

Data Tables

