Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Northwest Arctic, Alaska: 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:
            National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.
         Publication_Date: 200208
         Title:
            Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Northwest Arctic, Alaska: HYDRO (Hydrography Lines and Polygons)
         Edition: First
         Geospatial_Data_Presentation_Form: Vector digital data
         Series_Information:
            Series_Name: None
            Issue_Identification: Northwest Arctic, Alaska
         Publication_Information:
            Publication_Place: Seattle, Washington
            Publisher:
               National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington.
         Other_Citation_Details:
            Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.
   Description:
      Abstract:
         This data set contains vector arcs and polygons representing coastal hydrography used in the creation of the Environmental Sensitivity Index (ESI) for Northwest Arctic, Alaska. 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 Northwest Arctic, Alaska. 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: 2001
            Ending_Date: 2002
      Currentness_Reference:
         These data were compiled during 2001-2002. The currentness dates for these data range from 1982 to 2001 and are documented in the Source_Information section.
   Status:
      Progress: Complete
      Maintenance_and_Update_Frequency: None Scheduled
   Spatial_Domain:
      Bounding_Coordinates:
         West_Bounding_Coordinate: -172.000
         East_Bounding_Coordinate: -159.667
         North_Bounding_Coordinate: 68.000
         South_Bounding_Coordinate: 62.700
   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: Northwest Arctic
Place_Keyword: Alaska
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:
Relationships between spatial data layers and attribute data tables for Northwest Arctic, Alaska ESI data.
Browse_Graphic_File_Type: JPEG
Data_Set_Credit:
This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.
Native_Data_Set_Environment:
The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.0.2) and ORACLE(r) RDBMS (version 8.0.5.0.0). The hardware configuration is Hewlett Packard workstations (models 715/50 and 712/80i) with UNIX operating system (HP-UX Release A.10.20), and PC's with Windows Operating System (NT4.0/2000).

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

Data_Quality_Information:
Attribute_Accuracy:
Attribute_Accuracy_Report:
A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.
Logical_Consistency_Report:
A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and ORACLE(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 Northwest Arctic, Alaska.
Positional_Accuracy:
Horizontal_Positional_Accuracy:
Horizontal_Positional_Accuracy_Report:
The hydrography data set was developed from pre-existing digital and hardcopy sources and reflects the positional accuracy of these original data. The horizontal positional accuracy of the 1:63,360 and 1:250,000 USGS topographic quads should conform to National Map Accuracy Standards at scales of 1:63,360 and 1:250,000. See the Lineage and Process_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.
Lineage:
Source_Information:
Source_Citation:
Citation_Information:
Originator: U. S. Geological Survey
Publication_Date: 1999
Title: DLG Hydrography
Geospatial_Data_Presentation_Form: Vector digital data
Source_Scale_Denominator: 63360
Type_of_Source_Media: Online
Source_Time_Period_of_Content:
Time_Period_Information:
Range_of_Dates/Times:
Beginning_Date: 1950
Ending_Date: 1997
Source_Currentness_Reference: ground condition

Source_Citation_Abbreviation: None
Source_Contribution: Shorelines
Source_Information:
  Source_Citation:
    Citation_Information:
      Originator: Alaska Department of Natural Resources
      Publication_Date: 1998
      Title: Alaska Coastline 1 to 63,360
      Geospatial_Data_Presentation_Form: Vector digital data
  Source_Scale_Denominator: 63360
  Type_of_Source_Media: CD-ROM
  Source_Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
        Calendar_Date: 1997
    Source_Currentness_Reference: Publication date
  Source_Citation_Abbreviation: None
  Source_Contribution: Shorelines
Source_Information:
  Source_Citation:
    Citation_Information:
      Originator: Colin Plank
      Publication_Date: Unpublished material
      Title: ESI Overflight
      Geospatial_Data_Presentation_Form: Hardcopy Map
  Source_Scale_Denominator: 63360
  Type_of_Source_Media: Paper
  Source_Time_Period_of_Content:
    Time_Period_Information:
      Single_Date/Time:
        Calendar_Date: 2001
    Source_Currentness_Reference: Date of overflight
  Source_Citation_Abbreviation: None
  Source_Contribution: Shorelines
Process_Step:
  Process_Description:
    The shoreline was derived primarily from digital coastline data from the U.S. Geological Survey (USGS) digital line graph (DLG) dataset, Alaska Department of Natural Resources (ADNR), and Research Planning, Inc. (RPI) 2001 Northwest Arctic, Alaska overflights. In some cases, gross shoreline changes or additional hydrography polygons were sketched during overflights conducted during the summer months of 2001. Overflight changes were digitized from the scanned and registered hardcopy field maps. Also, additional hydrographic features were digitized directly from USGS Digital Raster Graphs (DRG). And in some cases, minor hydrographic changes south of Cape Prince of Wales were digitized from the Norton Sound, Alaska ESI atlas published in 1983. After the initial shoreline classification, these data were edgematched and checked for logical consistency errors. Review maps were plotted at 1:63,360 scale for verification of polygonal and linear attributes.
  Process_Date: 200205
  Process_Contact:
    Contact_Information:
      Contact_Organization_Primary:
        Contact_Organization: NOAA, Office of Response and Restoration
        Contact_Person: Jill Petersen
      Contact_Address:
        Address_Type: Physical address
        Address: 7600 Sand Point Way, N.E.
        City: Seattle
        State_or_Province: Washington
        Postal_Code: 98115-6349
      Contact_Voice_Telephone: (206) 526-6944
      Contact_Facsimile_Telephone: (206) 526-6329
      Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

Spatial_Data_Organization_Information:
  Direct_Spatial_Reference_Method: Vector
  Point_and_Vector_Object_Information:
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: GT-polygon composed of rings
      Point_and_Vector_Object_Count: 57698
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Area point
      Point_and_Vector_Object_Count: 57698
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Complete chain
      Point_and_Vector_Object_Count: 108155
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Link
      Point_and_Vector_Object_Count: 2390383
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Label Point
      Point_and_Vector_Object_Count: 209

SDTS_Terms_Description:
    SDTS_Point_and_Vector_Object_Type: Node, planar graph
    Point_and_Vector_Object_Count: 94634

Spatial_Reference_Information:
    Horizontal_Coordinate_System_Definition:
        Geographic:
            Latitude_Resolution: 0.00005
            Longitude_Resolution: 0.00005
            Geographic_Coordinate_Units: Decimal degrees
        Geodetic_Model:
            Horizontal_Datum_Name: North American Datum of 1927
            Ellipsoid_Name: Clarke 1866
            Semi-major_Axis: 6378206.4
            Denominator_of_Flattening_Ratio: 294.978698

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.
                Enumerated_Domain:
                    Enumerated_Domain_Value: E
                    Enumerated_Domain_Value_Definition: Study Area Extent
                    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 (USGS DLG)
                    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
                Enumerated_Domain:
                    Enumerated_Domain_Value: 2
                    Enumerated_Domain_Value_Definition: Low-altitude overflights by Research Planning, Inc.
                    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
                Enumerated_Domain:
                    Enumerated_Domain_Value: 5
                    Enumerated_Domain_Value_Definition: Digitized from 1:63,360-USGS Digital Raster Graphics
                    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: 9
                    Enumerated_Domain_Value_Definition: Digital Shoreline from Alaska Department of Natural Resources
                    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 Northwest Arctic, Alaska
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: 200208
Metadata_Review_Date: 200208
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 2.7.27 on Thu Aug 29 23:19:54 2002

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Northwest Arctic, Alaska: 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:
        National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.
      Publication_Date: 200208
      Title:
        Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Northwest Arctic, Alaska: 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: Northwest Arctic, Alaska
      Publication_Information:
        Publication_Place: Seattle, Washington
        Publisher:
          National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington.
      Other_Citation_Details:
        Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.
  Description:
    Abstract:
      This data set contains vector lines and polygons representing the shoreline and coastal habitats of Northwest Arctic, Alaska classified according to the Environmental Sensitivity Index (ESI) classification system. This data set comprises a portion of the ESI for Northwest Arctic, Alaska. 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: 2001
        Ending_Date: 2002
    Currentness_Reference:
      These data were compiled during 2001-2002. The currentness dates for these data range from 1950 to 2001 and are documented in the Source_Information section.
  Status:
    Progress: Complete
    Maintenance_and_Update_Frequency: None Scheduled
  Spatial_Domain:
    Bounding_Coordinates:
      West_Bounding_Coordinate: -172.000
      East_Bounding_Coordinate: -159.667
      North_Bounding_Coordinate: 68.000
      South_Bounding_Coordinate: 62.700
  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: Northwest Arctic
Place_Keyword: Alaska
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:
Relationships between spatial data layers and attribute data tables for the Northwest Arctic, Alaska ESI data.
Browse_Graphic_File_Type: JPEG
Data_Set_Credit:
This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.
Native_Data_Set_Environment:
The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.0.2) and ORACLE(r) RDBMS (version 8.0.5.0.0). The hardware configuration is Hewlett Packard workstations (models 715/50 and 712/80i) with UNIX operating system (HP-UX Release A.10.20), and PC's with Windows Operating System (NT4.0/2000).

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Data_Quality_Information:
Attribute_Accuracy:
Attribute_Accuracy_Report:
A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.
Logical_Consistency_Report:
A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and ORACLE (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 1:63,360 U.S. Geological Survey (USGS) topographic quads should conform to National Map Accuracy Standards at scales of 1:63,360. 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
Publication_Date: Unpublished material
Title: ESI Overflight
Geospatial_Data_Presentation_Form: Hardcopy Map
Source_Scale_Denominator: 63360
Type_of_Source_Media: Paper
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 2001

Source_Currentness_Reference: Date of overflight
Source_Citation_Abbreviation: None
Source_Contribution: Digital Shoreline
Source_Information:
 Source_Citation:
  Citation_Information:
   Originator: Research Planning, Inc.
   Publication_Date: 1983
   Title: Norton Sound, Alaska ESI Atlas
   Geospatial_Data_Presentation_Form: Hardcopy Map
 Source_Scale_Denominator: 63360
 Type_of_Source_Media: Paper
 Source_Time_Period_of_Content:
  Time_Period_Information:
   Single_Date/Time:
    Calendar_Date: 1983
  Source_Currentness_Reference: Date of Atlas Publication
 Source_Citation_Abbreviation: None
 Source_Contribution: Digital Shoreline
Source_Information:
 Source_Citation:
  Citation_Information:
   Originator: U. S. Geological Survey
   Publication_Date: 1999
   Title: DLG Hydrography
   Geospatial_Data_Presentation_Form: Vector digital data
 Source_Scale_Denominator: 63360
 Type_of_Source_Media: Online
 Source_Time_Period_of_Content:
  Time_Period_Information:
   Range_of_Dates/Times:
    Beginning_Date: 1950
    Ending_Date: 1997
  Source_Currentness_Reference: ground condition
 Source_Citation_Abbreviation: None
 Source_Contribution: Shorelines
Process_Step:
 Process_Description:
  Overflights for Northwest Arctic, Alaska, north of Cape Prince of Wales, were conducted in July 2001. The overflights were conducted using fixed-wing aircraft operated by the U.S. Civil Air Patrol, flying at altitudes of 400-600 feet and slow air speeds. All flights were planned to maximize time on site during the 2.5 hours preceding and the 2.5 hours following peak low tide. During this work, the shoreline depicted on current 1:63,360-scale USGS topographic maps was annotated with the ESI ranking of observed intertidal shoreline habitats. Where appropriate, revisions to the existing shoreline were made and where necessary, multiple habitats were described for each shoreline segment. ESI classifications for shoreline south of Cape Prince of Wales were digitized from the Norton Sound, Alaska ESI atlas published in 1983. Coastal wetlands, while extensive in the region, were not mapped as polygonal features. The shoreline of St. Lawrence Island was not classified due to its remoteness.
 Process_Date: 200205
 Process_Contact:
  Contact_Information:
   Contact_Organization_Primary:
    Contact_Organization: NOAA, Office of Response and Restoration
    Contact_Person: Jill Petersen
   Contact_Address:
    Address_Type: Physical address
    Address: 7600 Sand Point Way, N.E.
    City: Seattle
    State_or_Province: Washington
    Postal_Code: 98115-6349
   Contact_Voice_Telephone: (206) 526-6944
   Contact_Facsimile_Telephone: (206) 526-6329
   Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

Spatial_Data_Organization_Information:
 Direct_Spatial_Reference_Method: Vector
 Point_and_Vector_Object_Information:
  SDTS_Terms_Description:
   SDTS_Point_and_Vector_Object_Type: GT-polygon composed of rings
   Point_and_Vector_Object_Count: 3276
  SDTS_Terms_Description:
   SDTS_Point_and_Vector_Object_Type: Area point
   Point_and_Vector_Object_Count: 3276
  SDTS_Terms_Description:
   SDTS_Point_and_Vector_Object_Type: Complete chain
   Point_and_Vector_Object_Count: 11839
  SDTS_Terms_Description:
   SDTS_Point_and_Vector_Object_Type: Link
   Point_and_Vector_Object_Count: 540653
  SDTS_Terms_Description:

       SDTS_Point_and_Vector_Object_Type: Node, planar graph
       Point_and_Vector_Object_Count: 11799

Spatial_Reference_Information:
    Horizontal_Coordinate_System_Definition:
       Geographic:
          Latitude_Resolution: 0.00005
          Longitude_Resolution: 0.00005
          Geographic_Coordinate_Units: Decimal degrees
       Geodetic_Model:
          Horizontal_Datum_Name: North American Datum of 1927
          Ellipsoid_Name: Clarke 1866
          Semi-major_Axis: 6378206.4
          Denominator_of_Flattening_Ratio: 294.978698

Entity_and_Attribute_Information:
    Detailed_Description:
       Entity_Type:
          Entity_Type_Label: ESI.AAT
          Entity_Type_Definition:
             The ESI.AAT table contains attribute information for the vector lines representing linear shoreline features with ESI classification.
          Entity_Type_Definition_Source: Research Planning, Inc.
       Attribute:
          Attribute_Label: ESI
          Attribute_Definition:
             The item ESI contains values representing the ESI shoreline type. In many cases shorelines are ranked with multiple codes, such as "6B/3A" (listed landward to seaward from left to right). The first code, "6B", is the most landward shoreline type and the second code, "3A", is the shoreline type closest to the water. Singular shoreline types are listed below. No multiple codes are listed, but all multiple codes included in the data set can be assembled from the codes described. The ESI rankings progress from low to high susceptibility to oil spills. To determine the sensitivity of a particular intertidal shoreline habitat, the following factors are integrated: 1) Shoreline type (substrate, grain size, tidal elevation, origin); 2) Exposure to wave and tidal energy; 3) Biological productivity and sensitivity; 4) Ease of cleanup. Prediction of the behavior and persistence of oil in intertidal habitats is based on an understanding of the dynamics of the coastal environments, not just the substrate type and grain size. The intensity of energy expended upon a shoreline by wave action, tidal currents, and river currents directly 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, Mud, or Clay
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
             Enumerated_Domain:
                Enumerated_Domain_Value: 2B
                Enumerated_Domain_Value_Definition: Exposed Scarps and Steep Slopes in Clay
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
             Enumerated_Domain:
                Enumerated_Domain_Value: 3A
                Enumerated_Domain_Value_Definition: Fine- to Medium-grained Sand Beaches
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
             Enumerated_Domain:
                Enumerated_Domain_Value: 3B
                Enumerated_Domain_Value_Definition: Scarps and Steep Slopes in Sand
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
             Enumerated_Domain:
                Enumerated_Domain_Value: 3C
                Enumerated_Domain_Value_Definition: Tundra Cliffs
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
             Enumerated_Domain:
                Enumerated_Domain_Value: 4
                Enumerated_Domain_Value_Definition: Coarse-Grained Sand Beaches
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
             Enumerated_Domain:
                Enumerated_Domain_Value: 5
                Enumerated_Domain_Value_Definition: Mixed Sand and Gravel Beaches
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
             Enumerated_Domain:

Enumerated_Domain_Value: 6A
Enumerated_Domain_Value_Definition: Gravel Beaches
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: 6B
Enumerated_Domain_Value_Definition: Riprap
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: 7
Enumerated_Domain_Value_Definition: Exposed Tidal Flats
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: 8A
Enumerated_Domain_Value_Definition:
        Sheltered Rocky Shores and Sheltered Scarps in Bedrock, Mud, or Clay
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: 8E
Enumerated_Domain_Value_Definition: Peat Shorelines
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: 9A
Enumerated_Domain_Value_Definition: Sheltered Tidal Flats
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: 9B
Enumerated_Domain_Value_Definition: Vegetated Low Banks
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: 10A
Enumerated_Domain_Value_Definition: Salt- and Brackish-water Marsh
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: 10D
Enumerated_Domain_Value_Definition: Scrub-shrub Wetlands
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
Enumerated_Domain_Value: 10E
Enumerated_Domain_Value_Definition: Inundated Low-Lying Tundra
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: 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: 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: 1
        Enumerated_Domain_Value_Definition: Original digital data (USGS DLG)
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
      Enumerated_Domain:
        Enumerated_Domain_Value: 2
        Enumerated_Domain_Value_Definition: Low-altitude overflights by Research Planning, Inc.
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
      Enumerated_Domain:
        Enumerated_Domain_Value: 5
        Enumerated_Domain_Value_Definition: Digitized from 1:63,360-USGS Digital Raster Graphics
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
      Enumerated_Domain:
        Enumerated_Domain_Value: 8
        Enumerated_Domain_Value_Definition:
           Digitized from scanned Norton Sound, Alaska ESI Atlas, published in 1983
        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.
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. The ESI rankings progress from low to high susceptibility to oil spills.
      The ESI rankings of polygons are similar to the ESI rankings of shorelines (see the ESI attribute in the ESI.AAT section).
    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, Mud, or Clay
        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 Marshes
        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 Northwest Arctic, Alaska
  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: 200208
  Metadata_Review_Date: 200208
  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 2.7.27 on Thu Aug 29 23:31:02 2002

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Northwest Arctic, Alaska: 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:
                National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.
            Publication_Date: 200208
            Title:
                Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Northwest Arctic, Alaska: INDEX (Index Polygons)
            Edition: First
            Geospatial_Data_Presentation_Form: Vector digital data
            Series_Information:
                Series_Name: None
                Issue_Identification: Northwest Arctic, Alaska
            Publication_Information:
                Publication_Place: Seattle, Washington
                Publisher:
                    National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington.
            Other_Citation_Details:
                Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.
    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 Northwest Arctic, Alaska, as well as digital data extents. This data set comprises a portion of the ESI data for Northwest Arctic. 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: 2001
                Ending_Date: 2002
        Currentness_Reference:
            The data were compiled during 2001-2002. The currentness dates for these data are 1999 to 2002 and are documented in the Source_Information section.
    Status:
        Progress: Complete
        Maintenance_and_Update_Frequency: None Scheduled
    Spatial_Domain:
        Bounding_Coordinates:
            West_Bounding_Coordinate: -172.000
            East_Bounding_Coordinate: -159.667
            North_Bounding_Coordinate: 68.000
            South_Bounding_Coordinate: 62.700
    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: Northwest Arctic
 Place_Keyword: Alaska
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:
  Relationships between spatial data layers and attribute data tables for Northwest Arctic, Alaska ESI data.
 Browse_Graphic_File_Type: JPEG
Data_Set_Credit:
 This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.
Native_Data_Set_Environment:
 The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.0.2) and ORACLE(r) RDBMS (version 8.0.5.0.0). The hardware configuration is Hewlett Packard workstations (models 715/50 and 712/80i) with UNIX operating system (HP-UX Release A.10.20), and PC's with Windows Operating System (NT4.0/2000).

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

Data_Quality_Information:
 Attribute_Accuracy:
  Attribute_Accuracy_Report:
   A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.
  Logical_Consistency_Report:
   A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and ORACLE(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 Northwest Arctic, Alaska, as well as digital data extents. Primarily, 1:63,360 and 1:250,000 U.S. Geological Survey (USGS) topographic maps were used to provide boundaries for cartographic products. In most cases the polygons represent USGS topographic maps that were re-tiled, moved, or extended to provide better cartographic coverage of the study area. Polygons representing the outer extent of all digital data are included in this data layer.
  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 1:63,360 and 1:250,000 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: U.S. Geological Survey
     Publication_Date: Unknown
     Title: Topographic Quadrangles
     Geospatial_Data_Presentation_Form: vector digital data
     Publication_Information:
      Publication_Place: Denver, CO or Reston, VA
      Publisher: U.S. Geological Survey
   Source_Scale_Denominator: 63360
   Type_of_Source_Media: online
   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 U.S. Geological Survey (USGS) map corners, or appropriate coordinates.
  Process_Date: 200205
  Process_Contact:
    Contact_Information:
      Contact_Organization_Primary:
        Contact_Organization: NOAA, Office of Response and Restoration
        Contact_Person: Jill Petersen
      Contact_Address:
        Address_Type: Physical address
        Address: 7600 Sand Point Way, N.E.
        City: Seattle
        State_or_Province: Washington
        Postal_Code: 98115-6349
      Contact_Voice_Telephone: (206) 526-6944
      Contact_Facsimile_Telephone: (206) 526-6329
      Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

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Spatial_Data_Organization_Information:
  Direct_Spatial_Reference_Method: Vector
  Point_and_Vector_Object_Information:
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: GT-polygon composed of rings
      Point_and_Vector_Object_Count: 34
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Area point
      Point_and_Vector_Object_Count: 34
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Complete chain
      Point_and_Vector_Object_Count: 118
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Link
      Point_and_Vector_Object_Count: 2286
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Node, planar graph
      Point_and_Vector_Object_Count: 86

Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Geographic:
      Latitude_Resolution: 0.00005
      Longitude_Resolution: 0.00005
      Geographic_Coordinate_Units: Decimal degrees
    Geodetic_Model:
      Horizontal_Datum_Name: North American Datum of 1927
      Ellipsoid_Name: Clarke 1866
      Semi-major_Axis: 6378206.4
      Denominator_of_Flattening_Ratio: 294.978698

Entity_and_Attribute_Information:
  Detailed_Description:
    Entity_Type:
      Entity_Type_Label: INDEX.PAT
      Entity_Type_Definition:
        The INDEX.PAT table contains attribute information for the vector polygons representing the boundaries of the maps and digital data boundaries used in the creation of the Environmental Sensitivity Index (ESI) for Northwest Arctic, Alaska.
      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 34.
      Attribute_Definition_Source: Research Planning, Inc.
      Attribute_Domain_Values:
        Range_Domain:
          Range_Domain_Minimum: 1

        Range_Domain_Maximum: 34
    Attribute:
        Attribute_Label: TOPO-NAME
        Attribute_Definition: Topographic map names (not specified in this atlas)
        Attribute_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
            Enumerated_Domain:
                Enumerated_Domain_Value: Northwest Arctic, AK
                Enumerated_Domain_Value_Definition: Atlas 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: 250,000
                Enumerated_Domain_Value_Definition: Scale = 1:250,000
                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: -7.843
                Range_Domain_Maximum: 9.896
                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 Northwest Arctic, Alaska
    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: 200208
    Metadata_Review_Date: 200208
    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 2.7.27 on Thu Aug 29 23:24:42 2002

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Northwest Arctic, Alaska: 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:*
>>>> National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.
>>> *Publication_Date:* 200208
>>> *Title:*
>>>> Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Northwest Arctic, Alaska: BIRDS (Bird Polygons)
>>> *Edition:* First
>>> *Geospatial_Data_Presentation_Form:* Vector digital data
>>> *Series_Information:*
>>>> *Series_Name:* None
>>>> *Issue_Identification:* Northwest Arctic, Alaska
>>> *Publication_Information:*
>>>> *Publication_Place:* Seattle, Washington
>>>> *Publisher:*
>>>>> National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington.
>>> *Other_Citation_Details:*
>>>> Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.
> *Description:*
>> *Abstract:*
>>> This data set contains sensitive biological resource data for wading birds, shorebirds, waterfowl, raptors, diving birds, pelagic birds, and gulls/terns in Northwest Arctic, Alaska. Vector polygons in this data set represent locations of bird nesting, migratory staging, molting, 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. See also the NESTS (Nest Points) data layer, part of the larger Northwest Arctic database, for additional bird information.
>>>
>>> This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for Northwest Arctic, Alaska. 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:* 2001
>>>> *Ending_Date:* 2002
>> *Currentness_Reference:*
>>> The biological data were compiled during 2001-2002. The currentness dates for these data range from 1978 to 2002 and are documented in the Source_Information section.
> *Status:*
>> *Progress:* Complete
>> *Maintenance_and_Update_Frequency:* None Scheduled
> *Spatial_Domain:*
>> *Bounding_Coordinates:*
>>> *West_Bounding_Coordinate:* -172.000
>>> *East_Bounding_Coordinate:* -159.667
>>> *North_Bounding_Coordinate:* 68.000
>>> *South_Bounding_Coordinate:* 62.700
> *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: Northwest Arctic
Place_Keyword: Alaska
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:
Relationships between spatial data layers and attribute data tables for the Northwest Arctic, Alaska ESI data.
Browse_Graphic_File_Type: JPEG
Data_Set_Credit:
This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.
Native_Data_Set_Environment:
The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.0.2) and ORACLE(r) RDBMS (version 8.0.5.0.0). The hardware configuration is Hewlett Packard workstations (models 715/50 and 712/80i) with UNIX operating system (HP-UX Release A.10.20), and PC's with Windows Operating System (NT4.0/2000).

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

Data_Quality_Information:
Attribute_Accuracy:
Attribute_Accuracy_Report:
A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.
Logical_Consistency_Report:
A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and ORACLE (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 "resource at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.
Completeness_Report:
These data represent a synthesis of expert knowledge and available hardcopy reports and digital data on bird nesting, migratory staging, molting, and wintering concentration areas. Refer to the NESTS (Nest Points) data layer for additional nesting information. These data do not necessarily represent all bird occurrences in the Northwest Arctic. The following species are included in this data set (Species_ID, Common Name, Scientific Name, if applicable): 3, Red-throated loon, Gavia stellata; 4, Red-necked grebe, Podiceps grisegena; 11, Tundra swan, Cygnus columbianus; 12, Canada goose, Branta canadensis; 13, Brant, Branta bernicla; 14, Greater white-fronted goose, Anser albifrons; 15, Snow goose, Chen caerulescens; 16, Mallard, Anas platyrhynchos; 17, Northern pintail, Anas acuta; 18, Green-winged teal, Anas crecca; 20, Northern shoveler, Anas clypeata; 22, Greater scaup, Aythya marila; 27, Long-tailed duck, Clangula hyemalis; 29, White-winged scoter, Melanitta fusca; 30, Surf scoter, Melanitta perspicillata; 31, Pacific loon, Gavia pacifica; 33, Red-breasted merganser, Mergus serrator; 53, Red-necked phalarope, Phalaropus lobatus; 55, Whimbrel, Numenius phaeopus; 61, Pectoral sandpiper, Calidris melanotos; 63, Dunlin, Calidris alpina; 65, Long-billed dowitcher, Limnodromus scolopaceus; 66, Western sandpiper, Calidris mauri; 71, Black-bellied plover, Pluvialis squatarola; 73, Ruddy turnstone, Arenaria interpres; 80, Arctic tern, Sterna paradisaea; 81, Horned puffin, Fratercula corniculata; 84, Parakeet auklet, Aethia psittacula; 103, Common eider, Somateria mollissima; 156, Semipalmated sandpiper, Calidris pusilla; 157, Emperor goose, Chen canagica; 158, King eider, Somateria spectabilis; 159, Stellers eider, Polysticta stelleri; 160, Red phalarope, Phalaropus fulicaria; 161, Rock sandpiper, Calidris ptilocnemis; 164, American golden-plover, Pluvialis dominica; 165, Bar-tailed godwit, Limosa lapponica; 169, American wigeon, Anas americana; 172, Sandhill crane, Grus canadensis; 197, Black scoter, Melanitta nigra; 199, Pomarine jaeger, Stercorarius pomarinus; 273, Geese; 289, Hudsonian godwit, Limosa haemastica; 292, Sharp-tailed sandpiper, Calidris acuminata; 302, Scoters, Melanitta spp.; 408, Yellow-billed loon, Gavia adamsii; 413, Bristle-thighed curlew, Numenius tahitiensis; 415, Spectacled eider, Somateria fischeri;

462, Loons, Gavia spp.; 543, Pacific golden-plover, Pluvialis fulva; 1003, Waterfowl; 1013, Dabbling ducks; 1014, Diving ducks; 1022, Seabirds.

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 basemaps with a scale of 1:250,000. 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: U.S. Fish & Wildlife Service
                Publication_Date: Unpublished Material
                Title: Waterfowl breeding population surveys
                Geospatial_Data_Presentation_Form: Digital table
        Type_of_Source_Media: CD-ROM
        Source_Time_Period_of_Content:
            Time_Period_Information:
                Single_Date/Time:
                    Calendar_Date: 1993
            Source_Currentness_Reference: Date of survey
        Source_Citation_Abbreviation: None
        Source_Contribution: Bird information
    Source_Information:
        Source_Citation:
            Citation_Information:
                Originator: Larned, W. (USFWS, Soldotna)
                Publication_Date: Unpublished Material
                Title: Waterfowl nesting and concentration areas
                Geospatial_Data_Presentation_Form: Expert knowledge
        Type_of_Source_Media: CD-ROM
        Source_Time_Period_of_Content:
            Time_Period_Information:
                Single_Date/Time:
                    Calendar_Date: 2001
            Source_Currentness_Reference: Date of communication
        Source_Citation_Abbreviation: None
        Source_Contribution: Bird information
    Source_Information:
        Source_Citation:
            Citation_Information:
                Originator: USFWS, Kotzebue
                Publication_Date: Unpublished Material
                Title:
                    Coastal waterfowl survey on Selawik Island National Wildlife Refuge
                Geospatial_Data_Presentation_Form: Hardcopy table
        Type_of_Source_Media: CD-ROM
        Source_Time_Period_of_Content:
            Time_Period_Information:
                Single_Date/Time:
                    Calendar_Date: 2001
            Source_Currentness_Reference: Date of survey
        Source_Citation_Abbreviation: None
        Source_Contribution: Bird information
    Source_Information:
        Source_Citation:
            Citation_Information:
                Originator: Moran, T. (USFWS, Kotzebue)
                Publication_Date: Unpublished Material
                Title: Waterfowl seasonality
                Geospatial_Data_Presentation_Form: Expert knowledge
        Type_of_Source_Media: CD-ROM
        Source_Time_Period_of_Content:
            Time_Period_Information:
                Single_Date/Time:
                    Calendar_Date: 2001
            Source_Currentness_Reference: Date of communication
        Source_Citation_Abbreviation: None
        Source_Contribution: Bird information
    Source_Information:
        Source_Citation:
            Citation_Information:
                Originator: Gill, R.E., Jr., T.L. Tibbitts, & C.M. Handel
                Publication_Date: 2001
                Title:
                    Profiles of important shorebird sites in Alaska. Information and Technology Report USGS/BRD/ITR-2001-000X.

Geospatial_Data_Presentation_Form: Hardcopy text
Publication_Information:
 Publication_Place: Seattle, WA.
 Publisher: U.S. Government Printing Office
Type_of_Source_Media: CD-ROM
Source_Time_Period_of_Content:
 Time_Period_Information:
  Single_Date/Time:
   Calendar_Date: 2001
 Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: Bird information
Source_Information:
 Source_Citation:
  Citation_Information:
   Originator: Alaska Department of Fish and Game (ADF&G).
   Publication_Date: 1986
   Title:
    Alaska habitat management guide, arctic region, map atlas. 19 maps.
   Geospatial_Data_Presentation_Form: Hardcopy map
   Publication_Information:
    Publication_Place: Juneau, AK
    Publisher: State of Alaska, Department of Fish and Game, Habitat Division
 Source_Scale_Denominator: 1000000
 Type_of_Source_Media: CD-ROM
 Source_Time_Period_of_Content:
  Time_Period_Information:
   Single_Date/Time:
    Calendar_Date: 1986
  Source_Currentness_Reference: Date of publication
 Source_Citation_Abbreviation: None
 Source_Contribution: Bird information
Source_Information:
 Source_Citation:
  Citation_Information:
   Originator: Harris, R. (NPS, Nome)
   Publication_Date: Unpublished Material
   Title: Bird distribution and seasonality
   Geospatial_Data_Presentation_Form: Expert knowledge
 Type_of_Source_Media: CD-ROM
 Source_Time_Period_of_Content:
  Time_Period_Information:
   Single_Date/Time:
    Calendar_Date: 2001
  Source_Currentness_Reference: Date of communication
 Source_Citation_Abbreviation: None
 Source_Contribution: Bird information
Source_Information:
 Source_Citation:
  Citation_Information:
   Originator: Stephenson, S. (USFWS, Anchorage)
   Publication_Date: Unpublished Material
   Title: Nesting seabird seasonality
   Geospatial_Data_Presentation_Form: Expert knowledge
 Type_of_Source_Media: CD-ROM
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  Time_Period_Information:
   Single_Date/Time:
    Calendar_Date: 2001
  Source_Currentness_Reference: Date of communication
 Source_Citation_Abbreviation: None
 Source_Contribution: Bird information
Source_Information:
 Source_Citation:
  Citation_Information:
   Originator: Alaska Dept. of Fish & Game (ADF&G).
   Publication_Date: 1997
   Title: Most Environmentally Sensitive Areas (MESA) maps
   Geospatial_Data_Presentation_Form: Hardcopy map
   Publication_Information:
    Publication_Place: Anchorage, AK
    Publisher:
     Alaska Department of Fish & Game, Habitat and Restoration Division
 Type_of_Source_Media: CD-ROM
 Source_Time_Period_of_Content:
  Time_Period_Information:
   Single_Date/Time:
    Calendar_Date: 1997
  Source_Currentness_Reference: Date of publication

Source_Citation_Abbreviation: None
Source_Contribution: Bird information
Source_Information:
 Source_Citation:
  Citation_Information:
   Originator: U. S. Fish and Wildlife Service, Endangered Species Program
   Publication_Date: Unpublished Material
   Title:
    Spectacled eider critical habitat, wintering, and molting concentrations
   Geospatial_Data_Presentation_Form: Vector digital data
 Type_of_Source_Media: CD-ROM
 Source_Time_Period_of_Content:
  Time_Period_Information:
   Range_of_Dates/Times:
    Beginning_Date: 1993
    Ending_Date: 1999
  Source_Currentness_Reference: Date of survey
 Source_Citation_Abbreviation: None
 Source_Contribution: Bird information
Source_Information:
 Source_Citation:
  Citation_Information:
   Originator: Gill, R. (USGS, Anchorage)
   Publication_Date: Unpublished Material
   Title: Shorebird nesting and staging areas
   Geospatial_Data_Presentation_Form: Expert knowledge
 Type_of_Source_Media: CD-ROM
 Source_Time_Period_of_Content:
  Time_Period_Information:
   Single_Date/Time:
    Calendar_Date: 2002
  Source_Currentness_Reference: Date of communication
 Source_Citation_Abbreviation: None
 Source_Contribution: Bird information
Source_Information:
 Source_Citation:
  Citation_Information:
   Originator: Schmutz, J. (USGS, Anchorage)
   Publication_Date: Unpublished Material
   Title: Red-throated loon concentration areas
   Geospatial_Data_Presentation_Form: Expert knowledge
 Type_of_Source_Media: CD-ROM
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  Time_Period_Information:
   Single_Date/Time:
    Calendar_Date: 2001
  Source_Currentness_Reference: Date of communication
 Source_Citation_Abbreviation: None
 Source_Contribution: Bird information
Source_Information:
 Source_Citation:
  Citation_Information:
   Originator: Whiting, A. (Kotzebue IRA)
   Publication_Date: Unpublished Material
   Title: Bird concentration areas
   Geospatial_Data_Presentation_Form: Expert knowledge
 Type_of_Source_Media: CD-ROM
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   Single_Date/Time:
    Calendar_Date: 2002
  Source_Currentness_Reference: Date of communication
 Source_Citation_Abbreviation: None
 Source_Contribution: Bird information
Source_Information:
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  Citation_Information:
   Originator: Georgette, S. (ADF&G, Kotzebue)
   Publication_Date: Unpublished Material
   Title: Bird concentration areas
   Geospatial_Data_Presentation_Form: Expert knowledge
 Type_of_Source_Media: CD-ROM
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   Single_Date/Time:
    Calendar_Date: 2002
  Source_Currentness_Reference: Date of communication
 Source_Citation_Abbreviation: None
 Source_Contribution: Bird information

Source_Information:
    Source_Citation:
        Citation_Information:
            Originator: Kessel, B.
            Publication_Date: 1989
            Title: Birds of the Seward Peninsula, Alaska; 330 pp
            Geospatial_Data_Presentation_Form: Hardcopy text
            Publication_Information:
                Publication_Place: Fairbanks, AK
                Publisher: University of Alaska Press
    Type_of_Source_Media: CD-ROM
    Source_Time_Period_of_Content:
        Time_Period_Information:
            Single_Date/Time:
                Calendar_Date: 1989
        Source_Currentness_Reference: Date of publication
    Source_Citation_Abbreviation: None
    Source_Contribution: Bird information
Source_Information:
    Source_Citation:
        Citation_Information:
            Originator: Dau, C. (USFWS, Anchorage)
            Publication_Date: Unpublished Material
            Title: Waterfowl nesting and concentration areas
            Geospatial_Data_Presentation_Form: Expert knowledge
    Type_of_Source_Media: CD-ROM
    Source_Time_Period_of_Content:
        Time_Period_Information:
            Single_Date/Time:
                Calendar_Date: 2002
        Source_Currentness_Reference: Date of communication
    Source_Citation_Abbreviation: None
    Source_Contribution: Bird information
Source_Information:
    Source_Citation:
        Citation_Information:
            Originator: Shields, G.F. and L.J. Peyton
            Publication_Date: 1978
            Title:
                Avian community ecology of the Akulik-Inglutalik River Delta, Norton Bay, Alaska (Vol. 3 Biological Studies. Final Report. 87 pp.)
            Geospatial_Data_Presentation_Form: Hardcopy text
            Publication_Information:
                Publication_Place: Boulder, CO
                Publisher: NOAA-OCSEAP
    Type_of_Source_Media: CD-ROM
    Source_Time_Period_of_Content:
        Time_Period_Information:
            Single_Date/Time:
                Calendar_Date: 1978
        Source_Currentness_Reference: Date of publication
    Source_Citation_Abbreviation: None
    Source_Contribution: Bird information
Process_Step:
    Process_Description:
        Four main sources of data were used to depict bird distribution and seasonality for this data layer: 1) personal interviews with resource experts from U.S. Fish and Wildlife Service (USFWS), U.S. Geological Survey (USGS), National Park Service (NPS), Kotzebue IRA, and Alaska Department of Fish & Game (ADF&G); 2) numerous published and unpublished reports, maps, and survey data; 3) a 1989 book, Birds of the Seward Peninsula, Alaska, by B. Kessel; and 4) a 2001 USFWS vector polygon "Spectacled Eider Wintering and Molting Concentration Areas" coverage.

        Information gathered during initial interviews and from hardcopy sources was compiled onto USGS 1:250,000 topographic quadrangles. The compiled data were digitized off the base maps into an ArcInfo system to create the BIRDS data layer. The 2001 USFWS vector polygon data were then incorporated into this data layer. All ESI, biology, and human-use data were plotted onto hardcopy draft maps. Following the creation of draft maps, a second set of interviews with resource experts was conducted. Participants who were unable to attend the meetings were sent a set of maps for review. 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 "very high" or "high" were used, while for others, numerical counts of nests or individuals were used. Concentration ranges, such as "1,000s" or "10,000s", were used in many cases, as exact concentrations vary from year to year. Concentration and seasonality information was provided by resource experts, or was extracted from published sources, reports, and survey data. In some cases, no quantitative abundance data were available.
    Process_Date: 200205
    Process_Contact:
        Contact_Information:
            Contact_Organization_Primary:
                Contact_Organization: NOAA, Office of Response and Restoration
                Contact_Person: Jill Petersen
            Contact_Address:
                Address_Type: Physical address

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

Spatial_Data_Organization_Information:
  Direct_Spatial_Reference_Method: Vector
  Point_and_Vector_Object_Information:
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: GT-polygon composed of rings
      Point_and_Vector_Object_Count: 441
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Area point
      Point_and_Vector_Object_Count: 441
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Complete chain
      Point_and_Vector_Object_Count: 2454
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Link
      Point_and_Vector_Object_Count: 846022
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Node, planar graph
      Point_and_Vector_Object_Count: 2324

Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Geographic:
      Latitude_Resolution: 0.00005
      Longitude_Resolution: 0.00005
      Geographic_Coordinate_Units: Decimal degrees
    Geodetic_Model:
      Horizontal_Datum_Name: North American Datum of 1927
      Ellipsoid_Name: Clarke 1866
      Semi-major_Axis: 6378206.4
      Denominator_of_Flattening_Ratio: 294.978698

Entity_and_Attribute_Information:
  Overview_Description:
    Entity_and_Attribute_Overview:
      In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, BIRDS) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (for the Northwest Arctic atlas, the number is 73), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

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

      A second supporting data table is SOURCES. This is the same as the source file described above, and the link from the flat file is both G_SOURCE and S_SOURCE. It should be noted that although the flat file eases data query, it is not a normalized database structure, and actual updates performed by the states and other responsible agencies should be done using the relational data tables. The entity-relationship diagram describing relationships between attribute tables in the ESI data structure does NOT include the BIOFILE data table, and this data table is NOT described in detail below.
  Detailed_Description:
    Entity_Type:
      Entity_Type_Label: BIRDS.PAT
      Entity_Type_Definition:
        The BIRDS.PAT table contains attribute information for the vector polygons representing bird nesting, migratory staging, molting, 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 (73), 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: 730100002
            Range_Domain_Maximum: 730100434
   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: 73000001
            Range_Domain_Maximum: 73000201
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: 73000001
            Range_Domain_Maximum: 73000380
   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 (73), 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: 730100002
            Range_Domain_Maximum: 733400012
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: 073000001
            Range_Domain_Maximum: 073000380
   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. In this data layer, the field is populated with a numerical count of nests (XX NESTS or XX NESTS/KM2) or individual birds (XX), or a concentration range, such as "1,000s" or "10,000s". In cases where no quantitative count data was available, the field may contain (1) a term describing relative abundance of birds at a particular site, such as "VERY HIGH" or "HIGH"; (2) "UNKNOWN", if a count was not specified at the time of the survey; or (3) "-", if no concentration information was available from any source. 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 a list of layer-specific species.

Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: SPECIES_ID

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: NAME

Attribute_Definition: Species common name

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Species common name for the entire ESI data set

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: GEN_SPEC

Attribute_Definition: Species scientific name

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Species scientific name for the entire ESI data set

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: ELEMENT

Attribute_Definition: Major categories of biological data

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: BIRD

Enumerated_Domain_Value_Definition: Birds

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: FISH

Enumerated_Domain_Value_Definition: Fish

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: HABITAT

Enumerated_Domain_Value_Definition: Habitats and Plants

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

            Enumerated_Domain_Value: INVERT
            Enumerated_Domain_Value_Definition: Invertebrates
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
      Attribute_Domain_Values:
         Enumerated_Domain:
            Enumerated_Domain_Value: M_MAMMAL
            Enumerated_Domain_Value_Definition: Marine Mammals
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
      Attribute_Domain_Values:
         Enumerated_Domain:
            Enumerated_Domain_Value: REPTILE
            Enumerated_Domain_Value_Definition: Reptiles and Amphibians
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
      Attribute_Domain_Values:
         Enumerated_Domain:
            Enumerated_Domain_Value: T_MAMMAL
            Enumerated_Domain_Value_Definition: Terrestrial Mammals
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: SUBELEMENT
    Attribute_Definition: Element subgroup delineating a logical grouping of species
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
           Enumerated_Domain_Value: alcid
           Enumerated_Domain_Value_Definition: Alcid
           Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Enumerated_Domain:
           Enumerated_Domain_Value: anadromous
           Enumerated_Domain_Value_Definition: Anadromous
           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 fish
           Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
           Enumerated_Domain_Value: diving
           Enumerated_Domain_Value_Definition: Diving bird
           Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
           Enumerated_Domain_Value: e_nursery
           Enumerated_Domain_Value_Definition: Estuarine nursery fish
           Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
           Enumerated_Domain_Value: freshwater
           Enumerated_Domain_Value_Definition: Freshwater fish
           Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
           Enumerated_Domain_Value: gull_tern
           Enumerated_Domain_Value_Definition: Gull or tern
           Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
           Enumerated_Domain_Value: kelp
           Enumerated_Domain_Value_Definition: Kelp habitat, community, or species
           Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
           Enumerated_Domain_Value: m_benthic
           Enumerated_Domain_Value_Definition: Marine benthic fish
           Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
           Enumerated_Domain_Value: m_pelagic

Enumerated_Domain_Value_Definition: Marine pelagic fish
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: pelagic
        Enumerated_Domain_Value_Definition: Pelagic bird
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: pinniped
        Enumerated_Domain_Value_Definition: Pinniped
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: polar bear
        Enumerated_Domain_Value_Definition: Polar bear
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: raptor
        Enumerated_Domain_Value_Definition: Raptor
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: sav
        Enumerated_Domain_Value_Definition: Submersed aquatic vegetation
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: shorebird
        Enumerated_Domain_Value_Definition: Shorebird
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: ungulate
        Enumerated_Domain_Value_Definition: Ungulate
        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 BIORES and SEASONAL data tables.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:
    Enumerated_Domain_Value: E#######
    Enumerated_Domain_Value_Definition:
     Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the last two characters are SEASON_ID (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 = pre-nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning/mating; if ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M_MAMMAL" then BREED1 = mating. This attribute is not used for HABITAT or T_MAMMAL elements.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:
    Enumerated_Domain_Value: Y
    Enumerated_Domain_Value_Definition: Life-history stage or activity present
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:
    Enumerated_Domain_Value: N
    Enumerated_Domain_Value_Definition: Life-history stage or activity not present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: -
        Enumerated_Domain_Value_Definition:
            Breed category not used or not appropriate for record(s) in question
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: BREED2
    Attribute_Definition:
        Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = nesting; 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 = post-nesting; if ELEMENT is "FISH" then BREED3 = larvae; if ELEMENT is "INVERT" then BREED3 = larvae; if ELEMENT is "REPTILE" then BREED3 = internesting; if ELEMENT is "M_MAMMAL" then BREED3 = pupping. This attribute is not used for HABITAT or T_MAMMAL elements.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Y
            Enumerated_Domain_Value_Definition: Life-history stage or activity present
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: N
            Enumerated_Domain_Value_Definition: Life-history stage or activity not present
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: -
            Enumerated_Domain_Value_Definition:
                Breed category not used or not appropriate for record(s) in question
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: BREED4
    Attribute_Definition:
        Life history stage or activity type, where: if ELEMENT is "FISH" then BREED4 = juvenile; if ELEMENT is "INVERT" then BREED4 = juvenile; if ELEMENT is "REPTILE" then BREED4 = juvenile; if ELEMENT is "M_MAMMAL" then BREED4 = molting. This attribute is not used for BIRD, HABITAT, or T_MAMMAL elements.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Y
            Enumerated_Domain_Value_Definition: Life-history stage or activity present
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: N
            Enumerated_Domain_Value_Definition: Life-history stage or activity not present
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: -
            Enumerated_Domain_Value_Definition:
                Breed category not used or not appropriate for record(s) in question
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: BREED5
    Attribute_Definition:
        Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 = adults; if ELEMENT is "INVERT" then BREED5 =

adults; if ELEMENT is "REPTILE" then BREED5 = adults. This attribute is not used for BIRD, M_MAMMAL, HABITAT, or T_MAMMAL elements.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: Y
      Enumerated_Domain_Value_Definition: Life-history stage or activity present
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  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_Sand_Domain_Value: Any character
        Enumerated_Domain_Value_Definition: Two-letter state abbreviation
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: S_F
    Attribute_Definition: State and Federal status
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: F
            Enumerated_Domain_Value_Definition: Federally listed
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: S
            Enumerated_Domain_Value_Definition: State listed
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: S/F
            Enumerated_Domain_Value_Definition: State and federally listed
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: T_E
    Attribute_Definition: Threatened and endangered status.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: E
            Enumerated_Domain_Value_Definition: Endangered on state or federal list
            Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: T
            Enumerated_Domain_Value_Definition: Threatened on state or federal list
            Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service
    Attribute_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: DATE_PUB
    Attribute_Definition:
    Publication date of source material used to assign state and federal status values for each species, if used.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Numeric
            Enumerated_Domain_Value_Definition: mmyyyy
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: EL_SPE
    Attribute_Definition:
    Concatenation of ELEMENT and SPECIES_ID. This item links the STATUS data table to the BIORES and SPECIES data tables.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: E#####
            Enumerated_Domain_Value_Definition:
                Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (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 Northwest Arctic, Alaska
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: 200208
Metadata_Review_Date: 200208
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

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Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Northwest Arctic, Alaska: 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:
                National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.
            Publication_Date: 200208
            Title:
                Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Northwest Arctic, Alaska: NESTS (Nest Points)
            Edition: First
            Geospatial_Data_Presentation_Form: Vector digital data
            Series_Information:
                Series_Name: None
                Issue_Identification: Northwest Arctic, Alaska
            Publication_Information:
                Publication_Place: Seattle, Washington
                Publisher:
                    National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington.
            Other_Citation_Details:
                Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.
    Description:
        Abstract:
            This data set contains sensitive biological resource data for nesting birds in Northwest Arctic, Alaska. Vector points in this data set represent locations of nesting birds. 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. See also the BIRDS (Bird Polygons) data layer, part of the larger Northwest Arctic database, for additional bird information.

            This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for Northwest Arctic, Alaska. 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: 2001
                Ending_Date: 2002
        Currentness_Reference:
            The biological data were compiled during 2001-2002. The currentness dates for these data range from 1991 to 2001 and are documented in the Source_Information section.
    Status:
        Progress: Complete
        Maintenance_and_Update_Frequency: None Scheduled
    Spatial_Domain:
        Bounding_Coordinates:
            West_Bounding_Coordinate: -172.000
            East_Bounding_Coordinate: -159.667
            North_Bounding_Coordinate: 68.000
            South_Bounding_Coordinate: 62.700
    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: Northwest Arctic
Place_Keyword: Alaska
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:

Relationships between spatial data layers and attribute data tables for the Northwest Arctic, Alaska ESI data.
Browse_Graphic_File_Type: JPEG
Data_Set_Credit:

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.

Native_Data_Set_Environment:

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.0.2) and ORACLE(r) RDBMS (version 8.0.5.0.0). The hardware configuration is Hewlett Packard workstations (models 715/50 and 712/80i) with UNIX operating system (HP-UX Release A.10.20), and PC's with Windows Operating System (NT4.0/2000).

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

Data_Quality_Information:
Attribute_Accuracy:
Attribute_Accuracy_Report:

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

Logical_Consistency_Report:

A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and ORACLE(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 "resource at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

Completeness_Report:

These data represent a synthesis of expert knowledge, hardcopy reports, and digital data on bird nesting locations. Refer to the BIRDS (Bird Polygons) data layer for additional nesting information. These data do not necessarily represent all nesting colonies present in the Northwest Arctic. The following species are included in this data set (Species_ID, Common Name, Scientific Name, if applicable): 10, Pelagic cormorant, Phalacrocorax pelagicus; 38, Herring gull, Larus argentatus; 41, Mew gull, Larus canus; 46, Common murre, Uria aalge; 47, Pigeon guillemot, Cepphus columba; 51, Tufted puffin, Fratercula cirrhata; 79, Cormorant, Phalacrocorax sp.; 80, Arctic tern, Sterna paradisaea; 81, Horned puffin, Fratercula corniculata; 82, Glaucous gull, Larus hyperboreus; 84, Parakeet auklet, Aethia psittacula; 100, Black-legged kittiwake, Rissa tridactyla; 101, Aleutian tern, Sterna aleutica; 103, Common eider, Somateria mollissima; 104, Murre, Uria sp.; 105, Thick-billed murre, Uria lomvia; 109, Crested auklet, Aethia cristatella; 110, Dovekie, Alle alle; 111, Least auklet, Aethia pusilla; 112, Black guillemot, Cepphus grille; 285, Arctic peregrine falcon, Falco peregrinus tundrius; 415, Spectacled eider, Somateria fischeri; 626, American peregrine falcon, Falco peregrinus anatum.

Positional_Accuracy:
Horizontal_Positional_Accuracy:
Horizontal_Positional_Accuracy_Report:

This biological 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. 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: U.S. Fish and Wildlife Service
    Publication_Date: 2001
    Title: Beringian Seabird Colony Catalog -- computer database
    Geospatial_Data_Presentation_Form: Vector digital data
    Publication_Information:
     Publication_Place: Anchorage, AK
     Publisher: U.S. Fish and Wildlife Service, Migratory Bird Management
  Source_Scale_Denominator: 250000
  Type_of_Source_Media: CD-ROM
  Source_Time_Period_of_Content:
   Time_Period_Information:
    Single_Date/Time:
     Calendar_Date: 2001
   Source_Currentness_Reference: Date of survey
  Source_Citation_Abbreviation: None
  Source_Contribution: Nest information
 Source_Information:
  Source_Citation:
   Citation_Information:
    Originator: Alaska Dept. of Fish & Game (ADF&G)
    Publication_Date: Unpublished Material
    Title: Peregrine falcon nesting sites
    Geospatial_Data_Presentation_Form: Digital table
  Type_of_Source_Media: CD-ROM
  Source_Time_Period_of_Content:
   Time_Period_Information:
    Single_Date/Time:
     Calendar_Date: 1991
   Source_Currentness_Reference: Date of survey
  Source_Citation_Abbreviation: None
  Source_Contribution: Nest information
 Source_Information:
  Source_Citation:
   Citation_Information:
    Originator: Wright, J. (ADF&G, Fairbanks)
    Publication_Date: Unpublished Material
    Title: Peregrine falcon seasonality
    Geospatial_Data_Presentation_Form: Expert knowledge
  Type_of_Source_Media: CD-ROM
  Source_Time_Period_of_Content:
   Time_Period_Information:
    Single_Date/Time:
     Calendar_Date: 2001
   Source_Currentness_Reference: Date of communication
  Source_Citation_Abbreviation: None
  Source_Contribution: Nest information
 Source_Information:
  Source_Citation:
   Citation_Information:
    Originator: USFWS, Endangered Species Program
    Publication_Date: Unpublished Material
    Title: Peregrine falcon nesting sites
    Geospatial_Data_Presentation_Form: Vector digital data
  Type_of_Source_Media: CD-ROM
  Source_Time_Period_of_Content:
   Time_Period_Information:
    Single_Date/Time:
     Calendar_Date: 2001
   Source_Currentness_Reference: Date of delivery
  Source_Citation_Abbreviation: None
  Source_Contribution: Nest information
 Process_Step:
  Process_Description:

Three main sources of data were used to depict bird nesting locations for this data layer: 1) personal interviews with resource experts from U.S. Fish and Wildlife Service (USFWS) and Alaska Department of Fish and Game (ADF&G); 2) a 2001 USFWS "Beringian Seabird Colony Catalog" vector point coverage of seabird nesting sites and a 2001 USFWS vector point coverage of peregrine falcon nesting sites; and 3) 1991 ADF&G latitude/longitude data on the occurrence of peregrine falcon nesting sites.

Resource experts provided the digital coverages, latitude/longitude data, and seasonality information during an initial set of interviews. The 1991 ADF&G latitude/longitude data were converted into geographic point features and were combined with the 2001 USFWS seabird and peregrine falcon nesting site vector point data to create the NESTS data layer. The NESTS data layer was incorporated into an ArcInfo system along with the other biology data layers, and hardcopy draft maps were created using U.S. Geological Survey (USGS) 1:250,000 topographic quadrangles as base maps. Following the creation of draft maps, a second set of interviews was conducted with the resource experts. Participants who were unable to attend the meetings were sent a set of maps to review. Edits to the NESTS data layer were made based on the recommendations of the resource experts, and final hardcopy maps were created.

Process_Date: 200205
Process_Contact:
    Contact_Information:
        Contact_Organization_Primary:
            Contact_Organization: NOAA, Office of Response and Restoration
            Contact_Person: Jill Petersen
        Contact_Address:
            Address_Type: Physical address
            Address: 7600 Sand Point Way, N.E.
            City: Seattle
            State_or_Province: Washington
            Postal_Code: 98115-6349
        Contact_Voice_Telephone: (206) 526-6944
        Contact_Facsimile_Telephone: (206) 526-6329
        Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

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Spatial_Data_Organization_Information:
    Direct_Spatial_Reference_Method: Vector
    Point_and_Vector_Object_Information:
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: Entity Point
            Point_and_Vector_Object_Count: 176

Spatial_Reference_Information:
    Horizontal_Coordinate_System_Definition:
        Geographic:
            Latitude_Resolution: 0.00005
            Longitude_Resolution: 0.00005
            Geographic_Coordinate_Units: Decimal degrees
        Geodetic_Model:
            Horizontal_Datum_Name: North American Datum of 1927
            Ellipsoid_Name: Clarke 1866
            Semi-major_Axis: 6378206.4
            Denominator_of_Flattening_Ratio: 294.978698

Entity_and_Attribute_Information:
    Overview_Description:
        Entity_and_Attribute_Overview:
            In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, 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 Northwest Arctic atlas, the number is 73), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

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

            A second supporting data table is SOURCES. This is the same as the source file described above, and the link from the flat file is both G_SOURCE and S_SOURCE. It should be noted that although the flat file eases data query, it is not a normalized database structure, and actual updates performed by the states and other responsible agencies should be done using the relational data tables. The entity-relationship diagram describing relationships between attribute tables in the ESI data structure does NOT include the BIOFILE data table, and this data table is NOT described in detail below.
    Detailed_Description:
        Entity_Type:
            Entity_Type_Label: NESTS.PAT
            Entity_Type_Definition:
                The NESTS.PAT table contains attribute information for the vector points representing bird nesting sites. Note that all attribute information is stored in a series of relational files, described below. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.
            Entity_Type_Definition_Source: 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 (73), element number (5), and record number.
Attribute_Definition_Source: NOAA
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: 730500001
Range_Domain_Maximum: 730500176
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: 73000011
Range_Domain_Maximum: 73000141

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: 73000001
Range_Domain_Maximum: 73000380
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 (73), 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: 730100002
Range_Domain_Maximum: 733400012

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: 073000001
Range_Domain_Maximum: 073000380
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. In this data layer, the CONC field may contain counts of nests for each species present at a particular nesting site, or may contain counts of adult breeding individuals (XX PAIRS). In cases where no quantitative count was available, the field may contain the word "UNKNOWN", to indicate that no count was specified at the time of the survey, or a "-", to indicate that no concentration information was available from any source. Counts were derived from the last surveyed date at each location, and were extracted from the 2001 U.S Fish and Wildlife Service (USFWS) "Beringian Seabird Colony Catalog."
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 a list of layer-specific species.
  Entity_Type_Definition_Source: Research Planning, Inc.

 Attribute:
  Attribute_Label: SPECIES_ID
  Attribute_Definition:
   Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Range_Domain:
    Range_Domain_Minimum: 1
    Range_Domain_Maximum: N

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

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

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

   Enumerated_Domain_Value_Definition: Marine Mammals
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:
    Enumerated_Domain_Value: REPTILE
    Enumerated_Domain_Value_Definition: Reptiles and Amphibians
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:
    Enumerated_Domain_Value: T_MAMMAL
    Enumerated_Domain_Value_Definition: Terrestrial Mammals
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: SUBELEMENT
 Attribute_Definition: Element subgroup delineating a logical grouping of species
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: alcid
   Enumerated_Domain_Value_Definition: Alcid
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Enumerated_Domain:
   Enumerated_Domain_Value: anadromous
   Enumerated_Domain_Value_Definition: Anadromous
   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 fish
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: diving
   Enumerated_Domain_Value_Definition: Diving bird
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: e_nursery
   Enumerated_Domain_Value_Definition: Estuarine nursery fish
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: freshwater
   Enumerated_Domain_Value_Definition: Freshwater fish
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: gull_tern
   Enumerated_Domain_Value_Definition: Gull or tern
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: kelp
   Enumerated_Domain_Value_Definition: Kelp habitat, community, or species
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: m_benthic
   Enumerated_Domain_Value_Definition: Marine benthic fish
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: m_pelagic
   Enumerated_Domain_Value_Definition: Marine pelagic fish
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: pelagic
   Enumerated_Domain_Value_Definition: Pelagic bird

        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
      Enumerated_Domain:
        Enumerated_Domain_Value: pinniped
        Enumerated_Domain_Value_Definition: Pinniped
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
      Enumerated_Domain:
        Enumerated_Domain_Value: polar bear
        Enumerated_Domain_Value_Definition: Polar bear
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
      Enumerated_Domain:
        Enumerated_Domain_Value: raptor
        Enumerated_Domain_Value_Definition: Raptor
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
      Enumerated_Domain:
        Enumerated_Domain_Value: sav
        Enumerated_Domain_Value_Definition: Submersed aquatic vegetation
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
      Enumerated_Domain:
        Enumerated_Domain_Value: shorebird
        Enumerated_Domain_Value_Definition: Shorebird
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
      Enumerated_Domain:
        Enumerated_Domain_Value: ungulate
        Enumerated_Domain_Value_Definition: Ungulate
        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 BIORES
        and SEASONAL data tables.
        Attribute_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
            Enumerated_Domain:
                Enumerated_Domain_Value: E#######
                Enumerated_Domain_Value_Definition:
                    Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the last two characters are
                    SEASON_ID (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 = pre-nesting; if ELEMENT is "FISH" then BREED1 =
        spawning; if ELEMENT is "INVERT" then BREED1 = spawning/mating; if ELEMENT is "REPTILE" then BREED1 = nesting; if
        ELEMENT is "M_MAMMAL" then BREED1 = mating. This attribute is not used for HABITAT or T_MAMMAL elements.
        Attribute_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
            Enumerated_Domain:
                Enumerated_Domain_Value: Y
                Enumerated_Domain_Value_Definition: Life-history stage or activity present
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
            Enumerated_Domain:
                Enumerated_Domain_Value: N
                Enumerated_Domain_Value_Definition: Life-history stage or activity not present
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
            Enumerated_Domain:
                Enumerated_Domain_Value: -
                Enumerated_Domain_Value_Definition:
                    Breed category not used or not appropriate for record(s) in question
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
    Attribute_Label: BREED2
    Attribute_Definition:
        Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = nesting; 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 = post-nesting; if ELEMENT is "FISH" then BREED3 = larvae; if ELEMENT is "INVERT" then BREED3 = larvae; if ELEMENT is "REPTILE" then BREED3 = internesting; if ELEMENT is "M_MAMMAL" then BREED3 = pupping. This attribute is not used for HABITAT or T_MAMMAL elements.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Y
            Enumerated_Domain_Value_Definition: Life-history stage or activity present
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: N
            Enumerated_Domain_Value_Definition: Life-history stage or activity not present
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: -
            Enumerated_Domain_Value_Definition:
                Breed category not used or not appropriate for record(s) in question
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: BREED4
    Attribute_Definition:
        Life history stage or activity type, where: if ELEMENT is "FISH" then BREED4 = juvenile; if ELEMENT is "INVERT" then BREED4 = juvenile; if ELEMENT is "REPTILE" then BREED4 = juvenile; if ELEMENT is "M_MAMMAL" then BREED4 = molting. This attribute is not used for BIRD, HABITAT, or T_MAMMAL elements.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Y
            Enumerated_Domain_Value_Definition: Life-history stage or activity present
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: N
            Enumerated_Domain_Value_Definition: Life-history stage or activity not present
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: -
            Enumerated_Domain_Value_Definition:
                Breed category not used or not appropriate for record(s) in question
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: BREED5
    Attribute_Definition:
        Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 = adults; if ELEMENT is "INVERT" then BREED5 = adults; if ELEMENT is "REPTILE" then BREED5 = adults. This attribute is not used for BIRD, M_MAMMAL, HABITAT, or T_MAMMAL elements.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Y
            Enumerated_Domain_Value_Definition: Life-history stage or activity present

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
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: S_F
    Attribute_Definition: State and Federal status.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: F
            Enumerated_Domain_Value_Definition: Federally listed
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: S
            Enumerated_Domain_Value_Definition: State listed
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: S/F
            Enumerated_Domain_Value_Definition: State and federally listed
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: T_E
    Attribute_Definition: Threatened and endangered status.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: E
            Enumerated_Domain_Value_Definition: Endangered on state or federal list
            Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: T
            Enumerated_Domain_Value_Definition: Threatened on state or federal list
            Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service
    Attribute_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: DATE_PUB
    Attribute_Definition:
        Publication date of source material used to assign state and federal status values for each species, if used.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Numeric
            Enumerated_Domain_Value_Definition: mmyyyy
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: EL_SPE
    Attribute_Definition:
        Concatenation of ELEMENT and SPECIES_ID. This item links the STATUS data table to the BIORES and SPECIES data tables.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: E#####
            Enumerated_Domain_Value_Definition:
                Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (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 Northwest Arctic, Alaska
    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: 200208
    Metadata_Review_Date: 200208
    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 2.7.27 on Wed Aug 28 21:18:28 2002

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Northwest Arctic, Alaska: 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:
                National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.
            Publication_Date: 200208
            Title:
                Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Northwest Arctic, Alaska: FISH (Fish Polygons)
            Edition: First
            Geospatial_Data_Presentation_Form: Vector digital data
            Series_Information:
                Series_Name: None
                Issue_Identification: Northwest Arctic, Alaska
            Publication_Information:
                Publication_Place: Seattle, Washington
                Publisher:
                    National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington.
            Other_Citation_Details:
                Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.
    Description:
        Abstract:
            This data set contains sensitive biological resource data for marine, estuarine, freshwater, and anadromous fish species in Northwest Arctic, Alaska. 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. See also the FISHL (Fish Lines) data layer, part of the larger Northwest Arctic database, for additional anadromous fish information.

            This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for Northwest Arctic, Alaska. 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: 2001
                Ending_Date: 2002
        Currentness_Reference:
            The biological data were compiled during 2001-2002. The currentness dates for these data range from 1983 to 2002 and are documented in the Source_Information section.
    Status:
        Progress: Complete
        Maintenance_and_Update_Frequency: None Scheduled
    Spatial_Domain:
        Bounding_Coordinates:
            West_Bounding_Coordinate: -172.000
            East_Bounding_Coordinate: -159.667
            North_Bounding_Coordinate: 68.000
            South_Bounding_Coordinate: 62.700
    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: Northwest Arctic
Place_Keyword: Alaska
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:
Relationships between spatial data layers and attribute data tables for the Northwest Arctic, Alaska ESI data.
Browse_Graphic_File_Type: JPEG
Data_Set_Credit:
This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.
Native_Data_Set_Environment:
The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.0.2) and ORACLE(r) RDBMS (version 8.0.5.0.0). The hardware configuration is Hewlett Packard workstations (models 715/50 and 712/80i) with UNIX operating system (HP-UX Release A.10.20), and PC's with Windows Operating System (NT4.0/2000).

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

Data_Quality_Information:
Attribute_Accuracy:
Attribute_Accuracy_Report:
A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.
Logical_Consistency_Report:
A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and ORACLE(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 "resource at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.
Completeness_Report:
These data represent a synthesis of expert knowledge and available hardcopy maps. Refer to the FISHL (Fish Lines) data layer for additional information on anadromous fish species. These data do not represent all fish occurrences in the Northwest Arctic. The following species are included in this data set (Species_ID, Common Name, Scientific Name, if applicable): 7, Pacific halibut, Hippoglossus stenolepis; 12, Starry flounder, Platichthys stellatus; 66, Pacific herring, Clupea pallasi; 68, Chinook salmon, Oncorhynchus tshawytscha; 69, Coho salmon (silver), Oncorhynchus kisutch; 70, Pink salmon (humpy), Oncorhynchus gorbuscha; 71, Sockeye salmon (red), Oncorhynchus nerka; 72, Chum salmon (dog), Oncorhynchus keta; 84, Rainbow smelt, Osmerus mordax; 135, Dolly varden, Salvelinus malma; 185, Northern pike, Esox lucius; 189, Arctic char, Salvelinus alpinus; 237, Burbot, Lota lota; 697, Whitefish; 698, Sheefish, Stendous leucichthys nelma; 699, Saffron cod, Eleqinus gracilis.
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 1:250,000. 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: National Park Service (NPS), Nome
                Publication_Date: Unpublished Material
                Title: Norton Sound herring spawning areas
                Geospatial_Data_Presentation_Form: Hardcopy map
        Type_of_Source_Media: CD-ROM
        Source_Time_Period_of_Content:
            Time_Period_Information:
                Single_Date/Time:
                    Calendar_Date: 2001
            Source_Currentness_Reference: Date of communication
        Source_Citation_Abbreviation: None
        Source_Contribution: Fish information
    Source_Information:
        Source_Citation:
            Citation_Information:
                Originator: Lean, C. (NPS, Nome)
                Publication_Date: Unpublished Material
                Title: Fish and invertebrate concentration areas
                Geospatial_Data_Presentation_Form: Expert knowledge
        Type_of_Source_Media: CD-ROM
        Source_Time_Period_of_Content:
            Time_Period_Information:
                Single_Date/Time:
                    Calendar_Date: 2001
            Source_Currentness_Reference: Date of communication
        Source_Citation_Abbreviation: None
        Source_Contribution: Fish information
    Source_Information:
        Source_Citation:
            Citation_Information:
                Originator: Alaska Dept. of Fish & Game (ADF&G)
                Publication_Date: 1983
                Title: Offshore prospecting permits: coastal habitats
                Geospatial_Data_Presentation_Form: Hardcopy map
                Publication_Information:
                    Publication_Place: Juneau, AK
                    Publisher: Alaska Department of Fish & Game
        Source_Scale_Denominator: 250000
        Type_of_Source_Media: CD-ROM
        Source_Time_Period_of_Content:
            Time_Period_Information:
                Single_Date/Time:
                    Calendar_Date: 1983
            Source_Currentness_Reference: Date of publication
        Source_Citation_Abbreviation: None
        Source_Contribution: Fish information
    Source_Information:
        Source_Citation:
            Citation_Information:
                Originator: NANA Coastal Resource Service Area
                Publication_Date: 1985
                Title: NANA Region map atlas: coastal management plan
                Geospatial_Data_Presentation_Form: Hardcopy map
                Publication_Information:
                    Publication_Place: Alaska
                    Publisher: Alaska Coastal Management Program
        Source_Scale_Denominator: 250000
        Type_of_Source_Media: CD-ROM
        Source_Time_Period_of_Content:
            Time_Period_Information:
                Single_Date/Time:
                    Calendar_Date: 1985
            Source_Currentness_Reference: Date of publication
        Source_Citation_Abbreviation: None
        Source_Contribution: Fish information
    Source_Information:
        Source_Citation:
            Citation_Information:
                Originator: DeCicco, F. (ADF&G, Fairbanks)
                Publication_Date: Unpublished Material
                Title: Anadromous fish distribution and seasonality
                Geospatial_Data_Presentation_Form: Expert knowledge
        Type_of_Source_Media: CD-ROM
        Source_Time_Period_of_Content:

Time_Period_Information:
    Single_Date/Time:
        Calendar_Date: 2001
    Source_Currentness_Reference: Date of communication
Source_Citation_Abbreviation: None
Source_Contribution: Fish information
Source_Information:
    Source_Citation:
        Citation_Information:
            Originator: Alaska Dept of Fish and Game (ADF&G).
            Publication_Date: 1986
            Title:
                Alaska habitat management guide, arctic region, map atlas. 19 maps
            Geospatial_Data_Presentation_Form: Hardcopy map
            Publication_Information:
                Publication_Place: Juneau, AK
                Publisher: State of Alaska, Department of Fish and Game, Habitat Division
    Source_Scale_Denominator: 1000000
    Type_of_Source_Media: CD-ROM
    Source_Time_Period_of_Content:
        Time_Period_Information:
            Single_Date/Time:
                Calendar_Date: 1986
        Source_Currentness_Reference: Date of publication
    Source_Citation_Abbreviation: None
    Source_Contribution: Fish information
Source_Information:
    Source_Citation:
        Citation_Information:
            Originator: Alaska Dept. of Fish & Game (ADF&G)
            Publication_Date: 2001
            Title:
                Groundfish/shellfish statistical areas: chart 4 - northern Bering Sea
            Geospatial_Data_Presentation_Form: Hardcopy map
            Publication_Information:
                Publication_Place: Juneau, AK
                Publisher: Alaska Dept. of Fish & Game
    Source_Scale_Denominator: Unknown
    Type_of_Source_Media: CD-ROM
    Source_Time_Period_of_Content:
        Time_Period_Information:
            Single_Date/Time:
                Calendar_Date: 2001
        Source_Currentness_Reference: Date of publication
    Source_Citation_Abbreviation: None
    Source_Contribution: Fish information
Source_Information:
    Source_Citation:
        Citation_Information:
            Originator: Kinneen, S. (NSEDC)
            Publication_Date: Unpublished Material
            Title: Pacific halibut seasonality
            Geospatial_Data_Presentation_Form: Expert knowledge
    Type_of_Source_Media: CD-ROM
    Source_Time_Period_of_Content:
        Time_Period_Information:
            Single_Date/Time:
                Calendar_Date: 2001
        Source_Currentness_Reference: Date of communication
    Source_Citation_Abbreviation: None
    Source_Contribution: Fish information
Source_Information:
    Source_Citation:
        Citation_Information:
            Originator: Lean, C. (NPS); DeCicco, F. (ADF&G)
            Publication_Date: Unpublished Material
            Title: Anadromous fish seasonality
            Geospatial_Data_Presentation_Form: Expert knowledge
    Type_of_Source_Media: CD-ROM
    Source_Time_Period_of_Content:
        Time_Period_Information:
            Single_Date/Time:
                Calendar_Date: 2001
        Source_Currentness_Reference: Date of communication
    Source_Citation_Abbreviation: None
    Source_Contribution: Fish information
Source_Information:
    Source_Citation:
        Citation_Information:

Originator: Jones, W. (ADF&G, Nome)
Publication_Date: Unpublished Material
Title: Fish distribution
Geospatial_Data_Presentation_Form: Expert knowledge
Type_of_Source_Media: CD-ROM
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 2001
Source_Currentness_Reference: Date of communication
Source_Citation_Abbreviation: None
Source_Contribution: Fish information
Source_Information:
Source_Citation:
Citation_Information:
Originator: Pahlke, K (ADF&G, Juneau)
Publication_Date: Unpublished Material
Title: Capelin spawning areas and seasonality
Geospatial_Data_Presentation_Form: Expert knowledge
Type_of_Source_Media: CD-ROM
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 2002
Source_Currentness_Reference: Date of communication
Source_Citation_Abbreviation: None
Source_Contribution: Fish information
Process_Step:
Process_Description:
Two main sources of data were used to depict fish distribution and seasonality for this data layer: 1) personal interviews with resource experts from National Park Service (NPS), Norton Sound Economic Development Commission (NSEDC), and Alaska Department of Fish & Game (ADF&G); and 2) various hardcopy maps, including: a 2001 NPS Herring Spawning Areas map, a 2001 ADF&G Groundfish/Shellfish statistical areas chart, a 1985 Northwest Alaska Native Association (NANA) Region Map Atlas: Coastal Management Plan, 1983 ADF&G Offshore Prospecting Permits: Coastal Habitat Maps, and a 1986 ADF&G Habitat Management Guide, Arctic Region, Map Atlas.

Information gathered during initial interviews and from hardcopy maps was compiled onto U.S. Geological Survey (USGS) 1:250,000 topographic quadrangles. The compiled data were digitized off of the base maps into an ArcInfo system to create the FISH data layer. All ESI, biology, and human-use data were plotted onto hardcopy draft maps. Following the creation of draft maps, a second set of interviews with resource experts was conducted. Participants who were unable to attend the meetings were sent a set of maps to review. Edits to the FISH data layer were made based on the recommendations of the resource experts, and final hardcopy maps were created.

The resource experts provided concentration and seasonality information.
Process_Date: 200205
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: NOAA, Office of Response and Restoration
Contact_Person: Jill Petersen
Contact_Address:
Address_Type: Physical address
Address: 7600 Sand Point Way, N.E.
City: Seattle
State_or_Province: Washington
Postal_Code: 98115-6349
Contact_Voice_Telephone: (206) 526-6944
Contact_Facsimile_Telephone: (206) 526-6329
Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: GT-polygon composed of rings
Point_and_Vector_Object_Count: 1770
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Area point
Point_and_Vector_Object_Count: 1770
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Complete chain
Point_and_Vector_Object_Count: 4500
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Link
Point_and_Vector_Object_Count: 1171425
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Node, planar graph
Point_and_Vector_Object_Count: 4276

Spatial_Reference_Information:
    Horizontal_Coordinate_System_Definition:
        Geographic:
            Latitude_Resolution: 0.00005
            Longitude_Resolution: 0.00005
            Geographic_Coordinate_Units: Decimal degrees
        Geodetic_Model:
            Horizontal_Datum_Name: North American Datum of 1927
            Ellipsoid_Name: Clarke 1866
            Semi-major_Axis: 6378206.4
            Denominator_of_Flattening_Ratio: 294.978698

Entity_and_Attribute_Information:
    Overview_Description:
        Entity_and_Attribute_Overview:

In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, FISH) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (for the Northwest Arctic atlas, the number is 73) an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

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

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

    Detailed_Description:
        Entity_Type:
            Entity_Type_Label: FISH.PAT
            Entity_Type_Definition:

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

            Entity_Type_Definition_Source: Research Planning, Inc.
        Attribute:
            Attribute_Label: ID
            Attribute_Definition:

An identifier that links vector objects in the biology data layers to records in the BIO_LUT data table. ID is a concatenation of atlas number (73), 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: 730200002
                    Range_Domain_Maximum: 730201770
        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: 73000202
                    Range_Domain_Maximum: 73000314
    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: 73000001
      Range_Domain_Maximum: 73000380
   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 (73), 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: 730100002
      Range_Domain_Maximum: 733400012
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: 073000001
     Range_Domain_Maximum: 073000380
  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. The descriptive terms "VERY HIGH" or "HIGH" were used to describe the relative abundance of particular fish species at specific locations. In cases where no qualitative concentration information was available, this field contains a "-".
   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 a list of layer-specific species.
Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:
 Attribute_Label: SPECIES_ID
 Attribute_Definition:
  Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Range_Domain:
   Range_Domain_Minimum: 1
   Range_Domain_Maximum: N
Attribute:
 Attribute_Label: NAME
 Attribute_Definition: Species common name
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: Species common name for the entire ESI data set
   Enumerated_Domain_Value_Definition: Free text
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: GEN_SPEC
 Attribute_Definition: Species scientific name
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: Species scientific name for the entire ESI data set
   Enumerated_Domain_Value_Definition: Free text
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: ELEMENT
 Attribute_Definition: Major categories of biological data
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: BIRD
   Enumerated_Domain_Value_Definition: Birds
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: FISH
   Enumerated_Domain_Value_Definition: Fish
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: HABITAT
   Enumerated_Domain_Value_Definition: Habitats and Plants
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: INVERT
   Enumerated_Domain_Value_Definition: Invertebrates
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: M_MAMMAL
   Enumerated_Domain_Value_Definition: Marine Mammals
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: REPTILE
   Enumerated_Domain_Value_Definition: Reptiles and Amphibians
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: T_MAMMAL
   Enumerated_Domain_Value_Definition: Terrestrial Mammals
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: SUBELEMENT
 Attribute_Definition: Element subgroup delineating a logical grouping of species
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: alcid
   Enumerated_Domain_Value_Definition: Alcid
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Enumerated_Domain:
   Enumerated_Domain_Value: anadromous
   Enumerated_Domain_Value_Definition: Anadromous

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 fish
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: diving
        Enumerated_Domain_Value_Definition: Diving bird
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: e_nursery
        Enumerated_Domain_Value_Definition: Estuarine nursery fish
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: freshwater
        Enumerated_Domain_Value_Definition: Freshwater fish
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: gull_tern
        Enumerated_Domain_Value_Definition: Gull or tern
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: kelp
        Enumerated_Domain_Value_Definition: Kelp habitat, community, or species
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: m_benthic
        Enumerated_Domain_Value_Definition: Marine benthic fish
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: m_pelagic
        Enumerated_Domain_Value_Definition: Marine pelagic fish
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: pelagic
        Enumerated_Domain_Value_Definition: Pelagic bird
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: pinniped
        Enumerated_Domain_Value_Definition: Pinniped
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: polar bear
        Enumerated_Domain_Value_Definition: Polar bear
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: raptor
        Enumerated_Domain_Value_Definition: Raptor
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: sav
        Enumerated_Domain_Value_Definition: Submersed aquatic vegetation
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: shorebird

                    Enumerated_Domain_Value_Definition: Shorebird
                    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
            Attribute_Domain_Values:
                Enumerated_Domain:
                    Enumerated_Domain_Value: ungulate
                    Enumerated_Domain_Value_Definition: Ungulate
                    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 BIORES
   and SEASONAL data tables.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:
    Enumerated_Domain_Value: E#######
    Enumerated_Domain_Value_Definition:
     Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the last two characters are
     SEASON_ID (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 = pre-nesting; if ELEMENT is "FISH" then BREED1 =
   spawning; if ELEMENT is "INVERT" then BREED1 = spawning/mating; if ELEMENT is "REPTILE" then BREED1 = nesting; if
   ELEMENT is "M_MAMMAL" then BREED1 = mating. This attribute is not used for HABITAT or T_MAMMAL elements.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:
    Enumerated_Domain_Value: Y
    Enumerated_Domain_Value_Definition: Life-history stage or activity present
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:
    Enumerated_Domain_Value: N
    Enumerated_Domain_Value_Definition: Life-history stage or activity not present
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:
    Enumerated_Domain_Value: -
    Enumerated_Domain_Value_Definition:
     Breed category not used or not appropriate for record(s) in question
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
 Attribute:
  Attribute_Label: BREED2
  Attribute_Definition:
   Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = nesting; 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 = post-nesting; if ELEMENT is "FISH" then BREED3 = larvae; if ELEMENT is "INVERT" then BREED3 = larvae; if ELEMENT is "REPTILE" then BREED3 = internesting; if ELEMENT is "M_MAMMAL" then BREED3 = pupping. This attribute is not used for HABITAT or T_MAMMAL elements.

    Attribute_Definition_Source: Research Planning, Inc.

    Attribute_Domain_Values:

        Enumerated_Domain:

            Enumerated_Domain_Value: Y

            Enumerated_Domain_Value_Definition: Life-history stage or activity present

            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

    Attribute_Domain_Values:

        Enumerated_Domain:

            Enumerated_Domain_Value: N

            Enumerated_Domain_Value_Definition: Life-history stage or activity not present

            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

    Attribute_Domain_Values:

        Enumerated_Domain:

            Enumerated_Domain_Value: -

            Enumerated_Domain_Value_Definition:

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

            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

    Attribute_Label: BREED4

    Attribute_Definition:

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

    Attribute_Definition_Source: Research Planning, Inc.

    Attribute_Domain_Values:

        Enumerated_Domain:

            Enumerated_Domain_Value: Y

            Enumerated_Domain_Value_Definition: Life-history stage or activity present

            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

    Attribute_Domain_Values:

        Enumerated_Domain:

            Enumerated_Domain_Value: N

            Enumerated_Domain_Value_Definition: Life-history stage or activity not present

            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

    Attribute_Domain_Values:

        Enumerated_Domain:

            Enumerated_Domain_Value: -

            Enumerated_Domain_Value_Definition:

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

            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

    Attribute_Label: BREED5

    Attribute_Definition:

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

    Attribute_Definition_Source: Research Planning, Inc.

    Attribute_Domain_Values:

        Enumerated_Domain:

            Enumerated_Domain_Value: Y

            Enumerated_Domain_Value_Definition: Life-history stage or activity present

            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

    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: S_F
Attribute_Definition: State and Federal status.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: F
        Enumerated_Domain_Value_Definition: Federally listed
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: S
        Enumerated_Domain_Value_Definition: State listed
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: S/F
        Enumerated_Domain_Value_Definition: State and federally listed
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: T_E
Attribute_Definition: Threatened and endangered status.

Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: E
        Enumerated_Domain_Value_Definition: Endangered on state or federal list
        Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: T
        Enumerated_Domain_Value_Definition: Threatened on state or federal list
        Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service
Attribute_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: DATE_PUB
    Attribute_Definition:
        Publication date of source material used to assign state and federal status values for each species, if used.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Numeric
            Enumerated_Domain_Value_Definition: mmyyyy
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
    Attribute_Label: EL_SPE
    Attribute_Definition:
        Concatenation of ELEMENT and SPECIES_ID. This item links the STATUS data table to the BIORES and SPECIES data tables.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: E#####
            Enumerated_Domain_Value_Definition:
                Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (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 Northwest Arctic, Alaska
    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: 200208
    Metadata_Review_Date: 200208
    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 2.7.27 on Wed Aug 28 21:26:40 2002

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Northwest Arctic, Alaska: FISHL (Fish Lines)

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

Metadata:

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

Identification_Information:
    Citation:
        Citation_Information:
            Originator:
                National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.
            Publication_Date: 200208
            Title:
                Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Northwest Arctic, Alaska: FISHL (Fish Lines)
            Edition: First
            Geospatial_Data_Presentation_Form: Vector digital data
            Series_Information:
                Series_Name: None
                Issue_Identification: Northwest Arctic, Alaska
            Publication_Information:
                Publication_Place: Seattle, Washington
                Publisher:
                    National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington.
            Other_Citation_Details:
                Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.
    Description:
        Abstract:
            This data set contains sensitive biological resource data for anadromous fish species in Northwest Arctic, Alaska. Vector arcs in this data set represent species occurrences in streams. 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. See also the FISH (Fish Polygons) data layer, part of the larger Northwest Arctic database, for additional anadromous fish information.

            This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for Northwest Arctic, Alaska. 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: 2001
                Ending_Date: 2002
        Currentness_Reference:
            The biological data were compiled during 2001-2002. The currentness dates for these data range from 1998 to 2002 and are documented in the Source_Information section.
    Status:
        Progress: Complete
        Maintenance_and_Update_Frequency: None Scheduled
    Spatial_Domain:
        Bounding_Coordinates:
            West_Bounding_Coordinate: -172.000
            East_Bounding_Coordinate: -159.667
            North_Bounding_Coordinate: 68.000
            South_Bounding_Coordinate: 62.700
    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: Northwest Arctic
    Place_Keyword: Alaska
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:
Relationships between spatial data layers and attribute data tables for the Northwest Arctic, Alaska ESI data.
Browse_Graphic_File_Type: JPEG
Data_Set_Credit:
This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.
Native_Data_Set_Environment:
The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.0.2) and ORACLE(r) RDBMS (version 8.0.5.0.0). The hardware configuration is Hewlett Packard workstations (models 715/50 and 712/80i) with UNIX operating system (HP-UX Release A.10.20), and PC's with Windows Operating System (NT4.0/2000).

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

Data_Quality_Information:
Attribute_Accuracy:
Attribute_Accuracy_Report:
A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.
Logical_Consistency_Report:
A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and ORACLE(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 "resource at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.
Completeness_Report:
These data represent a synthesis of digital data, expert knowledge, and hardcopy maps on anadromous fish species distribution. Refer to the FISH (Fish Polygons) data layer for additional anadromous fish species occurrence data. These data do not necessarily represent all anadromous fish occurrences in the Northwest Arctic. The following species are included in this data set: (Species_ID, Common Name, Scientific Name, if applicable): 68, Chinook salmon, Oncorhynchus tshawytscha; 69, Coho salmon (silver), Oncorhynchus kisutch; 70, Pink salmon (humpy), Oncorhynchus gorbuscha; 71, Sockeye salmon (red), Oncorhynchus nerka; 72, Chum salmon (dog), Oncorhynchus keta; 135, Dolly varden, Salvelinus malma; 189, Arctic char, Salvelinus alpinus; 697, Whitefish; 698, Sheefish, Stendous leucichthys nelma.
Positional_Accuracy:
Horizontal_Positional_Accuracy:
Horizontal_Positional_Accuracy_Report:
This biological data set was 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: Alaska Dept. of Fish & Game (ADF&G)
    Publication_Date: 2001
    Title: Anadromous streams - arctic region
    Geospatial_Data_Presentation_Form: Vector digital data
    Publication_Information:
        Publication_Place: Anchorage, AK
        Publisher: Alaska Department of Fish & Game
Source_Scale_Denominator: 63,360
Type_of_Source_Media: CD-ROM
Source_Time_Period_of_Content:
    Time_Period_Information:
        Range_of_Dates/Times:
            Beginning_Date: 1998
            Ending_Date: 2001
    Source_Currentness_Reference: Date of survey
Source_Citation_Abbreviation: None
Source_Contribution: Fish information

Source_Information:
    Source_Citation:
        Citation_Information:
            Originator: Carlisle, J. (BSNC)
            Publication_Date: Unpublished Material
            Title: Anadromous fish distribution
            Geospatial_Data_Presentation_Form: Expert knowledge
    Type_of_Source_Media: CD-ROM
    Source_Time_Period_of_Content:
        Time_Period_Information:
            Single_Date/Time:
                Calendar_Date: 2002
    Source_Currentness_Reference: Date of communication
    Source_Citation_Abbreviation: None
    Source_Contribution: Fish information
Process_Step:
    Process_Description:
        Three main sources of data were used for this data layer: 1) personal interviews with resource experts from Alaska Dept. of Fish & Game (ADF&G), National Park Service (NPS), and Bering Straits Native Corporation (BSNC); 2) a 2001 vector arc "Anadromous Streams - Arctic Region" coverage; and 3) hardcopy 1:63,360 ADF&G maps from which the digital coverage described in (2) was created from. Occurrences of anadromous fish species were depicted as arcs that represented the extent of their distribution in each stream. The 2001 ADF&G vector arc data were the basis of the FISHL data layer. ADF&G hardcopy maps were used to supplement digital data when information on species presence in certain streams was missing.

        The FISHL data layer was incorporated into the ArcInfo system along with the other biology data layers, and hardcopy draft maps were created using U.S. Geological Survey (USGS) 1:250,000 topographic quadrangles as base maps. Following the creation of draft maps, a set of interviews was conducted with the resource experts. Participants who were unable to attend the meetings were sent a set of maps to review. Edits to the FISHL data layer were made based on the recommendations of the resource experts, and final hardcopy maps were created.

        The resource experts provided seasonality information.
    Process_Date: 200205
    Process_Contact:
        Contact_Information:
            Contact_Organization_Primary:
                Contact_Organization: NOAA, Office of Response and Restoration
                Contact_Person: Jill Petersen
            Contact_Address:
                Address_Type: Physical address
                Address: 7600 Sand Point Way, N.E.
                City: Seattle
                State_or_Province: Washington
                Postal_Code: 98115-6349
            Contact_Voice_Telephone: (206) 526-6944
            Contact_Facsimile_Telephone: (206) 526-6329
            Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

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Spatial_Data_Organization_Information:
    Direct_Spatial_Reference_Method: Vector
    Point_and_Vector_Object_Information:
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: Complete chain
            Point_and_Vector_Object_Count: 713
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: Link
            Point_and_Vector_Object_Count: 35867
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: Node, planar graph
            Point_and_Vector_Object_Count: 1094

Spatial_Reference_Information:
    Horizontal_Coordinate_System_Definition:
        Geographic:
            Latitude_Resolution: 0.00005
            Longitude_Resolution: 0.00005
            Geographic_Coordinate_Units: Decimal degrees
        Geodetic_Model:
            Horizontal_Datum_Name: North American Datum of 1927
            Ellipsoid_Name: Clarke 1866
            Semi-major_Axis: 6378206.4
            Denominator_of_Flattening_Ratio: 294.978698

Entity_and_Attribute_Information:
    Overview_Description:
        Entity_and_Attribute_Overview:
            In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, FISHL) 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 Northwest Arctic, the number is 73), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

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

            A second supporting data table is SOURCES. This is the same as the source file described above, and the link from the flat file is both G_SOURCE and S_SOURCE. It should be noted that although the flat file eases data query, it is not a normalized database structure, and actual updates performed by the states and other responsible agencies should be done using the relational data tables. The entity-relationship diagram describing relationships between attribute tables in the ESI data structure does NOT include the BIOFILE data table, and this data table is NOT described in detail below.
    Detailed_Description:
        Entity_Type:
            Entity_Type_Label: FISHL.AAT
            Entity_Type_Definition:
                The FISHL.AAT table contains attribute information for the vector arcs representing anadromous fish streams. 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 (73), element number (22; 20 because it is a line feature, plus 2, the element value for FISH), and record number.
            Attribute_Definition_Source: NOAA
            Attribute_Domain_Values:
                Range_Domain:
                      Range_Domain_Minimum: 732200001
                      Range_Domain_Maximum: 732200713
        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: 73000209
                    Range_Domain_Maximum: 73000272
    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: 73000001
         Range_Domain_Maximum: 73000380
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 (73), element number (22; 20 because it is a line feature, plus 2, the element value for FISH), 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: 730100002
         Range_Domain_Maximum: 733400012
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: 073000001
            Range_Domain_Maximum: 073000380
   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. In this data layer, the CONC field contains a "-" because no concentration information was available for anadromous fish streams.
      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 a list of layer-specific species.
        Entity_Type_Definition_Source: Research Planning, Inc.
    Attribute:

Attribute_Label: SPECIES_ID
Attribute_Definition:
    Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Range_Domain:
        Range_Domain_Minimum: 1
        Range_Domain_Maximum: N
Attribute:
    Attribute_Label: NAME
    Attribute_Definition: Species common name
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Species common name for the entire ESI data set
            Enumerated_Domain_Value_Definition: Free text
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: GEN_SPEC
    Attribute_Definition: Species scientific name
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Species scientific name for the entire ESI data set.
            Enumerated_Domain_Value_Definition: Free text
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: ELEMENT
    Attribute_Definition: Major categories of biological data
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: BIRD
            Enumerated_Domain_Value_Definition: Birds
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: FISH
            Enumerated_Domain_Value_Definition: Fish
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: HABITAT
            Enumerated_Domain_Value_Definition: Habitats and Plants
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: INVERT
            Enumerated_Domain_Value_Definition: Invertebrates
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: M_MAMMAL
            Enumerated_Domain_Value_Definition: Marine Mammals
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: REPTILE
            Enumerated_Domain_Value_Definition: Reptiles and Amphibians
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: T_MAMMAL
            Enumerated_Domain_Value_Definition: Terrestrial Mammals
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: SUBELEMENT
    Attribute_Definition: Element subgroup delineating a logical grouping of species
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: alcid
            Enumerated_Domain_Value_Definition: Alcid
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Enumerated_Domain:
            Enumerated_Domain_Value: anadromous
            Enumerated_Domain_Value_Definition: Anadromous
            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 fish
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: diving
        Enumerated_Domain_Value_Definition: Diving bird
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: e_nursery
        Enumerated_Domain_Value_Definition: Estuarine nursery fish
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: freshwater
        Enumerated_Domain_Value_Definition: Freshwater fish
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: gull_tern
        Enumerated_Domain_Value_Definition: Gull or tern
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: kelp
        Enumerated_Domain_Value_Definition: Kelp habitat, community, or species
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: m_benthic
        Enumerated_Domain_Value_Definition: Marine benthic fish
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: m_pelagic
        Enumerated_Domain_Value_Definition: Marine pelagic fish
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: pelagic
        Enumerated_Domain_Value_Definition: Pelagic bird
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: pinniped
        Enumerated_Domain_Value_Definition: Pinniped
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: polar bear
        Enumerated_Domain_Value_Definition: Polar bear
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: raptor
        Enumerated_Domain_Value_Definition: Raptor
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: sav
        Enumerated_Domain_Value_Definition: Submersed aquatic vegetation
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: shorebird
        Enumerated_Domain_Value_Definition: Shorebird

                       Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
            Attribute_Domain_Values:
                Enumerated_Domain:
                    Enumerated_Domain_Value: ungulate
                    Enumerated_Domain_Value_Definition: Ungulate
                    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 BIORES and SEASONAL data tables.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: E#######
Enumerated_Domain_Value_Definition:
Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the last two characters are SEASON_ID (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 = pre-nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning/mating; if ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M_MAMMAL" then BREED1 = mating. This attribute is not used for HABITAT or T_MAMMAL elements.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Y
Enumerated_Domain_Value_Definition: Life-history stage or activity present
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: N
Enumerated_Domain_Value_Definition: Life-history stage or activity not present
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: -
Enumerated_Domain_Value_Definition:
Breed category not used or not appropriate for record(s) in question
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: BREED2
Attribute_Definition:
Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = nesting; 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 = post-nesting; if ELEMENT is "FISH" then BREED3 = larvae; if ELEMENT is "INVERT" then BREED3 = larvae; if ELEMENT is "REPTILE" then BREED3 = internesting; if ELEMENT is "M_MAMMAL" then BREED3 = pupping. This attribute is not used for HABITAT or T_MAMMAL elements.

        Attribute_Definition_Source: Research Planning, Inc.

        Attribute_Domain_Values:

            Enumerated_Domain:

                Enumerated_Domain_Value: Y

                Enumerated_Domain_Value_Definition: Life-history stage or activity present

                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

        Attribute_Domain_Values:

            Enumerated_Domain:

                Enumerated_Domain_Value: N

                Enumerated_Domain_Value_Definition: Life-history stage or activity not present

                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

        Attribute_Domain_Values:

            Enumerated_Domain:

                Enumerated_Domain_Value: -

                Enumerated_Domain_Value_Definition:

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

                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

    Attribute:

        Attribute_Label: BREED4

        Attribute_Definition:

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

        Attribute_Definition_Source: Research Planning, Inc.

        Attribute_Domain_Values:

            Enumerated_Domain:

                Enumerated_Domain_Value: Y

                Enumerated_Domain_Value_Definition: Life-history stage or activity present

                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

        Attribute_Domain_Values:

            Enumerated_Domain:

                Enumerated_Domain_Value: N

                Enumerated_Domain_Value_Definition: Life-history stage or activity not present

                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

        Attribute_Domain_Values:

            Enumerated_Domain:

                Enumerated_Domain_Value: -

                Enumerated_Domain_Value_Definition:

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

                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

    Attribute:

        Attribute_Label: BREED5

        Attribute_Definition:

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

        Attribute_Definition_Source: Research Planning, Inc.

        Attribute_Domain_Values:

            Enumerated_Domain:

                Enumerated_Domain_Value: Y

                Enumerated_Domain_Value_Definition: Life-history stage or activity present

                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

        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: S_F
    Attribute_Definition: State and Federal status.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: F
            Enumerated_Domain_Value_Definition: Federally listed
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: S
            Enumerated_Domain_Value_Definition: State listed
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: S/F
            Enumerated_Domain_Value_Definition: State and federally listed
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: T_E
    Attribute_Definition: Threatened and endangered status.
    Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:
　　Enumerated_Domain:
　　　　Enumerated_Domain_Value: E
　　　　Enumerated_Domain_Value_Definition: Endangered on state or federal list
　　　　Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service
Attribute_Domain_Values:
　　Enumerated_Domain:
　　　　Enumerated_Domain_Value: T
　　　　Enumerated_Domain_Value_Definition: Threatened on state or federal list
　　　　Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service
Attribute_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: DATE_PUB
　　Attribute_Definition:
　　　　Publication date of source material used to assign state and federal status values for each species, if used.
　　Attribute_Definition_Source: Research Planning, Inc.
　　Attribute_Domain_Values:
　　　　Enumerated_Domain:
　　　　　　Enumerated_Domain_Value: Numeric
　　　　　　Enumerated_Domain_Value_Definition: mmyyyy
　　　　　　Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
　　Attribute_Label: EL_SPE
　　Attribute_Definition:
　　　　Concatenation of ELEMENT and SPECIES_ID. This item links the STATUS data table to the BIORES and SPECIES data tables.
　　Attribute_Definition_Source: Research Planning, Inc.
　　Attribute_Domain_Values:
　　　　Enumerated_Domain:
　　　　　　Enumerated_Domain_Value: E#####
　　　　　　Enumerated_Domain_Value_Definition:
　　　　　　　　Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (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 Northwest Arctic, Alaska
　　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: 200208
　　Metadata_Review_Date: 200208
　　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

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Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Northwest Arctic, Alaska: 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:
        National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.
      Publication_Date: 200208
      Title:
        Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Northwest Arctic, Alaska: INVERT (Invertebrate Polygons)
      Edition: First
      Geospatial_Data_Presentation_Form: Vector digital data
      Series_Information:
        Series_Name: None
        Issue_Identification: Northwest Arctic, Alaska
      Publication_Information:
        Publication_Place: Seattle, Washington
        Publisher:
          National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington.
      Other_Citation_Details:
        Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.
  Description:
    Abstract:
      This data set contains sensitive biological resource data for marine and estuarine invertebrate species in Northwest Arctic, Alaska. 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 Northwest Arctic, Alaska. 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: 2001
        Ending_Date: 2002
      Currentness_Reference:
        The biological data were compiled during 2001-2002. The currentness dates for these data range from 1985 to 2001 and are documented in the Source_Information section.
  Status:
    Progress: Complete
    Maintenance_and_Update_Frequency: None Scheduled
  Spatial_Domain:
    Bounding_Coordinates:
      West_Bounding_Coordinate: -172.000
      East_Bounding_Coordinate: -159.667
      North_Bounding_Coordinate: 68.000
      South_Bounding_Coordinate: 62.700
  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: Northwest Arctic
    Place_Keyword: Alaska
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:

Relationships between spatial data layers and attribute data tables for the Northwest Arctic, Alaska ESI data.

    Browse_Graphic_File_Type: JPEG
Data_Set_Credit:

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.

Native_Data_Set_Environment:

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.0.2) and ORACLE(r) RDBMS (version 8.0.5.0.0). The hardware configuration is Hewlett Packard workstations (models 715/50 and 712/80i) with UNIX operating system (HP-UX Release A.10.20), and PC's with Windows Operating System (NT4.0/2000).

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

Data_Quality_Information:
    Attribute_Accuracy:
        Attribute_Accuracy_Report:

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

    Logical_Consistency_Report:

A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and ORACLE(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 "resource at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

    Completeness_Report:

These data represent a synthesis of expert knowledge and available hardcopy and digital maps on invertebrate distribution. These data do not necessarily represent all invertebrate occurrences in the Northwest Arctic. The following species are included in this data set (Species_ID, Common Name, Scientific Name, if applicable): 21, Butter clam, Saxidomus giganteus; 25, Softshell clam, Mya arenaria; 39, Red king crab, Paralithodes camtschaticus; 180, Siberia softshell clam, Mya uzenensis; 181, Alaska razor clam, Siliqua alta; 185, Crenulate astarte, Astarte crenata; 192, Blue king crab, Paralithodes platypus; 210, Helmet crab, Telmessus cheiragonus; 435, Pinkneck clam, Spisula polynyma.

    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 1:250,000. 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:* Lean, C. (NPS, Nome)
>>> *Publication_Date:* Unpublished Material
>>> *Title:* Fish and invertebrate concentration areas
>>> *Geospatial_Data_Presentation_Form:* Expert knowledge
> *Type_of_Source_Media:* CD-ROM
> *Source_Time_Period_of_Content:*
>> *Time_Period_Information:*
>>> *Single_Date/Time:*
>>>> *Calendar_Date:* 2001
> *Source_Currentness_Reference:* Date of communication
> *Source_Citation_Abbreviation:* None
> *Source_Contribution:* Invertebrate information

Source_Information:
> *Source_Citation:*
>> *Citation_Information:*
>>> *Originator:* NANA Coastal Resource Service Area
>>> *Publication_Date:* 1985
>>> *Title:* NANA Region map atlas: coastal management plan
>>> *Geospatial_Data_Presentation_Form:* Hardcopy map
>>> *Publication_Information:*
>>>> *Publication_Place:* Alaska
>>>> *Publisher:* Alaska Coastal Management Program
> *Source_Scale_Denominator:* 250000
> *Type_of_Source_Media:* CD-ROM
> *Source_Time_Period_of_Content:*
>> *Time_Period_Information:*
>>> *Single_Date/Time:*
>>>> *Calendar_Date:* 1985
> *Source_Currentness_Reference:* Date of publication
> *Source_Citation_Abbreviation:* None
> *Source_Contribution:* Invertebrate information

Source_Information:
> *Source_Citation:*
>> *Citation_Information:*
>>> *Originator:* National Marine Fisheries Service
>>> *Publication_Date:* 1998
>>> *Title:* Habitat assessment reports for Essential Fish Habitat
>>> *Geospatial_Data_Presentation_Form:* Vector digital data
>>> *Publication_Information:*
>>>> *Publication_Place:* Unknown
>>>> *Publisher:*
>>>>> The Technical Teams for EFH of NMFS, the North Pacific Fishery Management Council, and ADF&G
> *Source_Scale_Denominator:* Unknown
> *Type_of_Source_Media:* CD-ROM
> *Source_Time_Period_of_Content:*
>> *Time_Period_Information:*
>>> *Single_Date/Time:*
>>>> *Calendar_Date:* 1998
> *Source_Currentness_Reference:* Date of publication
> *Source_Citation_Abbreviation:* None
> *Source_Contribution:* 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 National Park Service (NPS) and local villages; 2) digital maps from a 1998 National Marine Fisheries (NMFS) habitat assessment report for red and blue king crab Essential Fish Habitat (EFH); and 3) a 1985 Northwest Alaska Native Association (NANA) Region map atlas: coastal management plan.

Information gathered during a set of interviews and from NANA hardcopy maps was compiled onto U.S. Geological Survey (USGS) 1:250,000 topographic quadrangles. Resource experts made alterations to printouts of digital NMFS EFH maps, and information from the edited data was transcribed by hand onto the topographic quadrangles. The compiled data were digitized off the base maps into an ArcInfo system to create the INVERT data layer. All ESI, biology, and human-use data were plotted onto hardcopy draft maps. Following the creation of draft maps, a second set of interviews with resource experts was conducted. Participants who were unable to attend the meetings were sent a set of maps to review. 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:* 200205
> *Process_Contact:*
>> *Contact_Information:*
>>> *Contact_Organization_Primary:*
>>>> *Contact_Organization:* NOAA, Office of Response and Restoration
>>>> *Contact_Person:* Jill Petersen
>>> *Contact_Address:*
>>>> *Address_Type:* Physical address
>>>> *Address:* 7600 Sand Point Way, N.E.
>>>> *City:* Seattle
>>>> *State_or_Province:* Washington
>>>> *Postal_Code:* 98115-6349
>>> *Contact_Voice_Telephone:* (206) 526-6944

Contact_Facsimile_Telephone: (206) 526-6329
Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

Spatial_Data_Organization_Information:
    Direct_Spatial_Reference_Method: Vector
    Point_and_Vector_Object_Information:
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: GT-polygon composed of rings
            Point_and_Vector_Object_Count: 232
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: Area point
            Point_and_Vector_Object_Count: 232
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: Complete chain
            Point_and_Vector_Object_Count: 1702
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: Link
            Point_and_Vector_Object_Count: 669131
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: Node, planar graph
            Point_and_Vector_Object_Count: 1685

Spatial_Reference_Information:
    Horizontal_Coordinate_System_Definition:
        Geographic:
            Latitude_Resolution: 0.00005
            Longitude_Resolution: 0.00005
            Geographic_Coordinate_Units: Decimal degrees
        Geodetic_Model:
            Horizontal_Datum_Name: North American Datum of 1927
            Ellipsoid_Name: Clarke 1866
            Semi-major_Axis: 6378206.4
            Denominator_of_Flattening_Ratio: 294.978698

Entity_and_Attribute_Information:
    Overview_Description:
        Entity_and_Attribute_Overview:
            In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, INVERT) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (for Northwest Arctic, the number is 73), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

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

            A second supporting data table is SOURCES. This is the same as the source file described above, and the link from the flat file is both G_SOURCE and S_SOURCE. It should be noted that although the flat file eases data query, it is not a normalized database structure, and actual updates performed by the states and other responsible agencies should be done using the relational data tables. The entity-relationship diagram describing relationships between attribute tables in the ESI data structure does NOT include the BIOFILE data table, and this data table is NOT described in detail below.
    Detailed_Description:
        Entity_Type:
            Entity_Type_Label: INVERT.PAT
            Entity_Type_Definition:
                The INVERT.PAT table contains attribute information for the vector polygons representing invertebrate concentration areas. Note that all attribute information is stored in a series of relational files, described below. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure. 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 (73), 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: 730700002
    Range_Domain_Maximum: 730700188
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: 73000317
      Range_Domain_Maximum: 73000325
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: 73000001
        Range_Domain_Maximum: 73000380
  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 (73), 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: 730100002
        Range_Domain_Maximum: 733400012
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: 073000001
        Range_Domain_Maximum: 073000380
  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. The field contains the term "HIGH" to indicate high concentration areas of particular invertebrate species at specific locations. In cases where no qualitative concentration information was available, this field contains a "-".
    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 a list of layer-specific species.

Entity_Type_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: SPECIES_ID

Attribute_Definition:

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

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

Attribute_Label: NAME

Attribute_Definition: Species common name

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Species common name for the entire ESI data set

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: GEN_SPEC

Attribute_Definition: Species scientific name

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Species scientific name for the entire ESI data set

Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

Attribute_Label: ELEMENT

Attribute_Definition: Major categories of biological data

Attribute_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: BIRD

Enumerated_Domain_Value_Definition: Birds

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: FISH

Enumerated_Domain_Value_Definition: Fish

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: HABITAT

Enumerated_Domain_Value_Definition: Habitats and Plants

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: INVERT

Enumerated_Domain_Value_Definition: Invertebrates

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: M_MAMMAL

Enumerated_Domain_Value_Definition: Marine Mammals

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

Attribute:
> *Attribute_Label:* SUBELEMENT
> *Attribute_Definition:* Element subgroup delineating a logical grouping of species
> *Attribute_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
> > *Enumerated_Domain:*
> > > *Enumerated_Domain_Value:* alcid
> > > *Enumerated_Domain_Value_Definition:* Alcid
> > > *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.
> > *Enumerated_Domain:*
> > > *Enumerated_Domain_Value:* anadromous
> > > *Enumerated_Domain_Value_Definition:* Anadromous
> > > *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 fish
> > > *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
> > *Enumerated_Domain:*
> > > *Enumerated_Domain_Value:* diving
> > > *Enumerated_Domain_Value_Definition:* Diving bird
> > > *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
> > *Enumerated_Domain:*
> > > *Enumerated_Domain_Value:* e_nursery
> > > *Enumerated_Domain_Value_Definition:* Estuarine nursery fish
> > > *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
> > *Enumerated_Domain:*
> > > *Enumerated_Domain_Value:* freshwater
> > > *Enumerated_Domain_Value_Definition:* Freshwater fish
> > > *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
> > *Enumerated_Domain:*
> > > *Enumerated_Domain_Value:* gull_tern
> > > *Enumerated_Domain_Value_Definition:* Gull or tern
> > > *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
> > *Enumerated_Domain:*
> > > *Enumerated_Domain_Value:* kelp
> > > *Enumerated_Domain_Value_Definition:* Kelp habitat, community, or species
> > > *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
> > *Enumerated_Domain:*
> > > *Enumerated_Domain_Value:* m_benthic
> > > *Enumerated_Domain_Value_Definition:* Marine benthic fish
> > > *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
> > *Enumerated_Domain:*
> > > *Enumerated_Domain_Value:* m_pelagic
> > > *Enumerated_Domain_Value_Definition:* Marine pelagic fish
> > > *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.
> *Attribute_Domain_Values:*
> > *Enumerated_Domain:*
> > > *Enumerated_Domain_Value:* pelagic
> > > *Enumerated_Domain_Value_Definition:* Pelagic bird
> > > *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.

Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: pinniped
        Enumerated_Domain_Value_Definition: Pinniped
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: polar bear
        Enumerated_Domain_Value_Definition: Polar bear
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: raptor
        Enumerated_Domain_Value_Definition: Raptor
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: sav
        Enumerated_Domain_Value_Definition: Submersed aquatic vegetation
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: shorebird
        Enumerated_Domain_Value_Definition: Shorebird
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: ungulate
        Enumerated_Domain_Value_Definition: Ungulate
        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 BIORES and SEASONAL data tables.
        Attribute_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
            Enumerated_Domain:
                Enumerated_Domain_Value: E#######
                Enumerated_Domain_Value_Definition:
                    Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the last two characters are SEASON_ID (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 = pre-nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning/mating; if ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M_MAMMAL" then BREED1 = mating. This attribute is not used for HABITAT or T_MAMMAL elements.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Y
            Enumerated_Domain_Value_Definition: Life-history stage or activity present
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: N
            Enumerated_Domain_Value_Definition: Life-history stage or activity not present
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: -
            Enumerated_Domain_Value_Definition:
                Breed category not used or not appropriate for record(s) in question
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:

Attribute_Label: BREED2
Attribute_Definition:
Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = nesting; 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 = post-nesting; if ELEMENT is "FISH" then BREED3 = larvae; if ELEMENT is "INVERT" then BREED3 = larvae; if ELEMENT is "REPTILE" then BREED3 = internesting; if ELEMENT is "M_MAMMAL" then BREED3 = pupping. This attribute is not used for HABITAT or T_MAMMAL elements.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Y
Enumerated_Domain_Value_Definition: Life-history stage or activity present
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: N
Enumerated_Domain_Value_Definition: Life-history stage or activity not present
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: -
Enumerated_Domain_Value_Definition:
Breed category not used or not appropriate for record(s) in question
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: BREED4
Attribute_Definition:
Life history stage or activity type, where: if ELEMENT is "FISH" then BREED4 = juvenile; if ELEMENT is "INVERT" then BREED4 = juvenile; if ELEMENT is "REPTILE" then BREED4 = juvenile; if ELEMENT is "M_MAMMAL" then BREED4 = molting. This attribute is not used for BIRD, HABITAT, or T_MAMMAL elements.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Y
Enumerated_Domain_Value_Definition: Life-history stage or activity present
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: N
Enumerated_Domain_Value_Definition: Life-history stage or activity not present
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: -
Enumerated_Domain_Value_Definition:
Breed category not used or not appropriate for record(s) in question
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: BREED5
Attribute_Definition:
Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 = adults; if ELEMENT is "INVERT" then BREED5 = adults; if ELEMENT is "REPTILE" then BREED5 = adults. This attribute is not used for BIRD, M_MAMMAL, HABITAT, or T_MAMMAL elements.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Y
Enumerated_Domain_Value_Definition: Life-history stage or activity present
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

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: S_F
Attribute_Definition: State and Federal status.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
        Enumerated_Domain:
                Enumerated_Domain_Value: F
                Enumerated_Domain_Value_Definition: Federally listed
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
        Enumerated_Domain:
                Enumerated_Domain_Value: S
                Enumerated_Domain_Value_Definition: State listed
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
        Enumerated_Domain:
                Enumerated_Domain_Value: S/F
                Enumerated_Domain_Value_Definition: State and federally listed
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
        Attribute_Label: T_E
        Attribute_Definition: Threatened and endangered status.
        Attribute_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
                Enumerated_Domain:
                        Enumerated_Domain_Value: E
                        Enumerated_Domain_Value_Definition: Endangered on state or federal list
                        Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service
        Attribute_Domain_Values:
                Enumerated_Domain:
                        Enumerated_Domain_Value: T
                        Enumerated_Domain_Value_Definition: Threatened on state or federal list
                        Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service
        Attribute_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: DATE_PUB
        Attribute_Definition:
                Publication date of source material used to assign state and federal status values for each species, if used.
        Attribute_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
                Enumerated_Domain:
                        Enumerated_Domain_Value: Numeric
                        Enumerated_Domain_Value_Definition: mmyyyy
                        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
        Attribute_Label: EL_SPE
        Attribute_Definition:
                Concatenation of ELEMENT and SPECIES_ID. This item links the STATUS data table to the BIORES and SPECIES data tables.
        Attribute_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
                Enumerated_Domain:
                        Enumerated_Domain_Value: E#####
                        Enumerated_Domain_Value_Definition:
                                Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (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 Northwest Arctic, Alaska
        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: 200208
    Metadata_Review_Date: 200208
    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 2.7.27 on Thu Aug 29 08:35:42 2002

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Northwest Arctic, Alaska: 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:
        National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.
      Publication_Date: 200208
      Title:
        Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Northwest Arctic, Alaska: M_MAMMAL (Marine Mammal Polygons)
      Edition: First
      Geospatial_Data_Presentation_Form: Vector digital data
      Series_Information:
        Series_Name: None
        Issue_Identification: Northwest Arctic, Alaska
      Publication_Information:
        Publication_Place: Seattle, Washington
        Publisher:
          National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington.
      Other_Citation_Details:
        Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.
  Description:
    Abstract:
      This data set contains sensitive biological resource data for seals, whales, walruses, polar bears, and Steller sea lions in Northwest Arctic, Alaska. Vector polygons in this data set represent marine mammal distributions 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. See also the M_MAMPT (Marine Mammal Points) data layer, part of the larger Northwest Arctic, Alaska ESI database, for additional marine mammal information.

      This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for Northwest Arctic, Alaska. 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: 2001
        Ending_Date: 2002
    Currentness_Reference:
      The biological data were compiled during 2001-2002. The currentness dates for these data range from 1983 to 2002 and are documented in the Source_Information section.
  Status:
    Progress: Complete
    Maintenance_and_Update_Frequency: None Scheduled
  Spatial_Domain:
    Bounding_Coordinates:
      West_Bounding_Coordinate: -172.000
      East_Bounding_Coordinate: -159.667
      North_Bounding_Coordinate: 68.000
      South_Bounding_Coordinate: 62.700
  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: Northwest Arctic
    Place_Keyword: Alaska
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:
Relationships between spatial data layers and attribute data tables for the Northwest Arctic, Alaska ESI data.
Browse_Graphic_File_Type: JPEG
Data_Set_Credit:
This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.
Native_Data_Set_Environment:
The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.0.2) and ORACLE(r) RDBMS (version 8.0.5.0.0). The hardware configuration is Hewlett Packard workstations (models 715/50 and 712/80i) with UNIX operating system (HP-UX Release A.10.20), and PC's with Windows Operating System (NT4.0/2000).

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

Data_Quality_Information:
Attribute_Accuracy:
Attribute_Accuracy_Report:
A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.
Logical_Consistency_Report:
A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and ORACLE(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 "resource at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.
Completeness_Report:
These data represent a synthesis of expert knowledge, hardcopy maps, and published documents on marine mammal distribution. Refer to the M_MAMPT (Marine Mammal Points) data layer for additional Steller sea lion haul-out locations and polar bear dens. These data do not necessarily represent all marine mammal occurrences in the Northwest Arctic. The following species are included in this data set (Species_ID, Common Name, Scientific Name, if applicable): 4, Killer whale, Orcinus orca; 9, Beluga whale, Delphinapterus leucas; 11, Fin whale, Balaenoptera physalus; 12, Minke whale, Balaenoptera acutorostrata; 15, Bearded seal, Erignathus barbatus; 16, Walrus, Odobenus rosmarus; 26, Gray whale, Eschrichtius robustus; 29, Blue whale, Balaenoptera musculus; 81, Northern right whale, Eubalaena glacialis; 90, Polar bear, Ursus maritimus; 91, Spotted seal, Phoca largha; 92, Ringed seal, Pusa hispida; 95, Bowhead whale, Balaena mysticetus.
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 basemaps with a scale of 1:250,000. 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: Lean, C. (NPS, Nome)
        Publication_Date: Unpublished Material
        Title: Fish and invertebrate concentration areas
        Geospatial_Data_Presentation_Form: Expert knowledge
Type_of_Source_Media: CD-ROM
Source_Time_Period_of_Content:
    Time_Period_Information:
        Single_Date/Time:
            Calendar_Date: 2001
    Source_Currentness_Reference: Date of communication
Source_Citation_Abbreviation: None
Source_Contribution: Marine mammal information
Source_Information:
    Source_Citation:
        Citation_Information:
            Originator: Alaska Dept. of Fish & Game (ADF&G)
            Publication_Date: 1983
            Title: Offshore prospecting permits: coastal habitats
            Geospatial_Data_Presentation_Form: Hardcopy map
            Publication_Information:
                Publication_Place: Juneau, AK
                Publisher: Alaska Department of Fish & Game
    Source_Scale_Denominator: 250,000
    Type_of_Source_Media: CD-ROM
    Source_Time_Period_of_Content:
        Time_Period_Information:
            Single_Date/Time:
                Calendar_Date: 1983
        Source_Currentness_Reference: Date of publication
    Source_Citation_Abbreviation: None
    Source_Contribution: Marine mammal information
Source_Information:
    Source_Citation:
        Citation_Information:
            Originator: NANA Coastal Resource Service Area
            Publication_Date: 1985
            Title: NANA Region map atlas: coastal management plan
            Geospatial_Data_Presentation_Form: Hardcopy map
            Publication_Information:
                Publication_Place: Alaska
                Publisher: Alaska Coastal Management Program
    Source_Scale_Denominator: 250,000
    Type_of_Source_Media: CD-ROM
    Source_Time_Period_of_Content:
        Time_Period_Information:
            Single_Date/Time:
                Calendar_Date: 1985
        Source_Currentness_Reference: Date of publication
    Source_Citation_Abbreviation: None
    Source_Contribution: Marine mammal information
Source_Information:
    Source_Citation:
        Citation_Information:
            Originator: Alaska Regional Response Team (ARRT)
            Publication_Date: 2001
            Title:
                Northwest Arctic subarea contingency plan: sensitive areas section (pp. D1-D92)
            Geospatial_Data_Presentation_Form: Hardcopy report
            Publication_Information:
                Publication_Place: Alaska
                Publisher: Alaska Regional Response Team (ARRT)
    Type_of_Source_Media: CD-ROM
    Source_Time_Period_of_Content:
        Time_Period_Information:
            Single_Date/Time:
                Calendar_Date: 2001
        Source_Currentness_Reference: Date of publication
    Source_Citation_Abbreviation: None
    Source_Contribution: Marine mammal information
Source_Information:
    Source_Citation:
        Citation_Information:
            Originator:
                Bengtson, J.L., J.M. Hiruki-Raring, P.L. Beveng, and R. Richeson
            Publication_Date: 2000
            Title:
                Density and distribution of ringed seals along the eastern Chukchi Sea coast, 1999-2000 (AFSC Processed Report 2001-XX., 14 pp.)

Geospatial_Data_Presentation_Form: Hardcopy text
Publication_Information:
    Publication_Place: Seattle, WA
    Publisher:
        National Marine Mammal Laboratory, Alaska Fisheries Science Center, NMFS
Type_of_Source_Media: CD-ROM
Source_Time_Period_of_Content:
    Time_Period_Information:
        Range_of_Dates/Times:
            Beginning_Date: 1999
            Ending_Date: 2000
    Source_Currentness_Reference: Date of survey
Source_Citation_Abbreviation: None
Source_Contribution: Marine mammal information
Source_Information:
    Source_Citation:
        Citation_Information:
            Originator: Alaska Dept of Fish and Game (ADF&G).
            Publication_Date: 1986
            Title:
                Alaska habitat management guide, arctic region, map atlas. 19 maps
            Geospatial_Data_Presentation_Form: Hardcopy map
            Publication_Information:
                Publication_Place: Juneau, AK.
                Publisher: State of Alaska, Department of Fish and Game, Habitat Division
    Source_Scale_Denominator: 1000000
Type_of_Source_Media: CD-ROM
Source_Time_Period_of_Content:
    Time_Period_Information:
        Single_Date/Time:
            Calendar_Date: 1986
    Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: Marine mammal information
Source_Information:
    Source_Citation:
        Citation_Information:
            Originator: Kalzdorff, S. (USFWS, Anchorage)
            Publication_Date: Unpublished Material
            Title: Polar bear denning and feeding areas
            Geospatial_Data_Presentation_Form: Expert knowledge
Type_of_Source_Media: CD-ROM
Source_Time_Period_of_Content:
    Time_Period_Information:
        Single_Date/Time:
            Calendar_Date: 2001
    Source_Currentness_Reference: Date of communication
Source_Citation_Abbreviation: None
Source_Contribution: Marine mammal information
Source_Information:
    Source_Citation:
        Citation_Information:
            Originator: Wynne, K.
            Publication_Date: 1997
            Title: Guide to marine mammals of Alaska. (75 pp.)
            Geospatial_Data_Presentation_Form: Hardcopy text
            Publication_Information:
                Publication_Place: Fairbanks,
                Publisher: Alaska Sea Grant College Program
Type_of_Source_Media: CD-ROM
Source_Time_Period_of_Content:
    Time_Period_Information:
        Single_Date/Time:
            Calendar_Date: 1997
    Source_Currentness_Reference: Date of publication
Source_Citation_Abbreviation: None
Source_Contribution: Marine mammal information
Source_Information:
    Source_Citation:
        Citation_Information:
            Originator: Garlich-Miller, J. (USFWS)
            Publication_Date: Unpublished Material
            Title: Walrus concentration areas
            Geospatial_Data_Presentation_Form: Expert knowledge
Type_of_Source_Media: CD-ROM
Source_Time_Period_of_Content:
    Time_Period_Information:
        Single_Date/Time:
            Calendar_Date: 2002

Source_Currentness_Reference: Date of communication
Source_Citation_Abbreviation: None
Source_Contribution: Marine mammal information
Source_Information:
Source_Citation:
Citation_Information:
Originator: Eningowuk, J. (Shishmaref Village)
Publication_Date: Unpublished Material
Title: Resource concentration areas in Shishmaref
Geospatial_Data_Presentation_Form: Expert knowledge
Type_of_Source_Media: CD-ROM
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 2002
Source_Currentness_Reference: Date 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. The sources included (1) personal interviews with resource experts from U.S. Fish and Wildlife Service (USFWS), Alaska Department of Fish and Game (ADF&G), National Park Service (NPS), and Alaska Natives from local villages; (2) hardcopy maps, such as the 1985 Northwest Arctic Native Association (NANA) Region Coastal Map Atlas: Coastal Management Plan; the 1983 ADF&G Offshore Prospecting Permits: Coastal Habitats Maps; the 1986 Alaska Habitat Management Guide, Arctic Region, Map Atlas; and unpublished USFWS maps; and (3) published reports/books, including the 2001 Alaska Regional Response Team (ARRT) Northwest Arctic Sub-area Contingency Plan: Sensitive Areas Section; and the 1997 Guide to Marine Mammals of Alaska.

Information gathered during a set of interviews and from hardcopy maps and reports was compiled onto U.S. Geological Survey (USGS) 1:250,000 topographic quadrangles. The compiled data were digitized off of the base maps into an ArcInfo system to create the M_MAMMAL data layer. All ESI, biology, and human-use data were plotted onto hardcopy draft maps. Following the creation of draft maps, a second set of interviews with resource experts was conducted. Participants who were unable to attend the meetings were sent a set of maps to review. 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: 200205
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: NOAA, Office of Response and Restoration
Contact_Person: Jill Petersen
Contact_Address:
Address_Type: Physical address
Address: 7600 Sand Point Way, N.E.
City: Seattle
State_or_Province: Washington
Postal_Code: 98115-6349
Contact_Voice_Telephone: (206) 526-6944
Contact_Facsimile_Telephone: (206) 526-6329
Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

Spatial_Data_Organization_Information:
Direct_Spatial_Reference_Method: Vector
Point_and_Vector_Object_Information:
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: GT-polygon composed of rings
Point_and_Vector_Object_Count: 302
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Area point
Point_and_Vector_Object_Count: 302
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Complete chain
Point_and_Vector_Object_Count: 1838
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Link
Point_and_Vector_Object_Count: 670010
SDTS_Terms_Description:
SDTS_Point_and_Vector_Object_Type: Node, planar graph
Point_and_Vector_Object_Count: 1769

Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Geographic:
Latitude_Resolution: 0.00005
Longitude_Resolution: 0.00005
Geographic_Coordinate_Units: Decimal degrees
Geodetic_Model:

Horizontal_Datum_Name: North American Datum of 1927
Ellipsoid_Name: Clark 1866
Semi-major_Axis: 6378206.4
Denominator_of_Flattening_Ratio: 294.978698

Entity_and_Attribute_Information:
  Overview_Description:
    Entity_and_Attribute_Overview:
      In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, 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 Northwest Arctic, it is 73), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

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

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

  Detailed_Description:
    Entity_Type:
      Entity_Type_Label: M_MAMMAL.PAT
      Entity_Type_Definition:
        The M_MAMMAL.PAT table contains attribute information for the vector polygons representing marine 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 (73), 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: 730400339
          Range_Domain_Maximum: 730400379
    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: 73000326
          Range_Domain_Maximum: 73000379
  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: 73000001
Range_Domain_Maximum: 73000380
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 (73), 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: 730100002
Range_Domain_Maximum: 733400012
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: 073000001
Range_Domain_Maximum: 073000380
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. In this data layer, the field contains the term "HIGH" to indicate high concentration areas of particular marine mammal species at specific locations. In cases where no qualitative description was available, this field contains a "-".
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 a list of layer-specific species.
        Entity_Type_Definition_Source: Research Planning, Inc.
    Attribute:
        Attribute_Label: SPECIES_ID
        Attribute_Definition:
            Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at
            NOAA.
        Attribute_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
            Range_Domain:
                Range_Domain_Minimum: 1

Range_Domain_Maximum: N

Attribute:

    Attribute_Label: NAME

    Attribute_Definition: Species common name

    Attribute_Definition_Source: Research Planning, Inc.

    Attribute_Domain_Values:

        Enumerated_Domain:

            Enumerated_Domain_Value: Species common name for the entire ESI data set

            Enumerated_Domain_Value_Definition: Free text

            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

    Attribute_Label: GEN_SPEC

    Attribute_Definition: Species scientific name

    Attribute_Definition_Source: Research Planning, Inc.

    Attribute_Domain_Values:

        Enumerated_Domain:

            Enumerated_Domain_Value: Species scientific name for the entire ESI data set

            Enumerated_Domain_Value_Definition: Free text

            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

    Attribute_Label: ELEMENT

    Attribute_Definition: Major categories of biological data

    Attribute_Definition_Source: Research Planning, Inc.

    Attribute_Domain_Values:

        Enumerated_Domain:

            Enumerated_Domain_Value: BIRD

            Enumerated_Domain_Value_Definition: Birds

            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

    Attribute_Domain_Values:

        Enumerated_Domain:

            Enumerated_Domain_Value: FISH

            Enumerated_Domain_Value_Definition: Fish

            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

    Attribute_Domain_Values:

        Enumerated_Domain:

            Enumerated_Domain_Value: HABITAT

            Enumerated_Domain_Value_Definition: Habitats and Plants

            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

    Attribute_Domain_Values:

        Enumerated_Domain:

            Enumerated_Domain_Value: INVERT

            Enumerated_Domain_Value_Definition: Invertebrates

            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

    Attribute_Domain_Values:

        Enumerated_Domain:

            Enumerated_Domain_Value: M_MAMMAL

            Enumerated_Domain_Value_Definition: Marine Mammals

            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

    Attribute_Domain_Values:

        Enumerated_Domain:

            Enumerated_Domain_Value: REPTILE

            Enumerated_Domain_Value_Definition: Reptiles and Amphibians

            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

    Attribute_Domain_Values:

        Enumerated_Domain:

            Enumerated_Domain_Value: T_MAMMAL

            Enumerated_Domain_Value_Definition: Terrestrial Mammals

            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

    Attribute_Label: SUBELEMENT

    Attribute_Definition: Element subgroup delineating a logical grouping of species

    Attribute_Definition_Source: Research Planning, Inc.

    Attribute_Domain_Values:

        Enumerated_Domain:

            Enumerated_Domain_Value: alcid

            Enumerated_Domain_Value_Definition: Alcid

            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

        Enumerated_Domain:

            Enumerated_Domain_Value: anadromous

            Enumerated_Domain_Value_Definition: Anadromous

            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 fish
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: diving
        Enumerated_Domain_Value_Definition: Diving bird
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: e_nursery
        Enumerated_Domain_Value_Definition: Estuarine nursery fish
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: freshwater
        Enumerated_Domain_Value_Definition: Freshwater fish
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: gull_tern
        Enumerated_Domain_Value_Definition: Gull or tern
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: kelp
        Enumerated_Domain_Value_Definition: Kelp habitat, community, or species
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: m_benthic
        Enumerated_Domain_Value_Definition: Marine benthic fish
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: m_pelagic
        Enumerated_Domain_Value_Definition: Marine pelagic fish
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: pelagic
        Enumerated_Domain_Value_Definition: Pelagic bird
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: pinniped
        Enumerated_Domain_Value_Definition: Pinniped
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: polar bear
        Enumerated_Domain_Value_Definition: Polar bear
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: raptor
        Enumerated_Domain_Value_Definition: Raptor
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: sav
        Enumerated_Domain_Value_Definition: Submersed aquatic vegetation
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: shorebird
        Enumerated_Domain_Value_Definition: Shorebird
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: ungulate
        Enumerated_Domain_Value_Definition: Ungulate
        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 BIORES and SEASONAL data tables.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: E#######
            Enumerated_Domain_Value_Definition:
                Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the last two characters are SEASON_ID (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 = pre-nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning/mating; if ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M_MAMMAL" then BREED1 = mating. This attribute is not used for HABITAT or T_MAMMAL elements.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Y
            Enumerated_Domain_Value_Definition: Life-history stage or activity present
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: N
            Enumerated_Domain_Value_Definition: Life-history stage or activity not present
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: -
            Enumerated_Domain_Value_Definition:
                Breed category not used or not appropriate for record(s) in question
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: BREED2
    Attribute_Definition:
        Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = nesting; 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 = post-nesting; if ELEMENT is "FISH" then BREED3 = larvae; if ELEMENT is "INVERT" then BREED3 = larvae; if ELEMENT is "REPTILE" then BREED3 = internesting; if ELEMENT is "M_MAMMAL" then BREED3 = pupping. This attribute is not used for HABITAT or T_MAMMAL elements.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Y

Enumerated_Domain_Value_Definition: Life-history stage or activity present
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: N
Enumerated_Domain_Value_Definition: Life-history stage or activity not present
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: -
Enumerated_Domain_Value_Definition:
Breed category not used or not appropriate for record(s) in question
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: BREED4
Attribute_Definition:
Life history stage or activity type, where: if ELEMENT is "FISH" then BREED4 = juvenile; if ELEMENT is "INVERT" then BREED4 = juvenile; if ELEMENT is "REPTILE" then BREED4 = juvenile; if ELEMENT is "M_MAMMAL" then BREED4 = molting. This attribute is not used for BIRD, HABITAT, or T_MAMMAL elements.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Y
Enumerated_Domain_Value_Definition: Life-history stage or activity present
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: N
Enumerated_Domain_Value_Definition: Life-history stage or activity not present
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: -
Enumerated_Domain_Value_Definition:
Breed category not used or not appropriate for record(s) in question
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
Attribute_Label: BREED5
Attribute_Definition:
Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 = adults; if ELEMENT is "INVERT" then BREED5 = adults; if ELEMENT is "REPTILE" then BREED5 = adults. This attribute is not used for BIRD, M_MAMMAL, HABITAT, or T_MAMMAL elements.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Y
Enumerated_Domain_Value_Definition: Life-history stage or activity present
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
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: S_F
  Attribute_Definition: State and Federal status.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: F
        Enumerated_Domain_Value_Definition: Federally listed
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: S
        Enumerated_Domain_Value_Definition: State listed
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: S/F
        Enumerated_Domain_Value_Definition: State and federally listed
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
  Attribute_Label: T_E
  Attribute_Definition: Threatened and endangered status.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: E
        Enumerated_Domain_Value_Definition: Endangered on state or federal list
        Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service
  Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: T
        Enumerated_Domain_Value_Definition: Threatened on state or federal list

   Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service
  Attribute_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: DATE_PUB
  Attribute_Definition:
   Publication date of source material used to assign state and federal status values for each species, if used.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:
    Enumerated_Domain_Value: Numeric
    Enumerated_Domain_Value_Definition: mmyyyy
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
 Attribute:
  Attribute_Label: EL_SPE
  Attribute_Definition:
   Concatenation of ELEMENT and SPECIES_ID. This item links the STATUS data table to the BIORES and SPECIES data tables.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:
    Enumerated_Domain_Value: E#####
    Enumerated_Domain_Value_Definition:
     Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (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 Northwest Arctic, Alaska
 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: 200208
 Metadata_Review_Date: 200208
 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

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Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Northwest Arctic, Alaska: M_MAMPT (Marine Mammal 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:
                National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.
            Publication_Date: 200208
            Title:
                Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Northwest Arctic, Alaska: M_MAMPT (Marine Mammal Points)
            Edition: First
            Geospatial_Data_Presentation_Form: Vector digital data
            Series_Information:
                Series_Name: None
                Issue_Identification: Northwest Arctic, Alaska
            Publication_Information:
                Publication_Place: Seattle, Washington
                Publisher:
                    National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington.
            Other_Citation_Details:
                Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.
    Description:
        Abstract:
            This data set contains sensitive biological resource data for Steller sea lions and polar bears in Northwest Arctic, Alaska. Vector points in this data set represent Steller sea lion haul-outs and polar bear dens. 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. See also the M_MAMMAL (Marine Mammal Polygons) data layer, part of the larger Northwest Arctic, Alaska ESI database, for additional marine mammal information.

            This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for Northwest Arctic, Alaska. 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: 2001
                Ending_Date: 2002
        Currentness_Reference:
            The biological data were compiled during 2001-2002. The currentness date for these data is 2001 and is documented in the Source_Information section.
    Status:
        Progress: Complete
        Maintenance_and_Update_Frequency: None Scheduled
    Spatial_Domain:
        Bounding_Coordinates:
            West_Bounding_Coordinate: -172.000
            East_Bounding_Coordinate: -159.667
            North_Bounding_Coordinate: 68.000
            South_Bounding_Coordinate: 62.700
    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: Northwest Arctic
    Place_Keyword: Alaska
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:
    Relationships between spatial data layers and attribute data tables for Northwest Arctic, Alaska ESI data.
Browse_Graphic_File_Type: JPEG
Data_Set_Credit:

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.

Native_Data_Set_Environment:

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.0.2) and ORACLE(r) RDBMS (version 8.0.5.0.0). The hardware configuration is Hewlett Packard workstations (models 715/50 and 712/80i) with UNIX operating system (HP-UX Release A.10.20), and PC's with Windows Operating System (NT4.0/2000).

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

Data_Quality_Information:
Attribute_Accuracy:
Attribute_Accuracy_Report:

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

Logical_Consistency_Report:

A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and ORACLE(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 "resource at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

Completeness_Report:

These data represent a synthesis of expert knowledge and latitude/longitude data on Steller sea lion haul-outs and polar bear dens. Refer to the M_MAMMAL (Marine Mammal Polygons) data layer for additional Steller seal lion and polar bear information. These data do not represent all marine mammal occurrences in Northwest Arctic, Alaska. The following species are included in this data set (Species_ID, Common Name, Scientific Name, if applicable): 1, Steller (Northern) sea lion, Eumetopias jubatus; 90, Polar bear, Ursus maritimus.

Positional_Accuracy:
Horizontal_Positional_Accuracy:
Horizontal_Positional_Accuracy_Report:

This biological 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. 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: Kalzdorff, S. (USFWS, Anchorage)
   Publication_Date: Unpublished Material
   Title: Polar bear denning and feeding areas
   Geospatial_Data_Presentation_Form: Expert knowledge
  Type_of_Source_Media: CD-ROM
  Source_Time_Period_of_Content:
   Time_Period_Information:
    Single_Date/Time:
     Calendar_Date: 2001
   Source_Currentness_Reference: Date of communication
  Source_Citation_Abbreviation: None
  Source_Contribution: Marine mammal information
 Source_Information:
  Source_Citation:
   Citation_Information:
    Originator: NMFS, Seattle
    Publication_Date: Unpublished Material
    Title: Sea lion haul-out sites
    Geospatial_Data_Presentation_Form: Hardcopy table
  Type_of_Source_Media: CD-ROM
  Source_Time_Period_of_Content:
   Time_Period_Information:
    Single_Date/Time:
     Calendar_Date: 2001
   Source_Currentness_Reference: Date of delivery
  Source_Citation_Abbreviation: None
  Source_Contribution: Marine mammal information
 Process_Step:
  Process_Description:
   Two main sources of data were used to depict distributions of marine mammals for this data layer. These sources included 1) personal interviews with resource experts from U.S. Fish and Wildlife Service (USFWS); and 2) National Marine Fisheries Service (NMFS) latitude/longitude data depicting occurrences of Steller sea lion haul-outs, and USFWS latitude/longitude data depicting occurrences of polar bear dens. Latitude/longitude data and seasonality information were gathered during initial interviews with resource experts. The latitude/longitude data were converted into geographic point features and incorporated in an ArcInfo system to create the M_MAMPT data layer. All ESI, biology, and human-use data were plotted onto scanned images of U.S. Geological Survey (USGS) 1:250,000 topographic quadrangles that were used as base maps. Following creation of draft maps, a set of interviews was conducted with the resource experts. Participants who were unable to attend the meetings were sent a set of maps to review. Edits to the M_MAMPT data were made based on the recommendations of the resource experts.
  Process_Date: 200205
  Process_Contact:
   Contact_Information:
    Contact_Organization_Primary:
     Contact_Organization: NOAA, Office of Response and Restoration
     Contact_Person: Jill Petersen
    Contact_Address:
     Address_Type: Physical address
     Address: 7600 Sand Point Way, N.E.
     City: Seattle
     State_or_Province: Washington
     Postal_Code: 98115-6349
    Contact_Voice_Telephone: (206) 526-6944
    Contact_Facsimile_Telephone: (206) 526-6329
    Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

Spatial_Data_Organization_Information:
 Direct_Spatial_Reference_Method: Vector
 Point_and_Vector_Object_Information:
  SDTS_Terms_Description:
   SDTS_Point_and_Vector_Object_Type: Entity Point
   Point_and_Vector_Object_Count: 12

Spatial_Reference_Information:
 Horizontal_Coordinate_System_Definition:
  Geographic:
   Latitude_Resolution: 0.00005
   Longitude_Resolution: 0.00005
   Geographic_Coordinate_Units: Decimal degrees
  Geodetic_Model:
   Horizontal_Datum_Name: North American Datum of 1927
   Ellipsoid_Name: Clarke 1866
   Semi-major_Axis: 6378206.4
   Denominator_of_Flattening_Ratio: 294.978698

Entity_and_Attribute_Information:

Overview_Description:

> *Entity_and_Attribute_Overview:*

>> In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, M_MAMPT) 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 Northwest Arctic atlas, the number is 73) an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

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

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

Detailed_Description:

> *Entity_Type:*

>> *Entity_Type_Label:* M_MAMPT.PAT

>> *Entity_Type_Definition:*

>>> The MAMPT.PAT table contains attribute information for the vector points representing marine mammal haul-out sites and dens. 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 (73), element number (34; 30 because it is a point feature, plus 4, the element value for M_MAMMAL), and record number.

>> *Attribute_Definition_Source:* NOAA

>> *Attribute_Domain_Values:*

>>> *Range_Domain:*

>>>> *Range_Domain_Minimum:* 733400001

>>>> *Range_Domain_Maximum:* 733400012

> *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:* 73000337

>>>> *Range_Domain_Maximum:* 73000338

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:* 73000001

>>>> *Range_Domain_Maximum:* 73000380

> *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 (73), element number (34; 30 because it is a point feature, plus 4, the element value for M_MAMMAL), 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: 730100002
    Range_Domain_Maximum: 733400012
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: 073000001
        Range_Domain_Maximum: 073000380
  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. In this data layer, the CONC field contains a "-" because no qualitative or quantitative concentration information was available for the marine mammal point features.
    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 a list of layer-specific species.
        Entity_Type_Definition_Source: Research Planning, Inc.
    Attribute:
        Attribute_Label: SPECIES_ID
        Attribute_Definition:
            Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at
            NOAA.
        Attribute_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
            Range_Domain:
                    Range_Domain_Minimum: 1
                    Range_Domain_Maximum: N
    Attribute:
        Attribute_Label: NAME
        Attribute_Definition: Species common name
        Attribute_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
            Enumerated_Domain:
                    Enumerated_Domain_Value: Species common name for the entire ESI data set
                    Enumerated_Domain_Value_Definition: Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: GEN_SPEC
    Attribute_Definition: Species scientific name
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Species scientific name for the entire ESI data set.
            Enumerated_Domain_Value_Definition: Free text
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: ELEMENT
    Attribute_Definition: Major categories of biological data
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: BIRD
            Enumerated_Domain_Value_Definition: Birds
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: FISH
            Enumerated_Domain_Value_Definition: Fish
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: HABITAT
            Enumerated_Domain_Value_Definition: Habitats and Plants
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: INVERT
            Enumerated_Domain_Value_Definition: Invertebrates
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: M_MAMMAL
            Enumerated_Domain_Value_Definition: Marine Mammals
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: REPTILE
            Enumerated_Domain_Value_Definition: Reptiles and Amphibians
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: T_MAMMAL
            Enumerated_Domain_Value_Definition: Terrestrial Mammals
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: SUBELEMENT
    Attribute_Definition: Element subgroup delineating a logical grouping of species
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: alcid
            Enumerated_Domain_Value_Definition: Alcid
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Enumerated_Domain:
            Enumerated_Domain_Value: anadromous
            Enumerated_Domain_Value_Definition: Anadromous
            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 fish
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:

Enumerated_Domain_Value: diving
Enumerated_Domain_Value_Definition: Diving bird
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: e_nursery
Enumerated_Domain_Value_Definition: Estuarine nursery fish
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: freshwater
Enumerated_Domain_Value_Definition: Freshwater fish
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: gull_tern
Enumerated_Domain_Value_Definition: Gull or tern
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: kelp
Enumerated_Domain_Value_Definition: Kelp habitat, community, or species
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: m_benthic
Enumerated_Domain_Value_Definition: Marine benthic fish
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: m_pelagic
Enumerated_Domain_Value_Definition: Marine pelagic fish
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: pelagic
Enumerated_Domain_Value_Definition: Pelagic bird
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: pinniped
Enumerated_Domain_Value_Definition: Pinniped
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: polar bear
Enumerated_Domain_Value_Definition: Polar bear
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: raptor
Enumerated_Domain_Value_Definition: Raptor
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: sav
Enumerated_Domain_Value_Definition: Submersed aquatic vegetation
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: shorebird
Enumerated_Domain_Value_Definition: Shorebird
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: ungulate
Enumerated_Domain_Value_Definition: Ungulate
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 BIORES
   and SEASONAL data tables.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:

Enumerated_Domain_Value: E#######
Enumerated_Domain_Value_Definition:
    Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the last two characters are SEASON_ID (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 = pre-nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning/mating; if ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M_MAMMAL" then BREED1 = mating. This attribute is not used for HABITAT or T_MAMMAL elements.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Y
Enumerated_Domain_Value_Definition: Life-history stage or activity present
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: N
Enumerated_Domain_Value_Definition: Life-history stage or activity not present
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: -
Enumerated_Domain_Value_Definition:
    Breed category not used or not appropriate for record(s) in question
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
Attribute_Label: BREED2
Attribute_Definition:
    Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = nesting; 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 = post-nesting; if ELEMENT is "FISH" then BREED3 = larvae; if ELEMENT is "INVERT" then BREED3 = larvae; if ELEMENT is "REPTILE" then BREED3 = internesting; if ELEMENT is "M_MAMMAL" then BREED3 = pupping. This attribute is not used for HABITAT or T_MAMMAL elements.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: Y
Enumerated_Domain_Value_Definition: Life-history stage or activity present
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:
Enumerated_Domain_Value: N
Enumerated_Domain_Value_Definition: Life-history stage or activity not present
Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
Enumerated_Domain:

    Enumerated_Domain_Value: -
    Enumerated_Domain_Value_Definition:
      Breed category not used or not appropriate for record(s) in question
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
 Attribute:
  Attribute_Label: BREED4
  Attribute_Definition:
    Life history stage or activity type, where: if ELEMENT is "FISH" then BREED4 = juvenile; if ELEMENT is "INVERT" then BREED4 =
    juvenile; if ELEMENT is "REPTILE" then BREED4 = juvenile; if ELEMENT is "M_MAMMAL" then BREED4 = molting. This
    attribute is not used for BIRD, HABITAT, or T_MAMMAL elements.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: Y
      Enumerated_Domain_Value_Definition: Life-history stage or activity present
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: N
      Enumerated_Domain_Value_Definition: Life-history stage or activity not present
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: -
      Enumerated_Domain_Value_Definition:
        Breed category not used or not appropriate for record(s) in question
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
 Attribute:
  Attribute_Label: BREED5
  Attribute_Definition:
    Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 = adults; if ELEMENT is "INVERT" then BREED5 =
    adults; if ELEMENT is "REPTILE" then BREED5 = adults. This attribute is not used for BIRD, M_MAMMAL, HABITAT, or
    T_MAMMAL elements.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: Y
      Enumerated_Domain_Value_Definition: Life-history stage or activity present
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  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: S_F
    Attribute_Definition: State and Federal status.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: F
            Enumerated_Domain_Value_Definition: Federally listed
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: S
            Enumerated_Domain_Value_Definition: State listed
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: S/F
            Enumerated_Domain_Value_Definition: State and federally listed
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: T_E
    Attribute_Definition: Threatened and endangered status.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: E
            Enumerated_Domain_Value_Definition: Endangered on state or federal list
            Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: T
            Enumerated_Domain_Value_Definition: Threatened on state or federal list
            Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service
    Attribute_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: DATE_PUB
    Attribute_Definition:

Publication date of source material used to assign state and federal status values for each species, if used.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: Numeric
        Enumerated_Domain_Value_Definition: mmyyyy
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: EL_SPE
    Attribute_Definition:
        Concatenation of ELEMENT and SPECIES_ID. This item links the STATUS data table to the BIORES and SPECIES data tables.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: E#####
            Enumerated_Domain_Value_Definition:
                Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (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 Northwest Arctic, Alaska
    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: 200208
    Metadata_Review_Date: 200208
    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

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Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Northwest Arctic, Alaska: 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:
        National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.
      Publication_Date: 200208
      Title:
        Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Northwest Arctic, Alaska: T_MAMMAL (Terrestrial Mammal Polygons)
      Edition: First
      Geospatial_Data_Presentation_Form: Vector digital data
      Series_Information:
        Series_Name: None
        Issue_Identification: Northwest Arctic, Alaska
      Publication_Information:
        Publication_Place: Seattle, Washington
        Publisher:
          National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington.
      Other_Citation_Details:
        Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.
  Description:
    Abstract:
      This data set contains sensitive biological resource data for terrestrial mammals in Northwest Arctic, Alaska. Vector polygons in this data set represent muskoxen 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 Northwest Arctic, Alaska. 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: 2001
        Ending_Date: 2002
      Currentness_Reference:
        The biological data were compiled during 2002. The currentness date for these data is 2002 and is documented in the Source_Information section.
  Status:
    Progress: Complete
    Maintenance_and_Update_Frequency: None Scheduled
  Spatial_Domain:
    Bounding_Coordinates:
      West_Bounding_Coordinate: -172.000
      East_Bounding_Coordinate: -159.667
      North_Bounding_Coordinate: 68.000
      South_Bounding_Coordinate: 62.700
  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: Northwest Arctic
Place_Keyword: Alaska
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:
Relationships between spatial data layers and attribute data tables for the Northwest Arctic, Alaska ESI data.
Browse_Graphic_File_Type: JPEG
Data_Set_Credit:
This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.
Native_Data_Set_Environment:
The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.0.2) and ORACLE(r) RDBMS (version 8.0.5.0.0). The hardware configuration is Hewlett Packard workstations (models 715/50 and 712/80i) with UNIX operating system (HP-UX Release A.10.20), and PC's with Windows Operating System (NT4.0/2000).

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

Data_Quality_Information:
Attribute_Accuracy:
Attribute_Accuracy_Report:
A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.
Logical_Consistency_Report:
A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and ORACLE(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 "resource at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.
Completeness_Report:
These data represent a synthesis of expert knowledge on terrestrial mammal concentration areas. These data do not represent all terrestrial mammal concentration areas in Northwest Arctic, Alaska. The following species is included in this data set (Species_ID, Common Name, Scientific Name, if applicable): 121, Muskox, Ovibos moschatus
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 basemaps with a scale of 1:250,000. 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: Arges, L. (USFWS, Kotzebue)
Publication_Date: Unpublished Material

Title: Muskoxen concentration areas
Geospatial_Data_Presentation_Form: Expert knowledge
Type_of_Source_Media: CD-ROM
Source_Time_Period_of_Content:
    Time_Period_Information:
        Single_Date/Time:
            Calendar_Date: 2002
    Source_Currentness_Reference: Date of communication
Source_Citation_Abbreviation: None
Source_Contribution: Terrestrial mammal information
Process_Step:
    Process_Description:
        The main source of data used to depict muskoxen distribution for this data layer was a personal interview with a resource expert from U.S. Fish and Wildlife Service (USFWS). Information was gathered during the interview and was compiled onto U.S. Geological Survey (USGS) 1:250,000 topographic quadrangles. The compiled data were digitized off the base maps into an ArcInfo system to create the T_MAMMAL data layer. All ESI, biology, and human-use data were plotted onto hardcopy draft maps. Following the creation of draft maps, a second interview with the resource expert was conducted. Edits to the T_MAMMAL data layer were made based on her recommendations, and final hardcopy maps were created.
    Process_Date: 200205
    Process_Contact:
        Contact_Information:
            Contact_Organization_Primary:
                Contact_Organization: NOAA, Office of Response and Restoration
                Contact_Person: Jill Petersen
            Contact_Address:
                Address_Type: Physical address
                Address: 7600 Sand Point Way, N.E.
                City: Seattle
                State_or_Province: Washington
                Postal_Code: 98115-6349
            Contact_Voice_Telephone: (206) 526-6944
            Contact_Facsimile_Telephone: (206) 526-6329
            Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

Spatial_Data_Organization_Information:
    Direct_Spatial_Reference_Method: Vector
    Point_and_Vector_Object_Information:
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: GT-polygon composed of rings
            Point_and_Vector_Object_Count: 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: 82
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: Link
            Point_and_Vector_Object_Count: 31060
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: Node, planar graph
            Point_and_Vector_Object_Count: 82

Spatial_Reference_Information:
    Horizontal_Coordinate_System_Definition:
        Geographic:
            Latitude_Resolution: 0.00005
            Longitude_Resolution: 0.00005
            Geographic_Coordinate_Units: Decimal degrees
        Geodetic_Model:
            Horizontal_Datum_Name: North American Datum of 1927
            Ellipsoid_Name: Clarke 1866
            Semi-major_Axis: 6378206.400000
            Denominator_of_Flattening_Ratio: 294.978698

Entity_and_Attribute_Information:
    Overview_Description:
        Entity_and_Attribute_Overview:
            In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, T_MAMMAL) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (for the Northwest Arctic atlas, the number is 73), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the

other relational data tables are described below in detail. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

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

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

Detailed_Description:
　　Entity_Type:
　　　　Entity_Type_Label: 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 (73), 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: 730900002
　　　　　　　　Range_Domain_Maximum: 730900004
　　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: 73000380
　　　　　　　　Range_Domain_Maximum: 73000380
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: 73000001
　　　　　　　　Range_Domain_Maximum: 73000380
　　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 (73), 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: 730100002
　　　　　　　　Range_Domain_Maximum: 733400012
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: 073000001

Range_Domain_Maximum: 073000380

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. In this data layer, the field contains the term "HIGH" to indicate high concentration areas of particular terrestrial mammal species at specific locations.

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 a list of layer-specific species.
>   *Entity_Type_Definition_Source:* Research Planning, Inc.
>   *Attribute:*
>   *Attribute_Label:* SPECIES_ID
>   *Attribute_Definition:*
>   Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at
>   NOAA.
>   *Attribute_Definition_Source:* Research Planning, Inc.
>   *Attribute_Domain_Values:*
>   *Range_Domain:*
>   *Range_Domain_Minimum:* 1
>   *Range_Domain_Maximum:* N
>   *Attribute:*
>   *Attribute_Label:* NAME
>   *Attribute_Definition:* Species common name
>   *Attribute_Definition_Source:* Research Planning, Inc.
>   *Attribute_Domain_Values:*
>   *Enumerated_Domain:*
>   *Enumerated_Domain_Value:* Species common name for the entire ESI data set
>   *Enumerated_Domain_Value_Definition:* Free text
>   *Enumerated_Domain_Value_Definition_Source:* Research Planning, Inc.
>   *Attribute:*
>   *Attribute_Label:* GEN_SPEC
>   *Attribute_Definition:* Species scientific name
>   *Attribute_Definition_Source:* Research Planning, Inc.
>   *Attribute_Domain_Values:*
>   *Enumerated_Domain:*
>   *Enumerated_Domain_Value:* Species scientific name for the entire ESI data set.
>   *Enumerated_Domain_Value_Definition:* Free text

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: ELEMENT
    Attribute_Definition: Major categories of biological data
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: BIRD
            Enumerated_Domain_Value_Definition: Birds
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: FISH
            Enumerated_Domain_Value_Definition: Fish
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: HABITAT
            Enumerated_Domain_Value_Definition: Habitats and Plants
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: INVERT
            Enumerated_Domain_Value_Definition: Invertebrates
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: M_MAMMAL
            Enumerated_Domain_Value_Definition: Marine Mammals
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: REPTILE
            Enumerated_Domain_Value_Definition: Reptiles and Amphibians
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: T_MAMMAL
            Enumerated_Domain_Value_Definition: Terrestrial Mammals
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: SUBELEMENT
    Attribute_Definition: Element subgroup delineating a logical grouping of species
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: alcid
            Enumerated_Domain_Value_Definition: Alcid
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
        Enumerated_Domain:
            Enumerated_Domain_Value: anadromous
            Enumerated_Domain_Value_Definition: Anadromous
            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 fish
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: diving
            Enumerated_Domain_Value_Definition: Diving bird
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: e_nursery
            Enumerated_Domain_Value_Definition: Estuarine nursery fish
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:

Enumerated_Domain:
    Enumerated_Domain_Value: freshwater
    Enumerated_Domain_Value_Definition: Freshwater fish
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: gull_tern
        Enumerated_Domain_Value_Definition: Gull or tern
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: kelp
        Enumerated_Domain_Value_Definition: Kelp habitat, community, or species
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: m_benthic
        Enumerated_Domain_Value_Definition: Marine benthic fish
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: m_pelagic
        Enumerated_Domain_Value_Definition: Marine pelagic fish
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: pelagic
        Enumerated_Domain_Value_Definition: Pelagic bird
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: pinniped
        Enumerated_Domain_Value_Definition: Pinniped
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: polar bear
        Enumerated_Domain_Value_Definition: Polar bear
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: raptor
        Enumerated_Domain_Value_Definition: Raptor
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: sav
        Enumerated_Domain_Value_Definition: Submersed aquatic vegetation
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: shorebird
        Enumerated_Domain_Value_Definition: Shorebird
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: ungulate
        Enumerated_Domain_Value_Definition: Ungulate
        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 BIORES and SEASONAL data tables.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:
    Enumerated_Domain_Value: E#######
    Enumerated_Domain_Value_Definition:
     Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the last two characters are SEASON_ID (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 = pre-nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning/mating; if ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M_MAMMAL" then BREED1 = mating. This attribute is not used for HABITAT or T_MAMMAL elements.
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: Y
   Enumerated_Domain_Value_Definition: Life-history stage or activity present
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: N
   Enumerated_Domain_Value_Definition: Life-history stage or activity not present
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: -
   Enumerated_Domain_Value_Definition:
    Breed category not used or not appropriate for record(s) in question
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: BREED2
 Attribute_Definition:
  Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = nesting; 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 = post-nesting; if ELEMENT is "FISH" then BREED3 = larvae; if ELEMENT is "INVERT" then BREED3 = larvae; if ELEMENT is "REPTILE" then BREED3 = internesting; if ELEMENT is "M_MAMMAL" then BREED3 = pupping. This attribute is not used for HABITAT or T_MAMMAL elements.
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: Y
   Enumerated_Domain_Value_Definition: Life-history stage or activity present
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: N
   Enumerated_Domain_Value_Definition: Life-history stage or activity not present
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: -
   Enumerated_Domain_Value_Definition:
    Breed category not used or not appropriate for record(s) in question
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: BREED4
 Attribute_Definition:
  Life history stage or activity type, where: if ELEMENT is "FISH" then BREED4 = juvenile; if ELEMENT is "INVERT" then BREED4 = juvenile; if ELEMENT is "REPTILE" then BREED4 = juvenile; if ELEMENT is "M_MAMMAL" then BREED4 = molting. This

attribute is not used for BIRD, HABITAT, or T_MAMMAL elements.
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: Y
   Enumerated_Domain_Value_Definition: Life-history stage or activity present
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: N
   Enumerated_Domain_Value_Definition: Life-history stage or activity not present
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: -
   Enumerated_Domain_Value_Definition:
    Breed category not used or not appropriate for record(s) in question
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: BREED5
 Attribute_Definition:
  Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 = adults; if ELEMENT is "INVERT" then BREED5 = adults; if ELEMENT is "REPTILE" then BREED5 = adults. This attribute is not used for BIRD, M_MAMMAL, HABITAT, or T_MAMMAL elements.
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: Y
   Enumerated_Domain_Value_Definition: Life-history stage or activity present
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
 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: S_F
 Attribute_Definition: State and Federal status.
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: F
   Enumerated_Domain_Value_Definition: Federally listed
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: S
   Enumerated_Domain_Value_Definition: State listed
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: S/F
   Enumerated_Domain_Value_Definition: State and federally listed
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: T_E
 Attribute_Definition: Threatened and endangered status.
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: E
   Enumerated_Domain_Value_Definition: Endangered on state or federal list
   Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: T
   Enumerated_Domain_Value_Definition: Threatened on state or federal list
   Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service
 Attribute_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: DATE_PUB
 Attribute_Definition:
  Publication date of source material used to assign state and federal status values for each species, if used.
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: Numeric
   Enumerated_Domain_Value_Definition: mmyyyy
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: EL_SPE

Attribute_Definition:
 Concatenation of ELEMENT and SPECIES_ID. This item links the STATUS data table to the BIORES and SPECIES data tables.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
 Enumerated_Domain:
  Enumerated_Domain_Value: E#####
  Enumerated_Domain_Value_Definition:
   Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (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 Northwest Arctic, Alaska
  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: 200208
 Metadata_Review_Date: 200208
 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

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Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Northwest Arctic, Alaska: 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:
    National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.
   Publication_Date: 200208
   Title:
    Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Northwest Arctic, Alaska: HABITATS (Habitat Polygons)
   Edition: First
   Geospatial_Data_Presentation_Form: Vector digital data
   Series_Information:
    Series_Name: None
    Issue_Identification: Northwest Arctic, Alaska
   Publication_Information:
    Publication_Place: Seattle, Washington
    Publisher:
     National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington
   Other_Citation_Details:
    Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.
 Description:
  Abstract:
   This data set contains sensitive biological resource data for submerged aquatic vegetation (SAV) in Northwest Arctic, Alaska. 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 Northwest Arctic, Alaska. 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: 2001
    Ending_Date: 2002
  Currentness_Reference:
   The biological data were compiled during 2001-2002. The currentness date for these data is 2001 and is documented in the Source_Information section.
 Status:
  Progress: Complete
  Maintenance_and_Update_Frequency: None Scheduled
 Spatial_Domain:
  Bounding_Coordinates:
   West_Bounding_Coordinate: -172.000
   East_Bounding_Coordinate: -159.667
   North_Bounding_Coordinate: 68.000
   South_Bounding_Coordinate: 62.700
 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: Northwest Arctic
Place_Keyword: Alaska
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:
Relationships between spatial data layers and attribute data tables for the Northwest Arctic, Alaska ESI data.
Browse_Graphic_File_Type: JPEG
Data_Set_Credit:
This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.
Native_Data_Set_Environment:
The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.0.2) and ORACLE(r) RDBMS (version 8.0.5.0.0). The hardware configuration is Hewlett Packard workstations (models 715/50 and 712/80i) with UNIX operating system (HP-UX Release A.10.20), and PC's with Windows Operating System (NT4.0/2000).

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

Data_Quality_Information:
Attribute_Accuracy:
Attribute_Accuracy_Report:
A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.
Logical_Consistency_Report:
A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and ORACLE(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 "resource at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.
Completeness_Report:
These data represent a synthesis of expert knowledge and hardcopy maps on eelgrass and kelp distribution. These data do not represent total submerged aquatic vegetation distribution in the Northwest Arctic. The following species are included in this data set (Species_ID, Common Name, Scientific Name, if applicable): 413, Kelp, Laminaria saludoncula; 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 1:250,000. 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: Lean, C. (NPS, Nome)
Publication_Date: Unpublished Material
Title: Fish and invertebrate concentration areas
Geospatial_Data_Presentation_Form: Expert knowledge
Type_of_Source_Media: CD-ROM
Source_Time_Period_of_Content:
  Time_Period_Information:
    Single_Date/Time:
      Calendar_Date: 2001
  Source_Currentness_Reference: Date of communication
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 personal interview with a resource expert from National Park Service (NPS). Information on eelgrass and kelp was gathered during the interview and was compiled onto U.S. Geological Survey (USGS) 1:250,000 topographic quadrangles. The compiled data were digitized off the base maps into an ArcInfo system to create the HABITATS data layer. All ESI, biology, and human-use data were plotted onto hardcopy draft maps. Following the creation of draft maps, a second interview with the resource expert was conducted. Based on his recommendations, edits to the HABITATS data layer were made, and final hardcopy maps were created.
  Process_Date: 200205
  Process_Contact:
    Contact_Information:
      Contact_Organization_Primary:
        Contact_Organization: NOAA, Office of Response and Restoration
        Contact_Person: Jill Petersen
      Contact_Address:
        Address_Type: Physical address
        Address: 7600 Sand Point Way, N.E.
        City: Seattle
        State_or_Province: Washington
        Postal_Code: 98115-6349
      Contact_Voice_Telephone: (206) 526-6944
      Contact_Facsimile_Telephone: (206) 526-6329
      Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

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Spatial_Data_Organization_Information:
  Direct_Spatial_Reference_Method: Vector
  Point_and_Vector_Object_Information:
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: GT-polygon composed of rings
      Point_and_Vector_Object_Count: 219
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Area point
      Point_and_Vector_Object_Count: 219
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Complete chain
      Point_and_Vector_Object_Count: 866
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Link
      Point_and_Vector_Object_Count: 286561
    SDTS_Terms_Description:
      SDTS_Point_and_Vector_Object_Type: Node, planar graph
      Point_and_Vector_Object_Count: 865

Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Geographic:
      Latitude_Resolution: 0.00005
      Longitude_Resolution: 0.00005
      Geographic_Coordinate_Units: Decimal degrees
    Geodetic_Model:
      Horizontal_Datum_Name: North American Datum of 1927
      Ellipsoid_Name: Clarke 1866
      Semi-major_Axis: 6378206.4
      Denominator_of_Flattening_Ratio: 294.978698

Entity_and_Attribute_Information:
  Overview_Description:
    Entity_and_Attribute_Overview:
    In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, HABITATS) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (for Northwest Arctic, the number is 73) an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique

combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

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

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

Detailed_Description:
    Entity_Type:
        Entity_Type_Label: HABITATS.PAT
        Entity_Type_Definition:
            The HABITATS.PAT table contains attribute information for the vector polygons representing eelgrass and kelp concentration areas. Note that all attribute information is stored in a series of relational files, described below. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure. 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 (73), 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: 730300002
                Range_Domain_Maximum: 730300185
    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: 73000315
                Range_Domain_Maximum: 73000316
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: 73000001
                Range_Domain_Maximum: 73000380
    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 (73), 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: 730100002
                Range_Domain_Maximum: 733400012
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:* 073000001
>>>*Range_Domain_Maximum:* 073000380

Attribute:
>*Attribute_Label:* SPECIES_ID
>*Attribute_Definition:*
>>Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.
>
>*Attribute_Definition_Source:* Research Planning, Inc.
>*Attribute_Domain_Values:*
>>*Range_Domain:*
>>>*Range_Domain_Minimum:* 1
>>>*Range_Domain_Maximum:* N

Attribute:
>*Attribute_Label:* CONC
>*Attribute_Definition:*
>>The field CONC refers to "concentration," abundance, or density value of a habitat at a particular location. No quantitative or qualitative data on concentrations of eelgrass or kelp were available; therefore this field contains a "-".
>
>*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 a list of layer-specific species.
    Entity_Type_Definition_Source: Research Planning, Inc.
  Attribute:
    Attribute_Label: SPECIES_ID
    Attribute_Definition:
      Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at
      NOAA.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
      Range_Domain:
        Range_Domain_Minimum: 1
        Range_Domain_Maximum: N
  Attribute:
    Attribute_Label: NAME
    Attribute_Definition: Species common name
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
      Enumerated_Domain:
        Enumerated_Domain_Value: Species common name for the entire ESI data set
        Enumerated_Domain_Value_Definition: Free text
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute:
    Attribute_Label: GEN_SPEC
    Attribute_Definition: Species scientific name
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:

Enumerated_Domain:
    Enumerated_Domain_Value: Species scientific name for the entire ESI data set
    Enumerated_Domain_Value_Definition: Free text
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
  Attribute_Label: ELEMENT
  Attribute_Definition: Major categories of biological data
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: BIRD
      Enumerated_Domain_Value_Definition: Birds
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: FISH
      Enumerated_Domain_Value_Definition: Fish
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: HABITAT
      Enumerated_Domain_Value_Definition: Habitats and Plants
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: INVERT
      Enumerated_Domain_Value_Definition: Invertebrates
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: M_MAMMAL
      Enumerated_Domain_Value_Definition: Marine Mammals
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: REPTILE
      Enumerated_Domain_Value_Definition: Reptiles and Amphibians
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: T_MAMMAL
      Enumerated_Domain_Value_Definition: Terrestrial Mammals
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
  Attribute_Label: SUBELEMENT
  Attribute_Definition: Element subgroup delineating a logical grouping of species
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: alcid
      Enumerated_Domain_Value_Definition: Alcid
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Enumerated_Domain:
      Enumerated_Domain_Value: anadromous
      Enumerated_Domain_Value_Definition: Anadromous
      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 fish
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: diving
      Enumerated_Domain_Value_Definition: Diving bird
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: e_nursery

    Enumerated_Domain_Value_Definition: Estuarine nursery fish
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:
    Enumerated_Domain_Value: freshwater
    Enumerated_Domain_Value_Definition: Freshwater fish
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:
    Enumerated_Domain_Value: gull_tern
    Enumerated_Domain_Value_Definition: Gull or tern
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:
    Enumerated_Domain_Value: kelp
    Enumerated_Domain_Value_Definition: Kelp habitat, community, or species
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:
    Enumerated_Domain_Value: m_benthic
    Enumerated_Domain_Value_Definition: Marine benthic fish
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:
    Enumerated_Domain_Value: m_pelagic
    Enumerated_Domain_Value_Definition: Marine pelagic fish
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:
    Enumerated_Domain_Value: pelagic
    Enumerated_Domain_Value_Definition: Pelagic bird
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:
    Enumerated_Domain_Value: pinniped
    Enumerated_Domain_Value_Definition: Pinniped
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:
    Enumerated_Domain_Value: polar bear
    Enumerated_Domain_Value_Definition: Polar bear
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:
    Enumerated_Domain_Value: raptor
    Enumerated_Domain_Value_Definition: Raptor
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:
    Enumerated_Domain_Value: sav
    Enumerated_Domain_Value_Definition: Submersed aquatic vegetation
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:
    Enumerated_Domain_Value: shorebird
    Enumerated_Domain_Value_Definition: Shorebird
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:
    Enumerated_Domain_Value: ungulate
    Enumerated_Domain_Value_Definition: Ungulate
    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 BIORES and SEASONAL data tables.
        Attribute_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
            Enumerated_Domain:
                Enumerated_Domain_Value: E#######
                Enumerated_Domain_Value_Definition:
                    Where E is the first character of ELEMENT, the next five characters are SPECIES_ID, and the last two characters are SEASON_ID (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 = pre-nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning/mating; if ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M_MAMMAL" then BREED1 = mating. This attribute is not used for HABITAT or T_MAMMAL elements.
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: Y
   Enumerated_Domain_Value_Definition: Life-history stage or activity present
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: N
   Enumerated_Domain_Value_Definition: Life-history stage or activity not present
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: -
   Enumerated_Domain_Value_Definition:
    Breed category not used or not appropriate for record(s) in question
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: BREED2
 Attribute_Definition:
  Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = nesting; 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 = post-nesting; if ELEMENT is "FISH" then BREED3 = larvae; if ELEMENT is "INVERT" then BREED3 = larvae; if ELEMENT is "REPTILE" then BREED3 = internesting; if ELEMENT is "M_MAMMAL" then BREED3 = pupping. This attribute is not used for HABITAT or T_MAMMAL elements.
 Attribute_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: Y
   Enumerated_Domain_Value_Definition: Life-history stage or activity present
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: N
   Enumerated_Domain_Value_Definition: Life-history stage or activity not present
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
 Attribute_Domain_Values:
  Enumerated_Domain:
   Enumerated_Domain_Value: -
   Enumerated_Domain_Value_Definition:
    Breed category not used or not appropriate for record(s) in question
   Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
 Attribute_Label: BREED4

Attribute_Definition:
    Life history stage or activity type, where: if ELEMENT is "FISH" then BREED4 = juvenile; if ELEMENT is "INVERT" then BREED4 = juvenile; if ELEMENT is "REPTILE" then BREED4 = juvenile; if ELEMENT is "M_MAMMAL" then BREED4 = molting. This attribute is not used for BIRD, HABITAT, or T_MAMMAL elements.
Attribute_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: Y
        Enumerated_Domain_Value_Definition: Life-history stage or activity present
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: N
        Enumerated_Domain_Value_Definition: Life-history stage or activity not present
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute_Domain_Values:
    Enumerated_Domain:
        Enumerated_Domain_Value: -
        Enumerated_Domain_Value_Definition:
           Breed category not used or not appropriate for record(s) in question
        Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: BREED5
    Attribute_Definition:
        Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 = adults; if ELEMENT is "INVERT" then BREED5 = adults; if ELEMENT is "REPTILE" then BREED5 = adults. This attribute is not used for BIRD, M_MAMMAL, HABITAT, or T_MAMMAL elements.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
           Enumerated_Domain_Value: Y
           Enumerated_Domain_Value_Definition: Life-history stage or activity present
           Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    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: S_F
  Attribute_Definition: State and Federal status.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:
    Enumerated_Domain_Value: F
    Enumerated_Domain_Value_Definition: Federally listed
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:
    Enumerated_Domain_Value: S
    Enumerated_Domain_Value_Definition: State listed
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:
    Enumerated_Domain_Value: S/F
    Enumerated_Domain_Value_Definition: State and federally listed
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
  Attribute_Label: T_E
  Attribute_Definition: Threatened and endangered status.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:
    Enumerated_Domain_Value: E
    Enumerated_Domain_Value_Definition: Endangered on state or federal list
    Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service
  Attribute_Domain_Values:
   Enumerated_Domain:
    Enumerated_Domain_Value: T
    Enumerated_Domain_Value_Definition: Threatened on state or federal list
    Enumerated_Domain_Value_Definition_Source: U.S. Fish and Wildlife Service
  Attribute_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: DATE_PUB
  Attribute_Definition:
   Publication date of source material used to assign state and federal status values for each species, if used.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:
    Enumerated_Domain_Value: Numeric
    Enumerated_Domain_Value_Definition: mmyyyy

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:

    Attribute_Label: EL_SPE

    Attribute_Definition:

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

    Attribute_Definition_Source: Research Planning, Inc.

    Attribute_Domain_Values:

        Enumerated_Domain:

            Enumerated_Domain_Value: E#####

            Enumerated_Domain_Value_Definition:

                Where E is the first character of ELEMENT and the next five characters are SPECIES_ID (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 Northwest Arctic, Alaska

    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: 200208

    Metadata_Review_Date: 200208

    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 2.7.27 on Thu Aug 29 12:47:53 2002

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Northwest Arctic, Alaska: 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:
                National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.
            Publication_Date: 200208
            Title:
                Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Northwest Arctic, Alaska: MGT (Management Area Polygons)
            Edition: First
            Geospatial_Data_Presentation_Form: Vector digital data
            Series_Information:
                Series_Name: None
                Issue_Identification: Northwest Arctic, Alaska
            Publication_Information:
                Publication_Place: Seattle, Washington
                Publisher:
                    National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington.
            Other_Citation_Details:
                Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.
    Description:
        Abstract:
            This data set contains vector polygons representing management area data for Designated Critical Habitats, National Park Service properties, Wildlife Refuges, and Management Areas (rivers designated under the Wild and Scenic Rivers Act). 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. See also the SOCECON (Socioeconomic Resource Points) data layer, part of the larger Northwest Arctic, Alaska ESI database for additional human-use information.

            This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for Northwest Arctic, Alaska. 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: 2001
                Ending_Date: 2002
        Currentness_Reference:
            The biological data were compiled during 2001-2002. The currentness dates for these data range from 1993 to 2000 and are documented in the Source_Information section.
    Status:
        Progress: Complete
        Maintenance_and_Update_Frequency: None Scheduled
    Spatial_Domain:
        Bounding_Coordinates:
            West_Bounding_Coordinate: -172.000
            East_Bounding_Coordinate: -159.667
            North_Bounding_Coordinate: 68.000
            South_Bounding_Coordinate: 62.700
    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: Northwest Arctic
    Place_Keyword: Alaska
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:
    Relationships between spatial data layers and attribute data tables for the Northwest Arctic, Alaska ESI data.
    Browse_Graphic_File_Type: JPEG
Data_Set_Credit:
    This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.
Native_Data_Set_Environment:
    The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.0.2) and ORACLE(r) RDBMS (version 8.0.5.0.0). The hardware configuration is Hewlett Packard workstations (models 715/50 and 712/80i) with UNIX operating system (HP-UX Release A.10.20), and PC's with Windows Operating System (NT4.0/2000).

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

Data_Quality_Information:
    Attribute_Accuracy:
        Attribute_Accuracy_Report:
        A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.
    Logical_Consistency_Report:
    A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and ORACLE(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 boundaries for management areas. Refer to the SOCECON (Socioeconomic Resource Points) data layer for additional human-use information. These data do not necessarily represent all management areas in Northwest Arctic, Alaska.
    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: USFWS, Endangered Species Program
                Publication_Date: Unpublished Material
                Title:
                Spectacled eider critical habitat, wintering, and molting concentrations
                Geospatial_Data_Presentation_Form: Vector digital data
        Type_of_Source_Media: CD-ROM
        Source_Time_Period_of_Content:
            Time_Period_Information:
                Range_of_Dates/Times:
                    Beginning_Date: 1993

          Ending_Date: 1999
      Source_Currentness_Reference: Date of survey
   Source_Citation_Abbreviation: None
   Source_Contribution: Management information
Source_Information:
   Source_Citation:
      Citation_Information:
         Originator: Alaska Dept. of Natural Resources
         Publication_Date: 2000
         Title: Administrative large parcel boundaries
         Geospatial_Data_Presentation_Form: Vector digital data
         Publication_Information:
            Publication_Place: Anchorage, AK
            Publisher: ADNR, Land Records Information Section
   Source_Scale_Denominator: 63,360
   Type_of_Source_Media: CD-ROM
   Source_Time_Period_of_Content:
      Time_Period_Information:
         Single_Date/Time:
            Calendar_Date: 2000
   Source_Currentness_Reference: Date of publication
   Source_Citation_Abbreviation: None
   Source_Contribution: Management information
Process_Step:
   Process_Description:
      Two digital coverages were used to depict management areas for this data layer: 1) a 2000 Alaska Department of Natural Resources (ADNR) "Administrative Large Parcel Boundaries" vector polygon coverage, and 2) a 2001 USFWS "Spectacled Eider Designated Critical Habitat for Molting and Wintering" vector polygon coverage. Resource experts provided the 2001 USFWS coverage during an initial set of interviews, and the 2000 ADNR coverage was downloaded from the Alaska State Geospatial Data Clearinghouse (ASGDC) website. The MGT data layer was incorporated into an ArcInfo system along with the SOCECON and Biology data layers, and hardcopy draft maps were created, using U.S. Geological Survey (USGS) 1:250,000 topographic quadrangles as base maps. Following the creation of draft maps, a second set of interviews was conducted with the resource experts. 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, then final hardcopy maps were created.
   Process_Date: 200205
   Process_Contact:
      Contact_Information:
         Contact_Organization_Primary:
            Contact_Organization: NOAA, Office of Response and Restoration
            Contact_Person: Jill Petersen
         Contact_Address:
            Address_Type: Physical address
            Address: 7600 Sand Point Way, N.E.
            City: Seattle
            State_or_Province: Washington
            Postal_Code: 98115-6349
         Contact_Voice_Telephone: (206) 526-6944
         Contact_Facsimile_Telephone: (206) 526-6329
         Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

Spatial_Data_Organization_Information:
   Direct_Spatial_Reference_Method: Vector
   Point_and_Vector_Object_Information:
      SDTS_Terms_Description:
         SDTS_Point_and_Vector_Object_Type: GT-polygon composed of rings
         Point_and_Vector_Object_Count: 87
      SDTS_Terms_Description:
         SDTS_Point_and_Vector_Object_Type: Area point
         Point_and_Vector_Object_Count: 87
      SDTS_Terms_Description:
         SDTS_Point_and_Vector_Object_Type: Complete chain
         Point_and_Vector_Object_Count: 270
      SDTS_Terms_Description:
         SDTS_Point_and_Vector_Object_Type: Link
         Point_and_Vector_Object_Count: 83520
      SDTS_Terms_Description:
         SDTS_Point_and_Vector_Object_Type: Node, planar graph
         Point_and_Vector_Object_Count: 267

Spatial_Reference_Information:
   Horizontal_Coordinate_System_Definition:
      Geographic:
         Latitude_Resolution: 0.00005
         Longitude_Resolution: 0.00005
         Geographic_Coordinate_Units: Decimal degrees
      Geodetic_Model:

Horizontal_Datum_Name: North American Datum of 1927
Ellipsoid_Name: Clarke 1866
Semi-major_Axis: 6378206.4
Denominator_of_Flattening_Ratio: 294.978698

Entity_and_Attribute_Information:
    Overview_Description:
        Entity_and_Attribute_Overview:
            In addition to the geographic data layers, two relational attribute or data tables, SOC_DAT and SOURCES, are used to store the complex socioeconomic data in the ESI data structure. The geographic data layer containing socioeconomic resource information (in this case, MGT) is linked to the Socioeconomic Resources table (SOC_DAT) using the unique ID and the lookup table SOC_LUT, or it can be linked directly using HUNUM. HUNUM is a unique reference number concatenated with the atlas number (the Northwest Arctic atlas number is 73). 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 Designated Critical Habitats, Management Areas (rivers designated under the Wild and Scenic Rivers Act), National Park Service properties, and Wildlife Refuges. Note that all attribute information is stored in a series of relational files, described below. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.
            Entity_Type_Definition_Source: Research Planning, Inc.
        Attribute:
            Attribute_Label: TYPE
            Attribute_Definition:
                The human-use features depicted on the maps are those that could be impacted by an oil spill or could provide access for response operations
            Attribute_Definition_Source: Research Planning, Inc.
            Attribute_Domain_Values:
                Enumerated_Domain:
                    Enumerated_Domain_Value: CH
                    Enumerated_Domain_Value_Definition: DESIGNATED CRITICAL HABITAT
                    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: NP
                    Enumerated_Domain_Value_Definition: NATIONAL 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: 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 (73), element number (11), and record number. ID values of 9999 are holes in polygons and do not contain information.
            Attribute_Definition_Source: NOAA
            Attribute_Domain_Values:
                Range_Domain:
                    Range_Domain_Minimum: 731100002
                    Range_Domain_Maximum: 731100088
        Attribute:
            Attribute_Label: HUNUM
            Attribute_Definition:
                An identifier that links directly to the SOC_DAT table. HUNUM values of 0 are holes in polygons and do not contain information.
            Attribute_Definition_Source: NOAA
            Attribute_Domain_Values:
                Range_Domain:
                    Range_Domain_Minimum: 73000003
                    Range_Domain_Maximum: 73000016
    Detailed_Description:
        Entity_Type:
            Entity_Type_Label: SOC_LUT
            Entity_Type_Definition:
                The data table SOC_LUT is a lookup table that contains items necessary for linking vector objects in the human-use data layers with the SOC_DAT data table. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.
            Entity_Type_Definition_Source: Research Planning, Inc.
        Attribute:
            Attribute_Label: HUNUM
            Attribute_Definition:
                An identifier that links records in the SOC_LUT data table to records in the SOC_DAT data table. HUNUM values of 0 are holes in polygons and do not contain information.

Attribute_Definition_Source: NOAA
Attribute_Domain_Values:
    Range_Domain:
        Range_Domain_Minimum: 73000001
        Range_Domain_Maximum: 73000016
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 (73), element number (SOCECON=10; MGT=11), and record number. ID values of 9999 are holes in polygons and do not
    contain information.
Attribute_Definition_Source: NOAA
Attribute_Domain_Values:
    Range_Domain:
        Range_Domain_Minimum: 731000001
        Range_Domain_Maximum: 731100088
Detailed_Description:
    Entity_Type:
        Entity_Type_Label: SOC_DAT
        Entity_Type_Definition:
            The data table SOC_DAT contains both human-use attribute data and items necessary for linking the human-use spatial data layers to the
            SOURCES data table. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table
            relates to other attribute tables in the ESI data structure.
        Entity_Type_Definition_Source: Research Planning, Inc.
    Attribute:
        Attribute_Label: HUNUM
        Attribute_Definition:
            An identifier that links records in the SOC_DAT data table to records in the SOC_LUT data table.
        Attribute_Definition_Source: NOAA
        Attribute_Domain_Values:
            Range_Domain:
                Range_Domain_Minimum: 73000001
                Range_Domain_Maximum: 73000016
    Attribute:
        Attribute_Label: TYPE
        Attribute_Definition: Identifies the feature type
        Attribute_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
            Enumerated_Domain:
                Enumerated_Domain_Value: AIRPORT
                Enumerated_Domain_Value_Definition: AIRPORT
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
            Enumerated_Domain:
                Enumerated_Domain_Value: DESIGNATED CRITICAL HABITAT
                Enumerated_Domain_Value_Definition: DESIGNATED CRITICAL HABITAT
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
            Enumerated_Domain:
                Enumerated_Domain_Value: INTERNATIONAL BORDER
                Enumerated_Domain_Value_Definition: INTERNATIONAL BORDER
                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: MARINA
                Enumerated_Domain_Value_Definition: MARINA
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
            Enumerated_Domain:
                Enumerated_Domain_Value: MINE SITE
                Enumerated_Domain_Value_Definition: MINE SITE
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
            Enumerated_Domain:
                Enumerated_Domain_Value: NATIONAL PARK
                Enumerated_Domain_Value_Definition: NATIONAL PARK
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
            Enumerated_Domain:
                Enumerated_Domain_Value: WILDLIFE REFUGE
                Enumerated_Domain_Value_Definition: WILDLIFE REFUGE
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute:
        Attribute_Label: NAME
        Attribute_Definition: The feature name
        Attribute_Definition_Source: Research Planning, Inc.
        Attribute_Domain_Values:
            Enumerated_Domain:
                Enumerated_Domain_Value: Any character
                Enumerated_Domain_Value_Definition: Free text
                Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
    Attribute:

   Attribute_Label: CONTACT
   Attribute_Definition: Contact person or entity
   Attribute_Definition_Source: Research Planning, Inc.
   Attribute_Domain_Values:
    Enumerated_Domain:
     Enumerated_Domain_Value: Any character
     Enumerated_Domain_Value_Definition: Free text
     Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute:
   Attribute_Label: PHONE
   Attribute_Definition: Contact telephone number
   Attribute_Definition_Source: Research Planning, Inc.
   Attribute_Domain_Values:
    Enumerated_Domain:
     Enumerated_Domain_Value: Any character
     Enumerated_Domain_Value_Definition: Free text
     Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
  Attribute:
   Attribute_Label: G_SOURCE
   Attribute_Definition:
    Geographic source integer identifier that links records in the SOC_DAT data table to records in the SOURCES data table.
   Attribute_Definition_Source: Research Planning, Inc.
   Attribute_Domain_Values:
    Range_Domain:
     Range_Domain_Minimum: 1
     Range_Domain_Maximum: N
  Attribute:
   Attribute_Label: A_SOURCE
   Attribute_Definition:
    Attribute source integer identifier that links records in the SOC_DAT data table to records in the SOURCES data table.
   Attribute_Definition_Source: Research Planning, Inc.
   Attribute_Domain_Values:
    Range_Domain:
     Range_Domain_Minimum: 1
     Range_Domain_Maximum: N
Detailed_Description:
 Entity_Type:
  Entity_Type_Label: SOURCES
  Entity_Type_Definition:
   The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse_Graphic section for a link to the
   entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.
  Entity_Type_Definition_Source: Research Planning, Inc.
 Attribute:
  Attribute_Label: SOURCE_ID
  Attribute_Definition:
   Source identifier that links records in the SOURCES data table to the items G_SOURCE and A_SOURCE in the SOC_DAT table, and to
   G_SOURCE and S_SOURCE in the BIORES table.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Range_Domain:
    Range_Domain_Minimum: 1
    Range_Domain_Maximum: N
 Attribute:
  Attribute_Label: ORIGINATOR
  Attribute_Definition: Author or developer of source material or data set
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:
    Enumerated_Domain_Value: Any character
    Enumerated_Domain_Value_Definition: Free text
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
 Attribute:
  Attribute_Label: DATE_PUB
  Attribute_Definition:
   Date of source material, publication, or date of personal communication with expert source
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:
    Enumerated_Domain_Value: Numeric
    Enumerated_Domain_Value_Definition: mmyyyy
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
 Attribute:
  Attribute_Label: TITLE
  Attribute_Definition: Title of source material or data
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:
    Enumerated_Domain_Value: Any character
    Enumerated_Domain_Value_Definition: Free text
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Attribute:
  Attribute_Label: DATA_FORMAT
  Attribute_Definition: The format of the source material
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: Any character
      Enumerated_Domain_Value_Definition: Free text
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
  Attribute_Label: PUBLICATION
  Attribute_Definition: Additional citation information
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: Any character
      Enumerated_Domain_Value_Definition: Free text
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
  Attribute_Label: SCALE
  Attribute_Definition: Scale denominator of the source
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: integer
      Enumerated_Domain_Value_Definition: Any integer
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
  Attribute_Label: TIME_PERIOD
  Attribute_Definition:
    Date(s) of data collection that the source material is based upon.
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
    Enumerated_Domain:
      Enumerated_Domain_Value: Numeric
      Enumerated_Domain_Value_Definition: yyyy
      Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Distribution_Information:
  Distributor:
    Contact_Information:
      Contact_Person_Primary:
        Contact_Person: John Kaperick
        Contact_Organization: NOAA, Office of Response and Restoration
      Contact_Address:
        Address_Type: Physical Address
        Address: 7600 Sand Point Way, N.E.
        City: Seattle
        State_or_Province: Washington
        Postal_Code: 98115-6349
      Contact_Voice_Telephone: (206) 526-6400
      Contact_Facsimile_Telephone: (206) 526-6329
  Resource_Description: ESI Atlas for Northwest Arctic, Alaska
  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: 200208
  Metadata_Review_Date: 200208
  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

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Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Northwest Arctic, Alaska: 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:
                National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.
            Publication_Date: 200208
            Title:
                Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Northwest Arctic, Alaska: SOCECON (Socioeconomic Resource Points and Lines)
            Edition: First
            Geospatial_Data_Presentation_Form: Vector digital data
            Series_Information:
                Series_Name: None
                Issue_Identification: Northwest Arctic, Alaska
            Publication_Information:
                Publication_Place: Seattle, Washington
                Publisher:
                    National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington.
            Other_Citation_Details:
                Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.
    Description:
        Abstract:
            This data set contains vector points and lines representing human-use resource data for airports, marinas, and mining sites in Northwest Arctic, Alaska. 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. See also the MGT (Management Area Polygons) data layer, part of the larger Northwest Arctic, Alaska ESI database for additional human-use information.

            This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for Northwest Arctic, Alaska. 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: 2001
                Ending_Date: 2002
        Currentness_Reference:
            These data were compiled during 2001-2002. The currentness dates for these data range from 2001 to 2002 and are documented in the Source_Information section.
    Status:
        Progress: Complete
        Maintenance_and_Update_Frequency: None Scheduled
    Spatial_Domain:
        Bounding_Coordinates:
            West_Bounding_Coordinate: -172.000
            East_Bounding_Coordinate: -159.667
            North_Bounding_Coordinate: 68.000
            South_Bounding_Coordinate: 62.700
    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: Northwest Arctic
Place_Keyword: Alaska
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:
Relationships between spatial data layers and attribute data tables for Northwest Arctic, Alaska ESI data.
Browse_Graphic_File_Type: JPEG
Data_Set_Credit:
This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Bering Straits Coastal Resources Service Area, Unalakleet, Alaska; Northwest Arctic Borough, Kotzebue, Alaska; Cominco Mining Company, Red Dog, Alaska; Norton Sound Economic Development Corporation, Anchorage, Alaska; Alaska CHADUX Oil Spill Cooperative, Anchorage, Alaska; NANA Regional Corporation, Kotzebue, Alaska; Alaskan Civil Air Patrol, Kotzebue, Alaska; and National Marine Fisheries Service, Juneau, Alaska.
Native_Data_Set_Environment:
The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.0.2) and ORACLE(r) RDBMS (version 8.0.5.0.0). The hardware configuration is Hewlett Packard workstations (models 715/50 and 712/80i) with UNIX operating system (HP-UX Release A.10.20), and PC's with Windows Operating System (NT4.0/2000).

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

Data_Quality_Information:
Attribute_Accuracy:
Attribute_Accuracy_Report:
A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.
Logical_Consistency_Report:
A multi-stage error checking process, described in the above Attribute_Accuracy_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and ORACLE(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 and hardcopy data on socioeconomic resources in Northwest Arctic, Alaska. Refer to the MGT (Management Area Polygons) data layer for additional human-use information. These data do not necessarily represent all human-use sites in Northwest Arctic, Alaska.
Positional_Accuracy:
Horizontal_Positional_Accuracy:
Horizontal_Positional_Accuracy_Report:
The spatial components of the SOCECON data sets were 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 basemaps with a scale of 1:250,000. 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: Anderson, I. (Sitnasuak)
Publication_Date: Unpublished material
Title: Mining/land use in Nome
Geospatial_Data_Presentation_Form: expert knowledge
Type_of_Source_Media: CD-ROM
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:

Calendar_Date: 2001
Source_Currentness_Reference: date of communication
Source_Citation_Abbreviation: None
Source_Contribution: Socioeconomic information
Source_Information:
    Source_Citation:
        Citation_Information:
            Originator: Plank, C. (RPI)
            Publication_Date: Unpublished material
            Title: Observations of marinas/ports from overflights
            Geospatial_Data_Presentation_Form: expert knowledge
    Source_Scale_Denominator: 63,360
    Type_of_Source_Media: CD-ROM
    Source_Time_Period_of_Content:
        Time_Period_Information:
            Single_Date/Time:
                Calendar_Date: 2001
    Source_Currentness_Reference: date of survey
    Source_Citation_Abbreviation: None
    Source_Contribution: Socioeconomic information
Source_Information:
    Source_Citation:
        Citation_Information:
            Originator: US Geological Survey (USGS)
            Publication_Date: Varies
            Title: Topographic quadrangles
            Geospatial_Data_Presentation_Form: hardcopy map
            Publication_Information:
                Publication_Place: Denver, CO or Reston, VA
                Publisher: USGS
    Source_Scale_Denominator: 24,000
    Type_of_Source_Media: CD-ROM
    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: Socioeconomic information
Source_Information:
    Source_Citation:
        Citation_Information:
            Originator: Whitney, J. (NOAA, Anchorage)
            Publication_Date: Unpublished material
            Title: Soc_econ attribute information
            Geospatial_Data_Presentation_Form: Expert knowledge
    Type_of_Source_Media: CD-ROM
    Source_Time_Period_of_Content:
        Time_Period_Information:
            Single_Date/Time:
                Calendar_Date: 2002
    Source_Currentness_Reference: date of communication
    Source_Citation_Abbreviation: None
    Source_Contribution: Socioeconomic information
Process_Step:
    Process_Description:
        Three main sources of data were used to depict human-use resources for this data layer: 1) personal interviews with resource experts from Sitnasuak Native Corporation and National Oceanic and Atmospheric Administration (NOAA); 2) observations made during overflights; and 3) U.S. Geological Survey (USGS) 1:250,000 topographic quadrangles. Information gathered during initial interviews, overflights, and from hardcopy maps was compiled as point features onto USGS 1:250,000 topographic quadrangles. The compiled data were digitized off the base maps into an ArcInfo system to create the SOCECON data layer. All ESI, biology, and human-use data were plotted onto hardcopy draft maps. Following the creation of draft maps, a second set of interviews was conducted with the resource experts. Participants who were unable to attend the meetings were sent a set of maps to review. Edits to the SOCECON data layer were made based on the recommendations of the resource experts, and final hardcopy maps were created.
    Process_Date: 200205
    Process_Contact:
        Contact_Information:
            Contact_Organization_Primary:
                Contact_Organization: NOAA, Office of Response and Restoration
                Contact_Person: Jill Petersen
            Contact_Address:
                Address_Type: Physical address
                Address: 7600 Sand Point Way, N.E.
                City: Seattle
                State_or_Province: Washington
                Postal_Code: 98115-6349
            Contact_Voice_Telephone: (206) 526-6944
            Contact_Facsimile_Telephone: (206) 526-6329
            Contact_Electronic_Mail_Address: Jill.Petersen@noaa.gov

Spatial_Data_Organization_Information:
    Direct_Spatial_Reference_Method: Vector
    Point_and_Vector_Object_Information:
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: Complete Chain
            Point_and_Vector_Object_Count: 34
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: Link
            Point_and_Vector_Object_Count: 16236
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: Entity Point
            Point_and_Vector_Object_Count: 51
        SDTS_Terms_Description:
            SDTS_Point_and_Vector_Object_Type: Node, planar graph
            Point_and_Vector_Object_Count: 35

Spatial_Reference_Information:
    Horizontal_Coordinate_System_Definition:
        Geographic:
            Latitude_Resolution: 0.00005
            Longitude_Resolution: 0.00005
            Geographic_Coordinate_Units: Decimal degrees
        Geodetic_Model:
            Horizontal_Datum_Name: North American Datum of 1927
            Ellipsoid_Name: Clarke 1866
            Semi-major_Axis: 6378206.4
            Denominator_of_Flattening_Ratio: 294.978698

Entity_and_Attribute_Information:
    Overview_Description:
        Entity_and_Attribute_Overview:
            In addition to the geographic data layers, two relational attribute or data tables, SOC_DAT and SOURCES, are used to store the complex socioeconomic data in the ESI data structure. The geographic data layer containing socioeconomic resource information (in this case, SOCECON) is linked to the Socioeconomic Resources table (SOC_DAT) using the unique ID and the lookup table SOC_LUT, or it can be linked directly using HUNUM. HUNUM is a unique reference number concatenated with the atlas number (the Northwest Arctic atlas number is 73). ID is a unique combination of the atlas number (73), 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 international borders. These lines are not linked to any additional information in the relational data files.
            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: IB
                    Enumerated_Domain_Value_Definition: INTERNATIONAL BORDER
                    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 airports, marinas, and mining 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: 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: M
     Enumerated_Domain_Value_Definition: MARINA
     Enumerated_Domain_Value_Definition_Source: Research Planning, Inc
    Enumerated_Domain:
     Enumerated_Domain_Value: M2
     Enumerated_Domain_Value_Definition: MINE SITE
     Enumerated_Domain_Value_Definition_Source: Research Planning, Inc
 Attribute:
  Attribute_Label: ID
  Attribute_Definition:
   An identifier that links vector objects in the human-use data layers to records in the SOC_LUT data table. ID is a concatenation of atlas
   number (73), element number (10), and record number.
  Attribute_Definition_Source: NOAA
  Attribute_Domain_Values:
   Range_Domain:
    Range_Domain_Minimum: 731000001
    Range_Domain_Maximum: 731000051
 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: 73000001
    Range_Domain_Maximum: 73000007
Detailed_Description:
 Entity_Type:
  Entity_Type_Label: SOC_LUT
  Entity_Type_Definition:
   The data table SOC_LUT is a lookup table that contains items necessary for linking vector objects in the human-use data layers with the
   SOC_DAT data table. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table
   relates to other attribute tables in the ESI data structure.
  Entity_Type_Definition_Source: Research Planning, Inc.
 Attribute:
  Attribute_Label: HUNUM
  Attribute_Definition:
   An identifier that links records in the SOC_LUT data table to records in the SOC_DAT data table. HUNUM values of 0 are holes in
   polygons and do not contain information.
  Attribute_Definition_Source: NOAA
  Attribute_Domain_Values:
   Range_Domain:
    Range_Domain_Minimum: 73000001
    Range_Domain_Maximum: 73000016
 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 (73), element number (SOCECON=10; MGT=11), and record number. ID values of 9999 are holes in polygons and do not
   contain information.
  Attribute_Definition_Source: NOAA
  Attribute_Domain_Values:
   Range_Domain:
    Range_Domain_Minimum: 731000001
    Range_Domain_Maximum: 731100088
Detailed_Description:
 Entity_Type:
  Entity_Type_Label: SOC_DAT
  Entity_Type_Definition:
   The data table SOC_DAT contains both human-use attribute data and items necessary for linking the human-use spatial data layers to the
   SOURCES data table. See the Browse_Graphic section for a link to the entity-relationship diagram, which describes the way this table
   relates to other attribute tables in the ESI data structure.
  Entity_Type_Definition_Source: Research Planning, Inc.
 Attribute:
  Attribute_Label: HUNUM
  Attribute_Definition:
   An identifier that links records in the SOC_DAT data table to records in the SOC_LUT data table.
  Attribute_Definition_Source: NOAA
  Attribute_Domain_Values:
   Range_Domain:
    Range_Domain_Minimum: 73000001
    Range_Domain_Maximum: 73000016
 Attribute:
  Attribute_Label: TYPE
  Attribute_Definition: Identifies the feature type
  Attribute_Definition_Source: Research Planning, Inc.
  Attribute_Domain_Values:
   Enumerated_Domain:
    Enumerated_Domain_Value: AIRPORT
    Enumerated_Domain_Value_Definition: AIRPORT

Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
    Enumerated_Domain_Value: DESIGNATED CRITICAL HABITAT
    Enumerated_Domain_Value_Definition: DESIGNATED CRITICAL HABITAT
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
    Enumerated_Domain_Value: INTERNATIONAL BORDER
    Enumerated_Domain_Value_Definition: INTERNATIONAL BORDER
    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: MARINA
    Enumerated_Domain_Value_Definition: MARINA
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
    Enumerated_Domain_Value: MINE SITE
    Enumerated_Domain_Value_Definition: MINE SITE
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
    Enumerated_Domain_Value: NATIONAL PARK
    Enumerated_Domain_Value_Definition: NATIONAL PARK
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Enumerated_Domain:
    Enumerated_Domain_Value: WILDLIFE REFUGE
    Enumerated_Domain_Value_Definition: WILDLIFE REFUGE
    Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: NAME
    Attribute_Definition: The feature name
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Any character
            Enumerated_Domain_Value_Definition: Free text
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: CONTACT
    Attribute_Definition: Contact person or entity
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Any character
            Enumerated_Domain_Value_Definition: Free text
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: PHONE
    Attribute_Definition: Contact telephone number
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Any character
            Enumerated_Domain_Value_Definition: Free text
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: G_SOURCE
    Attribute_Definition:
        Geographic source integer identifier that links records in the SOC_DAT data table to records in the SOURCES data table.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Range_Domain:
            Range_Domain_Minimum: 1
            Range_Domain_Maximum: N
Attribute:
    Attribute_Label: A_SOURCE
    Attribute_Definition:
        Attribute source integer identifier that links records in the SOC_DAT data table to records in the SOURCES data table.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Range_Domain:
            Range_Domain_Minimum: 1
            Range_Domain_Maximum: N
Detailed_Description:
    Entity_Type:
        Entity_Type_Label: SOURCES
        Entity_Type_Definition:
        The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse_Graphic section for a link to the
        entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

Entity_Type_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: SOURCE_ID
    Attribute_Definition:
        Source identifier that links records in the SOURCES data table to the items G_SOURCE and A_SOURCE in the SOC_DAT table, and to G_SOURCE and S_SOURCE in the BIORES table.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Range_Domain:
            Range_Domain_Minimum: 1
            Range_Domain_Maximum: N
Attribute:
    Attribute_Label: ORIGINATOR
    Attribute_Definition: Author or developer of source material or data set
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Any character
            Enumerated_Domain_Value_Definition: Free text
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: DATE_PUB
    Attribute_Definition:
        Date of source material, publication, or date of personal communication with expert source
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Numeric
            Enumerated_Domain_Value_Definition: mmyyyy
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: TITLE
    Attribute_Definition: Title of source material or data
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Any character
            Enumerated_Domain_Value_Definition: Free text
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: DATA_FORMAT
    Attribute_Definition: The format of the source material
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Any character
            Enumerated_Domain_Value_Definition: Free text
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: PUBLICATION
    Attribute_Definition: Additional citation information
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Any character
            Enumerated_Domain_Value_Definition: Free text
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: SCALE
    Attribute_Definition: Scale denominator of the source
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: integer
            Enumerated_Domain_Value_Definition: Any integer
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.
Attribute:
    Attribute_Label: TIME_PERIOD
    Attribute_Definition:
        Date(s) of data collection that the source material is based upon.
    Attribute_Definition_Source: Research Planning, Inc.
    Attribute_Domain_Values:
        Enumerated_Domain:
            Enumerated_Domain_Value: Numeric
            Enumerated_Domain_Value_Definition: yyyy
            Enumerated_Domain_Value_Definition_Source: Research Planning, Inc.

Distribution_Information:

Distributor:
- *Contact_Information:*
  - *Contact_Person_Primary:*
    - *Contact_Person:* John Kaperick
    - *Contact_Organization:* NOAA, Office of Response and Restoration
  - *Contact_Address:*
    - *Address_Type:* Physical Address
    - *Address:* 7600 Sand Point Way, N.E.
    - *City:* Seattle
    - *State_or_Province:* Washington
    - *Postal_Code:* 98115-6349
  - *Contact_Voice_Telephone:* (206) 526-6400
  - *Contact_Facsimile_Telephone:* (206) 526-6329
- *Resource_Description:* ESI Atlas for Northwest Arctic, Alaska
- *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:* 200208
- *Metadata_Review_Date:* 200208
- *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

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Relationships between spatial data layers and attribute data tables

Geographic Themes

Lookup Tables

Data Tables

ESI (ARCS)
 ESI (10, 10, C)
 LINE (1, 1, C)
 SOURCE_ID (6, 6, I)
 ENVIR (1, 1, C)
ESI (POLYS)
 ESI (10, 10, C)
 WATER_CODE (1, 1, C)
 ENVIR (1, 1, C)
HYDRO (ARCS)
 LINE (1, 1, C)
 SOURCE_ID (6, 6, I)
HYDRO (POLYS)
 WATER_CODE (1, 1, C)
INDEX (POLYS)
 TILE-NAME (32, 32, C)
 TOPO-NAME (255, 255, C)
 SCALE (7, 7, I)
 MAPANGLE (4, 8, F, 3)
 PAGESIZE (11, 11, C)

MGT (POLYS)
 TYPE (2, 2, C)
 ID (10, 10, I)
 HUNUM (9, 9, I)
SOCECON (ARCS)
 TYPE (2, 2, C)
SOCECON (POINTS)
 TYPE (2, 2, C)
 ID (10,10,I)
 HUNUM (9, 9, I)

BIRDS (POLYS)
 ID (10, 10, I)
 RARNUM (9, 9, I)
FISH (POLYS)
 ID (10, 10, I)
 RARNUM (9, 9, I)
FISHL (ARCS)
 ID (10, 10, I)
 RARNUM (9, 9, I)
HABITATS (POLYS)
 ID (10, 10, I)
 RARNUM (9, 9, I)
INVERT (POLYS)
 ID (10, 10, I)
 RARNUM (9, 9, I)
M_MAMMAL (POLYS)
 ID (10, 10, I)
 RARNUM (9, 9, I)
M_MAMPT (POINTS)
 ID (10, 10, I)
 RARNUM (9, 9, I)
NESTS (POINTS)
 ID (10, 10, I)
 RARNUM (9, 9, I)
T_MAMMAL (POLYS)
 ID (10, 10, I)
 RARNUM (9, 9, I)

SOC_LUT
 HUNUM (9, 9, I)
 ID (10, 10, I)

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

BIO_LUT
 RARNUM (9, 9, I)
 ID (10, 10, I)

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

SOC_DAT
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 NAME (40, 40, C)
 CONTACT (80, 80, C)
 PHONE (20, 20, C)
 G_SOURCE (6, 6, I)
 A_SOURCE (6, 6, I)

BIORES
 RARNUM (9, 9, I)
 SPECIES_ID (5, 5, I)
 CONC (20, 20, C)
 SEASON_ID (2, 2, I)
 G_SOURCE (6, 6, I)
 S_SOURCE (6, 6, I)
 ELEMENT (10, 10, C)
 EL_SPE (6, 6, C)
 EL_SPE_SEA (8, 8, C)

SOURCES
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 TITLE (80, 80, C)
 DATA_FORMAT (80, 80, C)
 PUBLICATION (120, 120, C)
 SCALE (20, 20, C)
 TIME_PERIOD (22, 22, C)

SPECIES
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 GEN_SPEC (45, 45, C)
 ELEMENT (10, 10, C)
 SUBELEMENT (10, 10, C)
 NHP (10, 10, C)
 DATE_PUB (10, 10, I)
 EL_SPE (6, 6, C)

SEASONAL
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 SPECIES_ID (5, 5, I)
 SEASON_ID (2, 2, I)
 JAN (1, 1, C)
 FEB (1, 1, C)
 MAR (1, 1, C)
 APR (1, 1, C)
 MAY (1, 1, C)
 JUN (1, 1, C)
 JUL (1, 1, C)
 AUG (1, 1, C)
 SEP (1, 1, C)
 OCT (1, 1, C)
 NOV (1, 1, C)
 DEC (1, 1, C)
 EL_SPE_SEA (8, 8, C)

STATUS
 ELEMENT (10, 10, C)
 SPECIES_ID (5, 5, I)
 STATE (2, 2, C)
 S_F (3, 3, C)
 T_E (3, 3, C)
 DATE_PUB (10, 10, I)
 EL_SPE (6, 6, C)

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