

# North Slope, Alaska ESI: HYDRO (Hydrography Lines and Polygons)

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

## Metadata:

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

### *Identification Information:*

#### *Citation:*

##### *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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

*Publication Date:* 200506

*Title:* North Slope, Alaska ESI: HYDRO (Hydrography Lines and Polygons)

*Edition:* First

*Geospatial Data Presentation Form:* Vector digital data

##### *Series Information:*

*Series Name:* None

*Issue Identification:* North Slope, 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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

*Description:**Abstract:*

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

This data set comprises a portion of the ESI data for North Slope, 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:* 1950

*Ending\_Date:* 2000

*Currentness\_Reference:*

The data were compiled during 2003-2004. The currentness dates for the data range from 1950 to 2000 and are documented in the Lineage section.

*Status:*

*Progress:* Complete

*Maintenance\_and\_Update\_Frequency:* None Scheduled

*Spatial\_Domain:**Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -168.00000

*East\_Bounding\_Coordinate:* -140.80000

*North\_Bounding\_Coordinate:* 72.00000

*South\_Bounding\_Coordinate:* 68.00000

*Keywords:**Theme:*

*Theme\_Keyword\_Thesaurus:* None

*Theme\_Keyword:* ESI

*Theme\_Keyword:* Sensitivity maps

*Theme\_Keyword:* Coastal resources

*Theme\_Keyword:* Oil spill planning

*Theme\_Keyword:* Coastal Zone Management

*Theme\_Keyword:* Wildlife

*Theme\_Keyword:* Hydrography

*Place:*

*Place\_Keyword\_Thesaurus:* None

*Place\_Keyword:* North Slope, 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:*

Depicts the relationships between spatial data layers and attribute data tables for the North Slope, 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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

*Native\_Data\_Set\_Environment:*

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

The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in the data set: bioindex.e00, birds.e00, esi.e00, facility.e00, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, m\_mammal.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 SQL SERVER(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks.

*Completeness\_Report:*

These data represent linear and polygonal hydrography for the North Slope.

*Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy\_Report:*

The HYDRO data layer was developed from pre-existing digital or hardcopy sources and reflects the positional accuracy of these original data. The horizontal positional accuracy of the 1:63,360 USGS topographic quads should conform to National Map Accuracy Standards at scales of 1:63,360. 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:* VARIES

*Title:* TOPOGRAPHIC QUADRANGLES

*Geospatial\_Data\_Presentation\_Form:* HARDCOPY MAP

*Other\_Citation\_Details:* DENVER, CO OR RESTON, VA

*Source\_Scale\_Denominator:* 63360

*Type\_of\_Source\_Media:* PAPER

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* VARIES

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* DIGITAL SHORELINE

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* U.S. GEOLOGICAL SURVEY

*Publication\_Date:* VARIES

*Title:* DIGITAL LINE GRAPHS (DLG) OF TOPOGRAPHIC MAPS

*Geospatial\_Data\_Presentation\_Form:* DIGITAL MAP

*Other\_Citation\_Details:* DENVER, CO OR RESTON, VA

*Source\_Scale\_Denominator:* 63360

*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:* DIGITAL SHORELINE

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:**Originator:* ED OWENS*Publication\_Date:* 1981*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:* 1981*Source\_Currentness\_Reference:* DATE OF OVERFLIGHT*Source\_Citation\_Abbreviation:* NONE*Source\_Contribution:* DIGITAL SHORELINE*Source\_Information:**Source\_Citation:**Citation\_Information:**Originator:*

AK Department of Natural Resources, Land Records Information Section

*Publication\_Date:* 1998*Title:*

Alaska Coastline 1 to 63,360 excluding small islands - Generalized

*Geospatial\_Data\_Presentation\_Form:* DIGITAL MAP*Other\_Citation\_Details:* Anchorage, AK*Source\_Scale\_Denominator:* 63360*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:* DIGITAL SHORELINE*Source\_Information:**Source\_Citation:**Citation\_Information:**Originator:*

Yukon Dept. of Renewable Resources Geographic Information System

*Publication\_Date:* 2000*Title:* Yukon Border and Shoreline*Geospatial\_Data\_Presentation\_Form:* DIGITAL MAP*Other\_Citation\_Details:* Yukon RRGIS*Source\_Scale\_Denominator:* 250000*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:* DIGITAL SHORELINE

*Process\_Step:**Process\_Description:*

Five sources of data were used to derive the shoreline for the North Slope ESI Atlas: (1) the primary source was digital coastline data from the U.S. Geological Survey (DLG data set); (2) Alaska Department of Natural Resources coastline (cst63) was used to fill in gaps from the DLG data; (3) a single quad (Wainwright D-2) was digitized directly from USGS Digital Raster Graphs (DRG); (4) Canadian shoreline was derived from the Yukon Dept. of Renewable Resources GIS; and (5) gross shoreline changes or additional hydrography polygons were sketched during overflights (See ESI metadata document for additional information). Overflight changes were digitized from the scanned and registered hardcopy field maps. After the initial shoreline classification, these data were edgematched and checked for logical consistency errors. Review maps were plotted at 1:63,360 scale for verification of polygonal and linear attributes by the Project Geomorphologist.

*Process\_Date:* 200501

*Process\_Contact:**Contact\_Information:**Contact\_Organization\_Primary:*

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Person:* Jill Petersen

*Contact\_Address:*

*Address\_Type:* Physical address

*Address:* 7600 Sand Point Way N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6944

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:* Vector

*Point\_and\_Vector\_Object\_Information:**SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* GT-polygon composed of chains

*Point\_and\_Vector\_Object\_Count:* 78904

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Area point

*Point\_and\_Vector\_Object\_Count:* 78904

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Complete chain

*Point\_and\_Vector\_Object\_Count:* 93075

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Link

*Point\_and\_Vector\_Object\_Count:* 1847075

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Label Point

*Point\_and\_Vector\_Object\_Count:* 93

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Node, planar graph

*Point\_and\_Vector\_Object\_Count:* 92987

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*Spatial\_Reference\_Information:*

*Horizontal\_Coordinate\_System\_Definition:*

*Geographic:*

*Latitude\_Resolution:* 0.0000001

*Longitude\_Resolution:* 0.0000001

*Geographic\_Coordinate\_Units:* Decimal degrees

*Geodetic\_Model:*

*Horizontal\_Datum\_Name:* North American Datum of 1927

*Ellipsoid\_Name:* Clark 1866

*Semi-major\_Axis:* 6378206.400000

*Denominator\_of\_Flattening\_Ratio:* 294.978698

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*Entity\_and\_Attribute\_Information:*

*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:* E

*Enumerated\_Domain\_Value\_Definition:* Extent of Digital Data

*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 lines

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: 1*

*Enumerated\_Domain\_Value\_Definition: Digital line graph (USGS)*

*Enumerated\_Domain\_Value\_Definition\_Source: Research Planning, Inc.*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: 2*

*Enumerated\_Domain\_Value\_Definition:*

Digitized from low-altitude overflight field sketches and oblique photography

*Enumerated\_Domain\_Value\_Definition\_Source: Research Planning, Inc.*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: 5*

*Enumerated\_Domain\_Value\_Definition: Digitized from scanned 1:63,360-USGS topographic quadrangle*

*Enumerated\_Domain\_Value\_Definition\_Source: Research Planning, Inc.*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: 7*

*Enumerated\_Domain\_Value\_Definition: Digital Index*

*Enumerated\_Domain\_Value\_Definition\_Source: Research Planning, Inc.*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: 8*

*Enumerated\_Domain\_Value\_Definition: DLG Index (Extent of DLG Data)*

*Enumerated\_Domain\_Value\_Definition\_Source: Research Planning, Inc.*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: 9*

*Enumerated\_Domain\_Value\_Definition: Alaska Department of Natural Resources (cst63)*

*Enumerated\_Domain\_Value\_Definition\_Source: Research Planning, Inc.*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: 10*

*Enumerated\_Domain\_Value\_Definition: Yukon Dept. of Renewable Resources GIS*

*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 North Slope, 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.

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*Metadata\_Reference\_Information:*

*Metadata\_Date:* 200506

*Metadata\_Review\_Date:* 200506

*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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# North Slope, Alaska ESI: ESI (Environmental Sensitivity Index Shoreline Types - 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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

*Publication Date:* 200506

#### *Title:*

North Slope, Alaska ESI: ESI (Environmental Sensitivity Index Shoreline Types - Lines and Polygons)

*Edition:* First

*Geospatial Data Presentation Form:* Vector digital data

#### *Series Information:*

*Series Name:* None

*Issue Identification:* North Slope, 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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

*Description:*

*Abstract:*

This data set contains vector lines and polygons representing the shoreline and coastal habitats for the North Slope of Alaska classified according to the Environmental Sensitivity Index (ESI) classification system. This data set comprises a portion of the ESI data for North Slope, 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:* 1950

*Ending\_Date:* 2004

*Currentness\_Reference:*

The ESI shoreline data were compiled during 2003-2004. The currentness dates for the data range from 1950 to 2004 and are documented in the Lineage section.

*Status:*

*Progress:* Complete

*Maintenance\_and\_Update\_Frequency:* None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -168.00000

*East\_Bounding\_Coordinate:* -140.80000

*North\_Bounding\_Coordinate:* 72.00000

*South\_Bounding\_Coordinate:* 68.00000

*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:* North Slope, 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:*

Depicts the relationships between spatial data layers and attribute data tables for the North Slope, 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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

*Native\_Data\_Set\_Environment:*

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

The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in the data set: bioindex.e00, birds.e00, esi.e00, facility.e00, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, m\_mammal.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 SQL SERVER(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks.

*Completeness\_Report:*

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

*Positional\_Accuracy:**Horizontal\_Positional\_Accuracy:**Horizontal\_Positional\_Accuracy\_Report:*

The ESI data layer was developed from pre-existing digital or hardcopy sources and reflects the positional accuracy of these original data. The horizontal positional accuracy of the 1:63,360 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 where mapping is conducted using 1:24,000 hardcopy fieldmaps. Field verification has shown that the absolute positional accuracy of breaks between shoreline ESI types with a 95-percent error bound is approximately 58 meters. See the Lineage and Process\_Description sections for more information on the original data source 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:* VARIES

*Title:* TOPOGRAPHIC QUADRANGLES

*Geospatial\_Data\_Presentation\_Form:* HARDCOPY MAP

*Other\_Citation\_Details:* DENVER, CO OR RESTON, VA

*Source\_Scale\_Denominator:* 63360

*Type\_of\_Source\_Media:* PAPER

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* VARIES

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* DIGITAL SHORELINE

*Source\_Information:**Source\_Citation:**Citation\_Information:*

*Originator:* U.S. GEOLOGICAL SURVEY

*Publication\_Date:* VARIES

*Title:* DIGITAL LINE GRAPHS (DLG) OF TOPOGRAPHIC MAPS

*Geospatial\_Data\_Presentation\_Form:* DIGITAL MAP

*Other\_Citation\_Details:* DENVER, CO OR RESTON, VA

*Source\_Scale\_Denominator:* 63360

*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:* DIGITAL SHORELINE

*Source\_Information:**Source\_Citation:**Citation\_Information:**Originator:* ED OWENS*Publication\_Date:* 1981*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:* 1981*Source\_Currentness\_Reference:* DATE OF OVERFLIGHT*Source\_Citation\_Abbreviation:* NONE*Source\_Contribution:* DIGITAL SHORELINE*Source\_Information:**Source\_Citation:**Citation\_Information:**Originator:*

AK Department of Natural Resources, Land Records Information Section

*Publication\_Date:* 1998*Title:*

Alaska Coastline 1 to 63,360 excluding small islands - Generalized

*Geospatial\_Data\_Presentation\_Form:* DIGITAL MAP*Other\_Citation\_Details:* Anchorage, AK*Source\_Scale\_Denominator:* 63360*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:* DIGITAL SHORELINE*Process\_Step:**Process\_Description:*

Overflights for the North Slope, Alaska ESI Atlas were conducted as part of 2 previous projects. First, the shoreline habitats between the Colville and Canning Rivers were mapped in April 1997 as part of the North Slope Summary maps. Second, the shoreline habitats for the area from Point Hope to the Coville River and the Canning River to the Canadian border were mapped from 24 July to 29 July, 1997 as part of the Alaskan Beaufort Sea project. Overflights were conducted 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.

*Process\_Date:* 200501*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Person:* Jill Petersen

*Contact\_Address:*

*Address\_Type:* Physical address

*Address:* 7600 Sand Point Way N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6944

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

---

*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:* Vector

*Point\_and\_Vector\_Object\_Information:*

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* GT-polygon composed of chains

*Point\_and\_Vector\_Object\_Count:* 867

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Area point

*Point\_and\_Vector\_Object\_Count:* 867

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Complete chain

*Point\_and\_Vector\_Object\_Count:* 4936

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Link

*Point\_and\_Vector\_Object\_Count:* 287973

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Node, planar graph

*Point\_and\_Vector\_Object\_Count:* 4977

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*Spatial\_Reference\_Information:*

*Horizontal\_Coordinate\_System\_Definition:*

*Geographic:*

*Latitude\_Resolution:* 0.0000001

*Longitude\_Resolution:* 0.0000001

*Geographic\_Coordinate\_Units:* Decimal degrees

*Geodetic\_Model:*

*Horizontal\_Datum\_Name:* North American Datum of 1927

*Ellipsoid\_Name:* Clark 1866

*Semi-major\_Axis:* 6378206.400000

*Denominator\_of\_Flattening\_Ratio:* 294.978698

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*Entity\_and\_Attribute\_Information:*

*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:* 3A

*Enumerated\_Domain\_Value\_Definition:* Fine- to Medium-grained Sand Beaches

*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 Mud or Clay*

*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: Sheltered, Vegetated Low Banks*

*Enumerated\_Domain\_Value\_Definition\_Source: Research Planning, Inc.*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: 10A*

*Enumerated\_Domain\_Value\_Definition: Salt- and Brackish-water marshes*

*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:* S

*Enumerated\_Domain\_Value\_Definition:* Shoreline

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SOURCE\_ID

*Attribute\_Definition:* Data source of the ESI lines.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 1

*Enumerated\_Domain\_Value\_Definition:* Digital line graph (USGS)

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 2

*Enumerated\_Domain\_Value\_Definition:* Low-altitude overflight field sketches and oblique photography

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 5

*Enumerated\_Domain\_Value\_Definition:* Digitized from scanned 1:63,360-USGS topographic quadrangle

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 9

*Enumerated\_Domain\_Value\_Definition:* Alaska Department of Natural Resources coastline (cst63)

*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.

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: 9A

*Enumerated\_Domain\_Value\_Definition*: Sheltered Tidal Flats

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*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 North Slope, 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:* 200506

*Metadata\_Review\_Date:* 200506

*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

# North Slope, Alaska ESI: INDEX (Index Polygons)

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

## Metadata:

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

### *Identification Information:*

#### *Citation:*

#### *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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

*Publication Date:* 200506

*Title:* North Slope, Alaska ESI: INDEX (Index Polygons)

*Edition:* First

*Geospatial Data Presentation Form:* Vector digital data

#### *Series Information:*

*Series Name:* None

*Issue Identification:* North Slope, 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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

### *Description:*

#### *Abstract:*

This data set contains vector polygons representing the boundaries used for the production of the hardcopy maps as part of the Environmental Sensitivity Index (ESI) atlas for the North Slope of Alaska. This data set comprises a portion of the ESI data for North Slope, 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:*

*Single\_Date/Time:*

*Calendar\_Date:* 2004

*Currentness\_Reference:*

The INDEX data were compiled during 2003-2004. The currentness date for the data is 2004 and is documented in the Lineage section.

*Status:*

*Progress:* Complete

*Maintenance\_and\_Update\_Frequency:* None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -168.00000

*East\_Bounding\_Coordinate:* -140.80000

*North\_Bounding\_Coordinate:* 72.00000

*South\_Bounding\_Coordinate:* 68.00000

*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:* North Slope, 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:*

Depicts the relationships between spatial data layers and attribute data tables for the North Slope, 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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

*Native\_Data\_Set\_Environment:*

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

The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in the data set: bioindex.e00, birds.e00, esi.e00, facility.e00, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, m\_mammal.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 SQL SERVER(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks.

*Completeness\_Report:*

These data represent the boundaries of all hardcopy cartographic products produced as part of the North Slope ESI, as well as the digital data extents.

*Positional\_Accuracy:**Horizontal\_Positional\_Accuracy:**Horizontal\_Positional\_Accuracy\_Report:*

The INDEX data layer is generated from the coordinates of the USGS 1:63,360



topographic map corners or developed from pre-existing digital or hardcopy sources and reflects the positional accuracy of these original data. Some small amount of positional error may be present along the lines forming the boundaries of these polygons, particularly away from the polygon corners. 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:* VARIES

*Title:* TOPOGRAPHIC QUADRANGLES

*Geospatial\_Data\_Presentation\_Form:* HARDCOPY MAP

*Other\_Citation\_Details:* DENVER, CO OR RESTON, VA

*Source\_Scale\_Denominator:* 63360

*Type\_of\_Source\_Media:* PAPER

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* VARIES

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* INDEX INFORMATION

*Process\_Step:*

*Process\_Description:*

Primarily, 1:63,360 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.

*Process\_Date:* 200501

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Person:* Jill Petersen

*Contact\_Address:*

*Address\_Type:* Physical address

*Address:* 7600 Sand Point Way N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6944

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

---

*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:* Vector

*Point\_and\_Vector\_Object\_Information:*

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type*: GT-polygon composed of chains

*Point\_and\_Vector\_Object\_Count*: 24

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: Area point

*Point\_and\_Vector\_Object\_Count*: 24

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: Complete chain

*Point\_and\_Vector\_Object\_Count*: 77

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: Link

*Point\_and\_Vector\_Object\_Count*: 981

*SDTS\_Terms\_Description*:

*SDTS\_Point\_and\_Vector\_Object\_Type*: Node, planar graph

*Point\_and\_Vector\_Object\_Count*: 54

### *Spatial\_Reference\_Information*:

*Horizontal\_Coordinate\_System\_Definition*:

*Geographic*:

*Latitude\_Resolution*: 0.0000001

*Longitude\_Resolution*: 0.0000001

*Geographic\_Coordinate\_Units*: Decimal degrees

*Geodetic\_Model*:

*Horizontal\_Datum\_Name*: North American Datum of 1927

*Ellipsoid\_Name*: Clark 1866

*Semi-major\_Axis*: 6378206.400000

*Denominator\_of\_Flattening\_Ratio*: 294.978698

### *Entity\_and\_Attribute\_Information*:

*Detailed\_Description*:

*Entity\_Type*:

*Entity\_Type\_Label*: INDEX.PAT

*Entity\_Type\_Definition*:

The INDEX.PAT table contains attribute information for the vector polygons representing the boundaries of the maps and digital data boundaries used in the creation of the ESI.

*Entity\_Type\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: TILE-NAME

*Attribute\_Definition*:

The TILE-NAME contains the map number according to the specified layout of the atlas.

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1

*Range\_Domain\_Maximum*: 24

*Attribute*:

*Attribute\_Label*: TOPO-NAME

*Attribute\_Definition*:

USGS Topographic map name, short description of location, or atlas name.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* SCALE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 63360

*Enumerated\_Domain\_Value\_Definition:* Scale = 1:63,360

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* MAPANGLE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* -11.0400

*Range\_Domain\_Maximum:* 11.6290

*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 North Slope, 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:* 200506

*Metadata\_Review\_Date:* 200506

*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 2.8.21 on Mon Jun 13 16:33:45 2005

# North Slope, Alaska ESI: BIOINDEX (Biological 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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

*Publication Date:* 200506

*Title:* North Slope, Alaska ESI: BIOINDEX (Biological Index Polygons)

*Edition:* First

*Geospatial Data Presentation Form:* Vector digital data

##### *Series Information:*

*Series Name:* None

*Issue Identification:* North Slope, 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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

*Description:**Abstract:*

This data set contains vector polygons representing the quad boundaries of the 1:250,000 USGS topographic quadrangles. These boundaries represent the extent of the biological resources mapping for the North Slope, Alaska. Specifically, these data were used for the creation of the biology data compilation and edit maps. These data are also used for digitizing of hardcopy biology data that extended beyond the INDEX layer.

This data set comprises a portion of the ESI data for North Slope, 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. See also the INDEX (Index Polygons) data layer, part of the larger North Slope, Alaska ESI database, for additional boundary information.

*Purpose:*

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

*Time\_Period\_of\_Content:**Time\_Period\_Information:**Single\_Date/Time:*

*Calendar\_Date:* 2004

*Currentness\_Reference:*

The BIOINDEX data were compiled during 2003-2004. The currentness date for the data is 2004 and is documented in the Lineage section.

*Status:*

*Progress:* Complete

*Maintenance\_and\_Update\_Frequency:* None Scheduled

*Spatial\_Domain:**Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -168.00000

*East\_Bounding\_Coordinate:* -140.80000

*North\_Bounding\_Coordinate:* 72.00000

*South\_Bounding\_Coordinate:* 68.00000

*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:* Biological index

*Place:*

*Place\_Keyword\_Thesaurus:* None

*Place\_Keyword:* North Slope, 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:*

Depicts the relationships between spatial data layers and attribute data tables for the North Slope, 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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

*Native\_Data\_Set\_Environment:*

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

The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in the data set: bioindex.e00, birds.e00, esi.e00, facility.e00, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, m\_mammal.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 SQL SERVER(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks.

*Completeness\_Report:*

These data represent the boundaries of the biological data sets produced as part of the North Slope ESI, as well as the digital data extents. See also the INDEX (Index Polygons) data layer, part of the larger North Slope, Alaska ESI database, for additional boundary information.

*Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy\_Report:*

The BIOINDEX data layer is generated from the coordinates of the USGS 1:250,000 topographic map corners or developed from pre-existing digital or hardcopy sources and reflects the positional accuracy of these original data. Some small amount of positional error may be present along the arcs forming the boundaries of these polygons, particularly away from the polygon corners. 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:* VARIES

*Title:* TOPOGRAPHIC QUADRANGLES

*Geospatial\_Data\_Presentation\_Form:* HARDCOPY MAP

*Other\_Citation\_Details:* DENVER, CO OR RESTON, VA

*Source\_Scale\_Denominator:* 250000

*Type\_of\_Source\_Media:* PAPER

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* VARIES

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIOLOGICAL INDEX

*Process\_Step:*

*Process\_Description:*

The index polygons in this data layer were generated in Arc/INFO from the coordinates of the U.S. Geological Survey (USGS) map corners, or appropriate coordinates.

*Process\_Date:* 200501

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Person:* Jill Petersen

*Contact\_Address:*

*Address\_Type:* Physical address

*Address:* 7600 Sand Point Way N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349



*Contact\_Voice\_Telephone:* (206) 526-6944  
*Contact\_Facsimile\_Telephone:* (206) 526-6329  
*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

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*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:* Vector

*Point\_and\_Vector\_Object\_Information:*

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* GT-polygon composed of chains

*Point\_and\_Vector\_Object\_Count:* 19

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Area point

*Point\_and\_Vector\_Object\_Count:* 19

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Complete chain

*Point\_and\_Vector\_Object\_Count:* 67

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Link

*Point\_and\_Vector\_Object\_Count:* 5269

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Node, planar graph

*Point\_and\_Vector\_Object\_Count:* 49

---

*Spatial\_Reference\_Information:*

*Horizontal\_Coordinate\_System\_Definition:*

*Geographic:*

*Latitude\_Resolution:* 0.0000001

*Longitude\_Resolution:* 0.0000001

*Geographic\_Coordinate\_Units:* Decimal degrees

*Geodetic\_Model:*

*Horizontal\_Datum\_Name:* North American Datum of 1927

*Ellipsoid\_Name:* Clark 1866

*Semi-major\_Axis:* 6378206.400000

*Denominator\_of\_Flattening\_Ratio:* 294.978698

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*Entity\_and\_Attribute\_Information:*

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BIOINDEX.PAT

*Entity\_Type\_Definition:*

The BIOINDEX.PAT table contains attribute information for the vector polygons representing the boundaries of the maps and digital data boundaries used in the creation of the ESI.

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* TILE-NAME

*Attribute\_Definition:*

The TILE-NAME contains the map number according to the specified layout of the

atlas.

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1

*Range\_Domain\_Maximum*: 14

*Attribute*:

*Attribute\_Label*: TOPO-NAME

*Attribute\_Definition*:

USGS Topographic map name, short description of location, or atlas name.

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label*: SCALE

*Attribute\_Definition*:

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

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: 250000

*Enumerated\_Domain\_Value\_Definition*: Scale = 1:250,000

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: MAPANGLE

*Attribute\_Definition*:

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

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: -11.0400

*Range\_Domain\_Maximum*: 11.6290

*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 North Slope, 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:* 200506*Metadata\_Review\_Date:* 200506*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

# North Slope, Alaska ESI: FACILITY (Facility 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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

*Publication Date:* 200506

*Title:* North Slope, Alaska ESI: FACILITY (Facility Points)

*Edition:* First

*Geospatial Data Presentation Form:* Vector digital data

##### *Series Information:*

*Series Name:* None

*Issue Identification:* North Slope, 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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

*Description:**Abstract:*

This data set contains data for oil field facilities for the North Slope of Alaska. Vector points in this data set represent oil field facility locations. This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for North Slope, 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:**Single\_Date/Time:*

*Calendar\_Date:* 2003

*Currentness\_Reference:*

The FACILITY data were compiled during 2003-2004. The currentness date for the data is 2003 and is documented in the Lineage section.

*Status:*

*Progress:* Complete

*Maintenance\_and\_Update\_Frequency:* None Scheduled

*Spatial\_Domain:**Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -168.00000

*East\_Bounding\_Coordinate:* -140.80000

*North\_Bounding\_Coordinate:* 72.00000

*South\_Bounding\_Coordinate:* 68.00000

*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 Resource

*Theme\_Keyword:* Human Use Resource

*Place:*

*Place\_Keyword\_Thesaurus:* None

*Place\_Keyword:* North Slope, 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:*

Depicts the relationships between spatial data layers and attribute data tables for the North Slope, 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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

*Native\_Data\_Set\_Environment:*

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

The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in the data set: bioindex.e00, birds.e00, esi.e00, facility.e00, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, m\_mammal.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 node, etc.), and SQL SERVER(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written.

After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number,

element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "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 on oil facility resources. These data do not necessarily represent all oil facility sites in North Slope, Alaska.

*Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy\_Report:*

Spatial components for the FACILITY data layer came from a pre-existing digital source 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.

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* BPXA

*Publication\_Date:* 2003

*Title:* NORTH SLOPE ALASKA OIL FIELD INFRASTRUCTURE

*Geospatial\_Data\_Presentation\_Form:* DIGITAL VECTOR DATA

*Other\_Citation\_Details:* BP Exploration (Alaska) Inc. (BPXA), FAIRBANKS

*Source\_Scale\_Denominator:* 63,360

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2003

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FACILITY INFORMATION

*Process\_Step:*

*Process\_Description:*

The main source used to depict oil field facility resources for this data layer were the 2003 BP Exploration (Alaska) Inc. (BPXA) digital vector data of oil field infrastructure.

The above digital and/or hardcopy sources were compiled by the project biologist to create the FACILITY data layer. Depending on the type of source data, three general approaches are used for compiling a human-use data layer: (1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:250,000 topographic quadrangles and digitized; (2) hardcopy maps are digitized at their source scale; (3) digital data layers are evaluated and used 'as is' or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology,

and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the FACILITY data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:* 200501

*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:* 153

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*Spatial\_Reference\_Information:*

*Horizontal\_Coordinate\_System\_Definition:*

*Geographic:*

*Latitude\_Resolution:* 0.0000001

*Longitude\_Resolution:* 0.0000001

*Geographic\_Coordinate\_Units:* Decimal degrees

*Geodetic\_Model:*

*Horizontal\_Datum\_Name:* North American Datum of 1927

*Ellipsoid\_Name:* Clark 1866

*Semi-major\_Axis:* 6378206.400000

*Denominator\_of\_Flattening\_Ratio:* 294.978698

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*Entity\_and\_Attribute\_Information:*

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* FACILITY.PAT

*Entity\_Type\_Definition:*

The FACILITY.PAT data layer contains vector points representing representing oil field facility locations.

*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 North Slope, 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:* 200506*Metadata\_Review\_Date:* 200506*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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# North Slope, Alaska ESI: BIRDS (Bird Polygons)

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

## Metadata:

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

### *Identification Information:*

#### *Citation:*

##### *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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

##### *Publication Date:* 200506

*Title:* North Slope, Alaska ESI: BIRDS (Bird Polygons)

*Edition:* First

*Geospatial Data Presentation Form:* Vector digital data

##### *Series Information:*

*Series Name:* None

*Issue Identification:* North Slope, 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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

### *Description:*

#### *Abstract:*

This data set contains sensitive biological resource data for diving birds, gulls and terns, seabirds, shorebirds, and waterfowl for the North Slope of Alaska. Vector polygons in this data set represent nesting, brood rearing, migratory staging, and molting sites for 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.

This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for North Slope, 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. See also the NESTS (Nest Points) data layer, part of the larger North Slope, Alaska ESI database, for additional bird information.

*Purpose:*

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

*Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1983

*Ending\_Date:* 2004

*Currentness\_Reference:*

The biological data were compiled during 2003-2004. The currentness dates for the data range from 1983 to 2004 and are documented in the Lineage section.

*Status:*

*Progress:* Complete

*Maintenance\_and\_Update\_Frequency:* None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -168.00000

*East\_Bounding\_Coordinate:* -140.80000

*North\_Bounding\_Coordinate:* 72.00000

*South\_Bounding\_Coordinate:* 68.00000

*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:* North Slope, 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:*

Depicts the relationships between spatial data layers and attribute data tables for the North Slope, 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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

*Native\_Data\_Set\_Environment:*

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

The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: bioindex.e00, birds.e00, esi.e00, facility.e00, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, m\_mammal.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 SQL SERVER(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written.

After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "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, maps, and digital data on bird nesting, brood rearing, migratory staging, and molting sites. See also the NESTS (Nest Points) data layer, part of the larger North Slope, Alaska ESI database, for additional bird information. These data do not necessarily represent all bird occurrences in North Slope, Alaska. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name [n/a if not applicable]): 3, Red-throated loon, *Gavia stellata*; 13, Brant, *Branta bernicla*; 14, Greater white-fronted goose, *Anser albifrons*; 15, Snow goose, *Chen caerulescens*; 17, Northern pintail, *Anas acuta*; 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*; 60, Red knot, *Calidris canutus*; 61, Pectoral sandpiper, *Calidris melanotos*; 63, Dunlin, *Calidris alpina*; 65, Long-billed dowitcher, *Limnodromus scolopaceus*; 66, Western sandpiper, *Calidris mauri*; 67, Sanderling, *Calidris alba*; 69, Semipalmated plover, *Charadrius semipalmatus*; 71, Black-bellied plover, *Pluvialis squatarola*; 73, Ruddy turnstone, *Arenaria interpres*; 80, Arctic tern, *Sterna paradisaea*; 82, Glaucous gull, *Larus hyperboreus*; 103, Common eider, *Somateria mollissima*; 156, Semipalmated sandpiper, *Calidris pusilla*; 158, King eider, *Somateria spectabilis*; 159, Steller's eider, *Polysticta stelleri*; 160, Red phalarope, *Phalaropus fulicaria*; 164, American golden-plover, *Pluvialis dominica*; 165, Bar-tailed godwit, *Limosa lapponica*; 197, Black scoter, *Melanitta nigra*; 213, Stilt sandpiper, *Calidris himantopus*; 237, Baird's sandpiper, *Calidris bairdii*; 238, White-rumped sandpiper, *Calidris fuscicollis*; 273, Geese, n/a; 284, Buff-breasted sandpiper, *Tryngites subruficollis*; 292, Sharp-tailed sandpiper, *Calidris acuminata*; 299, Scaup, *Aythya* spp.; 408, Yellow-billed loon, *Gavia adamsii*; 409, Ross' gull, *Rhodostethia rosea*; 415, Spectacled eider, *Somateria fischeri*; 462, Loons, *Gavia* spp.; 1001, Gulls, n/a; 1003, Waterfowl, n/a; 1008, Terns, n/a; 1022, Seabirds, n/a.

#### *Positional\_Accuracy:*

##### *Horizontal\_Positional\_Accuracy:*

##### *Horizontal\_Positional\_Accuracy\_Report:*

Spatial components for the biological data layers can come from expert interviews, hardcopy, or digital sources. Most of the spatial components of the biological data layers are developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy base maps with a scale of 1:250,000. Some of the spatial components of the biological data sets are developed from pre-existing digital or hardcopy sources and reflect the positional accuracy of these original data. See the Lineage and Process\_Description sections for more information on the original data

source and how these data were integrated or manipulated to create the final data set. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources.

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* ABR, INC. (FAIRBANKS)

*Publication\_Date:* 2004

*Title:*

LOCATIONS OF BRANT & SNOW GOOSE BROODS: AERIAL SURVEYS ON ARCTIC COASTAL PLAIN

*Geospatial\_Data\_Presentation\_Form:* DIGITAL TABLE

*Other\_Citation\_Details:* ABR DATA, FAIRBANKS

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1995

*Ending\_Date:* 2003

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* ADF&G HAB. & REST. DIV.

*Publication\_Date:* 1997

*Title:* MOST ENVIRONMENTALLY SENSITIVE AREA (MESA) DATA

*Geospatial\_Data\_Presentation\_Form:* DIGITAL MAP

*Other\_Citation\_Details:*

ALASKA DEPARTMENT OF FISH & GAME (ADF&G) HABITAT AND RESTORATION DIVISION, 7 MAPS

*Source\_Scale\_Denominator:* VARIED

*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:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* AK REG. RESP. TEAM (ARRT)

*Publication\_Date:* 1999

*Title:* NORTH SLOPE SUBAREA CONTINGENCY PLAN: SENSITIVE AREAS SECTION

*Geospatial\_Data\_Presentation\_Form:* HARDCOPY TEXT

*Other\_Citation\_Details:* ALASKA REGIONAL RESPONSE TEAM (ARRT),  
PP. D1-D92

*Type\_of\_Source\_Media:* PAPER

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 1999

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* DAU, HODGES, ANDERSON, & TAYLOR

*Publication\_Date:* 2003

*Title:* AERIAL POPULATION SURVEY OF COMMON EIDERS & OTHER  
WATERBIRDS

*Geospatial\_Data\_Presentation\_Form:* HARDCOPY TEXT

*Other\_Citation\_Details:*

U.S. FISH & WILDLIFE SERVICE (USFWS), MIGRATORY BIRD  
MANAGEMENT (MBM), ANCHORAGE/JUNEAU/FAIRBANKS; 5  
ANNUAL REPORTS

*Type\_of\_Source\_Media:* PAPER

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1999

*Ending\_Date:* 2003

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* FISCHER, J. (USFWS, MBM, ANCHORAGE)

*Publication\_Date:* 2004

*Title:* DISTRIBUTION OF SEA DUCKS AND LOONS IN BEAUFORT SEA

*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2004

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* FISCHER, J., T. TIPLADY, W. LARNED



*Publication\_Date:* 2002

*Title:*

MONITORING BEAUFORT SEA WATERFOWL & MARINE BIRDS:  
AERIAL SURVEY COMPONENT

*Geospatial\_Data\_Presentation\_Form:* HARDCOPY TEXT

*Other\_Citation\_Details:*

U.S. FISH & WILDLIFE SERVICE (USFWS), DIV. OF MIGRATORY  
BIRD MANAGEMENT, ANCHORAGE, AK. OCS STUDY, MMS  
2002-002.

*Type\_of\_Source\_Media:* PAPER

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1999

*Ending\_Date:* 2000

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* GILL, TIBBITS, & HANDEL

*Publication\_Date:* 2001

*Title:* PROFILES OF IMPORTANT SHOREBIRD SITES IN ALASKA

*Geospatial\_Data\_Presentation\_Form:* HARDCOPY TEXT

*Other\_Citation\_Details:* INFORMATION AND TECHNOLOGY REPORT  
USGS/BRD/ITR-2001-000X, 85 PP

*Type\_of\_Source\_Media:* PAPER

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2001

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* FISCHER, J.B. AND W.W. LARNED

*Publication\_Date:* 2003

*Title:* SUMMER DISTRIBUTION OF MARINE BIRDS IN WESTERN  
BEAUFORT SEA

*Geospatial\_Data\_Presentation\_Form:* HARDCOPY TEXT

*Other\_Citation\_Details:*

U.S. FISH & WILDLIFE SERVICE (USFWS), MIGRATORY BIRD  
MANAGEMENT, ANCHORAGE/SOLDOTNA, ALASKA, 32 PP. +  
TABLES AND FIGURES

*Type\_of\_Source\_Media:* PAPER

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1999  
*Ending\_Date:* 2001  
*Source\_Currentness\_Reference:* DATE OF SURVEY  
*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* BIRDS INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* JOHNSON, S.R.  
*Publication\_Date:* 1993  
*Title:*  
 AN IMPORTANT EARLY-AUTUMN STAGING AREA FOR PAC.  
 FLYWAY BRANT: KASEGALUK LAGOON  
*Geospatial\_Data\_Presentation\_Form:* HARDCOPY TEXT  
*Other\_Citation\_Details:* J. FIELD ORNITHOL., 64(4):539-548  
*Type\_of\_Source\_Media:* PAPER  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Range\_of\_Dates/Times:*  
*Beginning\_Date:* 1989  
*Ending\_Date:* 1991  
*Source\_Currentness\_Reference:* DATE OF SURVEY  
*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* BIRDS INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* JOHNSON, S.R.  
*Publication\_Date:* 1996  
*Title:*  
 STAGING AND WINTERING AREAS OF SNOW GEESE NESTING  
 ON HOWE ISLAND, ALASKA  
*Geospatial\_Data\_Presentation\_Form:* HARDCOPY TEXT  
*Other\_Citation\_Details:* ARCTIC 49(1), P. 86-93.  
*Type\_of\_Source\_Media:* PAPER  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:* 1996  
*Source\_Currentness\_Reference:* DATE OF PUBLICATION  
*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* BIRDS INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* JOHNSON, S.R. AND D.R. HERTER  
*Publication\_Date:* 1989  
*Title:* THE BIRDS OF THE BEAUFORT SEA  
*Geospatial\_Data\_Presentation\_Form:* HARDCOPY TEXT  
*Other\_Citation\_Details:* BP EXPLORATION (ALASKA) INC.,  
 ANCHORAGE, ALASKA, 372 PP.

*Type\_of\_Source\_Media:* PAPER  
*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:* BIRDS INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* JOHNSON, WIGGINS, WAINWRIGHT  
*Publication\_Date:* 1993  
*Title:*  
 LATE-SUMMER ABUNDANCE AND DISTRIBUTION OF MARINE  
 BIRDS IN KASEGALUK LAGOON  
*Geospatial\_Data\_Presentation\_Form:* HARDCOPY TEXT  
*Other\_Citation\_Details:* ARCTIC 46(3): 212-227.

*Type\_of\_Source\_Media:* PAPER  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:* 1993  
*Source\_Currentness\_Reference:* DATE OF PUBLICATION  
*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* BIRDS INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* KENDALL, S. (USFWS, FAIRBANKS)  
*Publication\_Date:* 2004  
*Title:* DISTRIBUTION/SEASONALITY OF SHOREBIRDS  
*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE  
*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* PERSONAL COMMUNICATION  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:* 2004  
*Source\_Currentness\_Reference:* DATE OF COMMUNICATION  
*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* BIRDS INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* LARNED, W., G. BALOGH, and M. PETERSON  
*Publication\_Date:* 1995  
*Title:*  
 DISTRIBUTION & ABUNDANCE OF SPECTACLED EIDERS IN  
 LEDYARD BAY, AK, SEPTEMBER 1995  
*Geospatial\_Data\_Presentation\_Form:* HARDCOPY TEXT

*Other\_Citation\_Details:*

U.S. FISH & WILDLIFE SERVICE (USFWS) MIGRATORY BIRD  
MANAGEMENT (MBM), USGS NATIONAL BIOLOGICAL SURVEY  
(NBS) AK SCIENCE CENTER, 11 PP.

*Type\_of\_Source\_Media:* PAPER

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 1995

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* LYSNE, L.A., E.J. MALLEK, and C.P. DAU

*Publication\_Date:* 2004

*Title:* NEAR SHORE SURVEYS OF ALASKA'S ARCTIC COAST, 1999-2003

*Geospatial\_Data\_Presentation\_Form:* HARDCOPY TEXT

*Other\_Citation\_Details:*

U.S. FISH AND WILDLIFE SERVICE, MIGRATORY BIRD  
MANAGEMENT, WATERFOWL BRANCH, FAIRBANKS, AK

*Type\_of\_Source\_Media:* PAPER

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1998

*Ending\_Date:* 2003

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* MARTIN, P. (USFWS, FAIRBANKS)

*Publication\_Date:* 2004

*Title:* NESTING WATERFOWL ON THE NORTH SLOPE

*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2004

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* NSF (ARLINGTON), USFWS (FAIRBANKS)

*Publication\_Date:* 2002

*Title:*

ENDANGERED SPECIES CONSULTATION FOR STELLER'S AND SPECTACLED EIDERS

*Geospatial\_Data\_Presentation\_Form:* HARDCOPY TEXT

*Other\_Citation\_Details:* NATIONAL SCIENCE FOUNDATION BULLETIN  
CB 01-02 MARCH 2002, 9 PP.

*Type\_of\_Source\_Media:* PAPER

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2002

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* OCSEAP

*Publication\_Date:* 1983

*Title:*

THE BARROW ARCH ENVIRONMENT & POSSIBLE CONSEQ. OF PLANNED OFFSHORE O&G DEVELOP.

*Geospatial\_Data\_Presentation\_Form:* HARDCOPY TEXT

*Other\_Citation\_Details:*

NOAA NOS, MMS; PROCEEDINGS OF OCT.-NOV. 1983 SYNTHESIS MEETING, GIRDWOOD, AK

*Type\_of\_Source\_Media:* PAPER

*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:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* PETERSEN, M. (USGS, ANCHORAGE)

*Publication\_Date:* 2004

*Title:*

DISTRIBUTION AND SEASONALITY OF SEA DUCKS IN CHUKCHI AND BEAUFORT SEAS

*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2004

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* BIRDS INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* RITCHIE, R., R. BURGESS, R. SUYDAM  
*Publication\_Date:* 2000  
*Title:*  
 STATUS & NESTING DISTRIBUTION OF LESSER SNOW GEESE &  
 BRANT ON THE WESTERN A.C.P.  
*Geospatial\_Data\_Presentation\_Form:* HARDCOPY TEXT  
*Other\_Citation\_Details:* CANADIAN FIELD-NATURALIST 114(3):395-404.  
*Type\_of\_Source\_Media:* PAPER  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Range\_of\_Dates/Times:*  
*Beginning\_Date:* 1991  
*Ending\_Date:* 1998  
*Source\_Currentness\_Reference:* DATE OF PUBLICATION  
*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* BIRDS INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* STEPHENSON, S. (USFWS, MBM)  
*Publication\_Date:* 2003  
*Title:* SEABIRD SEASONALITY  
*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE  
*Other\_Citation\_Details:* UNPUBLISHED  
*Type\_of\_Source\_Media:* PERSONAL COMMUNICATION  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:* 2003  
*Source\_Currentness\_Reference:* DATE OF COMMUNICATION  
*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* BIRDS INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* SUYDAM, R. (NORTH SLOPE BOROUGH)  
*Publication\_Date:* 2004  
*Title:*  
 DISTRIBUTION/SEASONALITY OF CHUKCHI/BEAUFORT SEA  
 MARINE MAMMALS; BIRDS  
*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE  
*Other\_Citation\_Details:* UNPUBLISHED  
*Type\_of\_Source\_Media:* PERSONAL COMMUNICATION  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*

*Calendar\_Date:* 2004

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* TAYLOR, A. (UAF, FAIRBANKS)

*Publication\_Date:* 2004

*Title:* STAGING SHOREBIRDS IN THE BARROW AREA

*Geospatial\_Data\_Presentation\_Form:* DIGITAL MAP

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2004

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* USFWS ARCTIC NWR

*Publication\_Date:* 2004

*Title:* SNOW GOOSE FLOCK DISTRIBUTION, SEPTEMBER 7, 2003

*Geospatial\_Data\_Presentation\_Form:* HARDCOPY MAP

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* PAPER

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2003

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

U.S. FISH & WILDLIFE SERVICE (USFWS) MIGRATORY BIRD  
MANAGEMENT (MBM) (FAIRBANKS)

*Publication\_Date:* 2003

*Title:* 2002 AND 2003 SEA DUCK CENSUSES ALONG THE NORTH COAST  
OF ALASKA

*Geospatial\_Data\_Presentation\_Form:* DIGITAL VECTOR DATA

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* CD-ROM

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 2002

*Ending\_Date:* 2003

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* USFWS, ARCTIC NATIONAL WILDLIFE REFUGE (ANWR)  
(FAIRBANKS)

*Publication\_Date:* 2004

*Title:* BIRD NESTS ON BARRIER ISLANDS IN THE ARCTIC NWR,  
2003-2004

*Geospatial\_Data\_Presentation\_Form:* DIGITAL TABLE

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 2003

*Ending\_Date:* 2004

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* USFWS, MIGRATORY BIRD MANAGEMENT

*Publication\_Date:* 2004

*Title:* MARINE BIRD DISTRIBUTION AND SEASONALITY

*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2004

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* BIRDS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* USFWS, MIGRATORY BIRD MANAGEMENT

*Publication\_Date:* 2003

*Title:* NORTH SLOPE EIDER SURVEY COVERAGES

*Geospatial\_Data\_Presentation\_Form:* DIGITAL VECTOR DATA

*Other\_Citation\_Details:* USFWS, MIGRATORY BIRD MANAGEMENT,  
ANCHORAGE, AK

*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 PUBLICATION*Source\_Citation\_Abbreviation:* NONE*Source\_Contribution:* BIRDS INFORMATION*Source\_Information:**Source\_Citation:**Citation\_Information:**Originator:* USFWS, MIGRATORY BIRD MANAGEMENT*Publication\_Date:* 2003*Title:* TESHEKPUK LAKE MOLTING GEESE SURVEY*Geospatial\_Data\_Presentation\_Form:* DIGITAL VECTOR DATA*Other\_Citation\_Details:* USFWS, MIGRATORY BIRD MANAGEMENT,  
ANCHORAGE, ALASKA*Type\_of\_Source\_Media:* CD-ROM*Source\_Time\_Period\_of\_Content:**Time\_Period\_Information:**Range\_of\_Dates/Times:**Beginning\_Date:* 1976*Ending\_Date:* 2001*Source\_Currentness\_Reference:* DATE OF SURVEY*Source\_Citation\_Abbreviation:* NONE*Source\_Contribution:* BIRDS INFORMATION*Process\_Step:**Process\_Description:*

Four main sources of data were used to depict bird distribution and seasonality for this data layer: (1) personal interviews with resource experts from U.S. Fish and Wildlife Service (USFWS), U.S. Geological Survey (USGS), Alaska Department of Fish and Game (ADF&G), Canadian Wildlife Service (CWS), University of Alaska-Fairbanks (UAF), and ABR, Inc.; (2) numerous published and unpublished reports, maps, and survey data provided by the agencies listed above; (3) peer-reviewed journal articles and books; and (4) digital data. The digital data included four USFWS vector polygon coverages depicting waterfowl nesting and molting distribution in 2002-2003 and two 2004 digital tables (provided by ABR, Inc. and USFWS) depicting bird nesting and/or brood rearing locations.

Concentration and seasonality information was provided by resource experts or was extracted from published sources, reports, and survey data.

The above digital and/or hardcopy sources were compiled by the project biologist to create the BIRDS data layer. Depending on the type of source data, three general approaches are used for compiling a biology data layer: (1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:250,000 topographic quadrangles and digitized; (2) hardcopy maps are digitized at their source scale; (3) digital data layers are evaluated and used 'as is' or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the

maps. If necessary, edits to the BIRDS data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:* 200501

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Person:* Jill Petersen

*Contact\_Address:*

*Address\_Type:* Physical address

*Address:* 7600 Sand Point Way N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6944

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:* Vector

*Point\_and\_Vector\_Object\_Information:*

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* GT-polygon composed of chains

*Point\_and\_Vector\_Object\_Count:* 1350

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Area point

*Point\_and\_Vector\_Object\_Count:* 1350

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Complete chain

*Point\_and\_Vector\_Object\_Count:* 2755

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Link

*Point\_and\_Vector\_Object\_Count:* 420953

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Node, planar graph

*Point\_and\_Vector\_Object\_Count:* 2230

*Spatial\_Reference\_Information:*

*Horizontal\_Coordinate\_System\_Definition:*

*Geographic:*

*Latitude\_Resolution:* 0.0000001

*Longitude\_Resolution:* 0.0000001

*Geographic\_Coordinate\_Units:* Decimal degrees

*Geodetic\_Model:*

*Horizontal\_Datum\_Name:* North American Datum of 1927

*Ellipsoid\_Name:* Clark 1866

*Semi-major\_Axis:* 6378206.400000

*Denominator\_of\_Flattening\_Ratio:* 294.978698

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*Entity\_and\_Attribute\_Information:*

*Overview\_Description:*

*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 North Slope atlas, the number is 75), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

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

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

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BIRDS.PAT

*Entity\_Type\_Definition:*

The BIRDS.PAT table contains attribute information for the vector polygons in this

data set representing nesting, brood rearing, migratory staging, and molting sites for birds. 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 (75), 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*: 750100002

*Range\_Domain\_Maximum*: 750101351

*Attribute*:

*Attribute\_Label*: RARNUM

*Attribute\_Definition*:

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

*Attribute\_Definition\_Source*: NOAA

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 75000001

*Range\_Domain\_Maximum*: 75000293

*Detailed\_Description*:

*Entity\_Type*:

*Entity\_Type\_Label*: BIO\_LUT

*Entity\_Type\_Definition*:

The data table BIO\_LUT is a lookup table that contains items necessary for linking vector objects in the biological data layers with the BIORES data table. Note that all attribute information is stored in a series of relational files, described below. See the [Browse\\_Graphic](#) section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: RARNUM

*Attribute\_Definition*:

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

*Attribute\_Definition\_Source*: NOAA

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 75000001

*Range\_Domain\_Maximum*: 75000437

*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 (75), 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:* 750100002

*Range\_Domain\_Maximum:* 750900182

*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:* 075000001

*Range\_Domain\_Maximum:* 075000437

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* CONC

*Attribute\_Definition:*

The field CONC refers to "concentration," abundance, or density values. The field may contain counts of individuals (XX BIRDS), and in some cases the counts are generalized into categories (100s, 1,000s, 10,000s). In cases where no quantitative count data were available, the field may contain descriptive terms, such as "HIGH", "<10", or ">25-NESTS". If no concentration information was available from any source, the field is populated with "-". Counts were derived from a variety of surveys and may range in date.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.*Attribute:**Attribute\_Label:* SEASON\_ID*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* N*Attribute:**Attribute\_Label:* G\_SOURCE*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* N*Attribute:**Attribute\_Label:* S\_SOURCE*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* N*Attribute:**Attribute\_Label:* ELEMENT*Attribute\_Definition:* Major categories of biological data.*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* BIRD*Enumerated\_Domain\_Value\_Definition:* Birds*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* FISH*Enumerated\_Domain\_Value\_Definition:* Fish*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* HABITAT*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* INVERT*Enumerated\_Domain\_Value\_Definition:* Invertebrates*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* M\_MAMMAL*Enumerated\_Domain\_Value\_Definition:* Marine Mammals*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* REPTILE*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* T\_MAMMAL*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* EL\_SPE*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* E#####*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* EL\_SPE\_SEA*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BIORES data table to records in the SEASONAL and BREED data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* E#####*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Detailed\_Description:**Entity\_Type:*

*Entity\_Type\_Label:* SPECIES

*Entity\_Type\_Definition:*

The data table SPECIES identifies all species in the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure. Refer to the Completeness\_Report for a list of layer-specific species.

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* NAME

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* GEN\_SPEC

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT



*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SUBELEMENT

*Attribute\_Definition:* Element subgroup delineating a logical grouping of species.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* alcid

*Enumerated\_Domain\_Value\_Definition:* Alcid

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* anadromous

*Enumerated\_Domain\_Value\_Definition:* Anadromous fish

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* bear

*Enumerated\_Domain\_Value\_Definition:* Bear

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 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*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* m\_benthic*Enumerated\_Domain\_Value\_Definition:* Marine benthic*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* m\_pelagic*Enumerated\_Domain\_Value\_Definition:* Marine pelagic fish*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* 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:* 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:* 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:* Date unspecified*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* EL\_SPE*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* E#####*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:* SEASONAL*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* SEASON\_ID

*Attribute\_Definition:*

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

each species at a given location.

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1

*Range\_Domain\_Maximum*: N

*Attribute*:

*Attribute\_Label*: JAN

*Attribute\_Definition*: January

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

*Enumerated\_Domain\_Value\_Definition*: Present in January

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: FEB

*Attribute\_Definition*: February

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

*Enumerated\_Domain\_Value\_Definition*: Present in February

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: MAR

*Attribute\_Definition*: March

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

*Enumerated\_Domain\_Value\_Definition*: Present in March

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: APR

*Attribute\_Definition*: April

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

*Enumerated\_Domain\_Value\_Definition*: Present in April

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: MAY

*Attribute\_Definition*: May

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

*Enumerated\_Domain\_Value\_Definition*: Present in May

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute:**Attribute\_Label:* JUN*Attribute\_Definition:* June*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* X*Enumerated\_Domain\_Value\_Definition:* Present in June*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* JUL*Attribute\_Definition:* July*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* X*Enumerated\_Domain\_Value\_Definition:* Present in July*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* AUG*Attribute\_Definition:* August*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* X*Enumerated\_Domain\_Value\_Definition:* Present in August*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* SEP*Attribute\_Definition:* September*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* X*Enumerated\_Domain\_Value\_Definition:* Present in September*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* OCT*Attribute\_Definition:* October*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* X*Enumerated\_Domain\_Value\_Definition:* Present in October*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* NOV*Attribute\_Definition:* November*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in November  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* DEC  
*Attribute\_Definition:* December  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in December  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA  
*Attribute\_Definition:*  
Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the SEASONAL data table to records in the BIORES and BREED data tables.  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* E#####  
*Enumerated\_Domain\_Value\_Definition:*  
Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Detailed\_Description:**Entity\_Type:*

*Entity\_Type\_Label:* BREED  
*Entity\_Type\_Definition:*  
The data table BREED identifies the monthly presence of certain life-history stages or activities for each species at a given location.  
*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA  
*Attribute\_Definition:*  
Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BREED data table to records in the BIORES and SEASONAL data tables.  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* E#####  
*Enumerated\_Domain\_Value\_Definition:*  
Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* MONTH

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:**Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* 12

*Attribute:*

*Attribute\_Label:* BREED1

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:**Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:**Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:**Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* BREED2

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:**Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:**Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N



*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* BREED3

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* BREED4

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* BREED5

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SOURCES

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SOURCE\_ID

*Attribute\_Definition:*

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table, and to G\_SOURCE and S\_SOURCE in the BIORES table.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* N*Attribute:**Attribute\_Label:* ORIGINATOR*Attribute\_Definition:* Author or developer of source material or data set.*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.*Attribute:**Attribute\_Label:* DATE\_PUB*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* YYYYMM*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* TITLE*Attribute\_Definition:* Title of source material or data.*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.*Attribute:**Attribute\_Label:* DATA\_FORMAT*Attribute\_Definition:* The format of the source material.*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.*Attribute:**Attribute\_Label:* PUBLICATION*Attribute\_Definition:* Additional citation information.*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.*Attribute:**Attribute\_Label:* SCALE*Attribute\_Definition:* 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*: YYYY

*Enumerated\_Domain\_Value\_Definition*: Year

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: VARIES

*Enumerated\_Domain\_Value\_Definition*: Date information varies

*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 threatened or endangered by a state, federal, or international authority. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: ELEMENT

*Attribute\_Definition*: Major categories of biological data.

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: BIRD

*Enumerated\_Domain\_Value\_Definition*: Birds

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: FISH

*Enumerated\_Domain\_Value\_Definition*: Fish

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: HABITAT

*Enumerated\_Domain\_Value\_Definition*: Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: INVERT

*Enumerated\_Domain\_Value\_Definition*: Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition*: Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain:**Enumerated\_Domain\_Value:* REPTILE*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* T\_MAMMAL*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* SPECIES\_ID*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* N*Attribute:**Attribute\_Label:* STATE*Attribute\_Definition:* Two-letter state abbreviation.*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.*Attribute:**Attribute\_Label:* COUNTRY*Attribute\_Definition:* Three-letter country abbreviation.*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.*Attribute:**Attribute\_Label:* S*Attribute\_Definition:* State threatened or endangered status.*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* E*Enumerated\_Domain\_Value\_Definition:* Endangered on state list*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* T*Enumerated\_Domain\_Value\_Definition:* Threatened on state list*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* C*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service*Attribute:*

*Attribute\_Label:* F

*Attribute\_Definition:* Federal threatened or endangered status.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

*Enumerated\_Domain\_Value\_Definition:* Endangered on federal list

*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T

*Enumerated\_Domain\_Value\_Definition:* Threatened on federal list

*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* C

*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service

*Attribute:*

*Attribute\_Label:* I

*Attribute\_Definition:* International threatened or endangered status.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

*Enumerated\_Domain\_Value\_Definition:* Endangered on international list

*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T

*Enumerated\_Domain\_Value\_Definition:* Threatened on international list

*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* C

*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service

*Attribute:*

*Attribute\_Label:* S\_DATE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* F\_DATE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* I\_DATE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links the STATUS data table to the BIORRES and SPECIES data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Distribution\_Information:*

*Distributor:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:* John Kaperick

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Address:*

*Address\_Type:* Physical Address

*Address:* 7600 Sand Point Way N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6400

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Resource\_Description:* ESI Atlas for North Slope, 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:* 200506

*Metadata\_Review\_Date:* 200506

*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



# North Slope, Alaska ESI: NESTS (Nest Points)

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

## Metadata:

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

### *Identification Information:*

#### *Citation:*

#### *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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

#### *Publication Date:* 200506

*Title:* North Slope, Alaska ESI: NESTS (Nest Points)

*Edition:* First

*Geospatial Data Presentation Form:* Vector digital data

#### *Series Information:*

*Series Name:* None

*Issue Identification:* North Slope, 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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

### *Description:*

#### *Abstract:*

This data set contains sensitive biological resource data for waterfowl, seabirds, gulls and terns for the North Slope of Alaska. Vector points in this data set represent bird nesting sites. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for North Slope, 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. See also the BIRDS (Bird Polygons) data layer, part of the larger North Slope, Alaska ESI database, for additional bird information.

*Purpose:*

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

*Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1989

*Ending\_Date:* 2004

*Currentness\_Reference:*

The biological data were compiled during 2003-2004. The currentness dates for the data range from 1989 to 2004 and are documented in the Lineage section.

*Status:*

*Progress:* Complete

*Maintenance\_and\_Update\_Frequency:* None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -168.00000

*East\_Bounding\_Coordinate:* -140.80000

*North\_Bounding\_Coordinate:* 72.00000

*South\_Bounding\_Coordinate:* 68.00000

*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:* North Slope, 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:*

Depicts the relationships between spatial data layers and attribute data tables for the North Slope, 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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

*Native\_Data\_Set\_Environment:*

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

The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: bioindex.e00, birds.e00, esi.e00, facility.e00, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, m\_mammal.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 SQL SERVER(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written.

After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resource at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

#### *Completeness\_Report:*

These data represent a synthesis of available digital data and hardcopy sources on bird nesting. See also the BIRDS (Bird Polygons) data layer, part of the larger North Slope, Alaska ESI database, for additional bird information. These data do not necessarily represent all nest occurrences in North Slope, Alaska. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name [n/a if not applicable]): 10, Pelagic cormorant, *Phalacrocorax pelagicus*; 13, Brant, *Branta bernicla*; 15, Snow goose, *Chen caerulescens*; 46, Common murre, *Uria aalge*; 47, Pigeon guillemot, *Cephus columba*; 51, Tufted puffin, *Fratercula cirrhata*; 80, Arctic tern, *Sterna paradisaea*; 81, Horned puffin, *Fratercula corniculata*; 82, Glaucous gull, *Larus hyperboreus*; 100, Black-legged kittiwake, *Rissa tridactyla*; 103, Common eider, *Somateria mollissima*; 104, Murre, *Uria sp.*; 105, Thick-billed murre, *Uria lomvia*; 112, Black guillemot, *Cephus grylle*; 114, Sabine's gull, *Xema sabini*.

#### *Positional\_Accuracy:*

##### *Horizontal\_Positional\_Accuracy:*

##### *Horizontal\_Positional\_Accuracy\_Report:*

Spatial components for the biological data layers can come from expert interviews, hardcopy, or digital sources. Most of the spatial components of the biological data layers are developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy base maps with a scale of 1:250,000. Some of the spatial components of the biological data sets are developed from pre-existing digital or hardcopy sources and reflect the positional accuracy of these original data. See the Lineage and Process\_Description sections for more information on the original data source and how these data were integrated or manipulated to create the final data set. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources.

#### *Lineage:*

##### *Source\_Information:*

##### *Source\_Citation:*

##### *Citation\_Information:*

*Originator:* ABR INC. (FAIRBANKS)

*Publication\_Date:* 2004

*Title:*

SNOW GOOSE NEST SITES AND COLONY LOCATIONS  
IDENTIFIED DURING AERIAL SURVEYS

*Geospatial\_Data\_Presentation\_Form:* DIGITAL TABLE

*Other\_Citation\_Details:*

ABR INC., ENVIRONMENTAL RESEARCH AND SERVICES, PO

BOX 80410, FAIRBANKS, AK 99708

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1991

*Ending\_Date:* 2003

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* NESTS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* ABR, INC. (FAIRBANKS)

*Publication\_Date:* 2004

*Title:*

DISTRIBUTION AND ABUNDANCE OF BRANT AT COLONIES  
DETERMINED FROM AERIAL SURVEYS

*Geospatial\_Data\_Presentation\_Form:* DIGITAL TABLE

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1994

*Ending\_Date:* 2003

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* NESTS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* AK REG. RESP. TEAM (ARRT)

*Publication\_Date:* 1999

*Title:* NORTH SLOPE SUBAREA CONTINGENCY PLAN: SENSITIVE  
AREAS SECTION

*Geospatial\_Data\_Presentation\_Form:* HARDCOPY TEXT

*Other\_Citation\_Details:* ALASKA REGIONAL RESPONSE TEAM (ARRT),  
PP. D1-D92

*Type\_of\_Source\_Media:* PAPER

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 1999

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* NESTS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* JOHNSON, S.R. AND D.R. HERTER

*Publication\_Date*: 1989  
*Title*: THE BIRDS OF THE BEAUFORT SEA  
*Geospatial\_Data\_Presentation\_Form*: HARDCOPY TEXT  
*Other\_Citation\_Details*: BP EXPLORATION (ALASKA) INC.,  
 ANCHORAGE, ALASKA, 372 PP.  
*Type\_of\_Source\_Media*: PAPER  
*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*: NESTS INFORMATION  
*Source\_Information*:  
     *Source\_Citation*:  
         *Citation\_Information*:  
             *Originator*: STEPHENSON, S. (USFWS, MBM)  
             *Publication\_Date*: 2003  
             *Title*: SEABIRD SEASONALITY  
             *Geospatial\_Data\_Presentation\_Form*: EXPERT KNOWLEDGE  
             *Other\_Citation\_Details*: UNPUBLISHED  
     *Type\_of\_Source\_Media*: PERSONAL COMMUNICATION  
     *Source\_Time\_Period\_of\_Content*:  
         *Time\_Period\_Information*:  
             *Single\_Date/Time*:  
                 *Calendar\_Date*: 2003  
     *Source\_Currentness\_Reference*: DATE OF COMMUNICATION  
     *Source\_Citation\_Abbreviation*: NONE  
     *Source\_Contribution*: NESTS INFORMATION  
*Source\_Information*:  
     *Source\_Citation*:  
         *Citation\_Information*:  
             *Originator*: USFWS (ANCHORAGE)  
             *Publication\_Date*: 2003  
             *Title*: BERINGIAN SEABIRD COLONY CATALOG  
             *Geospatial\_Data\_Presentation\_Form*: DIGITAL VECTOR DATA  
             *Other\_Citation\_Details*:  
                 U.S. FISH & WILDLIFE SERVICE (USFWS), MIGRATORY BIRD  
                 MANAGEMENT (MBM), ANCHORAGE, ALASKA  
     *Source\_Scale\_Denominator*: 250,000  
     *Type\_of\_Source\_Media*: EMAIL  
     *Source\_Time\_Period\_of\_Content*:  
         *Time\_Period\_Information*:  
             *Single\_Date/Time*:  
                 *Calendar\_Date*: 2003  
     *Source\_Currentness\_Reference*: DATE OF PUBLICATION  
     *Source\_Citation\_Abbreviation*: NONE  
     *Source\_Contribution*: NESTS INFORMATION  
*Source\_Information*:  
     *Source\_Citation*:  
         *Citation\_Information*:

*Originator:* USFWS, ARCTIC NATIONAL WILDLIFE REFUGE (ANWR)  
(FAIRBANKS)

*Publication\_Date:* 2004

*Title:* BIRD NESTS ON BARRIER ISLANDS IN THE ARCTIC NWR,  
2003-2004

*Geospatial\_Data\_Presentation\_Form:* DIGITAL TABLE

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 2003

*Ending\_Date:* 2004

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* NESTS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* USFWS, MIGRATORY BIRD MANAGEMENT

*Publication\_Date:* 2004

*Title:* MARINE BIRD DISTRIBUTION AND SEASONALITY

*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2004

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* NESTS INFORMATION

*Process\_Step:*

*Process\_Description:*

The five main sources of data used to depict bird distribution and seasonality for this data later were: (1) 2004 digital tables identifying snow goose and brant colony locations and brood-rearing areas provided by ABR, Inc.; (2) a 2002 Beringian seabird colony catalog (digital vector point coverage) provided by U.S. Fish & Wildlife Service (USFWS); (3) a 2004 bird nests on barrier islands in the Arctic National Wildlife Refuge (NWR), 2003-2004 digital vector point coverage provided by USFWS; (4) published reports and books; and (5) personal interviews with resource experts from USFWS.

Concentration and seasonality information was provided by resource experts or was extracted from published sources.

The above digital and/or hardcopy sources were compiled by the project biologist to create the NESTS data layer. Depending on the type of source data, three general approaches are used for compiling a biology data layer: (1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:250,000 topographic quadrangles and digitized; (2) hardcopy maps are digitized at

their source scale; (3) digital data layers are evaluated and used 'as is' or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the NESTS data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:* 200501

*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:* 252

*Spatial\_Reference\_Information:*

*Horizontal\_Coordinate\_System\_Definition:*

*Geographic:*

*Latitude\_Resolution:* 0.0000001

*Longitude\_Resolution:* 0.0000001

*Geographic\_Coordinate\_Units:* Decimal degrees

*Geodetic\_Model:*

*Horizontal\_Datum\_Name:* North American Datum of 1927

*Ellipsoid\_Name:* Clark 1866

*Semi-major\_Axis:* 6378206.400000

*Denominator\_of\_Flattening\_Ratio:* 294.978698

*Entity\_and\_Attribute\_Information:*

*Overview\_Description:*

*Entity\_and\_Attribute\_Overview:*

In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex



biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, 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 North Slope atlas, the number is 75), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the [Browse\\_Graphic](#) section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

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

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

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* NESTS.PAT

*Entity\_Type\_Definition:*

The NESTS.PAT table contains attribute information for the vector points in this data set representing bird nesting sites. Note that all attribute information is stored in a series of relational files, described below. See the [Browse\\_Graphic](#) section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* 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 (75), element number (5), and record number.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 750500001

*Range\_Domain\_Maximum:* 750500252

*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:* 75000011

*Range\_Domain\_Maximum:* 75000126

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BIO\_LUT

*Entity\_Type\_Definition:*

The data table BIO\_LUT is a lookup table that contains items necessary for linking vector objects in the biological data layers with the BIORES data table. Note that all attribute information is stored in a series of relational files, described below. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* RARNUM

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 75000001

*Range\_Domain\_Maximum:* 75000437

*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 (75), 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:* 750100002

*Range\_Domain\_Maximum:* 750900182

*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:* 075000001*Range\_Domain\_Maximum:* 075000437*Attribute:**Attribute\_Label:* SPECIES\_ID*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* N*Attribute:**Attribute\_Label:* CONC*Attribute\_Definition:*

The field CONC refers to "concentration," abundance, or density values. The field may contain counts of individuals (XX BIRDS) or a range of counts of nests of individuals (X-XX NESTS). In cases where no count data were available, the field is populated with "UNKNOWN". Counts were derived from a variety of surveys and may range in date. See the Lineage section of this document for range of survey dates.

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.*Attribute:**Attribute\_Label:* SEASON\_ID*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* N

*Attribute:**Attribute\_Label:* G\_SOURCE*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* N*Attribute:**Attribute\_Label:* S\_SOURCE*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* N*Attribute:**Attribute\_Label:* ELEMENT*Attribute\_Definition:* Major categories of biological data.*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* BIRD*Enumerated\_Domain\_Value\_Definition:* Birds*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* FISH*Enumerated\_Domain\_Value\_Definition:* Fish*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* HABITAT*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* INVERT*Enumerated\_Domain\_Value\_Definition:* Invertebrates*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* M\_MAMMAL*Enumerated\_Domain\_Value\_Definition:* Marine Mammals*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BIORES data table to records in the SEASONAL and BREED data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SPECIES

*Entity\_Type\_Definition:*

The data table SPECIES identifies all species in the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure. Refer to the Completeness\_Report for a list of layer-specific species.

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1

*Range\_Domain\_Maximum*: N

*Attribute*:

*Attribute\_Label*: NAME

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

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label*: GEN\_SPEC

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

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label*: ELEMENT

*Attribute\_Definition*: Major categories of biological data.

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: BIRD

*Enumerated\_Domain\_Value\_Definition*: Birds

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: FISH

*Enumerated\_Domain\_Value\_Definition*: Fish

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: HABITAT

*Enumerated\_Domain\_Value\_Definition*: Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: INVERT

*Enumerated\_Domain\_Value\_Definition*: Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition*: Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: REPTILE

*Enumerated\_Domain\_Value\_Definition*: Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* T\_MAMMAL*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* SUBELEMENT*Attribute\_Definition:* Element subgroup delineating a logical grouping of species.*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* alcid*Enumerated\_Domain\_Value\_Definition:* Alcid*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* anadromous*Enumerated\_Domain\_Value\_Definition:* Anadromous fish*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* bear*Enumerated\_Domain\_Value\_Definition:* Bear*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* 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

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* m\_benthic

*Enumerated\_Domain\_Value\_Definition:* Marine benthic

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* m\_pelagic

*Enumerated\_Domain\_Value\_Definition:* Marine pelagic fish

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 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:* 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:* 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:* Date unspecified

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SEASONAL

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* HABITAT*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* INVERT*Enumerated\_Domain\_Value\_Definition:* Invertebrates*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* M\_MAMMAL*Enumerated\_Domain\_Value\_Definition:* Marine Mammals*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* REPTILE*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* T\_MAMMAL*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* SPECIES\_ID*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* N*Attribute:**Attribute\_Label:* SEASON\_ID*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* N*Attribute:**Attribute\_Label:* JAN*Attribute\_Definition:* January*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in January  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* FEB  
*Attribute\_Definition:* February  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:* X  
         *Enumerated\_Domain\_Value\_Definition:* Present in February  
         *Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* MAR  
*Attribute\_Definition:* March  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:* X  
         *Enumerated\_Domain\_Value\_Definition:* Present in March  
         *Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* APR  
*Attribute\_Definition:* April  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:* X  
         *Enumerated\_Domain\_Value\_Definition:* Present in April  
         *Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* MAY  
*Attribute\_Definition:* May  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:* X  
         *Enumerated\_Domain\_Value\_Definition:* Present in May  
         *Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* JUN  
*Attribute\_Definition:* June  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:* X  
         *Enumerated\_Domain\_Value\_Definition:* Present in June  
         *Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* JUL  
*Attribute\_Definition:* July

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

*Enumerated\_Domain\_Value\_Definition*: Present in July

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: AUG

*Attribute\_Definition*: August

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

*Enumerated\_Domain\_Value\_Definition*: Present in August

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: SEP

*Attribute\_Definition*: September

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

*Enumerated\_Domain\_Value\_Definition*: Present in September

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: OCT

*Attribute\_Definition*: October

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

*Enumerated\_Domain\_Value\_Definition*: Present in October

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: NOV

*Attribute\_Definition*: November

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

*Enumerated\_Domain\_Value\_Definition*: Present in November

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: DEC

*Attribute\_Definition*: December

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

*Enumerated\_Domain\_Value\_Definition*: Present in December

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute:**Attribute\_Label:* EL\_SPE\_SEA*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the SEASONAL data table to records in the BIORES and BREED data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* E#####*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:* BREED*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* EL\_SPE\_SEA*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BREED data table to records in the BIORES and SEASONAL data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* E#####*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* MONTH*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* 12*Attribute:**Attribute\_Label:* BREED1*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED1 =

nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning; if ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M\_MAMMAL" then BREED1 = mating. This attribute is not used for HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* BREED2

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* BREED3

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* BREED4

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* BREED5

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:**Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:**Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:**Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Detailed\_Description:**Entity\_Type:*

*Entity\_Type\_Label:* SOURCES

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SOURCE\_ID

*Attribute\_Definition:*

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table, and to G\_SOURCE and S\_SOURCE in the BIORES table.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:**Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* ORIGINATOR

*Attribute\_Definition:* Author or developer of source material or data set.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* DATE\_PUB

*Attribute\_Definition:*



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

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: YYYYMM

*Enumerated\_Domain\_Value\_Definition*: YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: TITLE

*Attribute\_Definition*: Title of source material or data.

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label*: DATA\_FORMAT

*Attribute\_Definition*: The format of the source material.

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label*: PUBLICATION

*Attribute\_Definition*: Additional citation information.

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label*: SCALE

*Attribute\_Definition*: 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*: YYYY

*Enumerated\_Domain\_Value\_Definition*: Year

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: VARIES

*Enumerated\_Domain\_Value\_Definition*: Date information varies

*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 threatened or endangered by a state, federal, or international authority. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* ELEMENT*Attribute\_Definition:* Major categories of biological data.*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* BIRD*Enumerated\_Domain\_Value\_Definition:* Birds*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* FISH*Enumerated\_Domain\_Value\_Definition:* Fish*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* HABITAT*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* INVERT*Enumerated\_Domain\_Value\_Definition:* Invertebrates*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* M\_MAMMAL*Enumerated\_Domain\_Value\_Definition:* Marine Mammals*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* REPTILE*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* T\_MAMMAL*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* SPECIES\_ID*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* STATE

*Attribute\_Definition:* Two-letter state abbreviation.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* COUNTRY

*Attribute\_Definition:* Three-letter country abbreviation.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* S

*Attribute\_Definition:* State threatened or endangered status.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

*Enumerated\_Domain\_Value\_Definition:* Endangered on state list

*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T

*Enumerated\_Domain\_Value\_Definition:* Threatened on state list

*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* C

*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service

*Attribute:*

*Attribute\_Label:* F

*Attribute\_Definition:* Federal threatened or endangered status.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

*Enumerated\_Domain\_Value\_Definition:* Endangered on federal list

*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T

*Enumerated\_Domain\_Value\_Definition:* Threatened on federal list

*Enumerated\_Domain\_Value\_Definition\_Source*: U.S. Fish and Wildlife Service  
*Attribute\_Domain\_Values*:  
     *Enumerated\_Domain*:  
         *Enumerated\_Domain\_Value*: C  
         *Enumerated\_Domain\_Value\_Definition*: Species of Special Concern  
         *Enumerated\_Domain\_Value\_Definition\_Source*: U.S. Fish and Wildlife Service  
*Attribute*:  
     *Attribute\_Label*: I  
     *Attribute\_Definition*: International threatened or endangered status.  
     *Attribute\_Definition\_Source*: Research Planning, Inc.  
     *Attribute\_Domain\_Values*:  
         *Enumerated\_Domain*:  
             *Enumerated\_Domain\_Value*: E  
             *Enumerated\_Domain\_Value\_Definition*: Endangered on international list  
             *Enumerated\_Domain\_Value\_Definition\_Source*: U.S. Fish and Wildlife Service  
         *Enumerated\_Domain*:  
             *Enumerated\_Domain\_Value*: T  
             *Enumerated\_Domain\_Value\_Definition*: Threatened on international list  
             *Enumerated\_Domain\_Value\_Definition\_Source*: U.S. Fish and Wildlife Service  
     *Attribute\_Domain\_Values*:  
         *Enumerated\_Domain*:  
             *Enumerated\_Domain\_Value*: C  
             *Enumerated\_Domain\_Value\_Definition*: Species of Special Concern  
             *Enumerated\_Domain\_Value\_Definition\_Source*: U.S. Fish and Wildlife Service  
*Attribute*:  
     *Attribute\_Label*: S\_DATE  
     *Attribute\_Definition*:  
         Publication date of source material used to assign state status values for each species, if used.  
     *Attribute\_Definition\_Source*: Research Planning, Inc.  
     *Attribute\_Domain\_Values*:  
         *Enumerated\_Domain*:  
             *Enumerated\_Domain\_Value*: YYYYMM  
             *Enumerated\_Domain\_Value\_Definition*: YYYY for year and optionally MM for month  
             *Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.  
*Attribute*:  
     *Attribute\_Label*: F\_DATE  
     *Attribute\_Definition*:  
         Publication date of source material used to assign federal status values for each species, if used.  
     *Attribute\_Definition\_Source*: Research Planning, Inc.  
     *Attribute\_Domain\_Values*:  
         *Enumerated\_Domain*:  
             *Enumerated\_Domain\_Value*: YYYYMM  
             *Enumerated\_Domain\_Value\_Definition*: YYYY for year and optionally MM for month  
             *Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.  
*Attribute*:  
     *Attribute\_Label*: I\_DATE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links the STATUS data table to the BIORRES and SPECIES data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Distribution\_Information:*

*Distributor:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:* John Kaperick

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Address:*

*Address\_Type:* Physical Address

*Address:* 7600 Sand Point Way N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6400

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Resource\_Description:* ESI Atlas for North Slope, 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:* 200506

*Metadata\_Review\_Date:* 200506

*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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# North Slope, Alaska ESI: FISH (Fish Polygons)

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

## Metadata:

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

### *Identification Information:*

#### *Citation:*

#### *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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

#### *Publication Date:* 200506

*Title:* North Slope, Alaska ESI: FISH (Fish Polygons)

*Edition:* First

*Geospatial Data Presentation Form:* Vector digital data

#### *Series Information:*

*Series Name:* None

*Issue Identification:* North Slope, 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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

### *Description:*

#### *Abstract:*

This data set contains sensitive biological resource data for marine, estuarine, anadromous, and freshwater fish species for the North Slope of 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.

This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for North Slope, 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. See also the FISHL (Fish Lines) data layer, part of the larger North Slope, Alaska ESI database, for additional fish information.

*Purpose:*

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

*Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1984

*Ending\_Date:* 2004

*Currentness\_Reference:*

The biological data were compiled during 2003-2004. The currentness dates for the data range from 1984 to 2004 and are documented in the Lineage section.

*Status:*

*Progress:* Complete

*Maintenance\_and\_Update\_Frequency:* None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -168.00000

*East\_Bounding\_Coordinate:* -140.80000

*North\_Bounding\_Coordinate:* 72.00000

*South\_Bounding\_Coordinate:* 68.00000

*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:* North Slope, 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:*

Depicts the relationships between spatial data layers and attribute data tables for the North Slope, 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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

*Native\_Data\_Set\_Environment:*

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

The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: bioindex.e00, birds.e00, esi.e00, facility.e00, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, m\_mammal.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 SQL SERVER(r) to ARC/INFO(r) consistencies. A final review is made by the GIS

manager, where the data are written to CD-ROM and the metadata are written.

After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "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, digital data, reports, and peer-reviewed journal articles. See also the FISHL (Fish Lines) data layer, part of the larger North Slope, Alaska ESI database, for additional fish information. These data do not necessarily represent all fish occurrences in North Slope, Alaska. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name [n/a if not applicable]): 12, Starry flounder, *Platichthys stellatus*; 66, Pacific herring, *Clupea pallasii*; 68, Chinook salmon, *Oncorhynchus tshawytscha*; 70, Pink salmon, *Oncorhynchus gorbuscha*; 72, Chum salmon, *Oncorhynchus keta*; 78, Capelin, *Mallotus villosus*; 80, Pacific sand lance, *Ammodytes hexapterus*; 84, Rainbow smelt, *Osmerus mordax*; 135, Dolly varden, *Salvelinus malma*; 167, Lake trout, *Salvelinus namaycush*; 185, Northern pike, *Esox lucius*; 233, Ninespine stickleback, *Pungitius pungitius*; 237, Burbot, *Lota lota*; 503, Arctic grayling, *Thymallus arcticus*; 697, Whitefish, n/a; 699, Saffron cod, *Eleqinus gracilis*; 974, Arctic cisco, *Coregonus autumnalis*; 975, Broad whitefish, *Coregonus nasus*; 976, Humpback whitefish, *Coregonus pidschian*; 977, Least cisco, *Coregonus sardinella*; 978, Arctic cod, *Boreogadus saida*; 979, Arctic flounder, *Pleuronectes glacialis*; 980, Fourhorn sculpin, *Myoxocephalus quadricornis*; 982, Bering cisco, *Coregonus laurettae*; 983, Alaska blackfish, *Dallia pectoralis*.

#### *Positional\_Accuracy:*

##### *Horizontal\_Positional\_Accuracy:*

##### *Horizontal\_Positional\_Accuracy\_Report:*

Spatial components for the biological data layers can come from expert interviews, hardcopy, or digital sources. Most of the spatial components of the biological data layers are developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy base maps with a scale of 1:250,000. Some of the spatial components of the biological data sets are developed from pre-existing digital or hardcopy sources and reflect the positional accuracy of these original data. See the Lineage and Process\_Description sections for more information on the original data source and how these data were integrated or manipulated to create the final data set. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources.

#### *Lineage:*

##### *Source\_Information:*

##### *Source\_Citation:*

##### *Citation\_Information:*

*Originator:* AK REG. RESP. TEAM (ARRT)

*Publication\_Date:* 1999

*Title:* NORTH SLOPE SUBAREA CONTINGENCY PLAN: SENSITIVE AREAS SECTION

*Geospatial\_Data\_Presentation\_Form:* HARDCOPY TEXT

*Other\_Citation\_Details:* ALASKA REGIONAL RESPONSE TEAM (ARRT), PP. D1-D92

*Type\_of\_Source\_Media:* PAPER

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 1999

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* BURR, J. (ADF&G), MORRIS, W. (ADNR)

*Publication\_Date:* 2004

*Title:*

ANADROMOUS/ESTUARINE/FRESHWATER FISH DISTRIBUTION AND SEASONALITY

*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2004

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* CRAIG, P.C.

*Publication\_Date:* 1984

*Title:*

FISH USE OF COASTAL WATERS OF THE ALASKAN BEAUFORT SEA: A REVIEW

*Geospatial\_Data\_Presentation\_Form:* HARDCOPY TEXT

*Other\_Citation\_Details:* TRANSACTIONS OF THE AMERICAN FISHERIES SOCIETY 113:265-282

*Type\_of\_Source\_Media:* PAPER

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 1984

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:**Source\_Citation:**Citation\_Information:**Originator:* GEORGE, J.C. (NORTH SLOPE BOROUGH)*Publication\_Date:* 2004*Title:*DISTRIBUTION OF FISH IN ESTUARINE/MARINE/FRESHWATER  
HABITATS IN BEAUFORT SEA*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE*Other\_Citation\_Details:* UNPUBLISHED*Type\_of\_Source\_Media:* PERSONAL COMMUNICATION*Source\_Time\_Period\_of\_Content:**Time\_Period\_Information:**Single\_Date/Time:**Calendar\_Date:* 2004*Source\_Currentness\_Reference:* DATE OF COMMUNICATION*Source\_Citation\_Abbreviation:* NONE*Source\_Contribution:* FISH INFORMATION*Source\_Information:**Source\_Citation:**Citation\_Information:**Originator:* HUNTINGTON ET AL.*Publication\_Date:* 1999*Title:*TRADITIONAL KNOWLEDGE OF THE ECOLOGY OF BELUGA  
WHALES IN CHUKCHI/BERING SEAS, AK*Geospatial\_Data\_Presentation\_Form:* HARDCOPY TEXT*Other\_Citation\_Details:* ARCTIC 52(1), PP. 49-61.*Type\_of\_Source\_Media:* PAPER*Source\_Time\_Period\_of\_Content:**Time\_Period\_Information:**Single\_Date/Time:**Calendar\_Date:* 1999*Source\_Currentness\_Reference:* DATE OF PUBLICATION*Source\_Citation\_Abbreviation:* NONE*Source\_Contribution:* FISH INFORMATION*Source\_Information:**Source\_Citation:**Citation\_Information:**Originator:* NELSON, L. (NORTH SLOPE BOROUGH)*Publication\_Date:* 2004*Title:* DISTRIBUTION/SEASONALITY OF FISH ALONG THE NORTH  
SLOPE*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE*Other\_Citation\_Details:* UNPUBLISHED*Type\_of\_Source\_Media:* PERSONAL COMMUNICATION*Source\_Time\_Period\_of\_Content:**Time\_Period\_Information:**Single\_Date/Time:**Calendar\_Date:* 2004*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* PHILO, GEORGE, MOULTON

*Publication\_Date:* 1993

*Title:*

THE OCCURRENCE & DESCRIPTION OF ANADROMOUS &  
FRESHWATER FISH IN TESHEKPUK LAKE

*Geospatial\_Data\_Presentation\_Form:* HARDCOPY TEXT

*Other\_Citation\_Details:* DEPARTMENT OF WILDLIFE MANAGEMENT  
AND MJM RESEARCH, P. 19

*Type\_of\_Source\_Media:* PAPER

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1990

*Ending\_Date:* 1992

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISH INFORMATION

*Process\_Step:*

*Process\_Description:*

Three main sources of data were used to depict fish distribution and seasonality for this data layer: (1) personal interviews with resource experts from the Alaska Department of Fish & Game (ADF&G), North Slope Borough (NSB), Alaska Department of Natural Resources (ADNR), and U.S. Fish and Wildlife Service (USFWS); (2) reports provided by the agencies listed above; and (3) peer-reviewed journal articles.

Resource experts provided concentration and seasonality information.

The above digital and/or hardcopy sources were compiled by the project biologist to create the FISH data layer. Depending on the type of source data, three general approaches are used for compiling a biology data layer: (1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:250,000 topographic quadrangles and digitized; (2) hardcopy maps are digitized at their source scale; (3) digital data layers are evaluated and used 'as is' or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the FISH data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:* 200501

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Person:* Jill Petersen  
*Contact\_Address:*  
*Address\_Type:* Physical address  
*Address:* 7600 Sand Point Way N.E.  
*City:* Seattle  
*State\_or\_Province:* Washington  
*Postal\_Code:* 98115-6349  
*Contact\_Voice\_Telephone:* (206) 526-6944  
*Contact\_Facsimile\_Telephone:* (206) 526-6329  
*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

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*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:* Vector

*Point\_and\_Vector\_Object\_Information:*

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* GT-polygon composed of chains

*Point\_and\_Vector\_Object\_Count:* 714

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Area point

*Point\_and\_Vector\_Object\_Count:* 714

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Complete chain

*Point\_and\_Vector\_Object\_Count:* 1332

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Link

*Point\_and\_Vector\_Object\_Count:* 272736

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Node, planar graph

*Point\_and\_Vector\_Object\_Count:* 1285

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*Spatial\_Reference\_Information:*

*Horizontal\_Coordinate\_System\_Definition:*

*Geographic:*

*Latitude\_Resolution:* 0.0000001

*Longitude\_Resolution:* 0.0000001

*Geographic\_Coordinate\_Units:* Decimal degrees

*Geodetic\_Model:*

*Horizontal\_Datum\_Name:* North American Datum of 1927

*Ellipsoid\_Name:* Clark 1866

*Semi-major\_Axis:* 6378206.400000

*Denominator\_of\_Flattening\_Ratio:* 294.978698

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*Entity\_and\_Attribute\_Information:*

*Overview\_Description:*

*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 North Slope atlas, the number is 75), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

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

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

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* FISH.PAT

*Entity\_Type\_Definition:*

The FISH.PAT table contains attribute information for the vector polygons in this data set representing fish distribution. 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 (75), 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:* 750200002

*Range\_Domain\_Maximum:* 750200714

*Attribute:*

*Attribute\_Label:* RARNUM

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 75000294

*Range\_Domain\_Maximum:* 75000350

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BIO\_LUT

*Entity\_Type\_Definition:*

The data table BIO\_LUT is a lookup table that contains items necessary for linking vector objects in the biological data layers with the BIORES data table. Note that all attribute information is stored in a series of relational files, described below. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* RARNUM

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 75000001

*Range\_Domain\_Maximum:* 75000437

*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 (75), 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:* 750100002



*Range\_Domain\_Maximum:* 750900182

*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:* 075000001

*Range\_Domain\_Maximum:* 075000437

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* CONC

*Attribute\_Definition:*

The field CONC refers to "concentration," abundance, or density values of a species at a particular location. No quantitative data were available for fish, so the concentration field may contain a descriptive term, such as "HIGH" or "MED-HIGH", or "-" if no concentration information was available.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* SEASON\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:**Attribute\_Label:* G\_SOURCE*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* N*Attribute:**Attribute\_Label:* S\_SOURCE*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* N*Attribute:**Attribute\_Label:* ELEMENT*Attribute\_Definition:* Major categories of biological data.*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* BIRD*Enumerated\_Domain\_Value\_Definition:* Birds*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* FISH*Enumerated\_Domain\_Value\_Definition:* Fish*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* HABITAT*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* INVERT*Enumerated\_Domain\_Value\_Definition:* Invertebrates*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* M\_MAMMAL*Enumerated\_Domain\_Value\_Definition:* Marine Mammals*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BIORES data table to records in the SEASONAL and BREED data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SPECIES

*Entity\_Type\_Definition:*

The data table SPECIES identifies all species in the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure. Refer to the Completeness\_Report for a list of layer-specific species.

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1

*Range\_Domain\_Maximum*: N

*Attribute*:

*Attribute\_Label*: NAME

*Attribute\_Definition*: Species common name for the entire ESI data set

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label*: GEN\_SPEC

*Attribute\_Definition*: Species scientific name for the entire ESI data set

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label*: ELEMENT

*Attribute\_Definition*: Major categories of biological data.

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: BIRD

*Enumerated\_Domain\_Value\_Definition*: Birds

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: FISH

*Enumerated\_Domain\_Value\_Definition*: Fish

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: HABITAT

*Enumerated\_Domain\_Value\_Definition*: Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: INVERT

*Enumerated\_Domain\_Value\_Definition*: Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition*: Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: REPTILE

*Enumerated\_Domain\_Value\_Definition*: Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* T\_MAMMAL*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* SUBELEMENT*Attribute\_Definition:* Element subgroup delineating a logical grouping of species*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* alcid*Enumerated\_Domain\_Value\_Definition:* Alcid*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* anadromous*Enumerated\_Domain\_Value\_Definition:* Anadromous fish*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* bear*Enumerated\_Domain\_Value\_Definition:* Bear*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* 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

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* m\_benthic

*Enumerated\_Domain\_Value\_Definition:* Marine benthic

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* m\_pelagic

*Enumerated\_Domain\_Value\_Definition:* Marine pelagic fish

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 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:* 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:* 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. When no information was provided on the global rank for a species, the field is blank.

*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*: Date unspecified

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: EL\_SPE

*Attribute\_Definition*:

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

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: E#####

*Enumerated\_Domain\_Value\_Definition*:

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Detailed\_Description*:

*Entity\_Type*:

*Entity\_Type\_Label*: SEASONAL

*Entity\_Type\_Definition*:

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

*Entity\_Type\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: ELEMENT

*Attribute\_Definition*: Major categories of biological data

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: BIRD

*Enumerated\_Domain\_Value\_Definition*: Birds

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* SEASON\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* JAN

*Attribute\_Definition:* January

*Attribute\_Definition\_Source:* Research Planning, Inc.



*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in January

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* FEB

*Attribute\_Definition:* February

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in February

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* MAR

*Attribute\_Definition:* March

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in March

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* APR

*Attribute\_Definition:* April

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in April

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* MAY

*Attribute\_Definition:* May

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in May

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* JUN

*Attribute\_Definition:* June

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in June

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* JUL

*Attribute\_Definition:* July

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in July

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* AUG

*Attribute\_Definition:* August

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in August

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SEP

*Attribute\_Definition:* September

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in September

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* OCT

*Attribute\_Definition:* October

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in October

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* NOV

*Attribute\_Definition:* November

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in November

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* DEC

*Attribute\_Definition:* December

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in December  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the SEASONAL data table to records in the BIORES and BREED data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BREED

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BREED data table to records in the BIORES and SEASONAL data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* MONTH

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* 12

*Attribute:*

*Attribute\_Label:* BREED1

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:**Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:**Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:**Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* BREED2

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:**Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:**Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:**Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* BREED3

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* BREED4

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:**Attribute\_Label:* BREED5*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* Y*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* N*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* -*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:* SOURCES*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* SOURCE\_ID*Attribute\_Definition:*

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table, and to G\_SOURCE and S\_SOURCE in the BIORES table.

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* N*Attribute:**Attribute\_Label:* ORIGINATOR*Attribute\_Definition:* Author or developer of source material or data set*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.*Attribute:*

*Attribute\_Label:* DATE\_PUB

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* TITLE

*Attribute\_Definition:* Title of source material or data.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* DATA\_FORMAT

*Attribute\_Definition:* The format of the source material

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUBLICATION

*Attribute\_Definition:* Additional citation information.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* SCALE

*Attribute\_Definition:* 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:* YYYY

*Enumerated\_Domain\_Value\_Definition:* Year

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* VARIES

*Enumerated\_Domain\_Value\_Definition:* Date information varies  
*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 threatened or endangered by a state, federal, or international authority. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*



*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* STATE

*Attribute\_Definition:* Two-letter state abbreviation.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* COUNTRY

*Attribute\_Definition:* Three-letter country abbreviation.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* S

*Attribute\_Definition:* State threatened or endangered status

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

*Enumerated\_Domain\_Value\_Definition:* Endangered on state list

*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T

*Enumerated\_Domain\_Value\_Definition:* Threatened on state list

*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* C

*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service

*Attribute:*

*Attribute\_Label:* F

*Attribute\_Definition:* Federal threatened or endangered status

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

*Enumerated\_Domain\_Value\_Definition:* Endangered on federal list

*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T

*Enumerated\_Domain\_Value\_Definition:* Threatened on federal list

*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* C

*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service

*Attribute:*

*Attribute\_Label:* I

*Attribute\_Definition:* International threatened or endangered status

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

*Enumerated\_Domain\_Value\_Definition:* Endangered on international list

*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T

*Enumerated\_Domain\_Value\_Definition:* Threatened on international list

*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* C

*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service

*Attribute:*

*Attribute\_Label:* S\_DATE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* F\_DATE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:**Attribute\_Label:* I\_DATE*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* EL\_SPE*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links the STATUS data table to the BIORRES and SPECIES data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* E#####*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Distribution\_Information:**Distributor:**Contact\_Information:**Contact\_Person\_Primary:**Contact\_Person:* John Kaperick*Contact\_Organization:* NOAA, Office of Response and Restoration*Contact\_Address:**Address\_Type:* Physical Address*Address:* 7600 Sand Point Way N.E.*City:* Seattle*State\_or\_Province:* Washington*Postal\_Code:* 98115-6349*Contact\_Voice\_Telephone:* (206) 526-6400*Contact\_Facsimile\_Telephone:* (206) 526-6329*Resource\_Description:* ESI Atlas for North Slope, 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:* 200506

*Metadata\_Review\_Date:* 200506

*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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# North Slope, Alaska ESI: 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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

##### *Publication Date:* 200506

*Title:* North Slope, Alaska ESI: FISHL (Fish Lines)

*Edition:* First

*Geospatial Data Presentation Form:* Vector digital data

##### *Series Information:*

*Series Name:* None

*Issue Identification:* North Slope, 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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

### *Description:*

#### *Abstract:*

This data set contains sensitive biological resource data for anadromous and freshwater fish species for the North Slope of Alaska. Vector lines in this data set represent fish distribution. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer.

This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for North Slope, 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. See also the FISH (Fish Polygons) data layer, part of the larger North Slope, Alaska ESI database, for additional fish information.

*Purpose:*

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

*Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1973

*Ending\_Date:* 2004

*Currentness\_Reference:*

The biological data were compiled during 2003-2004. The currentness dates for the data range from 1973 to 2004 and are documented in the Lineage section.

*Status:*

*Progress:* Complete

*Maintenance\_and\_Update\_Frequency:* None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -168.00000

*East\_Bounding\_Coordinate:* -140.80000

*North\_Bounding\_Coordinate:* 72.00000

*South\_Bounding\_Coordinate:* 68.00000

*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:* North Slope, 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:*

Depicts the relationships between spatial data layers and attribute data tables for the North Slope, 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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

*Native\_Data\_Set\_Environment:*

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

The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: bioindex.e00, birds.e00, esi.e00, facility.e00, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, m\_mammal.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 SQL SERVER(r) to ARC/INFO(r) consistencies. A final review is made by the GIS

manager, where the data are written to CD-ROM and the metadata are written.

After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "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, digital data, and hardcopy reports and maps. See also the FISH (Fish Polygons) data layer, part of the larger North Slope, Alaska ESI database, for additional fish information. These data do not necessarily represent all fish occurrences in North Slope, Alaska. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name [n/a if not applicable]): 68, Chinook salmon, *Oncorhynchus tshawytscha*; 69, Coho salmon, *Oncorhynchus kisutch*; 70, Pink salmon, *Oncorhynchus gorbuscha*; 71, Sockeye salmon, *Oncorhynchus nerka*; 72, Chum salmon, *Oncorhynchus keta*; 135, Dolly varden, *Salvelinus malma*; 233, Ninespine stickleback, *Pungitius pungitius*; 237, Burbot, *Lota lota*; 238, Round whitefish (menomonee), *Prosopium cylindraceum*; 503, Arctic grayling, *Thymallus arcticus*; 697, Whitefish, n/a; 974, Arctic cisco, *Coregonus autumnalis*; 975, Broad whitefish, *Coregonus nasus*; 976, Humpback whitefish, *Coregonus pidschian*; 977, Least cisco, *Coregonus sardinella*; 982, Bering cisco, *Coregonus laurettae*.

#### *Positional\_Accuracy:*

##### *Horizontal\_Positional\_Accuracy:*

##### *Horizontal\_Positional\_Accuracy\_Report:*

Spatial components for the biological data layers can come from expert interviews, hardcopy, or digital sources. Most of the spatial components of the biological data layers are developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy base maps with a scale of 1:250,000. Some of the spatial components of the biological data sets are developed from pre-existing digital or hardcopy sources and reflect the positional accuracy of these original data. See the Lineage and Process\_Description sections for more information on the original data source and how these data were integrated or manipulated to create the final data set. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources.

#### *Lineage:*

##### *Source\_Information:*

##### *Source\_Citation:*

##### *Citation\_Information:*

*Originator:* ADF&G

*Publication\_Date:* 2003

*Title:* ANADROMOUS STREAMS

*Geospatial\_Data\_Presentation\_Form:* DIGITAL VECTOR DATA

*Other\_Citation\_Details:* ALASKA DEPARTMENT OF FISH & GAME



(ADF&G), ANCHORAGE, AK

*Source\_Scale\_Denominator*: 63,360

*Type\_of\_Source\_Media*: CD-ROM

*Source\_Time\_Period\_of\_Content*:

*Time\_Period\_Information*:

*Single\_Date/Time*:

*Calendar\_Date*: 2003

*Source\_Currentness\_Reference*: DATE OF PUBLICATION

*Source\_Citation\_Abbreviation*: NONE

*Source\_Contribution*: FISHL INFORMATION

*Source\_Information*:

*Source\_Citation*:

*Citation\_Information*:

*Originator*: AK REG. RESP. TEAM (ARRT)

*Publication\_Date*: 1999

*Title*: NORTH SLOPE SUBAREA CONTINGENCY PLAN: SENSITIVE  
AREAS SECTION

*Geospatial\_Data\_Presentation\_Form*: HARDCOPY TEXT

*Other\_Citation\_Details*: ALASKA REGIONAL RESPONSE TEAM (ARRT),  
PP. D1-D92

*Type\_of\_Source\_Media*: PAPER

*Source\_Time\_Period\_of\_Content*:

*Time\_Period\_Information*:

*Single\_Date/Time*:

*Calendar\_Date*: 1999

*Source\_Currentness\_Reference*: DATE OF PUBLICATION

*Source\_Citation\_Abbreviation*: NONE

*Source\_Contribution*: FISHL INFORMATION

*Source\_Information*:

*Source\_Citation*:

*Citation\_Information*:

*Originator*: BURR, J. (ADF&G), MORRIS, W. (ADNR)

*Publication\_Date*: 2004

*Title*:

ANADROMOUS/ESTUARINE/FRESHWATER FISH DISTRIBUTION  
AND SEASONALITY

*Geospatial\_Data\_Presentation\_Form*: EXPERT KNOWLEDGE

*Other\_Citation\_Details*: UNPUBLISHED

*Type\_of\_Source\_Media*: PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content*:

*Time\_Period\_Information*:

*Single\_Date/Time*:

*Calendar\_Date*: 2004

*Source\_Currentness\_Reference*: DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation*: NONE

*Source\_Contribution*: FISHL INFORMATION

*Source\_Information*:

*Source\_Citation*:

*Citation\_Information*:

*Originator*: CRAIG, P.

*Publication\_Date*: 1973

*Title:*

FALL SPAWNING AND OVERWINTERING AREA OF FISH  
POPULATION ALONG ROUTES OF PROPOSED PIPELINE  
BETWEEN PRUDHOE BAY AND THE MACKENZIE DELTA

*Geospatial\_Data\_Presentation\_Form:* HARDCOPY TEXT

*Other\_Citation\_Details:* AQUATIC ENVIRONMENTS LIMITED, CALGARY,  
ALBERTA, 25 PP. + MAPS

*Type\_of\_Source\_Media:* PAPER

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 1973

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISHL INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* CRAIG, P.C.

*Publication\_Date:* 1984

*Title:*

FISH USE OF COASTAL WATERS OF THE ALASKAN BEAUFORT  
SEA: A REVIEW

*Geospatial\_Data\_Presentation\_Form:* HARDCOPY TEXT

*Other\_Citation\_Details:* TRANSACTIONS OF THE AMERICAN FISHERIES  
SOCIETY 113:265-282

*Type\_of\_Source\_Media:* PAPER

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 1984

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISHL INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* GILL, TIBBITS, & HANDEL

*Publication\_Date:* 2001

*Title:* PROFILES OF IMPORTANT SHOREBIRD SITES IN ALASKA

*Geospatial\_Data\_Presentation\_Form:* HARDCOPY TEXT

*Other\_Citation\_Details:* INFORMATION AND TECHNOLOGY REPORT  
USGS/BRD/ITR-2001-000X, 85 PP

*Type\_of\_Source\_Media:* PAPER

*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:* FISHL INFORMATION

*Source\_Information:**Source\_Citation:**Citation\_Information:**Originator:*

U.S. FISH & WILDLIFE SERVICE (USFWS), ARCTIC NATIONAL  
WILDLIFE REFUGE (NWR) (FAIRBANKS)

*Publication\_Date:* 2004

*Title:*

DISTRIBUTION OF ANADROMOUS, ESTUARINE, AND  
FRESHWATER FISH IN THE ARCTIC NWR

*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE

*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:**Single\_Date/Time:*

*Calendar\_Date:* 2004

*Source\_Currentness\_Reference:* DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* FISHL INFORMATION

*Process\_Step:**Process\_Description:*

Four main sources of data were used to depict fish distribution and seasonality for this data layer: (1) personal interviews with resource experts from the Alaska Department of Fish & Game (ADF&G), Alaska Department of Natural Resources (ADNR), U.S. Fish and Wildlife Service (USFWS), and North Slope Borough (NSB); (2) reports provided by the agencies listed above; (3) peer-reviewed journal articles; (4) the 2003 Anadromous Streams Catalog digital vector arc coverage provided by ADF&G.

Concentration and seasonality information was provided by resource experts and was extracted from journal articles and agency reports.

The above digital and/or hardcopy sources were compiled by the project biologist to create the FISHL data layer. Depending on the type of source data, three general approaches are used for compiling a biology data layer: (1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:250,000 topographic quadrangles and digitized; (2) hardcopy maps are digitized at their source scale; (3) digital data layers are evaluated and used 'as is' or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the FISHL data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:* 200501

*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:* 299

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Link

*Point\_and\_Vector\_Object\_Count:* 76410

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Node, planar graph

*Point\_and\_Vector\_Object\_Count:* 419

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*Spatial\_Reference\_Information:*

*Horizontal\_Coordinate\_System\_Definition:*

*Geographic:*

*Latitude\_Resolution:* 0.0000001

*Longitude\_Resolution:* 0.0000001

*Geographic\_Coordinate\_Units:* Decimal degrees

*Geodetic\_Model:*

*Horizontal\_Datum\_Name:* North American Datum of 1927

*Ellipsoid\_Name:* Clark 1866

*Semi-major\_Axis:* 6378206.400000

*Denominator\_of\_Flattening\_Ratio:* 294.978698

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*Entity\_and\_Attribute\_Information:*

*Overview\_Description:*

*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 the North Slope atlas, the number is 75), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a

number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

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

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

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* FISHL.AAT

*Entity\_Type\_Definition:*

The FISHL.AAT table contains attribute information for the vector lines in this data set representing fish distribution. Note that all attribute information is stored in a series of relational files, described below. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (75), 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:* 752200001

*Range\_Domain\_Maximum:* 752200299

*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:* 75000296

*Range\_Domain\_Maximum:* 75000347

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BIO\_LUT

*Entity\_Type\_Definition:*

The data table BIO\_LUT is a lookup table that contains items necessary for linking vector objects in the biological data layers with the BIORES data table. Note that all attribute information is stored in a series of relational files, described below. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* RARNUM

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 75000001

*Range\_Domain\_Maximum:* 75000437

*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 (75), 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:* 750100002

*Range\_Domain\_Maximum:* 750900182

*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*: 075000001

*Range\_Domain\_Maximum*: 075000437

*Attribute*:

*Attribute\_Label*: SPECIES\_ID

*Attribute\_Definition*:

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

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1

*Range\_Domain\_Maximum*: N

*Attribute*:

*Attribute\_Label*: CONC

*Attribute\_Definition*:

The field CONC refers to "concentration," abundance, or density values of a species at a particular location. No quantitative data were available for fish, so the concentration field may either contain a descriptive term such as "HIGH", or "-", to indicate that no concentration information was available.

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label*: SEASON\_ID

*Attribute\_Definition*:

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

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1

*Range\_Domain\_Maximum*: N

*Attribute*:

*Attribute\_Label*: G\_SOURCE

*Attribute\_Definition*:

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

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* S\_SOURCE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.



*Attribute:**Attribute\_Label:* EL\_SPE*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* E#####*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* EL\_SPE\_SEA*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BIORES data table to records in the SEASONAL and BREED data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* E#####*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:* SPECIES*Entity\_Type\_Definition:*

The data table SPECIES identifies all species in the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure. Refer to the Completeness\_Report for a list of layer-specific species.

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* SPECIES\_ID*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* N*Attribute:**Attribute\_Label:* NAME*Attribute\_Definition:* Species common name for the entire ESI data set

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label*: GEN\_SPEC

*Attribute\_Definition*: Species scientific name for the entire ESI data set

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label*: ELEMENT

*Attribute\_Definition*: Major categories of biological data.

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: BIRD

*Enumerated\_Domain\_Value\_Definition*: Birds

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: FISH

*Enumerated\_Domain\_Value\_Definition*: Fish

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: HABITAT

*Enumerated\_Domain\_Value\_Definition*: Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: INVERT

*Enumerated\_Domain\_Value\_Definition*: Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition*: Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: REPTILE

*Enumerated\_Domain\_Value\_Definition*: Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition*: Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: SUBELEMENT

*Attribute\_Definition*: Element subgroup delineating a logical grouping of species.

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: alcid

*Enumerated\_Domain\_Value\_Definition*: Alcid

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: anadromous

*Enumerated\_Domain\_Value\_Definition*: Anadromous fish

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: bear

*Enumerated\_Domain\_Value\_Definition*: Bear

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: 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

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: m\_benthic

*Enumerated\_Domain\_Value\_Definition*: Marine benthic

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* m\_pelagic*Enumerated\_Domain\_Value\_Definition:* Marine pelagic fish*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* 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:* 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:* 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*: Date unspecified

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: EL\_SPE

*Attribute\_Definition*:

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

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: E#####

*Enumerated\_Domain\_Value\_Definition*:

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Detailed\_Description*:

*Entity\_Type*:

*Entity\_Type\_Label*: SEASONAL

*Entity\_Type\_Definition*:

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

*Entity\_Type\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: ELEMENT

*Attribute\_Definition*: Major categories of biological data

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: BIRD

*Enumerated\_Domain\_Value\_Definition*: Birds

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: FISH

*Enumerated\_Domain\_Value\_Definition*: Fish

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: HABITAT

*Enumerated\_Domain\_Value\_Definition*: Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* SEASON\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* JAN

*Attribute\_Definition:* January

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in January

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* FEB

*Attribute\_Definition:* February

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:**Enumerated\_Domain\_Value:* X*Enumerated\_Domain\_Value\_Definition:* Present in February*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* MAR*Attribute\_Definition:* March*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* X*Enumerated\_Domain\_Value\_Definition:* Present in March*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* APR*Attribute\_Definition:* April*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* X*Enumerated\_Domain\_Value\_Definition:* Present in April*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* MAY*Attribute\_Definition:* May*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* X*Enumerated\_Domain\_Value\_Definition:* Present in May*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* JUN*Attribute\_Definition:* June*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* X*Enumerated\_Domain\_Value\_Definition:* Present in June*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* JUL*Attribute\_Definition:* July*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* X*Enumerated\_Domain\_Value\_Definition:* Present in July*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* AUG

*Attribute\_Definition:* August

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in August

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SEP

*Attribute\_Definition:* September

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in September

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* OCT

*Attribute\_Definition:* October

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in October

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* NOV

*Attribute\_Definition:* November

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in November

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* DEC

*Attribute\_Definition:* December

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in December

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the SEASONAL data table to records in the BIORES and BREED data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*



*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BREED

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BREED data table to records in the BIORES and SEASONAL data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* MONTH

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* 12

*Attribute:*

*Attribute\_Label:* BREED1

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* BREED2

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* BREED3

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* BREED4

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* BREED5

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SOURCES

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SOURCE\_ID

*Attribute\_Definition:*

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table, and to G\_SOURCE and S\_SOURCE in the BIORRES table.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* ORIGINATOR

*Attribute\_Definition:* Author or developer of source material or data set

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* DATE\_PUB

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* TITLE

*Attribute\_Definition:* Title of source material or data.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* DATA\_FORMAT

*Attribute\_Definition:* The format of the source material.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUBLICATION

*Attribute\_Definition:* Additional citation information.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* SCALE

*Attribute\_Definition:* 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:* YYYY

*Enumerated\_Domain\_Value\_Definition:* Year

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* VARIES

*Enumerated\_Domain\_Value\_Definition:* Date information varies

*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 threatened or endangered by a state, federal, or international authority. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* STATE

*Attribute\_Definition:* Two-letter state abbreviation.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* COUNTRY

*Attribute\_Definition:* Three-letter country abbreviation.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* S

*Attribute\_Definition:* State threatened or endangered status.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

*Enumerated\_Domain\_Value\_Definition:* Endangered on state list

*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T

*Enumerated\_Domain\_Value\_Definition:* Threatened on state list

*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* C

*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service

*Attribute:*

*Attribute\_Label:* F

*Attribute\_Definition:* Federal threatened or endangered status.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

*Enumerated\_Domain\_Value\_Definition:* Endangered on federal list

*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T

*Enumerated\_Domain\_Value\_Definition:* Threatened on federal list

*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* C

*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service

*Attribute:*

*Attribute\_Label:* I

*Attribute\_Definition:* International threatened or endangered status.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

*Enumerated\_Domain\_Value\_Definition:* Endangered on international list

*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T

*Enumerated\_Domain\_Value\_Definition:* Threatened on international list

*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* C

*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service

*Attribute:*

*Attribute\_Label:* S\_DATE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* F\_DATE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* I\_DATE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for



month

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: EL\_SPE

*Attribute\_Definition*:

Concatenation of ELEMENT and SPECIES\_ID. This item links the STATUS data table to the BIORRES and SPECIES data tables.

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: E#####

*Enumerated\_Domain\_Value\_Definition*:

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Distribution\_Information*:

*Distributor*:

*Contact\_Information*:

*Contact\_Person\_Primary*:

*Contact\_Person*: John Kaperick

*Contact\_Organization*: NOAA, Office of Response and Restoration

*Contact\_Address*:

*Address\_Type*: Physical Address

*Address*: 7600 Sand Point Way N.E.

*City*: Seattle

*State\_or\_Province*: Washington

*Postal\_Code*: 98115-6349

*Contact\_Voice\_Telephone*: (206) 526-6400

*Contact\_Facsimile\_Telephone*: (206) 526-6329

*Resource\_Description*: ESI Atlas for North Slope, 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:* 200506

*Metadata\_Review\_Date:* 200506

*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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# North Slope, Alaska ESI: 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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

*Publication\_Date:* 200506

*Title:* North Slope, Alaska ESI: M\_MAMMAL (Marine Mammal Polygons)

*Edition:* First

*Geospatial\_Data\_Presentation\_Form:* Vector digital data

##### *Series\_Information:*

*Series\_Name:* None

*Issue\_Identification:* North Slope, 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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

*Description:**Abstract:*

This data set contains sensitive biological resource data for whales, seals, walruses, and polar bears for the North Slope of Alaska. Vector polygons in this data set represent marine mammal distribution and locations of haul-out sites. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer.

This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for North Slope, 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:* 1982

*Ending\_Date:* 2005

*Currentness\_Reference:*

The biological data were compiled during 2003-2004. The currentness dates for the data range from 1982 to 2005 and are documented in the Lineage section.

*Status:*

*Progress:* Complete

*Maintenance\_and\_Update\_Frequency:* None Scheduled

*Spatial\_Domain:**Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -168.00000

*East\_Bounding\_Coordinate:* -140.80000

*North\_Bounding\_Coordinate:* 72.00000

*South\_Bounding\_Coordinate:* 68.00000

*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:* North Slope, 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:*

Depicts the relationships between spatial data layers and attribute data tables for the North Slope, 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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

*Native\_Data\_Set\_Environment:*

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

The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: bioindex.e00, birds.e00, esi.e00, facility.e00, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, m\_mammal.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 SQL SERVER(r) to ARC/INFO(r) consistencies. A final review is made by the GIS

manager, where the data are written to CD-ROM and the metadata are written.

After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "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/maps and digital data on marine mammal distribution. These data do not necessarily represent all marine mammal occurrences in North Slope, Alaska. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name [n/a if not applicable]): 9, Beluga whale, *Delphinapterus leucas*; 15, Bearded seal, *Erignathus barbatus*; 16, Walrus, *Odobenus rosmarus*; 26, Gray whale, *Eschrichtius robustus*; 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:*

Spatial components for the biological data layers can come from expert interviews, hardcopy, or digital sources. Most of the spatial components of the biological data layers are developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy base maps with a scale of 1:250,000. Some of the spatial components of the biological data sets are developed from pre-existing digital or hardcopy sources and reflect the positional accuracy of these original data. See the Lineage and Process\_Description sections for more information on the original data source and how these data were integrated or manipulated to create the final data set. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources.

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* ADF&G

*Publication\_Date:* 1986

*Title:* ALASKA HABITAT MANAGEMENT GUIDE, ARCTIC REGION, MAP ATLAS

*Geospatial\_Data\_Presentation\_Form:* HARDCOPY MAP

*Other\_Citation\_Details:*

STATE OF ALASKA, DEPARTMENT OF FISH & GAME, HABITAT DIVISION, JUNEAU, 19 MAPS.

*Source\_Scale\_Denominator:* 1,000,000

*Type\_of\_Source\_Media:* PAPER

*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:* M\_MAMMAL INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* ADF&G HAB. & REST. DIV.  
*Publication\_Date:* 1997  
*Title:* MOST ENVIRONMENTALLY SENSITIVE AREA (MESA) DATA  
*Geospatial\_Data\_Presentation\_Form:* DIGITAL MAP  
*Other\_Citation\_Details:*  
ALASKA DEPARTMENT OF FISH & GAME (ADF&G) HABITAT  
AND RESTORATION DIVISION, 7 MAPS  
*Source\_Scale\_Denominator:* VARIED  
*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:* M\_MAMMAL INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* AK REG. RESP. TEAM (ARRT)  
*Publication\_Date:* 1999  
*Title:* NORTH SLOPE SUBAREA CONTINGENCY PLAN: SENSITIVE  
AREAS SECTION  
*Geospatial\_Data\_Presentation\_Form:* HARDCOPY TEXT  
*Other\_Citation\_Details:* ALASKA REGIONAL RESPONSE TEAM (ARRT),  
PP. D1-D92  
*Type\_of\_Source\_Media:* PAPER  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:* 1999  
*Source\_Currentness\_Reference:* DATE OF PUBLICATION  
*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* M\_MAMMAL INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* FAY, F.H.  
*Publication\_Date:* 1982  
*Title:*  
ECOLOGY AND BIOLOGY OF THE PACIFIC WALRUS, ODOBENUS

## ROSMARUS DIVERGENS ILLIGER

*Geospatial\_Data\_Presentation\_Form*: HARDCOPY TEXT*Other\_Citation\_Details*:

U.S. DEPARTMENT OF THE INTERIOR (DOI), FISH AND WILDLIFE  
SERVICE, NORTH AMERICAN FAUNA, NUMBER 74,  
WASHINGTON D.C., 280 PP.

*Type\_of\_Source\_Media*: PAPER*Source\_Time\_Period\_of\_Content*:*Time\_Period\_Information*:*Single\_Date/Time*:*Calendar\_Date*: 1982*Source\_Currentness\_Reference*: DATE OF PUBLICATION*Source\_Citation\_Abbreviation*: NONE*Source\_Contribution*: M\_MAMMAL INFORMATION*Source\_Information*:*Source\_Citation*:*Citation\_Information*:*Originator*: FROST, LOWRY, CARROLL*Publication\_Date*: 1993*Title*:

BELUGA WHALE AND SPOTTED SEAL USE OF A COASTAL  
LAGOON SYSTEM IN NE CHUKCHI SEA

*Geospatial\_Data\_Presentation\_Form*: HARDCOPY TEXT*Other\_Citation\_Details*: ARCTIC 46(1), PP. 8-16.*Type\_of\_Source\_Media*: PAPER*Source\_Time\_Period\_of\_Content*:*Time\_Period\_Information*:*Single\_Date/Time*:*Calendar\_Date*: 1993*Source\_Currentness\_Reference*: DATE OF PUBLICATION*Source\_Citation\_Abbreviation*: NONE*Source\_Contribution*: M\_MAMMAL INFORMATION*Source\_Information*:*Source\_Citation*:*Citation\_Information*:*Originator*: HUNTINGTON ET AL.*Publication\_Date*: 1999*Title*:

TRADITIONAL KNOWLEDGE OF THE ECOLOGY OF BELUGA  
WHALES IN CHUKCHI/BERING SEAS, AK

*Geospatial\_Data\_Presentation\_Form*: HARDCOPY TEXT*Other\_Citation\_Details*: ARCTIC 52(1), PP. 49-61.*Type\_of\_Source\_Media*: PAPER*Source\_Time\_Period\_of\_Content*:*Time\_Period\_Information*:*Single\_Date/Time*:*Calendar\_Date*: 1999*Source\_Currentness\_Reference*: DATE OF PUBLICATION*Source\_Citation\_Abbreviation*: NONE*Source\_Contribution*: M\_MAMMAL INFORMATION*Source\_Information*:



*Source\_Citation:**Citation\_Information:**Originator:* MINERALS MANAGEMENT SERVICE (MMS)*Publication\_Date:* 2003*Title:* BOWHEAD WHALE AERIAL SURVEY PROJECT SIGHTINGS DATABASE*Geospatial\_Data\_Presentation\_Form:* DIGITAL VECTOR DATA*Other\_Citation\_Details:* MINERALS MANAGEMENT SERVICE, ANCHORAGE, AK*Type\_of\_Source\_Media:* CD-ROM*Source\_Time\_Period\_of\_Content:**Time\_Period\_Information:**Range\_of\_Dates/Times:**Beginning\_Date:* 1987*Ending\_Date:* 2002*Source\_Currentness\_Reference:* DATE OF SURVEY*Source\_Citation\_Abbreviation:* NONE*Source\_Contribution:* M\_MAMMAL INFORMATION*Source\_Information:**Source\_Citation:**Citation\_Information:**Originator:* QUAKENBUSH, L. (ADF&G, FAIRBANKS)*Publication\_Date:* 2004*Title:* MARINE MAMMAL DISTRIBUTION/SEASONALITY (PRIMARILY PINNIPEDS)*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE*Other\_Citation\_Details:* UNPUBLISHED*Type\_of\_Source\_Media:* PERSONAL COMMUNICATION*Source\_Time\_Period\_of\_Content:**Time\_Period\_Information:**Single\_Date/Time:**Calendar\_Date:* 2004*Source\_Currentness\_Reference:* DATE OF COMMUNICATION*Source\_Citation\_Abbreviation:* NONE*Source\_Contribution:* M\_MAMMAL INFORMATION*Source\_Information:**Source\_Citation:**Citation\_Information:**Originator:* ROSE, J.*Publication\_Date:* 1996*Title:* SPOTTED SEAL HAUL-OUTS*Geospatial\_Data\_Presentation\_Form:* HARDCOPY TEXT*Other\_Citation\_Details:* UNPUBLISHED*Type\_of\_Source\_Media:* EMAIL*Source\_Time\_Period\_of\_Content:**Time\_Period\_Information:**Single\_Date/Time:**Calendar\_Date:* 1996*Source\_Currentness\_Reference:* DATE OF SURVEY*Source\_Citation\_Abbreviation:* NONE*Source\_Contribution:* M\_MAMMAL INFORMATION

*Source\_Information:**Source\_Citation:**Citation\_Information:**Originator:* SUYDAM, R. (NORTH SLOPE BOROUGH)*Publication\_Date:* 2004*Title:*DISTRIBUTION/SEASONALITY OF CHUKCHI/BEAUFORT SEA  
MARINE MAMMALS; BIRDS*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE*Other\_Citation\_Details:* UNPUBLISHED*Type\_of\_Source\_Media:* PERSONAL COMMUNICATION*Source\_Time\_Period\_of\_Content:**Time\_Period\_Information:**Single\_Date/Time:**Calendar\_Date:* 2004*Source\_Currentness\_Reference:* DATE OF COMMUNICATION*Source\_Citation\_Abbreviation:* NONE*Source\_Contribution:* M\_MAMMAL INFORMATION*Source\_Information:**Source\_Citation:**Citation\_Information:**Originator:* SUYDAM, LOWRY, FROST, OCORRYCROW, PIKOK*Publication\_Date:* 2001*Title:*SATELLITE TRACKING OF EASTERN CHUKCHI SEA BELUGA  
WHALES INTO THE ARCTIC OCEAN*Geospatial\_Data\_Presentation\_Form:* HARDCOPY TEXT*Other\_Citation\_Details:* ARCTIC 54(3), P. 237-243*Type\_of\_Source\_Media:* PAPER*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:* M\_MAMMAL INFORMATION*Source\_Information:**Source\_Citation:**Citation\_Information:**Originator:* TREACY, S.D.*Publication\_Date:* 2002*Title:*AERIAL SURVEYS OF ENDANGERED WHALES IN THE  
BEAUFORT SEA, FALL 2001*Geospatial\_Data\_Presentation\_Form:* HARDCOPY TEXT*Other\_Citation\_Details:*U.S. DEPARTMENT OF THE INTERIOR (DOI), MINERALS  
MANAGEMENT SERVICE, ALASKA OCS REGION, ANCHORAGE,  
ALASKA, 2002*Type\_of\_Source\_Media:* PAPER*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:**Range\_of\_Dates/Times:**Beginning\_Date:* 2001*Ending\_Date:* 2002*Source\_Currentness\_Reference:* DATE OF SURVEY*Source\_Citation\_Abbreviation:* NONE*Source\_Contribution:* M\_MAMMAL INFORMATION*Source\_Information:**Source\_Citation:**Citation\_Information:**Originator:* USGS ALASKA SCIENCE CENTER*Publication\_Date:* 2005*Title:* WINTER AND SUMMER POLAR BEAR DENSITY GRIDS*Geospatial\_Data\_Presentation\_Form:* DIGITAL VECTOR DATA*Other\_Citation\_Details:*US GEOLOGICAL SURVEY (USGS) ALASKA SCIENCE CENTER,  
ANCHORAGE, ALASKA*Type\_of\_Source\_Media:* EMAIL*Source\_Time\_Period\_of\_Content:**Time\_Period\_Information:**Single\_Date/Time:**Calendar\_Date:* 2005*Source\_Currentness\_Reference:* DATE OF PUBLICATION*Source\_Citation\_Abbreviation:* NONE*Source\_Contribution:* M\_MAMMAL INFORMATION*Process\_Step:**Process\_Description:*

Four main sources of data were used to depict distributions of marine mammals for this data layer: (1) personal interviews with resource experts from U.S. Fish and Wildlife Service (USFWS), Alaska Department of Fish and Game (ADF&G), U.S. Geological Survey (USGS), North Slope Borough (NSB), and Minerals Management Service (MMS); (2) hardcopy reports and maps provided by the agencies listed above; (3) peer-reviewed journal articles; and (4) digital data, including a 2003 MMS bowhead whale aerial survey project sightings database vector point coverage, and a 2005 USGS winter and summer polar bear density grid coverage.

Concentration and seasonality information was provided by resource experts or was extracted from reports/published sources.

The above digital and/or hardcopy sources were compiled by the project biologist to create the M\_MAMMAL data layer. Depending on the type of source data, three general approaches are used for compiling a biology data layer: (1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:250,000 topographic quadrangles and digitized; (2) hardcopy maps are digitized at their source scale; (3) digital data layers are evaluated and used 'as is' or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the M\_MAMMAL data layer are made based on the recommendations of the resource experts, and final hardcopy

maps and digital data are created.

*Process\_Date:* 200501

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Person:* Jill Petersen

*Contact\_Address:*

*Address\_Type:* Physical address

*Address:* 7600 Sand Point Way N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6944

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:* Vector

*Point\_and\_Vector\_Object\_Information:*

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* GT-polygon composed of chains

*Point\_and\_Vector\_Object\_Count:* 295

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Area point

*Point\_and\_Vector\_Object\_Count:* 295

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Complete chain

*Point\_and\_Vector\_Object\_Count:* 1292

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Link

*Point\_and\_Vector\_Object\_Count:* 402866

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Node, planar graph

*Point\_and\_Vector\_Object\_Count:* 1165

*Spatial\_Reference\_Information:*

*Horizontal\_Coordinate\_System\_Definition:*

*Geographic:*

*Latitude\_Resolution:* 0.0000001

*Longitude\_Resolution:* 0.0000001

*Geographic\_Coordinate\_Units:* Decimal degrees

*Geodetic\_Model:*

*Horizontal\_Datum\_Name:* North American Datum of 1927

*Ellipsoid\_Name:* Clark 1866

*Semi-major\_Axis:* 6378206.400000

*Denominator\_of\_Flattening\_Ratio:* 294.978698

*Entity\_and\_Attribute\_Information:**Overview\_Description:**Entity\_and\_Attribute\_Overview:*

In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, M\_MAMMAL) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO\_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (for the North Slope atlas, the number is 75), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

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

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

*Detailed\_Description:**Entity\_Type:*

*Entity\_Type\_Label:* M\_MAMMAL.PAT

*Entity\_Type\_Definition:*

The M\_MAMMAL.PAT table contains attribute information for the vector polygons in this data set representing marine mammal distribution and locations of haul-out sites. Note that all attribute information is stored in a series of relational files, described

below. See the *Browse\_Graphic* section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: ID

*Attribute\_Definition*:

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (75), 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*: 750400002

*Range\_Domain\_Maximum*: 750400296

*Attribute*:

*Attribute\_Label*: RARNUM

*Attribute\_Definition*:

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

*Attribute\_Definition\_Source*: NOAA

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 75000352

*Range\_Domain\_Maximum*: 75000427

*Detailed\_Description*:

*Entity\_Type*:

*Entity\_Type\_Label*: BIO\_LUT

*Entity\_Type\_Definition*:

The data table BIO\_LUT is a lookup table that contains items necessary for linking vector objects in the biological data layers with the BIORES data table. Note that all attribute information is stored in a series of relational files, described below. See the *Browse\_Graphic* section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: RARNUM

*Attribute\_Definition*:

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

*Attribute\_Definition\_Source*: NOAA

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 75000001

*Range\_Domain\_Maximum*: 75000437

*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 (75), 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:* 750100002

*Range\_Domain\_Maximum:* 750900182

*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:* 075000001

*Range\_Domain\_Maximum:* 075000437

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* CONC

*Attribute\_Definition:*

The field CONC refers to "concentration," abundance, or density values. The field may contain counts of individuals (XX MARINE MAMMALS) and in some cases, generalized count categories (100s or >1000). In cases where no quantitative count data were available, the field may contain a descriptive term such as "HIGH", "IRREGULAR", or "LOW". If no concentration information was available from any source, the field is populated with "-". Counts were derived from a variety of surveys or were estimated by resource experts and may range in date.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* SEASON\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* G\_SOURCE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* S\_SOURCE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT



*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BIORES data table to records in the SEASONAL and BREED data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SPECIES

*Entity\_Type\_Definition:*

The data table SPECIES identifies all species in the ESI data set. See the

Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure. Refer to the Completeness\_Report for a list of layer-specific species.

*Entity\_Type\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: SPECIES\_ID

*Attribute\_Definition*:

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

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1

*Range\_Domain\_Maximum*: N

*Attribute*:

*Attribute\_Label*: NAME

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

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label*: GEN\_SPEC

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

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label*: ELEMENT

*Attribute\_Definition*: Major categories of biological data.

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: BIRD

*Enumerated\_Domain\_Value\_Definition*: Birds

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: FISH

*Enumerated\_Domain\_Value\_Definition*: Fish

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: HABITAT

*Enumerated\_Domain\_Value\_Definition*: Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: INVERT

*Enumerated\_Domain\_Value\_Definition*: Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain:**Enumerated\_Domain\_Value:* M\_MAMMAL*Enumerated\_Domain\_Value\_Definition:* Marine Mammals*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* REPTILE*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* T\_MAMMAL*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* SUBELEMENT*Attribute\_Definition:* Element subgroup delineating a logical grouping of species.*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* alcid*Enumerated\_Domain\_Value\_Definition:* Alcid*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**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:* bear*Enumerated\_Domain\_Value\_Definition:* Bear*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

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* m\_benthic

*Enumerated\_Domain\_Value\_Definition:* Marine benthic

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* m\_pelagic

*Enumerated\_Domain\_Value\_Definition:* Marine pelagic fish

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 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:* 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:* 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:* Date unspecified

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SEASONAL

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:**Enumerated\_Domain\_Value:* BIRD*Enumerated\_Domain\_Value\_Definition:* Birds*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* FISH*Enumerated\_Domain\_Value\_Definition:* Fish*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* HABITAT*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* INVERT*Enumerated\_Domain\_Value\_Definition:* Invertebrates*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* M\_MAMMAL*Enumerated\_Domain\_Value\_Definition:* Marine Mammals*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* REPTILE*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* T\_MAMMAL*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* SPECIES\_ID*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* N*Attribute:**Attribute\_Label:* SEASON\_ID*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:*

*Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* N*Attribute:**Attribute\_Label:* JAN*Attribute\_Definition:* January*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* X*Enumerated\_Domain\_Value\_Definition:* Present in January*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* FEB*Attribute\_Definition:* February*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* X*Enumerated\_Domain\_Value\_Definition:* Present in February*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* MAR*Attribute\_Definition:* March*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* X*Enumerated\_Domain\_Value\_Definition:* Present in March*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* APR*Attribute\_Definition:* April*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* X*Enumerated\_Domain\_Value\_Definition:* Present in April*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* MAY*Attribute\_Definition:* May*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* X*Enumerated\_Domain\_Value\_Definition:* Present in May*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* JUN*Attribute\_Definition:* June

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

*Enumerated\_Domain\_Value\_Definition*: Present in June

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: JUL

*Attribute\_Definition*: July

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

*Enumerated\_Domain\_Value\_Definition*: Present in July

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: AUG

*Attribute\_Definition*: August

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

*Enumerated\_Domain\_Value\_Definition*: Present in August

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: SEP

*Attribute\_Definition*: September

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

*Enumerated\_Domain\_Value\_Definition*: Present in September

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: OCT

*Attribute\_Definition*: October

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

*Enumerated\_Domain\_Value\_Definition*: Present in October

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: NOV

*Attribute\_Definition*: November

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

*Enumerated\_Domain\_Value\_Definition*: Present in November

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.



*Attribute:**Attribute\_Label:* DEC*Attribute\_Definition:* December*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* X*Enumerated\_Domain\_Value\_Definition:* Present in December*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* EL\_SPE\_SEA*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the SEASONAL data table to records in the BIORES and BREED data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* E#####*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:* BREED*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* EL\_SPE\_SEA*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BREED data table to records in the BIORES and SEASONAL data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* E#####*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* MONTH*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* 12

*Attribute:*

*Attribute\_Label:* BREED1

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* BREED2

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* -*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* BREED3*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* Y*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* N*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* -*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* BREED4*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* Y*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* N*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* BREED5

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SOURCES

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SOURCE\_ID

*Attribute\_Definition:*

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table, and to G\_SOURCE and S\_SOURCE in the BIORES table.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:**Attribute\_Label:* ORIGINATOR*Attribute\_Definition:* Author or developer of source material or data set.*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.*Attribute:**Attribute\_Label:* DATE\_PUB*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* YYYYMM*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* TITLE*Attribute\_Definition:* Title of source material or data.*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.*Attribute:**Attribute\_Label:* DATA\_FORMAT*Attribute\_Definition:* The format of the source material.*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.*Attribute:**Attribute\_Label:* PUBLICATION*Attribute\_Definition:* Additional citation information.*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.*Attribute:**Attribute\_Label:* SCALE*Attribute\_Definition:* 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:* YYYY*Enumerated\_Domain\_Value\_Definition:* Year*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, federal, or international authority. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* ELEMENT*Attribute\_Definition:* Major categories of biological data.*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* BIRD*Enumerated\_Domain\_Value\_Definition:* Birds*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* FISH*Enumerated\_Domain\_Value\_Definition:* Fish*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* HABITAT*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* INVERT*Enumerated\_Domain\_Value\_Definition:* Invertebrates*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* M\_MAMMAL*Enumerated\_Domain\_Value\_Definition:* Marine Mammals*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* REPTILE*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* T\_MAMMAL*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* STATE

*Attribute\_Definition:* Two-letter state abbreviation.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* COUNTRY

*Attribute\_Definition:* Three-letter country abbreviation.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* S

*Attribute\_Definition:* State threatened or endangered status.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

*Enumerated\_Domain\_Value\_Definition:* Endangered on state list

*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T

*Enumerated\_Domain\_Value\_Definition:* Threatened on state list

*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* C

*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service

*Attribute:*

*Attribute\_Label:* F

*Attribute\_Definition:* Federal threatened or endangered status.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

*Enumerated\_Domain\_Value\_Definition:* Endangered on federal list

*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* T*Enumerated\_Domain\_Value\_Definition:* Threatened on federal list*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* C*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service*Attribute:**Attribute\_Label:* I*Attribute\_Definition:* International threatened or endangered status.*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* E*Enumerated\_Domain\_Value\_Definition:* Endangered on international list*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* T*Enumerated\_Domain\_Value\_Definition:* Threatened on international list*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* C*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service*Attribute:**Attribute\_Label:* S\_DATE*Attribute\_Definition:*

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

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

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

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



month

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* I\_DATE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Distribution\_Information:*

*Distributor:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:* John Kaperick

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Address:*

*Address\_Type:* Physical Address

*Address:* 7600 Sand Point Way N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6400

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Resource\_Description:* ESI Atlas for North Slope, 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:* 200506

*Metadata\_Review\_Date:* 200506

*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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# North Slope, Alaska ESI: T\_MAMMAL (Terrestrial Mammal Polygons)

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

## Metadata:

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

### *Identification Information:*

#### *Citation:*

##### *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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

*Publication Date:* 200506

*Title:* North Slope, Alaska ESI: T\_MAMMAL (Terrestrial Mammal Polygons)

*Edition:* First

*Geospatial Data Presentation Form:* Vector digital data

##### *Series Information:*

*Series Name:* None

*Issue Identification:* North Slope, 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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

*Description:**Abstract:*

This data set contains sensitive biological resource data for brown bears, caribou, and muskoxen for the North Slope, Alaska. Vector polygons in this data set represent terrestrial mammal distribution. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer.

This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for North Slope, 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:* 1989

*Ending\_Date:* 2004

*Currentness\_Reference:*

The biological data were compiled during 2003-2004. The currentness dates for the data range from 1989 to 2004 and are documented in the Lineage section.

*Status:*

*Progress:* Complete

*Maintenance\_and\_Update\_Frequency:* None Scheduled

*Spatial\_Domain:**Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -168.00000

*East\_Bounding\_Coordinate:* -140.80000

*North\_Bounding\_Coordinate:* 72.00000

*South\_Bounding\_Coordinate:* 68.00000

*Keywords:**Theme:*

*Theme\_Keyword\_Thesaurus:* None

*Theme\_Keyword:* ESI

*Theme\_Keyword:* Sensitivity maps

*Theme\_Keyword:* Coastal resources

*Theme\_Keyword:* Oil spill planning

*Theme\_Keyword:* Coastal Zone Management

*Theme\_Keyword:* Wildlife

*Theme\_Keyword:* Terrestrial Mammal

*Place:*

*Place\_Keyword\_Thesaurus:* None

*Place\_Keyword:* North Slope, 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:*

Depicts the relationships between spatial data layers and attribute data tables for the North Slope, 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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

*Native\_Data\_Set\_Environment:*

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

The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: bioindex.e00, birds.e00, esi.e00, facility.e00, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, m\_mammal.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 SQL SERVER(r) to ARC/INFO(r) consistencies. A final review is made by the GIS

manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "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 and digital data for terrestrial mammal concentration areas. These data do not necessarily represent all terrestrial mammal occurrences in North Slope, Alaska. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name [n/a if not applicable]): 55, Brown bear, *Ursus arctos*; 118, Caribou, *Rangifer tarandus*; 121, Muskox, *Ovibos moschatus*.

*Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy\_Report:*

Spatial components for the biological data layers can come from expert interviews, hardcopy, or digital sources. Most of the spatial components of the biological data layers are developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy base maps with a scale of 1:250,000. Some of the spatial components of the biological data sets are developed from pre-existing digital or hardcopy sources and reflect the positional accuracy of these original data. See the Lineage and Process\_Description sections for more information on the original data source and how these data were integrated or manipulated to create the final data set. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources.

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* ABR, INC. (FAIRBANKS)

*Publication\_Date:* 2004

*Title:*

SATELLITE TELEMETRY DATA FOR THE TESHEKPUK CARIBOU  
HERD 1990-2002

*Geospatial\_Data\_Presentation\_Form:* DIGITAL VECTOR DATA

*Other\_Citation\_Details:* UNPUBLISHED, CONTACT: ALEX PRITCHARD,  
ABR, FAIRBANKS, AK

*Type\_of\_Source\_Media:* EMAIL

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1990

*Ending\_Date:* 2002

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* T\_MAMMAL INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* ADF&G

*Publication\_Date:* 2003

*Title:* WESTERN ARCTIC HERD CARIBOU CALVING GROUNDS

*Geospatial\_Data\_Presentation\_Form:* DIGITAL VECTOR DATA

*Other\_Citation\_Details:* ALASKA DEPARTMENT OF FISH & GAME  
(ADF&G), NOME/KOTZEBUE, ALASKA

*Type\_of\_Source\_Media:* CD-ROM

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1988

*Ending\_Date:* 2003

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* T\_MAMMAL INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* ADF&G (FAIRBANKS, AK)

*Publication\_Date:* 2003

*Title:* CENTRAL ARCTIC CARIBOU HERD CALVING LOCATIONS,  
1990-2002

*Geospatial\_Data\_Presentation\_Form:* DIGITAL MAP

*Other\_Citation\_Details:* ALASKA DEPARTMENT OF FISH & GAME  
(ADF&G), FAIRBANKS, ALASKA

*Type\_of\_Source\_Media:* CD-ROM

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1990

*Ending\_Date:* 2002

*Source\_Currentness\_Reference:* DATE OF SURVEY

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* T\_MAMMAL INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* ADF&G (KOTZEBUE)

*Publication\_Date:* 2004

*Title:* CARIBOU: WESTERN ALASKA HERD INSECT RELIEF  
SHAPEFILES

*Geospatial\_Data\_Presentation\_Form:* DIGITAL VECTOR DATA

*Other\_Citation\_Details:*

UNPUBLISHED: CONTACT JIM DAU, ALASKA DEPARTMENT OF  
FISH & GAME (ADF&G), KOTZEBUE

*Type\_of\_Source\_Media:* EMAIL  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Range\_of\_Dates/Times:*  
*Beginning\_Date:* 1989  
*Ending\_Date:* 2004  
*Source\_Currentness\_Reference:* DATE OF SURVEY  
*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* T\_MAMMAL INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* AK REG. RESP. TEAM (ARRT)  
*Publication\_Date:* 1999  
*Title:* NORTH SLOPE SUBAREA CONTINGENCY PLAN: SENSITIVE AREAS SECTION  
*Geospatial\_Data\_Presentation\_Form:* HARDCOPY TEXT  
*Other\_Citation\_Details:* ALASKA REGIONAL RESPONSE TEAM (ARRT), PP. D1-D92

*Type\_of\_Source\_Media:* PAPER  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:* 1999  
*Source\_Currentness\_Reference:* DATE OF PUBLICATION  
*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* T\_MAMMAL INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* CARROLL, G. (ADF&G, BARROW)  
*Publication\_Date:* 2004  
*Title:* CARIBOU SEASONALITY  
*Geospatial\_Data\_Presentation\_Form:* EXPERT KNOWLEDGE  
*Other\_Citation\_Details:* UNPUBLISHED

*Type\_of\_Source\_Media:* PERSONAL COMMUNICATION  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:* 2004  
*Source\_Currentness\_Reference:* DATE OF COMMUNICATION  
*Source\_Citation\_Abbreviation:* NONE  
*Source\_Contribution:* T\_MAMMAL INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* SCHOEN, J. ET AL.  
*Publication\_Date:* 2002  
*Title:* ALASKA'S WESTERN ARCTIC: A SUMMARY AND SYNTHESIS OF RESOURCES  
*Geospatial\_Data\_Presentation\_Form:* DIGITAL MAP



*Other\_Citation\_Details:* AUDUBON ALASKA, ANCHORAGE, AK

*Source\_Scale\_Denominator:* 2,810,000

*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 PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* T\_MAMMAL INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* USFWS, ANWR

*Publication\_Date:* 2004

*Title:* PORCUPINE CARIBOU HERD CALVING AREA

*Geospatial\_Data\_Presentation\_Form:* DIGITAL VECTOR DATA

*Other\_Citation\_Details:*

U.S. FISH & WILDLIFE SERVICE (USFWS), ARCTIC NATIONAL  
WILDLIFE REFUGE (ANWR), FAIRBANKS, ALASKA

*Type\_of\_Source\_Media:* CD-ROM

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2004

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* T\_MAMMAL INFORMATION

*Process\_Step:*

*Process\_Description:*

Three main sources of data were used to depict distributions of terrestrial mammals 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) hardcopy/digital maps provided by the agencies listed above and by Audubon Alaska; and (3) five vector polygon coverages depicting the distribution of 4 caribou herds during sensitive seasonal migration/concentration periods (calving, insect-relief, etc.). Digital data was provided by ABR, Inc. (2004), ADF&G (2003-2004), and USFWS (2004).

Resource experts provided concentration and seasonality information.

The above digital and/or hardcopy sources were compiled by the project biologist to create the T\_MAMMAL data layer. Depending on the type of source data, three general approaches are used for compiling a biology data layer: (1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:250,000 topographic quadrangles and digitized; (2) hardcopy maps are digitized at their source scale; (3) digital data layers are evaluated and used 'as is' or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews

are conducted to review the maps. If necessary, edits to the T\_MAMMAL data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:* 200501

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Person:* Jill Petersen

*Contact\_Address:*

*Address\_Type:* Physical address

*Address:* 7600 Sand Point Way N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6944

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:* Vector

*Point\_and\_Vector\_Object\_Information:*

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* GT-polygon composed of chains

*Point\_and\_Vector\_Object\_Count:* 185

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Area point

*Point\_and\_Vector\_Object\_Count:* 185

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Complete chain

*Point\_and\_Vector\_Object\_Count:* 507

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Link

*Point\_and\_Vector\_Object\_Count:* 135359

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Node, planar graph

*Point\_and\_Vector\_Object\_Count:* 494

*Spatial\_Reference\_Information:*

*Horizontal\_Coordinate\_System\_Definition:*

*Geographic:*

*Latitude\_Resolution:* 0.0000001

*Longitude\_Resolution:* 0.0000001

*Geographic\_Coordinate\_Units:* Decimal degrees

*Geodetic\_Model:*

*Horizontal\_Datum\_Name:* North American Datum of 1927

*Ellipsoid\_Name:* Clark 1866

*Semi-major\_Axis:* 6378206.400000

*Denominator\_of\_Flattening\_Ratio:* 294.978698

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*Entity\_and\_Attribute\_Information:*

*Overview\_Description:*

*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 North Slope atlas, the number is 75), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

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

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

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* T\_MAMMAL.PAT

*Entity\_Type\_Definition:*

The T\_MAMMAL.PAT table contains attribute information for the vector polygons in

this data set representing terrestrial mammal distribution. Note that all attribute information is stored in a series of relational files, described below. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (75), 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:* 750900002

*Range\_Domain\_Maximum:* 750900182

*Attribute:*

*Attribute\_Label:* RARNUM

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 75000428

*Range\_Domain\_Maximum:* 75000437

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BIO\_LUT

*Entity\_Type\_Definition:*

The data table BIO\_LUT is a lookup table that contains items necessary for linking vector objects in the biological data layers with the BIORES data table. Note that all attribute information is stored in a series of relational files, described below. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* RARNUM

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 75000001

*Range\_Domain\_Maximum:* 75000437

*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 (75), 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:* 750100002

*Range\_Domain\_Maximum:* 750900182

*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:* 075000001

*Range\_Domain\_Maximum:* 075000437

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* CONC

*Attribute\_Definition:*

The field CONC refers to "concentration," abundance, or density values. No quantitative count data were available, so the field may contain a descriptive term such as "HIGH". If no concentration information was available from any source, the field is populated with "-".

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* SEASON\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* G\_SOURCE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* S\_SOURCE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BIORES data table to records in the SEASONAL and BREED data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SPECIES

*Entity\_Type\_Definition:*

The data table SPECIES identifies all species in the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes

the way this table relates to other attribute tables in the ESI data structure. Refer to the Completeness\_Report for a list of layer-specific species.

*Entity\_Type\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: SPECIES\_ID

*Attribute\_Definition*:

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

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1

*Range\_Domain\_Maximum*: N

*Attribute*:

*Attribute\_Label*: NAME

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

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label*: GEN\_SPEC

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

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label*: ELEMENT

*Attribute\_Definition*: Major categories of biological data.

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: BIRD

*Enumerated\_Domain\_Value\_Definition*: Birds

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: FISH

*Enumerated\_Domain\_Value\_Definition*: Fish

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: HABITAT

*Enumerated\_Domain\_Value\_Definition*: Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: INVERT

*Enumerated\_Domain\_Value\_Definition*: Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:



*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SUBELEMENT

*Attribute\_Definition:* Element subgroup delineating a logical grouping of species.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* alcid

*Enumerated\_Domain\_Value\_Definition:* Alcid

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* anadromous

*Enumerated\_Domain\_Value\_Definition:* Anadromous fish

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* bear

*Enumerated\_Domain\_Value\_Definition:* Bear

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 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

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* m\_benthic

*Enumerated\_Domain\_Value\_Definition:* Marine benthic

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* m\_pelagic

*Enumerated\_Domain\_Value\_Definition:* Marine pelagic fish

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 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:* 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:* 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:* Date unspecified*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* EL\_SPE*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* E#####*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:* SEASONAL*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* ELEMENT*Attribute\_Definition:* Major categories of biological data.*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* SEASON\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum: 1*

*Range\_Domain\_Maximum: N*

*Attribute:*

*Attribute\_Label: JAN*

*Attribute\_Definition: January*

*Attribute\_Definition\_Source: Research Planning, Inc.*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: X*

*Enumerated\_Domain\_Value\_Definition: Present in January*

*Enumerated\_Domain\_Value\_Definition\_Source: Research Planning, Inc.*

*Attribute:*

*Attribute\_Label: FEB*

*Attribute\_Definition: February*

*Attribute\_Definition\_Source: Research Planning, Inc.*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: X*

*Enumerated\_Domain\_Value\_Definition: Present in February*

*Enumerated\_Domain\_Value\_Definition\_Source: Research Planning, Inc.*

*Attribute:*

*Attribute\_Label: MAR*

*Attribute\_Definition: March*

*Attribute\_Definition\_Source: Research Planning, Inc.*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: X*

*Enumerated\_Domain\_Value\_Definition: Present in March*

*Enumerated\_Domain\_Value\_Definition\_Source: Research Planning, Inc.*

*Attribute:*

*Attribute\_Label: APR*

*Attribute\_Definition: April*

*Attribute\_Definition\_Source: Research Planning, Inc.*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: X*

*Enumerated\_Domain\_Value\_Definition: Present in April*

*Enumerated\_Domain\_Value\_Definition\_Source: Research Planning, Inc.*

*Attribute:*

*Attribute\_Label: MAY*

*Attribute\_Definition: May*

*Attribute\_Definition\_Source: Research Planning, Inc.*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: X*

*Enumerated\_Domain\_Value\_Definition: Present in May*

*Enumerated\_Domain\_Value\_Definition\_Source: Research Planning, Inc.*

*Attribute:*

*Attribute\_Label: JUN*

*Attribute\_Definition: June*

*Attribute\_Definition\_Source: Research Planning, Inc.*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in June

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* JUL

*Attribute\_Definition:* July

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in July

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* AUG

*Attribute\_Definition:* August

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in August

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SEP

*Attribute\_Definition:* September

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in September

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* OCT

*Attribute\_Definition:* October

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in October

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* NOV

*Attribute\_Definition:* November

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in November

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* DEC

*Attribute\_Definition:* December

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in December

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the SEASONAL data table to records in the BIORES and BREED data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BREED

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BREED data table to records in the BIORES and SEASONAL data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* MONTH

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* 12*Attribute:**Attribute\_Label:* BREED1*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* Y*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* N*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* -*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* BREED2*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* Y*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* N*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:*



*Enumerated\_Domain:**Enumerated\_Domain\_Value:* -*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* BREED3*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* Y*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* N*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* -*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* BREED4*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* Y*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* N*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* -*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* BREED5*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* Y*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* N*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* -*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:* SOURCES*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* SOURCE\_ID*Attribute\_Definition:*

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table, and to G\_SOURCE and S\_SOURCE in the BIORRES table.

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* N*Attribute:*

*Attribute\_Label:* ORIGINATOR

*Attribute\_Definition:* Author or developer of source material or data set.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* DATE\_PUB

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* TITLE

*Attribute\_Definition:* Title of source material or data.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* DATA\_FORMAT

*Attribute\_Definition:* The format of the source material.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUBLICATION

*Attribute\_Definition:* Additional citation information.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* SCALE

*Attribute\_Definition:* 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:* YYYY

*Enumerated\_Domain\_Value\_Definition:* Year

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* VARIES

*Enumerated\_Domain\_Value\_Definition:* Date information varies

*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 threatened or endangered by a state, federal, or international authority. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* T\_MAMMAL*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* SPECIES\_ID*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* N*Attribute:**Attribute\_Label:* STATE*Attribute\_Definition:* Two-letter state abbreviation.*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.*Attribute:**Attribute\_Label:* COUNTRY*Attribute\_Definition:* Three-letter country abbreviation.*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.*Attribute:**Attribute\_Label:* S*Attribute\_Definition:* State threatened or endangered status.*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* E*Enumerated\_Domain\_Value\_Definition:* Endangered on state list*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* T*Enumerated\_Domain\_Value\_Definition:* Threatened on state list*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* C*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service*Attribute:**Attribute\_Label:* F*Attribute\_Definition:* Federal threatened or endangered status.*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:*

*Enumerated\_Domain:**Enumerated\_Domain\_Value:* E*Enumerated\_Domain\_Value\_Definition:* Endangered on federal list*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* T*Enumerated\_Domain\_Value\_Definition:* Threatened on federal list*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* C*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service*Attribute:**Attribute\_Label:* I*Attribute\_Definition:* International threatened or endangered status.*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* E*Enumerated\_Domain\_Value\_Definition:* Endangered on international list*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* T*Enumerated\_Domain\_Value\_Definition:* Threatened on international list*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* C*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service*Attribute:**Attribute\_Label:* S\_DATE*Attribute\_Definition:*

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

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

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

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

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

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

Concatenation of ELEMENT and SPECIES\_ID. This item links the STATUS data table to the BIORRES and SPECIES data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* E#####*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Distribution\_Information:**Distributor:**Contact\_Information:**Contact\_Person\_Primary:**Contact\_Person:* John Kaperick*Contact\_Organization:* NOAA, Office of Response and Restoration*Contact\_Address:**Address\_Type:* Physical Address*Address:* 7600 Sand Point Way N.E.*City:* Seattle*State\_or\_Province:* Washington*Postal\_Code:* 98115-6349*Contact\_Voice\_Telephone:* (206) 526-6400*Contact\_Facsimile\_Telephone:* (206) 526-6329*Resource\_Description:* ESI Atlas for North Slope, 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:* 200506

*Metadata\_Review\_Date:* 200506

*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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# North Slope, Alaska ESI: 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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

*Publication Date:* 200506

*Title:* North Slope, Alaska ESI: HABITATS (Habitat Polygons)

*Edition:* First

*Geospatial Data Presentation Form:* Vector digital data

##### *Series Information:*

*Series Name:* None

*Issue Identification:* North Slope, 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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

*Description:**Abstract:*

This data set contains sensitive biological resource data for benthic marine habitats for the North Slope of Alaska. Vector polygons in this data set represent benthic marine 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 North Slope, 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:**Single\_Date/Time:*

*Calendar\_Date:* 1998

*Currentness\_Reference:*

The biological data were compiled during 2003-2004. The currentness date for the data is 1998 and is documented in the Lineage section.

*Status:*

*Progress:* Complete

*Maintenance\_and\_Update\_Frequency:* None Scheduled

*Spatial\_Domain:**Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -168.00000

*East\_Bounding\_Coordinate:* -140.80000

*North\_Bounding\_Coordinate:* 72.00000

*South\_Bounding\_Coordinate:* 68.00000

*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:* North Slope, 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:*

Depicts the relationships between spatial data layers and attribute data tables for the North Slope, 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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

*Native\_Data\_Set\_Environment:*

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

The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in that data set: bioindex.e00, birds.e00, esi.e00, facility.e00, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, m\_mammal.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 SQL SERVER(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written.

After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resource at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

*Completeness\_Report:*

These data represent a synthesis of available digital data on kelp distribution. These data do not necessarily represent all habitat occurrences in North Slope, Alaska. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name [n/a if not applicable]): 413, Kelp, Laminaria saludoncula.

*Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy\_Report:*

Spatial components for the biological data layers can come from expert interviews, hardcopy, or digital sources. Most of the spatial components of the biological data layers are developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy base maps with a scale of 1:250,000. Some of the spatial components of the biological data sets are developed from pre-existing digital or hardcopy sources and reflect the positional accuracy of these original data. See the Lineage and Process\_Description sections for more information on the original data source and how these data were integrated or manipulated to create the final data set. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources.

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* BP EXPLORATION

*Publication\_Date:* 1998

*Title:* KELP BEDS AND BOULDER PATCHES

*Geospatial\_Data\_Presentation\_Form:* DIGITAL VECTOR DATA

*Other\_Citation\_Details:* BP EXPLORATION (ALASKA) INC., ANCHORAGE

*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:* HABITATS INFORMATION

*Process\_Step:*

*Process\_Description:*

The data source used to depict benthic marine habitat distribution for this data layer was a 1998 digital vector polygon coverage of kelp beds and boulder patches provided by BP Exploration.

The above digital and/or hardcopy sources were compiled by the project biologist to create the HABITATS data layer. Depending on the type of source data, three general approaches are used for compiling a biology data layer: (1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:250,000 topographic quadrangles and digitized; (2) hardcopy maps are digitized at their source scale; (3) digital data layers are evaluated and used 'as is' or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the HABITATS data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:* 200501

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Person:* Jill Petersen

*Contact\_Address:*

*Address\_Type:* Physical address

*Address:* 7600 Sand Point Way N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6944

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:* Vector

*Point\_and\_Vector\_Object\_Information:*

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* GT-polygon composed of chains

*Point\_and\_Vector\_Object\_Count:* 23

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Area point

*Point\_and\_Vector\_Object\_Count:* 23

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Complete chain

*Point\_and\_Vector\_Object\_Count:* 30

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Link

*Point\_and\_Vector\_Object\_Count:* 5794

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type*: Node, planar graph  
*Point\_and\_Vector\_Object\_Count*: 30

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*Spatial\_Reference\_Information:*

*Horizontal\_Coordinate\_System\_Definition:*

*Geographic:*

*Latitude\_Resolution*: 0.0000001

*Longitude\_Resolution*: 0.0000001

*Geographic\_Coordinate\_Units*: Decimal degrees

*Geodetic\_Model:*

*Horizontal\_Datum\_Name*: North American Datum of 1927

*Ellipsoid\_Name*: Clark 1866

*Semi-major\_Axis*: 6378206.400000

*Denominator\_of\_Flattening\_Ratio*: 294.978698

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*Entity\_and\_Attribute\_Information:*

*Overview\_Description:*

*Entity\_and\_Attribute\_Overview:*

In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, HABITATS) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO\_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (for the North Slope atlas, the number is 75), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

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

BREED\_DT is the BREED item.

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

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* HABITATS.PAT

*Entity\_Type\_Definition:*

The HABITATS.PAT table contains attribute information for the vector polygons in this data set representing benthic marine habitat (kelp) 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 (75), 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:* 750300002

*Range\_Domain\_Maximum:* 750300024

*Attribute:*

*Attribute\_Label:* RARNUM

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 75000351

*Range\_Domain\_Maximum:* 75000351

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BIO\_LUT

*Entity\_Type\_Definition:*

The data table BIO\_LUT is a lookup table that contains items necessary for linking vector objects in the biological data layers with the BIORES data table. Note that all attribute information is stored in a series of relational files, described below. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* RARNUM

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 75000001

*Range\_Domain\_Maximum:* 75000437

*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 (75), 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:* 750100002

*Range\_Domain\_Maximum:* 750900182

*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:* 075000001

*Range\_Domain\_Maximum:* 075000437

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*



*Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* N*Attribute:**Attribute\_Label:* CONC*Attribute\_Definition:*

The field CONC refers to "concentration," abundance, or density value of a habitat at a particular location. No quantitative or qualitative information on kelp concentration was available, so this field is populated with "-".

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.*Attribute:**Attribute\_Label:* SEASON\_ID*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* N*Attribute:**Attribute\_Label:* G\_SOURCE*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* N*Attribute:**Attribute\_Label:* S\_SOURCE*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* N*Attribute:**Attribute\_Label:* ELEMENT*Attribute\_Definition:* Major categories of biological data.*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* BIRD*Enumerated\_Domain\_Value\_Definition:* Birds*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* FISH*Enumerated\_Domain\_Value\_Definition:* Fish*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* HABITAT*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* INVERT*Enumerated\_Domain\_Value\_Definition:* Invertebrates*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* M\_MAMMAL*Enumerated\_Domain\_Value\_Definition:* Marine Mammals*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* REPTILE*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* T\_MAMMAL*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* EL\_SPE*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* E#####*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* EL\_SPE\_SEA*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BIORES data table to records in the SEASONAL and BREED data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:*

*Enumerated\_Domain:**Enumerated\_Domain\_Value:* E#####*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:* SPECIES*Entity\_Type\_Definition:*

The data table SPECIES identifies all species in the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure. Refer to the Completeness\_Report for a list of layer-specific species.

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* SPECIES\_ID*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* N*Attribute:**Attribute\_Label:* NAME*Attribute\_Definition:* Species common name for the entire ESI data set.*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.*Attribute:**Attribute\_Label:* GEN\_SPEC*Attribute\_Definition:* Species scientific name for the entire ESI data set.*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.*Attribute:**Attribute\_Label:* ELEMENT*Attribute\_Definition:* Major categories of biological data.*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* BIRD*Enumerated\_Domain\_Value\_Definition:* Birds*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SUBELEMENT

*Attribute\_Definition:* Element subgroup delineating a logical grouping of species.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* alcid

*Enumerated\_Domain\_Value\_Definition:* Alcid

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* anadromous

*Enumerated\_Domain\_Value\_Definition:* Anadromous fish

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* bear

*Enumerated\_Domain\_Value\_Definition:* Bear

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 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*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* m\_benthic*Enumerated\_Domain\_Value\_Definition:* Marine benthic*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* m\_pelagic*Enumerated\_Domain\_Value\_Definition:* Marine pelagic fish*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* 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:* 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:* 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:* Date unspecified*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* EL\_SPE*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* E#####*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Detailed\_Description:*

*Entity\_Type:**Entity\_Type\_Label:* SEASONAL*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* ELEMENT*Attribute\_Definition:* Major categories of biological data.*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* BIRD*Enumerated\_Domain\_Value\_Definition:* Birds*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* FISH*Enumerated\_Domain\_Value\_Definition:* Fish*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* HABITAT*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* INVERT*Enumerated\_Domain\_Value\_Definition:* Invertebrates*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* M\_MAMMAL*Enumerated\_Domain\_Value\_Definition:* Marine Mammals*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* REPTILE*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* T\_MAMMAL*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* SPECIES\_ID*Attribute\_Definition:*

Numeric identifier for each species that is unique within each element and refers to a

nationwide ESI species list maintained at NOAA.

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1

*Range\_Domain\_Maximum*: N

*Attribute*:

*Attribute\_Label*: SEASON\_ID

*Attribute\_Definition*:

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

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1

*Range\_Domain\_Maximum*: N

*Attribute*:

*Attribute\_Label*: JAN

*Attribute\_Definition*: January

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

*Enumerated\_Domain\_Value\_Definition*: Present in January

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: FEB

*Attribute\_Definition*: February

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

*Enumerated\_Domain\_Value\_Definition*: Present in February

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: MAR

*Attribute\_Definition*: March

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

*Enumerated\_Domain\_Value\_Definition*: Present in March

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: APR

*Attribute\_Definition*: April

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

*Enumerated\_Domain\_Value\_Definition*: Present in April



*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* MAY

*Attribute\_Definition:* May

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in May

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* JUN

*Attribute\_Definition:* June

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in June

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* JUL

*Attribute\_Definition:* July

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in July

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* AUG

*Attribute\_Definition:* August

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in August

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SEP

*Attribute\_Definition:* September

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in September

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* OCT

*Attribute\_Definition:* October

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:**Enumerated\_Domain\_Value:* X*Enumerated\_Domain\_Value\_Definition:* Present in October*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* NOV*Attribute\_Definition:* November*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* X*Enumerated\_Domain\_Value\_Definition:* Present in November*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* DEC*Attribute\_Definition:* December*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* X*Enumerated\_Domain\_Value\_Definition:* Present in December*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* EL\_SPE\_SEA*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the SEASONAL data table to records in the BIORES and BREED data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* E#####*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g.

ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1;

EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:* BREED*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* EL\_SPE\_SEA*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BREED data table to records in the BIORES and SEASONAL data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:*

*Enumerated\_Domain:**Enumerated\_Domain\_Value:* E#####*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* MONTH*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* 12*Attribute:**Attribute\_Label:* BREED1*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* Y*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* N*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* -*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* BREED2*Attribute\_Definition:*

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

HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: Y

*Enumerated\_Domain\_Value\_Definition*: Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: N

*Enumerated\_Domain\_Value\_Definition*: Life-history stage or activity not present

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: -

*Enumerated\_Domain\_Value\_Definition*:

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

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: BREED3

*Attribute\_Definition*:

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

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: Y

*Enumerated\_Domain\_Value\_Definition*: Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: N

*Enumerated\_Domain\_Value\_Definition*: Life-history stage or activity not present

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: -

*Enumerated\_Domain\_Value\_Definition*:

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

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: BREED4

*Attribute\_Definition*:

Life history stage or activity type, where: if ELEMENT is "FISH" then BREED4 = juveniles; if ELEMENT is "INVERT" then BREED4 = juveniles; if ELEMENT is "REPTILE" then BREED4 = juveniles; if ELEMENT is "M\_MAMMAL" then

BREED4 = molting. This attribute is not used for BIRD, HABITAT, or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* BREED5

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SOURCES

*Entity\_Type\_Definition:*

The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which

describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: SOURCE\_ID

*Attribute\_Definition*:

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table, and to G\_SOURCE and S\_SOURCE in the BIORES table.

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1

*Range\_Domain\_Maximum*: N

*Attribute*:

*Attribute\_Label*: ORIGINATOR

*Attribute\_Definition*: Author or developer of source material or data set.

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label*: DATE\_PUB

*Attribute\_Definition*:

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

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: YYYYMM

*Enumerated\_Domain\_Value\_Definition*: YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: TITLE

*Attribute\_Definition*: Title of source material or data.

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label*: DATA\_FORMAT

*Attribute\_Definition*: The format of the source material.

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label*: PUBLICATION

*Attribute\_Definition*: Additional citation information.

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Unrepresentable\_Domain*: Acceptable values change from atlas to atlas.

*Attribute*:

*Attribute\_Label*: SCALE

*Attribute\_Definition:* 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:* YYYY

*Enumerated\_Domain\_Value\_Definition:* Year

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* VARIES

*Enumerated\_Domain\_Value\_Definition:* Date information varies

*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 threatened or endangered by a state, federal, or international authority. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:**Enumerated\_Domain\_Value:* INVERT*Enumerated\_Domain\_Value\_Definition:* Invertebrates*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* M\_MAMMAL*Enumerated\_Domain\_Value\_Definition:* Marine Mammals*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* REPTILE*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* T\_MAMMAL*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* SPECIES\_ID*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* N*Attribute:**Attribute\_Label:* STATE*Attribute\_Definition:* Two-letter state abbreviation.*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.*Attribute:**Attribute\_Label:* COUNTRY*Attribute\_Definition:* Three-letter country abbreviation.*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.*Attribute:**Attribute\_Label:* S*Attribute\_Definition:* State threatened or endangered status.*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* E*Enumerated\_Domain\_Value\_Definition:* Endangered on state list*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service*Attribute\_Domain\_Values:*



*Enumerated\_Domain:**Enumerated\_Domain\_Value:* T*Enumerated\_Domain\_Value\_Definition:* Threatened on state list*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* C*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service*Attribute:**Attribute\_Label:* F*Attribute\_Definition:* Federal threatened or endangered status.*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* E*Enumerated\_Domain\_Value\_Definition:* Endangered on federal list*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* T*Enumerated\_Domain\_Value\_Definition:* Threatened on federal list*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* C*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service*Attribute:**Attribute\_Label:* I*Attribute\_Definition:* International threatened or endangered status.*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* E*Enumerated\_Domain\_Value\_Definition:* Endangered on international list*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* T*Enumerated\_Domain\_Value\_Definition:* Threatened on international list*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* C*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service*Attribute:**Attribute\_Label:* S\_DATE*Attribute\_Definition:*

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

used.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* F\_DATE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* I\_DATE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links the STATUS data table to the BIORRES and SPECIES data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

---

*Distribution\_Information:*

*Distributor:*

*Contact\_Information:*

*Contact\_Person\_Primary:**Contact\_Person:* John Kaperick*Contact\_Organization:* NOAA, Office of Response and Restoration*Contact\_Address:**Address\_Type:* Physical Address*Address:* 7600 Sand Point Way N.E.*City:* Seattle*State\_or\_Province:* Washington*Postal\_Code:* 98115-6349*Contact\_Voice\_Telephone:* (206) 526-6400*Contact\_Facsimile\_Telephone:* (206) 526-6329*Resource\_Description:* ESI Atlas for North Slope, 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:* 200506*Metadata\_Review\_Date:* 200506*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

# North Slope, Alaska ESI: MGT (Management Area Polygons)

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

## Metadata:

- [Identification\\_Information](#)
- [Data\\_Quality\\_Information](#)
- [Spatial\\_Data\\_Organization\\_Information](#)
- [Spatial\\_Reference\\_Information](#)
- [Entity\\_and\\_Attribute\\_Information](#)
- [Distribution\\_Information](#)
- [Metadata\\_Reference\\_Information](#)

### *Identification\_Information:*

#### *Citation:*

##### *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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

*Publication\_Date:* 200506

*Title:* North Slope, Alaska ESI: MGT (Management Area Polygons)

*Edition:* First

*Geospatial\_Data\_Presentation\_Form:* Vector digital data

##### *Series\_Information:*

*Series\_Name:* None

*Issue\_Identification:* North Slope, 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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

*Description:**Abstract:*

This data set contains the boundaries of U.S. Fish and Wildlife Service (USFWS) Designated Critical Habitats and National Wildlife Refuges and Bureau of Land Management (BLM) properties for the North Slope of Alaska. Vector polygons in this data set represent the management areas. Location-specific type and source information is stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer.

This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for North Slope, 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. See also the SOCECON (Socioeconomic Resource Points and Lines) data layer, part of the larger North Slope, Alaska ESI database, for additional human-use information.

*Purpose:*

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

*Time\_Period\_of\_Content:**Time\_Period\_Information:**Range\_of\_Dates/Times:*

*Beginning\_Date:* 2000

*Ending\_Date:* 2003

*Currentness\_Reference:*

The MGT data were compiled during 2003-2004. The currentness dates for the data range from 2000 to 2003 and are documented in the Lineage section.

*Status:*

*Progress:* Complete

*Maintenance\_and\_Update\_Frequency:* None Scheduled

*Spatial\_Domain:**Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -168.00000

*East\_Bounding\_Coordinate:* -140.80000

*North\_Bounding\_Coordinate:* 72.00000

*South\_Bounding\_Coordinate:* 68.00000

*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 Area

*Theme\_Keyword:* Human Use Resource

*Place:*

*Place\_Keyword\_Thesaurus:* None

*Place\_Keyword:* North Slope, 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:*

Depicts the relationships between spatial data layers and attribute data tables for the North Slope, 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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

*Native\_Data\_Set\_Environment:*

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

The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in the data set: bioindex.e00, birds.e00, esi.e00, facility.e00, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, m\_mammal.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 SQL SERVER(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written.

After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "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 boundaries for management areas. These data do not necessarily represent all management areas in North Slope, Alaska. See also the SOCECON (Socioeconomic Resource Points and Lines) data layer, part of the larger North Slope, Alaska ESI database, for additional human-use information.

#### *Positional\_Accuracy:*

##### *Horizontal\_Positional\_Accuracy:*

##### *Horizontal\_Positional\_Accuracy\_Report:*

Spatial components for the human-use data layers can come from expert interviews, hardcopy, or digital sources. Most of the spatial components of the human-use data layers are developed from pre-existing digital or hardcopy sources and reflect the positional accuracy of these original data. Some of the spatial components of the human-use data layers are compiled on hardcopy base maps with a scale of 1:250,000. 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:* Alaska Dept. of Natural Resources (ADNR)

*Publication\_Date:* 2000

*Title:* Administrative large parcel boundaries

*Geospatial\_Data\_Presentation\_Form:* DIGITAL VECTOR DATA

*Other\_Citation\_Details:* ADNR, Land Records Information Section, Anchorage

*Source\_Scale\_Denominator:* 31,680-63,360

*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:* MGT INFORMATION

*Source\_Information:**Source\_Citation:**Citation\_Information:**Originator:* U.S. Fish and Wildlife Service (USFWS)*Publication\_Date:* 2002*Title:* Alaska Maritime National Wildlife Refuge (NWR) boundary*Geospatial\_Data\_Presentation\_Form:* DIGITAL VECTOR DATA*Other\_Citation\_Details:* USFWS, Region 7, Division of Realty*Source\_Scale\_Denominator:* 63,360-250,000*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 PUBLICATION*Source\_Citation\_Abbreviation:* NONE*Source\_Contribution:* MGT INFORMATION*Source\_Information:**Source\_Citation:**Citation\_Information:**Originator:* U.S. FISH & WILDLIFE SERVICE (USFWS) (FAIRBANKS, AK)*Publication\_Date:* 2003*Title:* SPECTACLED EIDER CRITICAL HABITAT - LEDYARD BAY  
MOLTING*Geospatial\_Data\_Presentation\_Form:* DIGITAL VECTOR DATA*Other\_Citation\_Details:* USFWS, FAIRBANKS, ALASKA*Type\_of\_Source\_Media:* CD-ROM*Source\_Time\_Period\_of\_Content:**Time\_Period\_Information:**Single\_Date/Time:**Calendar\_Date:* 2003*Source\_Currentness\_Reference:* DATE OF PUBLICATION*Source\_Citation\_Abbreviation:* NONE*Source\_Contribution:* MGT INFORMATION*Process\_Step:**Process\_Description:*

Three 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; (2) a 2003 U.S. Fish and Wildlife Service (USFWS) Spectacled Eider Designated Critical Habitat vector polygon coverage; and (3) a 2002 USFWS Realty Division Alaska Maritime National Wildlife Refuge vector polygon coverage.

The above digital and/or hardcopy sources were compiled by the project biologist to create the MGT data layer. Depending on the type of source data, three general approaches are used for compiling a human-use data layer: (1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:250,000 topographic quadrangles and digitized; (2) hardcopy maps are digitized at their source scale; and (3) digital data layers are evaluated and used 'as is' or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology,



and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the MGT data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:* 200501

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Person:* Jill Petersen

*Contact\_Address:*

*Address\_Type:* Physical address

*Address:* 7600 Sand Point Way N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6944

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:* Vector

*Point\_and\_Vector\_Object\_Information:*

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* GT-polygon composed of chains

*Point\_and\_Vector\_Object\_Count:* 135

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Area point

*Point\_and\_Vector\_Object\_Count:* 135

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Complete chain

*Point\_and\_Vector\_Object\_Count:* 388

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Link

*Point\_and\_Vector\_Object\_Count:* 109833

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Node, planar graph

*Point\_and\_Vector\_Object\_Count:* 384

*Spatial\_Reference\_Information:*

*Horizontal\_Coordinate\_System\_Definition:*

*Geographic:*

*Latitude\_Resolution:* 0.0000001

*Longitude\_Resolution:* 0.0000001

*Geographic\_Coordinate\_Units:* Decimal degrees

*Geodetic\_Model:*

*Horizontal\_Datum\_Name:* North American Datum of 1927

*Ellipsoid\_Name:* Clark 1866  
*Semi-major\_Axis:* 6378206.400000  
*Denominator\_of\_Flattening\_Ratio:* 294.978698

---

*Entity\_and\_Attribute\_Information:*

*Overview\_Description:*

*Entity\_and\_Attribute\_Overview:*

In addition to the geographic data layers, two relational attribute or data tables, SOC\_DAT and SOURCES, are used to store the complex socioeconomic data in the ESI data structure. The geographic data layer containing socioeconomic data resource information (in this case, MGT) is linked to the Socioeconomic Resources table (SOC\_DAT) using the unique ID and the lookup table SOC\_LUT, or it can be linked directly using HUNUM. HUNUM is a unique reference number concatenated with the atlas number (for North Slope, the number is 75). ID is a unique combination of the atlas number (75), 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 critical habitats, wildlife refuges, and other management 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:* 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.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* MA

*Enumerated\_Domain\_Value\_Definition:* Management Area

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* NP

*Enumerated\_Domain\_Value\_Definition:* National Park

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:**Enumerated\_Domain\_Value:* WR*Enumerated\_Domain\_Value\_Definition:* Wildlife Refuge*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* ID*Attribute\_Definition:*

An identifier that links vector objects in the human-use data layers to records in the SOC\_LUT data table. ID is a concatenation of atlas number (75), 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:* 751100002*Range\_Domain\_Maximum:* 751100140*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:* 75000002*Range\_Domain\_Maximum:* 75000010*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:* 75000001*Range\_Domain\_Maximum:* 75000010*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 (75), 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*: 751000001

*Range\_Domain\_Maximum*: 751100140

*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*: 75000001

*Range\_Domain\_Maximum*: 75000010

*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.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: CRITICAL HABITAT

*Enumerated\_Domain\_Value\_Definition*: Designated Critical Habitat

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: MANAGEMENT AREA

*Enumerated\_Domain\_Value\_Definition*: Management Area

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: NATIONAL PARK

*Enumerated\_Domain\_Value\_Definition*: National Park

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value:* WILDLIFE REFUGE

*Enumerated\_Domain\_Value\_Definition:* Wildlife Refuge

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* NAME

*Attribute\_Definition:* The feature name.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* CONTACT

*Attribute\_Definition:* Contact person or entity.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PHONE

*Attribute\_Definition:* Contact telephone number.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* G\_SOURCE

*Attribute\_Definition:*

Geographic source identifier that links records in the SOC\_DAT data table to records in the SOURCES data table.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* A\_SOURCE

*Attribute\_Definition:*

Attribute source identifier that links records in the SOC\_DAT data table to records in the SOURCES data table.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SOURCES

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SOURCE\_ID

*Attribute\_Definition:*

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table, 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:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* DATE\_PUB

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* TITLE

*Attribute\_Definition:* Title of source material or data.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* DATA\_FORMAT

*Attribute\_Definition:* The format of the source material.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUBLICATION

*Attribute\_Definition:* Additional citation information.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* SCALE

*Attribute\_Definition:* 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*: YYYY

*Enumerated\_Domain\_Value\_Definition*: Year

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: VARIES

*Enumerated\_Domain\_Value\_Definition*: Date information varies

*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 North Slope, 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:* 200506

*Metadata\_Review\_Date:* 200506

*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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# North Slope, 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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

*Publication Date:* 200506

##### *Title:*

North Slope, Alaska: SOCECON (Socioeconomic Resource Points and Lines)

*Edition:* First

*Geospatial Data Presentation Form:* Vector digital data

##### *Series Information:*

*Series Name:* None

*Issue Identification:* North Slope, 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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service,

Anchorage, Alaska.

*Description:*

*Abstract:*

This data set contains data for airports (including airfields, landing strips, helipads, etc., whether they are manned or unmanned), roads, pipelines, and the US/Canadian border for the North Slope of Alaska. Vector points and lines in this data set represent human-use site locations. Location-specific type and source information is stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer.

This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for North Slope, 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. See also the MGT (Management Area Polygons) data layer, part of the larger North Slope, Alaska ESI database, for additional human-use information.

*Purpose:*

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

*Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1995

*Ending\_Date:* 2003

*Currentness\_Reference:*

The SOCECON data were compiled during 2003-2004. The currentness dates for the data range from 1995 to 2003 and are documented in the Lineage section.

*Status:*

*Progress:* Complete

*Maintenance\_and\_Update\_Frequency:* None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -168.00000

*East\_Bounding\_Coordinate:* -140.80000

*North\_Bounding\_Coordinate:* 72.00000

*South\_Bounding\_Coordinate:* 68.00000

*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 Resource

*Theme\_Keyword:* Human Use Resource

*Place:*

*Place\_Keyword\_Thesaurus:* None

*Place\_Keyword:* North Slope, 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:*

Depicts the relationships between spatial data layers and attribute data tables for the North Slope, 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; NOAA Fisheries, Alaska Region; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; Alaska Clean Seas, Deadhorse, Alaska; and Minerals Management Service, Anchorage, Alaska.

*Native\_Data\_Set\_Environment:*

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

The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in the data set: bioindex.e00, birds.e00, esi.e00, facility.e00, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, m\_mammal.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 node, etc.), and SQL SERVER(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written.

After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "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 on socioeconomic resources. These data do not necessarily represent all human-use sites in North Slope, Alaska. See also the MGT (Management Area Polygons) data layer, part of the larger North Slope, Alaska ESI database, for additional human-use information.

*Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy\_Report:*

Spatial components for the human-use data layers can come from expert interviews, hardcopy, or digital sources. Most of the spatial components of the human-use data layers are developed from pre-existing digital or hardcopy sources and reflect the positional accuracy of these original data. Some of the spatial components of the human-use data layers are compiled on hardcopy base maps with a scale of 1:250,000. 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:* BPXA

*Publication\_Date:* 2003

*Title:* NORTH SLOPE ALASKA OIL FIELD INFRASTRUCTURE

*Geospatial\_Data\_Presentation\_Form:* DIGITAL VECTOR DATA

*Other\_Citation\_Details:* BP Exploration (Alaska) Inc. (BPXA), FAIRBANKS

*Source\_Scale\_Denominator:* 63,360

*Type\_of\_Source\_Media:* ONLINE

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2003

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* SOCECON INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* U.S. GEOLOGICAL SURVEY (USGS)

*Publication\_Date:* VARIES

*Title:* TOPOGRAPHIC QUADRANGLES

*Geospatial\_Data\_Presentation\_Form:* HARDCOPY MAP

*Other\_Citation\_Details:* DENVER, CO OR RESTON, VA

*Source\_Scale\_Denominator:* 63,360

*Type\_of\_Source\_Media:* PAPER

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* VARIES

*Source\_Currentness\_Reference:* DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:* NONE

*Source\_Contribution:* SOCECON INFORMATION

*Process\_Step:*

*Process\_Description:*

Two main sources of data were used to depict human-use resources for this data layer: (1) 2003 BP Exploration (Alaska) Inc. (BPXA) digital vector data of oil field infrastructure (pipelines and roads), and (2) USGS Topographic quadrangles for airports and landing strips.

The above digital and/or hardcopy sources were compiled by the project biologist to create the SOCECON data layer. Depending on the type of source data, three general approaches are used for compiling a human-use data layer: (1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:250,000 topographic quadrangles and digitized; (2) hardcopy maps are digitized at their source scale; (3) digital data layers are evaluated and used 'as is' or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the SOCECON data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:* 200501

*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:* 7

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Complete chain

*Point\_and\_Vector\_Object\_Count:* 805

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Link

*Point\_and\_Vector\_Object\_Count:* 4364

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Node, planar graph

*Point\_and\_Vector\_Object\_Count:* 1378

---

*Spatial\_Reference\_Information:*

*Horizontal\_Coordinate\_System\_Definition:*

*Geographic:*

*Latitude\_Resolution:* 0.0000001

*Longitude\_Resolution:* 0.0000001

*Geographic\_Coordinate\_Units:* Decimal degrees

*Geodetic\_Model:*

*Horizontal\_Datum\_Name:* North American Datum of 1927

*Ellipsoid\_Name:* Clark 1866

*Semi-major\_Axis:* 6378206.400000

*Denominator\_of\_Flattening\_Ratio:* 294.978698

---

*Entity\_and\_Attribute\_Information:*

*Overview\_Description:*

*Entity\_and\_Attribute\_Overview:*

In addition to the geographic data layers, two relational attribute or data tables, SOC\_DAT, and SOURCES, are used to store the complex socioeconomic data in the ESI data structure. The geographic data layer containing socioeconomic data resource information (in this case, SOCECON) is linked to the Socioeconomic Resources table (SOC\_DAT) using the unique ID and the lookup table SOC\_LUT, or it can be linked directly using HUNUM. HUNUM is a unique reference number concatenated with the atlas number (for North Slope, the number is 75). ID is a unique combination of the atlas number (75), 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 vector lines representing roads, pipelines, and the U.S./Canadian border. 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:* AB

*Enumerated\_Domain\_Value\_Definition:* Area Boundary

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* PL

*Enumerated\_Domain\_Value\_Definition:* Pipeline

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* R

*Enumerated\_Domain\_Value\_Definition:* Road, Transportation, or Bridge

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SOCECON.PAT

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* TYPE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* A

*Enumerated\_Domain\_Value\_Definition:* Airport

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*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 (75), element number (10), and record number.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 751000001

*Range\_Domain\_Maximum:* 751000007

*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:* 75000001

*Range\_Domain\_Maximum:* 75000001

*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:* 75000001

*Range\_Domain\_Maximum:* 75000010

*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 (75), 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:* 751000001

*Range\_Domain\_Maximum:* 751000010

*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:* 75000001

*Range\_Domain\_Maximum:* 75000010

*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.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* CRITICAL HABITAT

*Enumerated\_Domain\_Value\_Definition:* Designated Critical Habitat

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* MANAGEMENT AREA

*Enumerated\_Domain\_Value\_Definition:* Management Area

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* NATIONAL PARK

*Enumerated\_Domain\_Value\_Definition:* National Park

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* WILDLIFE REFUGE

*Enumerated\_Domain\_Value\_Definition:* Wildlife Refuge

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* NAME

*Attribute\_Definition:* The feature name.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* CONTACT

*Attribute\_Definition:* Contact person or entity.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PHONE

*Attribute\_Definition:* Contact telephone number.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* G\_SOURCE

*Attribute\_Definition:*

Geographic source identifier that links records in the SOC\_DAT data table to records in the SOURCES data table.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* A\_SOURCE

*Attribute\_Definition:*

Attribute source identifier that links records in the SOC\_DAT data table to records in the SOURCES data table.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SOURCES

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SOURCE\_ID

*Attribute\_Definition:*

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table, 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:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* DATE\_PUB

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* YYYYMM

*Enumerated\_Domain\_Value\_Definition:* YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* TITLE

*Attribute\_Definition:* Title of source material or data.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* DATA\_FORMAT

*Attribute\_Definition:* The format of the source material.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* PUBLICATION

*Attribute\_Definition:* Additional citation information.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:* Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:* SCALE

*Attribute\_Definition:* 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:* YYYY*Enumerated\_Domain\_Value\_Definition:* Year*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* VARIES*Enumerated\_Domain\_Value\_Definition:* Date information varies*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 North Slope, 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:* 200506*Metadata\_Review\_Date:* 200506*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

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*Metadata\_Standard\_Version:* FGDC-STD-001-1998

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# North Slope ESI Entity Relationship Diagram

## Relationships between spatial data layers and attribute data tables

