

# Western Alaska ESI: HYDRO (Land Mass Polygons)

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

## Metadata:

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

### *Identification\_Information:*

#### *Citation:*

##### *Citation\_Information:*

##### *Originator:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

*Publication\_Date:* 200307

*Title:* Western Alaska ESI: HYDRO (Land Mass Polygons)

*Edition:* First

*Geospatial\_Data\_Presentation\_Form:* Vector digital data

##### *Series\_Information:*

*Series\_Name:* None

*Issue\_Identification:* Western Alaska

##### *Publication\_Information:*

*Publication\_Place:* Seattle, Washington

##### *Publisher:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington

##### *Other\_Citation\_Details:*

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

### *Description:*

#### *Abstract:*

This data set contains vector polygons representing coastal hydrography that defines the primary land masses used in the creation of the Environmental Sensitivity Index (ESI) for Western Alaska. The HYDRO data layer contains all annotation used in producing the atlas. The annotation features are categorized into three subclasses in order to simplify the mapping and quality control procedures: GEOG or geographic features, SOC or socioeconomic features, and HYDRO or water features. This data set comprises a portion of the ESI for Western 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:* 2002

*Ending\_Date:* 2003

*Currentness\_Reference:*

These data were compiled during 2002-2003. The currentness dates for these data range from 1982 to 2001 and are documented in the Source\_Information section.

*Status:*

*Progress:* Complete

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

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -173.12

*East\_Bounding\_Coordinate:* -161.0

*North\_Bounding\_Coordinate:* 64.0

*South\_Bounding\_Coordinate:* 59.0

*Keywords:*

*Theme:*

*Theme\_Keyword\_Thesaurus:* None

*Theme\_Keyword:* ESI

*Theme\_Keyword:* Sensitivity maps

*Theme\_Keyword:* Hydrography

*Theme\_Keyword:* Coastal resources

*Theme\_Keyword:* Oil spill planning

*Theme\_Keyword:* Coastal Zone Management

*Theme\_Keyword:* Wildlife

*Place:*

*Place\_Keyword\_Thesaurus:* None

*Place\_Keyword:* Western Alaska

*Place\_Keyword:* Alaska

*Access\_Constraints:* None

*Use\_Constraints:*

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* [datafig.jpg](#)

*Browse\_Graphic\_File\_Description:*

Relationships between spatial data layers and attribute data tables for Western Alaska ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and

Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) 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, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, invert.e00, lakes.e00, m\_mammal.e00, mgt.e00, nests.e00, socecon.e00, streams.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 hydrography polygons that define primary land masses for Western Alaska.

*Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy\_Report:*

The hydrography data set was developed from pre-existing digital and hardcopy sources and reflects the positional accuracy of these original data. The horizontal positional accuracy of the 1:63,360 and 1:250,000 USGS topographic quads should conform to National Map Accuracy Standards at scales of 1:63,360 and 1:250,000. See the Lineage and Process\_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* U. S. Geological Survey

*Publication\_Date:* 1999

*Title:* DLG Hydrography

*Geospatial\_Data\_Presentation\_Form:* Vector digital data

*Source\_Scale\_Denominator:* 63360

*Type\_of\_Source\_Media:* Online

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

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1950*Ending\_Date:* 1997*Source\_Currentness\_Reference:* ground condition*Source\_Citation\_Abbreviation:* None*Source\_Contribution:* Shorelines*Source\_Information:**Source\_Citation:**Citation\_Information:**Originator:* Alaska Department of Natural Resources*Publication\_Date:* 1998*Title:* Alaska Coastline 1 to 63,360*Geospatial\_Data\_Presentation\_Form:* Vector digital data*Source\_Scale\_Denominator:* 63360*Type\_of\_Source\_Media:* CD-ROM*Source\_Time\_Period\_of\_Content:**Time\_Period\_Information:**Single\_Date/Time:**Calendar\_Date:* 1997*Source\_Currentness\_Reference:* Publication date*Source\_Citation\_Abbreviation:* None*Source\_Contribution:* Shorelines*Source\_Information:**Source\_Citation:**Citation\_Information:**Originator:* Colin Plank*Publication\_Date:* Unpublished material*Title:* ESI Overflight*Geospatial\_Data\_Presentation\_Form:* Hardcopy Map*Source\_Scale\_Denominator:* 63360*Type\_of\_Source\_Media:* Paper*Source\_Time\_Period\_of\_Content:**Time\_Period\_Information:**Single\_Date/Time:**Calendar\_Date:* 2001*Source\_Currentness\_Reference:* Date of overflight*Source\_Citation\_Abbreviation:* None*Source\_Contribution:* Shorelines*Process\_Step:**Process\_Description:*

The shoreline was derived primarily from digital coastline data from the U.S. Geological Survey (USGS) digital line graph (DLG) data set, Alaska Department of Natural Resources, and Research Planning, Inc. (RPI) 2001 Western Alaska overflights. In some cases, gross shoreline changes or additional hydrography polygons were sketched during overflights conducted during the summer months of 2001. Overflight changes were digitized from the scanned and registered hardcopy field maps. Also, additional hydrographic features were digitized directly from USGS Digital Raster Graphs (DRG). In some cases, minor hydrographic changes south of Cape Prince of Wales were digitized from the Norton Sound, Alaska ESI atlas published in 1983. After the initial shoreline classification, these data were edgematched and checked for logical consistency errors. Review maps were plotted at 1:63,360 scale for verification of polygonal and linear attributes.

*Process\_Date:* 200305*Process\_Contact:**Contact\_Information:**Contact\_Organization\_Primary:**Contact\_Organization:* NOAA, Office of Response and Restoration*Contact\_Person:* Jill Petersen*Contact\_Address:**Address\_Type:* Physical address

Address: 7600 Sand Point Way, N.E.  
 City: Seattle  
 State\_or\_Province: Washington  
 Postal\_Code: 98115-6349  
 Contact\_Voice\_Telephone: (206) 526-6944  
 Contact\_Facsimile\_Telephone: (206) 526-6329  
 Contact\_Electronic\_Mail\_Address: Jill.Petersen@noaa.gov

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*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:* Vector

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

*SDTS\_Terms\_Description:*

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

*Point\_and\_Vector\_Object\_Count:* 2737

*SDTS\_Terms\_Description:*

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

*Point\_and\_Vector\_Object\_Count:* 2736

*SDTS\_Terms\_Description:*

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

*Point\_and\_Vector\_Object\_Count:* 18825

*SDTS\_Terms\_Description:*

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

*Point\_and\_Vector\_Object\_Count:* 481273

*SDTS\_Terms\_Description:*

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

*Point\_and\_Vector\_Object\_Count:* 112

*SDTS\_Terms\_Description:*

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

*Point\_and\_Vector\_Object\_Count:* 18825

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*Spatial\_Reference\_Information:*

*Horizontal\_Coordinate\_System\_Definition:*

*Geographic:*

*Latitude\_Resolution:* 0.00005

*Longitude\_Resolution:* 0.00005

*Geographic\_Coordinate\_Units:* Decimal degrees

*Geodetic\_Model:*

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

*Ellipsoid\_Name:* Clarke 1866

*Semi-major\_Axis:* 6378206.4

*Denominator\_of\_Flattening\_Ratio:* 294.978698

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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 comprising the shoreline polygons 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 DLG 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:* Original digital data (USGS DLG)*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Enumerated\_Domain:**Enumerated\_Domain\_Value:* 5*Enumerated\_Domain\_Value\_Definition:* Digitized from 1:63,360-USGS Digital Raster Graphics*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Enumerated\_Domain:**Enumerated\_Domain\_Value:* 7*Enumerated\_Domain\_Value\_Definition:* Digital USGS Index*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:* HYDRO.PAT*Entity\_Type\_Definition:*

The HYDRO.PAT table contains attribute information for the vector polygons representing shoreline 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.*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 Western 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:* 200307*Metadata\_Review\_Date:* 200307*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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# Western Alaska ESI: LAKES (Lake Polygons)

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

## Metadata:

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

### *Identification Information:*

#### *Citation:*

##### *Citation Information:*

##### *Originator:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

*Publication Date:* 200307

*Title:* Western Alaska ESI: LAKES (Lake Polygons)

*Edition:* First

*Geospatial Data Presentation Form:* Vector digital data

##### *Series Information:*

*Series Name:* None

*Issue Identification:* Western Alaska

##### *Publication Information:*

*Publication Place:* Seattle, Washington

##### *Publisher:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington

##### *Other Citation Details:*

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

### *Description:*

#### *Abstract:*

This data set contains vector polygons representing lakes and land masses used in the creation of the Environmental Sensitivity Index (ESI) for Western Alaska. The LAKES data set comprises a portion of the ESI for Western 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:* 2002

*Ending\_Date:* 2003

*Currentness\_Reference:*

These data were compiled during 2002-2003. The currentness dates for these data range from 1982 to 2001 and are documented in the Source\_Information section.

*Status:*

*Progress:* Complete

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

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -173.12

*East\_Bounding\_Coordinate:* -161.0

*North\_Bounding\_Coordinate:* 64.0

*South\_Bounding\_Coordinate:* 59.0

*Keywords:*

*Theme:*

*Theme\_Keyword\_Thesaurus:* None

*Theme\_Keyword:* ESI

*Theme\_Keyword:* Sensitivity maps

*Theme\_Keyword:* Hydrography

*Theme\_Keyword:* Coastal resources

*Theme\_Keyword:* Oil spill planning

*Theme\_Keyword:* Coastal Zone Management

*Theme\_Keyword:* Wildlife

*Place:*

*Place\_Keyword\_Thesaurus:* None

*Place\_Keyword:* Western Alaska

*Place\_Keyword:* Alaska

*Access\_Constraints:* None

*Use\_Constraints:*

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* [datafig.jpg](#)

*Browse\_Graphic\_File\_Description:*

Relationships between spatial data layers and attribute data tables for Western Alaska ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) 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, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, invert.e00, lakes.e00, m\_mammal.e00, mgt.e00, nests.e00, socecon.e00, streams.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 polygonal hydrography defining lake and land masses for Western Alaska.

##### *Positional\_Accuracy:*

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

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

The hydrography data set was developed from pre-existing digital and hardcopy sources and reflects the positional accuracy of these original data. The horizontal positional accuracy of the 1:63,360 and 1:250,000 USGS topographic quads should conform to National Map Accuracy Standards at scales of 1:63,360 and 1:250,000. See the Lineage and Process\_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

#### *Lineage:*

##### *Source\_Information:*

##### *Source\_Citation:*

##### *Citation\_Information:*

*Originator:* U. S. Geological Survey

*Publication\_Date:* 1999

*Title:* DLG Hydrography

*Geospatial\_Data\_Presentation\_Form:* Vector digital data

*Source\_Scale\_Denominator:* 63360

*Type\_of\_Source\_Media:* Online

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

##### *Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1950

*Ending\_Date:* 1997

*Source\_Currentness\_Reference:* ground condition

*Source\_Citation\_Abbreviation:* None

*Source\_Contribution:* Shorelines

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* Alaska Department of Natural Resources

*Publication\_Date:* 1998

*Title:* Alaska Coastline 1 to 63,360

*Geospatial\_Data\_Presentation\_Form:* Vector digital data

*Source\_Scale\_Denominator:* 63360

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

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 1997

*Source\_Currentness\_Reference:* Publication date

*Source\_Citation\_Abbreviation:* None

*Source\_Contribution:* Shorelines

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* Colin Plank

*Publication\_Date:* Unpublished material

*Title:* ESI Overflight

*Geospatial\_Data\_Presentation\_Form:* Hardcopy Map

*Source\_Scale\_Denominator:* 63360

*Type\_of\_Source\_Media:* Paper

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2001

*Source\_Currentness\_Reference:* Date of overflight

*Source\_Citation\_Abbreviation:* None

*Source\_Contribution:* Shorelines

*Process\_Step:*

*Process\_Description:*

The shoreline was derived primarily from digital coastline data from the U.S. Geological Survey (USGS) digital line graph (DLG) data set, Alaska Department of Natural Resources, and Research Planning, Inc. (RPI) 2001 Western Alaska overflights. In some cases, gross shoreline changes or additional hydrography polygons were sketched during overflights conducted during the summer months of 2001. Overflight changes were digitized from the scanned and registered hardcopy field maps. Also, additional hydrographic features were digitized directly from USGS Digital Raster Graphs (DRG). In some cases, minor hydrographic changes south of Cape Prince of Wales were digitized from the Norton Sound, Alaska ESI atlas published in 1983. After the initial shoreline classification, these data were edgematched and checked for logical consistency errors. Review maps were plotted at 1:63,360 scale for verification of polygonal and linear attributes.

*Process\_Date:* 200305

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

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

*Contact\_Person:* Jill Petersen

*Contact\_Address:*

*Address\_Type:* Physical address

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

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code*: 98115-6349  
*Contact\_Voice\_Telephone*: (206) 526-6944  
*Contact\_Facsimile\_Telephone*: (206) 526-6329  
*Contact\_Electronic\_Mail\_Address*: Jill.Petersen@noaa.gov

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*Spatial\_Data\_Organization\_Information*:

*Direct\_Spatial\_Reference\_Method*: Vector

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

*SDTS\_Terms\_Description*:

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

*Point\_and\_Vector\_Object\_Count*: 213648

*SDTS\_Terms\_Description*:

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

*Point\_and\_Vector\_Object\_Count*: 213647

*SDTS\_Terms\_Description*:

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

*Point\_and\_Vector\_Object\_Count*: 242425

*SDTS\_Terms\_Description*:

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

*Point\_and\_Vector\_Object\_Count*: 4848205

*SDTS\_Terms\_Description*:

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

*Point\_and\_Vector\_Object\_Count*: 242425

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*Spatial\_Reference\_Information*:

*Horizontal\_Coordinate\_System\_Definition*:

*Geographic*:

*Latitude\_Resolution*: 0.00005

*Longitude\_Resolution*: 0.00005

*Geographic\_Coordinate\_Units*: Decimal degrees

*Geodetic\_Model*:

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

*Ellipsoid\_Name*: Clarke 1866

*Semi-major\_Axis*: 6378206.4

*Denominator\_of\_Flattening\_Ratio*: 294.978698

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*Entity\_and\_Attribute\_Information*:

*Detailed\_Description*:

*Entity\_Type*:

*Entity\_Type\_Label*: LAKES.AAT

*Entity\_Type\_Definition*:

The LAKES.AAT table contains attribute information for the vector lines defining the inland water and land masses in the LAKES 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 DLG 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:* Original digital data (USGS DLG)  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* 5  
*Enumerated\_Domain\_Value\_Definition:* Digitized from 1:63,360-USGS Digital Raster Graphics  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* 6  
*Enumerated\_Domain\_Value\_Definition:* Alaska DNR Digital Shoreline Data  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* 7  
*Enumerated\_Domain\_Value\_Definition:* Digital USGS Index  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* 9  
*Enumerated\_Domain\_Value\_Definition:* Digital Shoreline from Alaska Department of Natural Resources  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

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

*Entity\_Type\_Label:* LAKES.PAT  
*Entity\_Type\_Definition:*  
 The LAKES.PAT table contains attribute information for the vector polygons representing inland water and land mass features in the LAKES 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.

---

*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 Western 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:* 200307*Metadata\_Review\_Date:* 200307*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

# Western Alaska ESI: STREAMS (River and Stream Lines)

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

## Metadata:

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

### *Identification\_Information:*

#### *Citation:*

#### *Citation\_Information:*

#### *Originator:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

*Publication\_Date:* 200307

*Title:* Western Alaska ESI: STREAMS (River and Stream Lines)

*Edition:* First

*Geospatial\_Data\_Presentation\_Form:* Vector digital data

#### *Series\_Information:*

*Series\_Name:* None

*Issue\_Identification:* Western Alaska

#### *Publication\_Information:*

*Publication\_Place:* Seattle, Washington

#### *Publisher:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington

#### *Other\_Citation\_Details:*

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

### *Description:*

#### *Abstract:*

This data set contains vector lines representing inland linear hydrography features used in the creation of the Environmental Sensitivity Index (ESI) for Western Alaska. The STREAMS data set comprises a portion of the ESI for Western 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:* 2002

*Ending\_Date:* 2003

*Currentness\_Reference:*

These data were compiled during 2002-2003. The currentness dates for these data range from 1982 to 2001 and are documented in the Source\_Information section.

*Status:*

*Progress:* Complete

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

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

*West\_Bounding\_Coordinate:* -173.12

*East\_Bounding\_Coordinate:* -161.0

*North\_Bounding\_Coordinate:* 64.0

*South\_Bounding\_Coordinate:* 59.0

*Keywords:**Theme:*

*Theme\_Keyword\_Thesaurus:* None

*Theme\_Keyword:* ESI

*Theme\_Keyword:* Sensitivity maps

*Theme\_Keyword:* Hydrography

*Theme\_Keyword:* Coastal resources

*Theme\_Keyword:* Oil spill planning

*Theme\_Keyword:* Coastal Zone Management

*Theme\_Keyword:* Wildlife

*Place:*

*Place\_Keyword\_Thesaurus:* None

*Place\_Keyword:* Western Alaska

*Place\_Keyword:* Alaska

*Access\_Constraints:* None*Use\_Constraints:*

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* [datafig.jpg](#)

*Browse\_Graphic\_File\_Description:*

Relationships between spatial data layers and attribute data tables for Western Alaska ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau,

Alaska.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) 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, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, invert.e00, lakes.e00, m\_mammal.e00, mgt.e00, nests.e00, socecon.e00, streams.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 river and stream hydrography for Western Alaska.

*Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy\_Report:*

The hydrography data set was developed from pre-existing digital and hardcopy sources and reflects the positional accuracy of these original data. The horizontal positional accuracy of the 1:63,360 and 1:250,000 USGS topographic quads should conform to National Map Accuracy Standards at scales of 1:63,360 and 1:250,000. See the Lineage and Process\_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* U. S. Geological Survey

*Publication\_Date:* 1999

*Title:* DLG Hydrography

*Geospatial\_Data\_Presentation\_Form:* Vector digital data

*Source\_Scale\_Denominator:* 63360

*Type\_of\_Source\_Media:* Online

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

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 1950

*Ending\_Date:* 1997  
*Source\_Currentness\_Reference:* ground condition  
*Source\_Citation\_Abbreviation:* None  
*Source\_Contribution:* Shorelines  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* Alaska Department of Natural Resources  
*Publication\_Date:* 1998  
*Title:* Alaska Coastline 1 to 63,360  
*Geospatial\_Data\_Presentation\_Form:* Vector digital data  
*Source\_Scale\_Denominator:* 63360  
*Type\_of\_Source\_Media:* CD-ROM  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:* 1997  
*Source\_Currentness\_Reference:* Publication date  
*Source\_Citation\_Abbreviation:* None  
*Source\_Contribution:* Shorelines  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* Colin Plank  
*Publication\_Date:* Unpublished material  
*Title:* ESI Overflight  
*Geospatial\_Data\_Presentation\_Form:* Hardcopy Map  
*Source\_Scale\_Denominator:* 63360  
*Type\_of\_Source\_Media:* Paper  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:* 2001  
*Source\_Currentness\_Reference:* Date of overflight  
*Source\_Citation\_Abbreviation:* None  
*Source\_Contribution:* Shorelines  
*Process\_Step:*  
*Process\_Description:*  
 The shoreline was derived primarily from digital coastline data from the U.S. Geological Survey (USGS) digital line graph (DLG) data set, Alaska Department of Natural Resources, and Research Planning, Inc. (RPI) 2001 Western Alaska overflights. In some cases, gross shoreline changes or additional hydrography polygons were sketched during overflights conducted during the summer months of 2001. Overflight changes were digitized from the scanned and registered hardcopy field maps. Also, additional hydrographic features were digitized directly from USGS Digital Raster Graphs (DRG). In some cases, minor hydrographic changes south of Cape Prince of Wales were digitized from the Norton Sound, Alaska ESI atlas published in 1983. After the initial shoreline classification, these data were edgematched and checked for logical consistency errors. Review maps were plotted at 1:63,360 scale for verification of polygonal and linear attributes.  
*Process\_Date:* 200305  
*Process\_Contact:*  
*Contact\_Information:*  
*Contact\_Organization\_Primary:*  
*Contact\_Organization:* NOAA, Office of Response and Restoration  
*Contact\_Person:* Jill Petersen  
*Contact\_Address:*  
*Address\_Type:* Physical address  
*Address:* 7600 Sand Point Way, N.E.

City: Seattle  
 State\_or\_Province: Washington  
 Postal\_Code: 98115-6349  
 Contact\_Voice\_Telephone: (206) 526-6944  
 Contact\_Facsimile\_Telephone: (206) 526-6329  
 Contact\_Electronic\_Mail\_Address: Jill.Petersen@noaa.gov

---

*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:* Vector

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

*SDTS\_Terms\_Description:*

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

*Point\_and\_Vector\_Object\_Count:* 94754

*SDTS\_Terms\_Description:*

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

*Point\_and\_Vector\_Object\_Count:* 1151567

*SDTS\_Terms\_Description:*

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

*Point\_and\_Vector\_Object\_Count:* 307594

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*Spatial\_Reference\_Information:*

*Horizontal\_Coordinate\_System\_Definition:*

*Geographic:*

*Latitude\_Resolution:* 0.00005

*Longitude\_Resolution:* 0.00005

*Geographic\_Coordinate\_Units:* Decimal degrees

*Geodetic\_Model:*

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

*Ellipsoid\_Name:* Clarke 1866

*Semi-major\_Axis:* 6378206.4

*Denominator\_of\_Flattening\_Ratio:* 294.978698

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*Entity\_and\_Attribute\_Information:*

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* STREAMS.AAT

*Entity\_Type\_Definition:*

The STREAMS.AAT table contains attribute information for the vector lines representing river and stream hydrography features in the STREAMS data layer.

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

*Attribute:*

*Attribute\_Label:* LINE

*Attribute\_Definition:* Type of geographic feature.

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* H

*Enumerated\_Domain\_Value\_Definition:* Hydrography

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

*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:* Original digital data (USGS DLG)*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Enumerated\_Domain:**Enumerated\_Domain\_Value:* 7*Enumerated\_Domain\_Value\_Definition:* Digital USGS Index*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*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 Western 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:* 200307*Metadata\_Review\_Date:* 200307*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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# Western Alaska ESI: ESI (Environmental Sensitivity Index Shoreline Types - Polygons and Lines)

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

## Metadata:

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

---

### *Identification\_Information:*

#### *Citation:*

#### *Citation\_Information:*

#### *Originator:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

*Publication\_Date:* 200307

#### *Title:*

Western Alaska ESI: ESI (Environmental Sensitivity Index Shoreline Types - Polygons and Lines)

*Edition:* First

*Geospatial\_Data\_Presentation\_Form:* Vector digital data

#### *Series\_Information:*

*Series\_Name:* None

*Issue\_Identification:* Western Alaska

#### *Publication\_Information:*

*Publication\_Place:* Seattle, Washington

#### *Publisher:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington

#### *Other\_Citation\_Details:*

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

### *Description:*

#### *Abstract:*

This data set contains vector lines and polygons representing the shoreline and coastal habitats of Western Alaska classified according to the Environmental Sensitivity Index (ESI) classification system. This data set comprises a portion of the ESI for Western 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:* 2002

*Ending\_Date:* 2003

*Currentness\_Reference:*

These data were compiled during 2002-2003. The currentness dates for these data range from 1950 to 2001 and are documented in the Source\_Information section.

*Status:*

*Progress:* Complete

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

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -173.12

*East\_Bounding\_Coordinate:* -161.0

*North\_Bounding\_Coordinate:* 64.0

*South\_Bounding\_Coordinate:* 59.0

*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:* Western Alaska

*Place\_Keyword:* Alaska

*Access\_Constraints:* None

*Use\_Constraints:*

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* [datafig.jpg](#)

*Browse\_Graphic\_File\_Description:*

Relationships between spatial data layers and attribute data tables for Western Alaska ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and



Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) 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, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, invert.e00, lakes.e00, m\_mammal.e00, mgt.e00, nests.e00, socecon.e00, streams.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 set was developed from pre-existing digital sources and reflects the positional accuracy of these original data. The horizontal positional accuracy of the 1:63,360 USGS topographic quads, should conform to National Map Accuracy Standards at scales of 1:63,360. The minimum mapping unit (MMU) of the actual shoreline classification segments is estimated at 50 meters when mapping is conducted using 1:24,000 hardcopy fieldmaps. Field verification has shown that the absolute positional accuracy of breaks between shoreline ESI types with a 95-percent error bound is approximately 58 meters. See the Lineage and Process\_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* Colin Plank

*Publication\_Date:* Unpublished material

*Title:* ESI Overflight

*Geospatial\_Data\_Presentation\_Form:* Hardcopy Map

*Source\_Scale\_Denominator:* 63360

*Type\_of\_Source\_Media:* Paper  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:* 2001  
*Source\_Currentness\_Reference:* Date of overflight  
*Source\_Citation\_Abbreviation:* None  
*Source\_Contribution:* Digital Shoreline

*Source\_Information:*

*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* Research Planning, Inc.  
*Publication\_Date:* 1983  
*Title:* Norton Sound, Alaska ESI Atlas  
*Geospatial\_Data\_Presentation\_Form:* Hardcopy Map

*Source\_Scale\_Denominator:* 63360

*Type\_of\_Source\_Media:* Paper  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:* 1983  
*Source\_Currentness\_Reference:* Date of Atlas Publication  
*Source\_Citation\_Abbreviation:* None  
*Source\_Contribution:* Digital Shoreline

*Source\_Information:*

*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* U. S. Geological Survey  
*Publication\_Date:* 1999  
*Title:* DLG Hydrography  
*Geospatial\_Data\_Presentation\_Form:* Vector digital data

*Source\_Scale\_Denominator:* 63360

*Type\_of\_Source\_Media:* Online  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Range\_of\_Dates/Times:*  
*Beginning\_Date:* 1950  
*Ending\_Date:* 1997  
*Source\_Currentness\_Reference:* ground condition  
*Source\_Citation\_Abbreviation:* None  
*Source\_Contribution:* Shorelines

*Process\_Step:*

*Process\_Description:*  
ESI maps for the region were created using sources and methods described below. Shoreline habitats were mapped during overflights and ground surveys conducted by experienced coastal geologists. The shoreline of southern Norton Sound (from St. Michael Island to Cape Vancouver) was originally mapped during overflights in June and July 1980, during the fieldwork for the earlier Norton Sound ESI maps. The shoreline of Kuskokwim Bay (from Cape Vancouver to Goodnews Bay) was originally mapped during overflights in July and August 1981, during the fieldwork for the earlier Bristol Bay ESI maps. During these overflights, the shoreline types were recorded on then-current 1:63,360-scale USGS topographic maps. Only large-scale modifications to the shoreline were noted on the maps (and only those observed during the 1980 and 1981 overflights). Because of the complexity of the shoreline, multiple habitats were often described for each shoreline segment. Salt marshes, while extensive in the region, were seldom mapped as polygonal features because of the difficulty in determining their landward extent. However, many of the tidal flats were mapped as polygons. The shorelines of St. Matthew Island have never been classified due to its remoteness.

*Process\_Date:* 200305

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

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

*Contact\_Person:* Jill Petersen

*Contact\_Address:*

*Address\_Type:* Physical address

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

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

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

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

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

---

*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:* Vector

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

*SDTS\_Terms\_Description:*

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

*Point\_and\_Vector\_Object\_Count:* 835

*SDTS\_Terms\_Description:*

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

*Point\_and\_Vector\_Object\_Count:* 835

*SDTS\_Terms\_Description:*

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

*Point\_and\_Vector\_Object\_Count:* 6845

*SDTS\_Terms\_Description:*

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

*Point\_and\_Vector\_Object\_Count:* 407554

*SDTS\_Terms\_Description:*

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

*Point\_and\_Vector\_Object\_Count:* 6617

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*Spatial\_Reference\_Information:*

*Horizontal\_Coordinate\_System\_Definition:*

*Geographic:*

*Latitude\_Resolution:* 0.00005

*Longitude\_Resolution:* 0.00005

*Geographic\_Coordinate\_Units:* Decimal degrees

*Geodetic\_Model:*

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

*Ellipsoid\_Name:* Clarke 1866

*Semi-major\_Axis:* 6378206.4

*Denominator\_of\_Flattening\_Ratio:* 294.978698

---

*Entity\_and\_Attribute\_Information:*

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* ESI.AAT

*Entity\_Type\_Definition:*

The ESI.AAT table contains attribute information for the vector lines representing linear shoreline features with ESI classification.

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

*Attribute:*

*Attribute\_Label:* ESI

*Attribute\_Definition:*

The item ESI contains values representing the ESI shoreline type. In many cases shorelines are ranked with multiple codes, such as "6B/3A" (listed landward to seaward from left to right). The first code, "6B", is the most landward shoreline type and the second code, "3A", is the shoreline type closest to the water. Singular shoreline types are listed below. No multiple codes are listed, but all multiple codes included in the data set can be assembled from the codes described. The ESI rankings progress from low to high susceptibility to oil spills. To determine the sensitivity of a particular intertidal shoreline habitat, the following factors are integrated: (1) Shoreline type (substrate, grain size, tidal elevation, origin); (2) Exposure to wave and tidal energy; (3) Biological productivity and sensitivity; (4) Ease of cleanup. Prediction of the behavior and persistence of oil in intertidal habitats is based on an understanding of the dynamics of the coastal environments, not just the substrate type and grain size. The intensity of energy expended upon a shoreline by wave action, tidal currents, and river currents directly affects the persistence of stranded oil. The need for shoreline cleanup activities is determined, in part, by the slowness of natural processes in removal of oil stranded on the shoreline. The potential for biological injury, and ease of cleanup of spilled oil are also important factors in the ESI ranking. Generally speaking, areas exposed to high levels of physical energy, such as wave action and tidal currents, and low biological activity rank low on the scale, whereas sheltered areas with associated high biological activity have the highest ranking.

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 1A

*Enumerated\_Domain\_Value\_Definition:* Exposed Rocky Shores

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

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 2A

*Enumerated\_Domain\_Value\_Definition:* Exposed, Wave-cut Platforms in Bedrock, Mud, or Clay

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

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 3A

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

*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:* 7

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

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

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 8A

*Enumerated\_Domain\_Value\_Definition:*

Sheltered Rocky Shores and Sheltered Scarps in Bedrock, Mud, or  
Clay

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* 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:* 10A  
*Enumerated\_Domain\_Value\_Definition:* Salt- and Brackish-water Marsh  
*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. See the Lineage and Process\_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* 1  
*Enumerated\_Domain\_Value\_Definition:* Original digital data (USGS DLG)  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* 5  
*Enumerated\_Domain\_Value\_Definition:* Digitized from 1:63,360-USGS Digital Raster Graphics  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* 6  
*Enumerated\_Domain\_Value\_Definition:* Alaska DNR Digital Shoreline Data  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 7  
*Enumerated\_Domain\_Value\_Definition:* Digital USGS Index  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* 8  
*Enumerated\_Domain\_Value\_Definition:*  
Digitized from Scanned Norton Sound, Alaska ESI Atlas  
Published in 1983  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* 9  
*Enumerated\_Domain\_Value\_Definition:*  
Digitized from Scanned Bristol Bay, Alaska ESI Atlas Published in  
1982  
*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:* 2A  
*Enumerated\_Domain\_Value\_Definition:* Exposed Wave-cut Platforms in  
Bedrock, Mud, or Clay  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* 7  
*Enumerated\_Domain\_Value\_Definition:* Exposed Tidal Flats  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* 9A  
*Enumerated\_Domain\_Value\_Definition:* Sheltered Tidal Flats  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* 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 Western 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:* 200307

*Metadata\_Review\_Date:* 200307

*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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# Western 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; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

*Publication\_Date:* 200307

*Title:* Western Alaska ESI: INDEX (Index Polygons)

*Edition:* First

*Geospatial\_Data\_Presentation\_Form:* Vector digital data

##### *Series\_Information:*

*Series\_Name:* None

*Issue\_Identification:* Western Alaska

##### *Publication\_Information:*

*Publication\_Place:* Seattle, Washington

##### *Publisher:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington

##### *Other\_Citation\_Details:*

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

### *Description:*

#### *Abstract:*

This data set contains vector polygons representing the boundaries of all the hardcopy cartographic products produced as part of the Environmental Sensitivity Index (ESI) for Western Alaska, as well as digital data extents. This data set comprises a portion of the ESI data for Western 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 BIOINDEX (Biological Index Polygons) data layer, part of the larger Western 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:**Range\_of\_Dates/Times:*

*Beginning\_Date:* 2002

*Ending\_Date:* 2003

*Currentness\_Reference:*

The index data were compiled during 2002-2003. The currentness dates for these data range from 1999 to 2002 and are documented in the Source\_Information section.

*Status:*

*Progress:* Complete

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

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

*West\_Bounding\_Coordinate:* -173.12

*East\_Bounding\_Coordinate:* -161.0

*North\_Bounding\_Coordinate:* 64.0

*South\_Bounding\_Coordinate:* 59.0

*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:* Western Alaska

*Place\_Keyword:* Alaska

*Access\_Constraints:* None

*Use\_Constraints:*

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* [datafig.jpg](#)

*Browse\_Graphic\_File\_Description:*

Relationships between spatial data layers and attribute data tables for Western Alaska ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) 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, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, invert.e00, lakes.e00, m\_mammal.e00, mgt.e00, nests.e00, socecon.e00, streams.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 the hardcopy cartographic products produced as part of the Environmental Sensitivity Index (ESI) for Western Alaska, as well as digital data extents. Primarily, 1:63,360 and 1:250,000 U.S. Geological Survey (USGS) topographic maps were used to provide boundaries for cartographic products. In most cases, the polygons represent USGS topographic maps that were re-tiled, moved, or extended to provide better cartographic coverage of the study area. Refer to the BIOINDEX data layer for additional boundary information.

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

The index polygons in this data layer were generated in ArcInfo from the coordinates of the USGS 1:63,360 and 1:250,000 topographic map corners. Some small amount of positional error may be present along the arcs forming the boundaries of these polygons, particularly away from the polygon corners. Some boundaries were developed from pre-existing digital and hardcopy sources and reflect the positional accuracy of these original data. See the Lineage and Process\_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

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

*Originator:* U.S. Geological Survey

*Publication\_Date:* Unknown

*Title:* Topographic Quadrangles

*Geospatial\_Data\_Presentation\_Form:* vector digital data

*Publication\_Information:*

*Publication\_Place:* Denver, CO or Reston, VA

*Publisher:* U.S. Geological Survey

*Source\_Scale\_Denominator:* 63360

*Type\_of\_Source\_Media:* online

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* Varies

*Source\_Currentness\_Reference:* Date of publication

*Source\_Citation\_Abbreviation:* None

*Source\_Contribution:* Map index

*Process\_Step:*

*Process\_Description:*

The index polygons in this data layer were generated in ArcInfo from the coordinates of the USGS map corners, or appropriate coordinates.

*Process\_Date:* 200305

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

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

*Contact\_Person:* Jill Petersen

*Contact\_Address:*

*Address\_Type:* Physical address

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

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

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

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

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

*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:* Vector

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

*SDTS\_Terms\_Description:*

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

*Point\_and\_Vector\_Object\_Count:* 28

*SDTS\_Terms\_Description:*

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

*Point\_and\_Vector\_Object\_Count:* 28

*SDTS\_Terms\_Description:*

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

*Point\_and\_Vector\_Object\_Count:* 86

*SDTS\_Terms\_Description:*

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

*Point\_and\_Vector\_Object\_Count:* 136

*SDTS\_Terms\_Description:*

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

*Point\_and\_Vector\_Object\_Count:* 60

*Spatial\_Reference\_Information:*

*Horizontal\_Coordinate\_System\_Definition:*

*Geographic:*

*Latitude\_Resolution:* 0.00005

*Longitude\_Resolution:* 0.00005

*Geographic\_Coordinate\_Units*: Decimal degrees  
*Geodetic\_Model*:  
*Horizontal\_Datum\_Name*: North American Datum of 1927  
*Ellipsoid\_Name*: Clarke 1866  
*Semi-major\_Axis*: 6378206.4  
*Denominator\_of\_Flattening\_Ratio*: 294.978698

---

*Entity\_and\_Attribute\_Information*:

*Detailed\_Description*:

*Entity\_Type*:

*Entity\_Type\_Label*: INDEX.PAT

*Entity\_Type\_Definition*:

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

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

*Attribute*:

*Attribute\_Label*: TILE-NAME

*Attribute\_Definition*:

The TILE-NAME contains the map number according to the specified layout of the atlas. The values for each polygon are unique and range from 1 through 28.

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

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1

*Range\_Domain\_Maximum*: 28

*Attribute*:

*Attribute\_Label*: TOPO-NAME

*Attribute\_Definition*: Topographic map names (not specified in this atlas)

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: Western Alaska

*Enumerated\_Domain\_Value\_Definition*: Atlas Title

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

*Attribute*:

*Attribute\_Label*: SCALE

*Attribute\_Definition*:

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

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: 250,000

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

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

*Attribute*:

*Attribute\_Label*: MAPANGLE

*Attribute\_Definition*:

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

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

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: -7.415

*Range\_Domain\_Maximum*: 16.97

*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 Western 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:* 200307

*Metadata\_Review\_Date:* 200307

*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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# Western 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; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

*Publication\_Date:* 200307

*Title:* Western Alaska ESI: BIOINDEX (Biological Index Polygons)

*Edition:* First

*Geospatial\_Data\_Presentation\_Form:* Digital vector data

#### *Series\_Information:*

*Series\_Name:* None

*Issue\_Identification:* Western Alaska

#### *Publication\_Information:*

*Publication\_Place:* Seattle, Washington

#### *Publisher:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington

#### *Other\_Citation\_Details:*

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

### *Description:*

#### *Abstract:*

This data set contains vector polygons representing the boundaries of the 1:250,000 map boundaries used in the creation of the Environmental Sensitivity Index (ESI) for Western Alaska. Specifically, these data were used for the creation of the hardcopy biology information maps. This data set comprises a portion of the ESI data for Western 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 Western 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:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:* 2002

*Ending\_Date:* 2003

*Currentness\_Reference:*

These data were compiled during 2002-2003. The currentness date for these data is 2003 and is documented in the Source\_Information section.

*Status:*

*Progress:* Complete

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

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -174.0

*East\_Bounding\_Coordinate:* -159.0

*North\_Bounding\_Coordinate:* 64.0

*South\_Bounding\_Coordinate:* 59.0

*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:* Western Alaska

*Place\_Keyword:* Alaska

*Access\_Constraints:* None

*Use\_Constraints:*

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* [datafig.jpg](#)

*Browse\_Graphic\_File\_Description:*

Relationships between spatial data layers and attribute data tables for the Western Alaska ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska;

Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) 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, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, invert.e00, lakes.e00, m\_mammal.e00, mgt.e00, nests.e00, socecon.e00, streams.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 Environmental Sensitivity Index (ESI) for Western Alaska, as well as digital data extents. Refer to the INDEX (Index Polygons) data layer for additional boundary information.

*Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy\_Report:*

The index polygons in this data layer were generated in Arc/INFO. Some small amount of positional error may be present along the arcs forming the boundaries of these polygons, particularly away from the polygon corners. Some boundaries were developed from pre-existing digital and hardcopy sources and reflect the positional accuracy of these original data. See the Lineage and Process\_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* U.S. Geological Survey

*Publication\_Date:* Unknown

*Title:* Topographic Quadrangles

*Geospatial\_Data\_Presentation\_Form:* Map

*Publication\_Information:*

*Publication\_Place:* Denver, CO or Reston, VA

*Publisher:* U.S. Geological Survey  
*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:* Map 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:* 200305  
     *Process\_Contact:*  
         *Contact\_Information:*  
             *Contact\_Organization\_Primary:*  
                 *Contact\_Organization:* NOAA, Office of Response and Restoration  
                 *Contact\_Person:* Jill Petersen  
             *Contact\_Address:*  
                 *Address\_Type:* Physical address  
                 *Address:* 7600 Sand Point Way, N.E.  
                 *City:* Seattle  
                 *State\_or\_Province:* Washington  
                 *Postal\_Code:* 98115-6349  
                 *Contact\_Voice\_Telephone:* (206) 526-6944  
                 *Contact\_Facsimile\_Telephone:* (206) 526-6329  
                 *Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

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*Spatial\_Data\_Organization\_Information:*  
     *Direct\_Spatial\_Reference\_Method:* Vector  
     *Point\_and\_Vector\_Object\_Information:*  
         *SDTS\_Terms\_Description:*  
             *SDTS\_Point\_and\_Vector\_Object\_Type:* GT-polygon composed of rings  
             *Point\_and\_Vector\_Object\_Count:* 12  
         *SDTS\_Terms\_Description:*  
             *SDTS\_Point\_and\_Vector\_Object\_Type:* Area point  
             *Point\_and\_Vector\_Object\_Count:* 12  
         *SDTS\_Terms\_Description:*  
             *SDTS\_Point\_and\_Vector\_Object\_Type:* Complete chain  
             *Point\_and\_Vector\_Object\_Count:* 144  
         *SDTS\_Terms\_Description:*  
             *SDTS\_Point\_and\_Vector\_Object\_Type:* Link  
             *Point\_and\_Vector\_Object\_Count:* 323  
         *SDTS\_Terms\_Description:*  
             *SDTS\_Point\_and\_Vector\_Object\_Type:* Node, planar graph  
             *Point\_and\_Vector\_Object\_Count:* 134

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*Spatial\_Reference\_Information:*  
     *Horizontal\_Coordinate\_System\_Definition:*  
         *Geographic:*  
             *Latitude\_Resolution:* 0.00005  
             *Longitude\_Resolution:* 0.00005

*Geographic\_Coordinate\_Units*: Decimal degrees  
*Geodetic\_Model*:  
*Horizontal\_Datum\_Name*: North American Datum of 1927  
*Ellipsoid\_Name*: Clark 1866  
*Semi-major\_Axis*: 6378206.4  
*Denominator\_of\_Flattening\_Ratio*: 294.978698

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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 Environmental Sensitivity Index (ESI) for Western Alaska.

*Entity\_Type\_Definition\_Source*: Research Planning, Inc.*Attribute*:*Attribute\_Label*: TILE-NAME*Attribute\_Definition*:

The TILE-NAME contains the map number according to the specified layout of the atlas. The values for each polygon are unique and range from 1 through 12.

*Attribute\_Definition\_Source*: Research Planning, Inc.*Attribute\_Domain\_Values*:*Range\_Domain*:*Range\_Domain\_Minimum*: 1*Range\_Domain\_Maximum*: 12*Attribute*:*Attribute\_Label*: TOPO-NAME*Attribute\_Definition*: Topographic map names (not specified in this atlas)*Attribute\_Definition\_Source*: Research Planning, Inc.*Attribute\_Domain\_Values*:*Enumerated\_Domain*:*Enumerated\_Domain\_Value*: Western Alaska*Enumerated\_Domain\_Value\_Definition*: Atlas Title*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.*Attribute*:*Attribute\_Label*: SCALE*Attribute\_Definition*:

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

*Attribute\_Definition\_Source*: Research Planning, Inc.*Attribute\_Domain\_Values*:*Enumerated\_Domain*:*Enumerated\_Domain\_Value*: 250,000*Enumerated\_Domain\_Value\_Definition*: Scale = 250,000*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.*Attribute*:*Attribute\_Label*: MAPANGLE*Attribute\_Definition*:

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

*Attribute\_Definition\_Source*: Research Planning, Inc.*Attribute\_Domain\_Values*:*Range\_Domain*:*Range\_Domain\_Minimum*: 5.644*Range\_Domain\_Maximum*: 16.849*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:* 30,24

*Enumerated\_Domain\_Value\_Definition:* Page size = 30" by 24"

*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 Western 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:* 200307

*Metadata\_Review\_Date:* 200307

*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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# Western 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; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

*Publication\_Date:* 200307

*Title:* Western Alaska ESI: BIRDS (Bird Polygons)

*Edition:* First

*Geospatial\_Data\_Presentation\_Form:* Vector digital data

##### *Series\_Information:*

*Series\_Name:* None

*Issue\_Identification:* Western Alaska

##### *Publication\_Information:*

*Publication\_Place:* Seattle, Washington

##### *Publisher:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington

##### *Other\_Citation\_Details:*

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

### *Description:*

#### *Abstract:*

This data set contains sensitive biological resource data for wading birds, shorebirds, waterfowl, raptors, diving birds, seabirds, passerine birds, and gulls and terns in Western Alaska. Vector polygons in this data set represent locations of bird nesting, migratory staging, molting, and wintering sites. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for Western 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 Western 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:* 2002

*Ending\_Date:* 2003

*Currentness\_Reference:*

The biological data were compiled during 2002-2003. The currentness dates for these data range from 1978 to 2002 and are documented in the Source\_Information section.

*Status:*

*Progress:* Complete

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

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -174.0

*East\_Bounding\_Coordinate:* -159.0

*North\_Bounding\_Coordinate:* 64.0

*South\_Bounding\_Coordinate:* 59.0

*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:* Western Alaska

*Place\_Keyword:* Alaska

*Access\_Constraints:* None

*Use\_Constraints:*

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* [datafig.jpg](#)

*Browse\_Graphic\_File\_Description:*

Relationships between spatial data layers and attribute data tables for the Western Alaska ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response



Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) 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, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, invert.e00, lakes.e00, m\_mammal.e00, mgt.e00, nests.e00, socecon.e00, streams.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 and digital data on bird nesting, migratory staging, molting, and wintering concentration areas. Refer to the NESTS (Nest Points) data layer for additional nesting information. These data do not necessarily represent all bird occurrences in Western Alaska. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name, if applicable): 3, Red-throated loon, *Gavia stellata*; 10, Pelagic cormorant, *Phalacrocorax pelagicus*; 11, Tundra swan, *Cygnus columbianus*; 12, Canada goose, *Branta canadensis*; 13, Brant, *Branta bernicla*; 14, Greater white-fronted goose, *Anser albifrons*; 16, Mallard, *Anas platyrhynchos*; 17, Northern pintail, *Anas acuta*; 18, Green-winged teal, *Anas crecca*; 20, Northern shoveler, *Anas clypeata*; 22, Greater scaup, *Aythya marila*; 27, Long-tailed duck, *Clangula hyemalis*; 28, Harlequin duck, *Histrionicus histrionicus*; 29, White-winged scoter, *Melanitta fusca*; 30, Surf scoter, *Melanitta perspicillata*; 31, Pacific loon, *Gavia pacifica*; 33, Red-breasted merganser,

Mergus serrator; 41, Mew gull, Larus canus; 53, Red-necked phalarope, Phalaropus lobatus; 55, Whimbrel, Numenius phaeopus; 59, Lesser yellowlegs, Tringa flavipes; 60, Red knot, Calidris canutus; 61, Pectoral sandpiper, Calidris melanotos; 62, Least sandpiper, Calidris minutilla; 63, Dunlin, Calidris alpina; 65, Long-billed dowitcher, Limnodromus scolopaceus; 66, Western sandpiper, Calidris mauri; 71, Black-bellied plover, Pluvialis squatarola; 72, Surfbird, Aphriza virgata; 73, Ruddy turnstone, Arenaria interpres; 74, Black turnstone, Arenaria melanocephala; 80, Arctic tern, Sterna paradisaea; 82, Glaucous gull, Larus hyperboreus; 103, Common eider, Somateria mollissima; 105, Thick-billed murre, Uria lomvia; 107, Peregrine falcon, Falco peregrinus; 112, Black guillemot, Cepphus grylle; 113, Gyrfalcon, Falco rusticolus; 114, Sabine's gull, Xema sabini; 156, Semipalmated sandpiper, Calidris pusilla; 157, Emperor goose, Chen canagica; 158, King eider, Somateria spectabilis; 159, Stellers eider, Polysticta stelleri; 160, Red phalarope, Phalaropus fulicaria; 161, Rock sandpiper, Calidris ptilocnemis; 164, American golden-plover, Pluvialis dominica; 165, Bar-tailed godwit, Limosa lapponica; 169, American wigeon, Anas americana; 172, Sandhill crane, Grus canadensis; 174, Golden eagle, Aquila chrysaetos; 176, Short-eared owl, Asio flammeus; 181, Northern harrier, Circus cyaneus; 196, Common snipe, Gallinago gallinago; 197, Black scoter, Melanitta nigra; 201, Short-tailed shearwater, Puffinus tenuirostris; 220, Merlin, Falco columbarius; 232, Rough-legged hawk, Buteo lagopus; 289, Hudsonian godwit, Limosa haemastica; 292, Sharp-tailed sandpiper, Calidris acuminata; 302, Scoters, Melanitta spp.; 410, Ivory gull, Pagophila eburnea; 411, McKays bunting, Plectrophenax hyperboreus; 413, Bristle-thighed curlew, Numenius tahitiensis; 415, Spectacled eider, Somateria fischeri; 543, Pacific golden-plover, Pluvialis fulva; 1002, Shorebirds; 1003, Waterfowl; 1019, Sea ducks.

#### *Positional\_Accuracy:*

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

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

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

#### *Lineage:*

##### *Source\_Information:*

##### *Source\_Citation:*

##### *Citation\_Information:*

*Originator:* Larned, W. (USFWS, Soldotna)

*Publication\_Date:* Unpublished material

*Title:* Waterfowl nesting and concentration areas

*Geospatial\_Data\_Presentation\_Form:* Expert knowledge

*Type\_of\_Source\_Media:* Personal communication

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

##### *Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2001

*Source\_Currentness\_Reference:* Date of communication

*Source\_Citation\_Abbreviation:* None

*Source\_Contribution:* Bird information

##### *Source\_Information:*

##### *Source\_Citation:*

##### *Citation\_Information:*

*Originator:* McCaffery, B. (NPS, Bethel)

*Publication\_Date:* Unpublished material

*Title:* Raptor concentration areas

*Geospatial\_Data\_Presentation\_Form:* Expert knowledge

*Type\_of\_Source\_Media:* Personal communication

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

*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:* 2002  
*Source\_Currentness\_Reference:* Date of communication  
*Source\_Citation\_Abbreviation:* None  
*Source\_Contribution:* Bird information  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* USFWS, MBM (Anchorage)  
*Publication\_Date:* 2002  
*Title:*  
 Density polygons for nesting waterfowl in the coastal zone of the  
 Yukon Delta  
*Geospatial\_Data\_Presentation\_Form:* Vector digital data  
*Publication\_Information:*  
*Publication\_Place:* Anchorage, AK.  
*Publisher:* U.S. Fish and Wildlife Service, Migratory Bird  
 Management  
*Source\_Scale\_Denominator:* 250,000  
*Type\_of\_Source\_Media:* CD-ROM  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Range\_of\_Dates/Times:*  
*Beginning\_Date:* 1988  
*Ending\_Date:* 2001  
*Source\_Currentness\_Reference:* Date of survey  
*Source\_Citation\_Abbreviation:* None  
*Source\_Contribution:* Bird information  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* King, J.G. and C.P. Dau  
*Publication\_Date:* 1981  
*Title:* Waterfowl and their habitats in the eastern Bering Sea  
*Geospatial\_Data\_Presentation\_Form:* Hardcopy text  
*Publication\_Information:*  
*Publication\_Place:* Unknown  
*Publisher:*  
 In Hood and Calder, eds. Eastern Bering Sea Shelf;  
 Ocean. and Res., Vol. 2.  
*Type\_of\_Source\_Media:* Paper  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:* 1981  
*Source\_Currentness\_Reference:* Date of publication  
*Source\_Citation\_Abbreviation:* None  
*Source\_Contribution:* Bird information  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* Stephenson, S. (USFWS, Anchorage)  
*Publication\_Date:* Unpublished material  
*Title:* Nesting seabird seasonality  
*Geospatial\_Data\_Presentation\_Form:* Expert knowledge  
*Type\_of\_Source\_Media:* Personal communication  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*

*Calendar\_Date:* 2001  
*Source\_Currentness\_Reference:* Date of communication  
*Source\_Citation\_Abbreviation:* None  
*Source\_Contribution:* Bird information  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* USFWS, MBM (Anchorage)  
*Publication\_Date:* 2002  
*Title:* Emperor goose (and other waterfowl) surveys: 1992-2002  
*Geospatial\_Data\_Presentation\_Form:* Digital table  
*Publication\_Information:*  
*Publication\_Place:* Anchorage, AK  
*Publisher:* USFWS, Migratory Bird Management  
*Type\_of\_Source\_Media:* Email  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Range\_of\_Dates/Times:*  
*Beginning\_Date:* 1992  
*Ending\_Date:* 2002  
*Source\_Currentness\_Reference:* Date of survey  
*Source\_Citation\_Abbreviation:* None  
*Source\_Contribution:* Bird information  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* Bowman, T. and G. Balogh  
*Publication\_Date:* 2001  
*Title:*  
 Nunivak Island Steller's Eider Reconnaissance Survey: Trip Report  
 for June 2001  
*Geospatial\_Data\_Presentation\_Form:* Hardcopy text  
*Publication\_Information:*  
*Publication\_Place:* Anchorage, AK, 7 pp.  
*Publisher:* USFWS, Migratory Bird Management  
*Type\_of\_Source\_Media:* Paper  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:* 2001  
*Source\_Currentness\_Reference:* Date of survey  
*Source\_Citation\_Abbreviation:* None  
*Source\_Contribution:* Bird information  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* Seppi, B.E  
*Publication\_Date:* 1995  
*Title:* Migration & Staging of Shorebirds & Waterfowl at Carter Spit  
*Geospatial\_Data\_Presentation\_Form:* Hardcopy text  
*Publication\_Information:*  
*Publication\_Place:* Anchorage, AK, 68 pp + appendices  
*Publisher:* U.S. Bureau of Land Management  
*Type\_of\_Source\_Media:* Paper  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:* 1994  
*Source\_Currentness\_Reference:* Date of survey  
*Source\_Citation\_Abbreviation:* None

*Source\_Contribution:* Bird information  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* U. S. Fish and Wildlife Service, Endangered Species Program  
*Publication\_Date:* Unpublished material  
*Title:*  
 Spectacled eider critical habitat, wintering, and molting concentrations  
*Geospatial\_Data\_Presentation\_Form:* Vector digital data  
*Type\_of\_Source\_Media:* Email  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Range\_of\_Dates/Times:*  
*Beginning\_Date:* 1993  
*Ending\_Date:* 1999  
*Source\_Currentness\_Reference:* Date of survey  
*Source\_Citation\_Abbreviation:* None  
*Source\_Contribution:* Bird information  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* Gill, Tibbitts, & Handel  
*Publication\_Date:* 2001  
*Title:* Profiles of important shorebird sites in Alaska  
*Geospatial\_Data\_Presentation\_Form:* Hardcopy text  
*Publication\_Information:*  
*Publication\_Place:* Unknown  
*Publisher:* 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 (draft)  
*Source\_Citation\_Abbreviation:* None  
*Source\_Contribution:* Bird information  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* Kessel, B.  
*Publication\_Date:* 1989  
*Title:* Bird of the Seward Peninsula Alaska  
*Geospatial\_Data\_Presentation\_Form:* Hardcopy text  
*Publication\_Information:*  
*Publication\_Place:* University of Alaska  
*Publisher:* University of Alaska Press, 330 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:* Bird information  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* Dau, C. (USFWS, Anchorage)

*Publication\_Date*: Unpublished material  
*Title*: Waterfowl nesting and concentration areas  
*Geospatial\_Data\_Presentation\_Form*: Expert knowledge  
*Type\_of\_Source\_Media*: Personal communication  
*Source\_Time\_Period\_of\_Content*:  
*Time\_Period\_Information*:  
*Single\_Date/Time*:  
*Calendar\_Date*: 2002  
*Source\_Currentness\_Reference*: Date of communication  
*Source\_Citation\_Abbreviation*: None  
*Source\_Contribution*: Bird information  
*Source\_Information*:  
*Source\_Citation*:  
*Citation\_Information*:  
*Originator*: Ernst, R.D.  
*Publication\_Date*: 1988  
*Title*:  
 Yukon Delta National Wildlife Refuge Coastal Survey: Final Report  
*Geospatial\_Data\_Presentation\_Form*: Hardcopy text  
*Publication\_Information*:  
*Publication\_Place*: Bethel, AK  
*Publisher*:  
 USFWS, Yukon Delta National Wildlife Refuge, Bethel, AK, 13 pp. + appendices  
*Type\_of\_Source\_Media*: Paper  
*Source\_Time\_Period\_of\_Content*:  
*Time\_Period\_Information*:  
*Single\_Date/Time*:  
*Calendar\_Date*: 1988  
*Source\_Currentness\_Reference*: Date of publication  
*Source\_Citation\_Abbreviation*: None  
*Source\_Contribution*: Bird information  
*Source\_Information*:  
*Source\_Citation*:  
*Citation\_Information*:  
*Originator*: Gill, R. (USGS, Anchorage)  
*Publication\_Date*: Unpublished material  
*Title*: Shorebird nesting and staging areas  
*Geospatial\_Data\_Presentation\_Form*: Expert knowledge  
*Type\_of\_Source\_Media*: Personal communication  
*Source\_Time\_Period\_of\_Content*:  
*Time\_Period\_Information*:  
*Single\_Date/Time*:  
*Calendar\_Date*: 2002  
*Source\_Currentness\_Reference*: Date of communication  
*Source\_Citation\_Abbreviation*: None  
*Source\_Contribution*: Bird information  
*Source\_Information*:  
*Source\_Citation*:  
*Citation\_Information*:  
*Originator*: Smith, C. (TNC, Anchorage)  
*Publication\_Date*: 2003  
*Title*: Waterfowl summary data  
*Geospatial\_Data\_Presentation\_Form*: Digital map  
*Publication\_Information*:  
*Publication\_Place*: Anchorage, AK  
*Publisher*: The Nature Conservancy  
*Source\_Scale\_Denominator*: 4,000,000  
*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 communication  
*Source\_Citation\_Abbreviation:* None  
*Source\_Contribution:* Bird information  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* Schmutz, J. (USGS, Anchorage)  
*Publication\_Date:* Unpublished material  
*Title:* Red-throated loon concentration areas  
*Geospatial\_Data\_Presentation\_Form:* Expert knowledge  
*Type\_of\_Source\_Media:* Personal communication  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:* 2002  
*Source\_Currentness\_Reference:* Date of communication  
*Source\_Citation\_Abbreviation:* None  
*Source\_Contribution:* Bird information  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* Alaska Dept. of Fish & Game (ADF&G).  
*Publication\_Date:* 2002  
*Title:* Most Environmentally Sensitive Areas (MESA) data  
*Geospatial\_Data\_Presentation\_Form:* Digital vector data  
*Publication\_Information:*  
*Publication\_Place:* Anchorage, AK  
*Publisher:*  
 Alaska Department of Fish & Game, Habitat and  
 Restoration Division  
*Source\_Scale\_Denominator:* 63,360  
*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:* Bird information  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* Larned, W. and T. Tiplady.  
*Publication\_Date:* 1998  
*Title:*  
 Surveys to Evaluate King Eider Molting Areas Detected by Satellite  
 Telemetry.  
*Geospatial\_Data\_Presentation\_Form:* Hardcopy text  
*Publication\_Information:*  
*Publication\_Place:* Anchorage, AK  
*Publisher:* USFWS, MBM, Waterfowl Branch, 7 pp.  
*Type\_of\_Source\_Media:* Paper  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:* 1997

*Source\_Currentness\_Reference:* Date of survey  
*Source\_Citation\_Abbreviation:* None  
*Source\_Contribution:* Bird information  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* Winker, K. et. al  
*Publication\_Date:* 2003  
*Title:* The birds of St. Matthew Island  
*Geospatial\_Data\_Presentation\_Form:* Hardcopy text  
*Publication\_Information:*  
*Publication\_Place:* Unknown  
*Publisher:* Technical report No. 12: 89-99  
*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:* Bird information  
*Process\_Step:*  
*Process\_Description:*  
 Four main sources of data were used to depict bird distribution and seasonality for this data layer: (1) personal interviews with resource experts from US Fish and Wildlife Service (USFWS) and US Geological Survey (USGS); (2) numerous published and unpublished reports, books, and a small Alaska Dept. of Fish & Game (ADF&G) digital coverage; (3) 2002 USFWS digital coverages depicting density polygons of nesting waterfowl on the Yukon-Kuskokwim Delta; and (4) 1992-2002 USFWS aerial survey data for waterfowl from two Migratory Bird Management (MBM) offices. Information gathered during initial interviews and from hardcopy sources was compiled onto USGS 1:250,000 topographic quadrangles. The compiled data were digitized off the base maps into an ArcInfo system to create the BIRDS data layer. The 2002 USFWS waterfowl density data were then simplified for readability on the maps and incorporated into this data layer. All ESI, biology, and human-use data were plotted onto hardcopy draft maps. Following the creation of draft maps, a second set of interviews with resource experts was conducted. Participants who were unable to attend the meetings were sent a set of maps for review. Edits to the BIRDS data layer were made based on the recommendations of the resource experts, and final hardcopy maps were created. Concentration information varied, and therefore for some species and locations, descriptive terms such as "HIGH" or "COMMON" were used, while for others, numerical counts of nests or individuals were used. Concentration ranges such as "1000s" and "10000s" were used in many cases, as exact concentrations vary from year to year. Concentration and seasonality information was provided by resource experts, or was extracted from published sources, reports, and survey data. In some cases, no quantitative abundance data were available.  
*Process\_Date:* 200305  
*Process\_Contact:*  
*Contact\_Information:*  
*Contact\_Organization\_Primary:*  
*Contact\_Organization:* NOAA, Office of Response and Restoration  
*Contact\_Person:* Jill Petersen  
*Contact\_Address:*  
*Address\_Type:* Physical address  
*Address:* 7600 Sand Point Way, N.E.  
*City:* Seattle  
*State\_or\_Province:* Washington  
*Postal\_Code:* 98115-6349



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

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*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:* Vector

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

*SDTS\_Terms\_Description:*

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

*Point\_and\_Vector\_Object\_Count:* 452

*SDTS\_Terms\_Description:*

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

*Point\_and\_Vector\_Object\_Count:* 452

*SDTS\_Terms\_Description:*

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

*Point\_and\_Vector\_Object\_Count:* 1882

*SDTS\_Terms\_Description:*

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

*Point\_and\_Vector\_Object\_Count:* 565514

*SDTS\_Terms\_Description:*

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

*Point\_and\_Vector\_Object\_Count:* 1691

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*Spatial\_Reference\_Information:*

*Horizontal\_Coordinate\_System\_Definition:*

*Geographic:*

*Latitude\_Resolution:* 0.00005

*Longitude\_Resolution:* 0.00005

*Geographic\_Coordinate\_Units:* Decimal degrees

*Geodetic\_Model:*

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

*Ellipsoid\_Name:* Clarke 1866

*Semi-major\_Axis:* 6378206.4

*Denominator\_of\_Flattening\_Ratio:* 294.978698

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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 Western Alaska atlas, the number is 74), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

Due to the complexity of the relational database model, the data items are also post-processed

into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN\_SPEC, S\_F, T\_E, NHP, DATE\_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G\_SOURCE, S\_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED\_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed\_Description of the BREED data table. The link to the BIOFILE may be made through the BIO\_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED\_DT is an auxiliary support data table to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to BREED\_DT is the BREED item.

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

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BIRDS.PAT

*Entity\_Type\_Definition:*

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

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

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (74), 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:* 740100002

*Range\_Domain\_Maximum:* 740100448

*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:* 74000001

*Range\_Domain\_Maximum:* 74000147

*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:* 74000001

*Range\_Domain\_Maximum:* 74000375

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (74), element number (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:* 740100002

*Range\_Domain\_Maximum:* 742201368

*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:* 074000001

*Range\_Domain\_Maximum:* 074000375

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:**Attribute\_Label:* CONC*Attribute\_Definition:*

The field CONC refers to "concentration," abundance, or density values. In this data layer, the field may contain counts of individuals (such as "1000s", ">20000", or "2 pairs") for each species present at a particular nesting or migratory staging site, or a descriptive term (such as "HIGH" or "COMMON") that describes relative abundance of birds at a particular site. In cases where no concentration information was available from any source, the field contains "-". Counts were derived from a variety of surveys, and may range in date.

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* Any character*Enumerated\_Domain\_Value\_Definition:* Free text*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* SEASON\_ID*Attribute\_Definition:*

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

The data table SPECIES identifies all species in the ESI data set. See the

Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

Refer to the Completeness\_Report for a list of layer-specific species.

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

*Attribute*:

*Attribute\_Label*: SPECIES\_ID

*Attribute\_Definition*:

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

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

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1

*Range\_Domain\_Maximum*: N

*Attribute*:

*Attribute\_Label*: NAME

*Attribute\_Definition*: Species common name

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: Species common name for the entire ESI data set

*Enumerated\_Domain\_Value\_Definition*: Free text

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

*Attribute*:

*Attribute\_Label*: GEN\_SPEC

*Attribute\_Definition*: Species scientific name

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: Species scientific name for the entire ESI data set.

*Enumerated\_Domain\_Value\_Definition*: Free text

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

*Attribute*:

*Attribute\_Label*: ELEMENT

*Attribute\_Definition*: Major categories of biological data

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: BIRD

*Enumerated\_Domain\_Value\_Definition*: Birds

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: FISH

*Enumerated\_Domain\_Value\_Definition*: Fish

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: HABITAT

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

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: INVERT

*Enumerated\_Domain\_Value\_Definition*: Invertebrates

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value:* M\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:* Marine Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* REPTILE  
*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* T\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute:*  
*Attribute\_Label:* SUBELEMENT  
*Attribute\_Definition:* Element subgroup delineating a logical grouping of species  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* alcid  
*Enumerated\_Domain\_Value\_Definition:* Alcid  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*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:* bivalve  
*Enumerated\_Domain\_Value\_Definition:* Bivalve  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* crab  
*Enumerated\_Domain\_Value\_Definition:* Crab  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* diadromous  
*Enumerated\_Domain\_Value\_Definition:* Diadromous fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* diving  
*Enumerated\_Domain\_Value\_Definition:* Diving bird  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* dolphin  
*Enumerated\_Domain\_Value\_Definition:* Dolphin  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* e\_nursery

*Enumerated\_Domain\_Value\_Definition:* Estuarine nursery fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* freshwater  
*Enumerated\_Domain\_Value\_Definition:* Freshwater fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* gull\_tern  
*Enumerated\_Domain\_Value\_Definition:* Gull or tern  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* kelp  
*Enumerated\_Domain\_Value\_Definition:* Kelp habitat, community, or species  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* m\_benthic  
*Enumerated\_Domain\_Value\_Definition:* Marine benthic fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* m\_pelagic  
*Enumerated\_Domain\_Value\_Definition:* Marine pelagic fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* passerine  
*Enumerated\_Domain\_Value\_Definition:* Passerine bird  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* pelagic  
*Enumerated\_Domain\_Value\_Definition:* Pelagic bird  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* pinniped  
*Enumerated\_Domain\_Value\_Definition:* Pinniped  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* raptor  
*Enumerated\_Domain\_Value\_Definition:* Raptor  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* sav  
*Enumerated\_Domain\_Value\_Definition:* Submersed aquatic vegetation  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* shorebird  
*Enumerated\_Domain\_Value\_Definition:* Shorebird  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

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



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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

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

*Attribute:*

*Attribute\_Label:* NHP

*Attribute\_Definition:* Natural Heritage Program global ranking

*Attribute\_Definition\_Source:* Network of Natural Heritage Program

*Attribute\_Domain\_Values:*

*Codeset\_Domain:*

*Codeset\_Name:* NHP Global Conservation Status Rank  
*Codeset\_Source:* Natural Heritage Program

*Attribute:*

*Attribute\_Label:* DATE\_PUB

*Attribute\_Definition:* Date of NHP listing

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 0  
*Enumerated\_Domain\_Value\_Definition:* Not ranked  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

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

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

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

*Enumerated\_Domain\_Value\_Definition:*

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

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

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SEASONAL

*Entity\_Type\_Definition:*

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

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

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

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

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

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* SEASON\_ID

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* JAN

*Attribute\_Definition:* January

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

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

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

*Attribute*:

*Attribute\_Label*: FEB

*Attribute\_Definition*: February

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

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

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

*Attribute*:

*Attribute\_Label*: MAR

*Attribute\_Definition*: March

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

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

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

*Attribute*:

*Attribute\_Label*: APR

*Attribute\_Definition*: April

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

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

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

*Attribute*:

*Attribute\_Label*: MAY

*Attribute\_Definition*: May

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

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

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

*Attribute*:

*Attribute\_Label*: JUN

*Attribute\_Definition*: June

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

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

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

*Attribute*:

*Attribute\_Label*: JUL

*Attribute\_Definition*: July

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: X

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

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

*Attribute:**Attribute\_Label:* AUG*Attribute\_Definition:* August*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* X*Enumerated\_Domain\_Value\_Definition:* Present in August*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* SEP*Attribute\_Definition:* September*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* X*Enumerated\_Domain\_Value\_Definition:* Present in September*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* OCT*Attribute\_Definition:* October*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* X*Enumerated\_Domain\_Value\_Definition:* Present in October*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* NOV*Attribute\_Definition:* November*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* X*Enumerated\_Domain\_Value\_Definition:* Present in November*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* DEC*Attribute\_Definition:* December*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* X*Enumerated\_Domain\_Value\_Definition:* Present in December*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* EL\_SPE\_SEA*Attribute\_Definition:*

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

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

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

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

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BREED

*Entity\_Type\_Definition:*

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

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

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

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

*Enumerated\_Domain\_Value\_Definition:*

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

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

*Attribute:*

*Attribute\_Label:* MONTH

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* 12

*Attribute:*

*Attribute\_Label:* BREED1

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED1 = nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning/mating; if ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M\_MAMMAL" then BREED1 = mating.

This attribute is not used for HABITAT or T\_MAMMAL elements.

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

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

question

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* BREED2*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = 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 = juvenile; if ELEMENT is "INVERT" then BREED4 = juvenile; if ELEMENT is "REPTILE" then BREED4 = juvenile; if ELEMENT is "M\_MAMMAL" then BREED4 = molting. This attribute is not used for BIRD, HABITAT, or T\_MAMMAL elements.

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

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

*Enumerated\_Domain\_Value:* Y

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

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

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

*Enumerated\_Domain\_Value:* N

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

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

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

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

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

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

*Attribute:*

*Attribute\_Label:* BREED5

*Attribute\_Definition:*

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

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

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

*Enumerated\_Domain\_Value:* Y

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

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

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

*Enumerated\_Domain\_Value:* N

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

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

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

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

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

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

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

*Entity\_Type\_Label:* SOURCES

*Entity\_Type\_Definition:*

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

structure.

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

*Attribute*:

*Attribute\_Label*: SOURCE\_ID

*Attribute\_Definition*:

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

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

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1

*Range\_Domain\_Maximum*: N

*Attribute*:

*Attribute\_Label*: ORIGINATOR

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

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: Any character

*Enumerated\_Domain\_Value\_Definition*: Free text

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

*Attribute*:

*Attribute\_Label*: DATE\_PUB

*Attribute\_Definition*:

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

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: Numeric

*Enumerated\_Domain\_Value\_Definition*: mmyyyy

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

*Attribute*:

*Attribute\_Label*: TITLE

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

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: Any character

*Enumerated\_Domain\_Value\_Definition*: Free text

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

*Attribute*:

*Attribute\_Label*: DATA\_FORMAT

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

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: Any character

*Enumerated\_Domain\_Value\_Definition*: Free text

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

*Attribute*:

*Attribute\_Label*: PUBLICATION

*Attribute\_Definition*: Additional citation information

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: Any character

*Enumerated\_Domain\_Value\_Definition*: Free text

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



*Attribute:**Attribute\_Label:* SCALE*Attribute\_Definition:* Scale denominator of the source*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* integer*Enumerated\_Domain\_Value\_Definition:* Any integer*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* TIME\_PERIOD*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* Numeric*Enumerated\_Domain\_Value\_Definition:* yyyy*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:* STATUS*Entity\_Type\_Definition:*

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

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

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

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

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* STATE

*Attribute\_Definition:* Two-letter state abbreviation

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Any character

*Enumerated\_Domain\_Value\_Definition:* Two-letter state abbreviation

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

*Attribute:*

*Attribute\_Label:* S\_F

*Attribute\_Definition:* State and Federal status

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* F

*Enumerated\_Domain\_Value\_Definition:* Federally listed

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* S

*Enumerated\_Domain\_Value\_Definition:* State listed

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* S/F

*Enumerated\_Domain\_Value\_Definition:* State and federally listed

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

*Attribute:*

*Attribute\_Label:* T\_E

*Attribute\_Definition:* Threatened and endangered status

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* C

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

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

*Attribute:*

*Attribute\_Label:* DATE\_PUB

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Numeric

*Enumerated\_Domain\_Value\_Definition:* mmyyyy

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

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

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

*Enumerated\_Domain\_Value\_Definition:*

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

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

*Distribution\_Information:*

*Distributor:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:* John Kaperick

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

*Contact\_Address:*

*Address\_Type:* Physical Address

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

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

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

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

*Resource\_Description:* ESI Atlas for Western 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:* 200307

*Metadata\_Review\_Date:* 200307

*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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# Western 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; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

*Publication\_Date:* 200307

*Title:* Western Alaska ESI: NESTS (Nest Points)

*Edition:* First

*Geospatial\_Data\_Presentation\_Form:* Vector digital data

##### *Series\_Information:*

*Series\_Name:* None

*Issue\_Identification:* Western Alaska

##### *Publication\_Information:*

*Publication\_Place:* Seattle, Washington

##### *Publisher:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington

##### *Other\_Citation\_Details:*

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

### *Description:*

#### *Abstract:*

This data set contains sensitive biological resource data for nesting birds in Western Alaska. Vector points in this data set represent locations of nesting birds. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for Western 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 Western 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:* 2002

*Ending\_Date:* 2003

*Currentness\_Reference:*

The biological data were compiled during 2002-2003. The currentness dates for these data range from 1991 to 2001 and are documented in the Source\_Information section.

*Status:*

*Progress:* Complete

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

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -174.0

*East\_Bounding\_Coordinate:* -159.0

*North\_Bounding\_Coordinate:* 64.0

*South\_Bounding\_Coordinate:* 59.0

*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:* Western Alaska

*Place\_Keyword:* Alaska

*Access\_Constraints:* None

*Use\_Constraints:*

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* [datafig.jpg](#)

*Browse\_Graphic\_File\_Description:*

Relationships between spatial data layers and attribute data tables for the Western Alaska ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response

Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) 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, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, invert.e00, lakes.e00, m\_mammal.e00, mgt.e00, nests.e00, socecon.e00, streams.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 hardcopy reports and digital data on bird nesting locations. Refer to the BIRDS (Bird Polygons) data layer for additional nesting information. These data do not necessarily represent all nesting colonies present in Western Alaska. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name, if applicable): 10, Pelagic cormorant, *Phalacrocorax pelagicus*; 36, Glaucous-winged gull, *Larus glaucescens*; 46, Common murre, *Uria aalge*; 47, Pigeon guillemot, *Cepphus columba*; 51, Tufted puffin, *Fratercula cirrhata*; 79, Cormorant, *Phalacrocorax* sp.; 80, Arctic tern, *Sterna paradisaea*; 81, Horned puffin, *Fratercula corniculata*; 82, Glaucous gull, *Larus hyperboreus*; 84, Parakeet auklet, *Aethia psittacula*; 99, Red-faced cormorant, *Phalacrocorax urile*; 100, Black-legged kittiwake, *Rissa tridactyla*; 101, Aleutian tern, *Sterna aleutica*; 103, Common eider, *Somateria mollissima*; 104, Murre, *Uria* sp.; 105, Thick-billed murre, *Uria lomvia*; 109, Crested auklet, *Aethia cristatella*; 111, Least auklet, *Aethia*

pusilla; 129, Northern fulmar, Fulmarus glacialis; 136, Caspian tern, Sterna caspia.

*Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy\_Report:*

This biological data set was developed from pre-existing digital sources and reflect the positional accuracy of these original data. See the Lineage and Process\_Description sections for more information on the original data source and how these data were integrated or manipulated to create the final data set. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources.

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* Stephenson, S. (USFWS, Anchorage)

*Publication\_Date:* Unpublished material

*Title:* Nesting seabird seasonality

*Geospatial\_Data\_Presentation\_Form:* Expert knowledge

*Type\_of\_Source\_Media:* Personal communication

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2001

*Source\_Currentness\_Reference:* Date of communication

*Source\_Citation\_Abbreviation:* None

*Source\_Contribution:* Nest information

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* U.S. Fish and Wildlife Service

*Publication\_Date:* 2002

*Title:* Beringian Seabird Colony Catalog -- computer database

*Geospatial\_Data\_Presentation\_Form:* Vector digital data

*Publication\_Information:*

*Publication\_Place:* Anchorage, AK

*Publisher:* U.S. Fish and Wildlife Service, Migratory Bird Management

*Source\_Scale\_Denominator:* 250,000

*Type\_of\_Source\_Media:* Unknown

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2001

*Source\_Currentness\_Reference:* Date of survey

*Source\_Citation\_Abbreviation:* None

*Source\_Contribution:* Nest information

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* Ritchie, B.J.

*Publication\_Date:* 1978

*Title:*

Seabirds and their Nesting Habitats on Western Nunivak Island, Alaska

*Geospatial\_Data\_Presentation\_Form:* Hardcopy text

*Publication\_Information:*

*Publication\_Place:* Unknown

*Publisher:*

Final Report, Alaska Biological Research, Contract No.



72100-0122, 33 pp + appendices

*Type\_of\_Source\_Media:* Paper*Source\_Time\_Period\_of\_Content:**Time\_Period\_Information:**Single\_Date/Time:**Calendar\_Date:* 1978*Source\_Currentness\_Reference:* Date of publication*Source\_Citation\_Abbreviation:* None*Source\_Contribution:* Nest information*Source\_Information:**Source\_Citation:**Citation\_Information:**Originator:* Winker, K. et. al*Publication\_Date:* 2003*Title:* The birds of St. Matthew Island*Geospatial\_Data\_Presentation\_Form:* Hardcopy text*Publication\_Information:**Publication\_Place:* Unknown*Publisher:* Technical report No. 12: 89-99.*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:* Nest information*Process\_Step:**Process\_Description:*

Two main sources of data, collected during personal interviews, were used to depict bird nesting locations for this data layer: (1) a 2002 US Fish and Wildlife Service (USFWS) "Beringian Seabird Colony Catalog" vector point coverage of seabird nesting sites, and (2) Seabirds and their Nesting Habitats on Western Nunivak Island, Alaska (Ritchie, B.J. 1978. Final Report, Alaska Biological Research, Contract No. 72100-0122, Fairbanks, Alaska, 33 pp + appendices). The 2002 USFWS seabird nesting site vector point data were the basis of the NESTS data layer. This data layer was incorporated into an ArcInfo system along with the other biological data layers, and hardcopy draft maps were created using U.S. Geological Survey 1:250,000 topographic quadrangles as base maps. Following the creation of draft maps, a second set of interviews was conducted with the resource experts. Participants who were unable to attend the meetings were sent a set of maps to review. Edits to the NESTS data layer were made based on the recommendations of the resource experts, including the incorporation of nesting locations described in source (2), and final hardcopy maps were created.

*Process\_Date:* 200305*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:* 54

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*Spatial\_Reference\_Information:**Horizontal\_Coordinate\_System\_Definition:**Geographic:**Latitude\_Resolution:* 0.00005*Longitude\_Resolution:* 0.00005*Geographic\_Coordinate\_Units:* Decimal degrees*Geodetic\_Model:**Horizontal\_Datum\_Name:* North American Datum of 1927*Ellipsoid\_Name:* Clarke 1866*Semi-major\_Axis:* 6378206.4*Denominator\_of\_Flattening\_Ratio:* 294.978698

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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, 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 Western Alaska atlas, the number is 74), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN\_SPEC, S\_F, T\_E, NHP, DATE\_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G\_SOURCE, S\_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED\_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed\_Description of the BREED data table. The link to the BIOFILE may be made through the BIO\_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED\_DT is an auxiliary support data table to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to

BREED\_DT is the BREED item.

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

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* NESTS.PAT

*Entity\_Type\_Definition:*

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

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

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (74), element number (5), and record number.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 740500001

*Range\_Domain\_Maximum:* 740500054

*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:* 74000020

*Range\_Domain\_Maximum:* 74000079

*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:* 74000001

*Range\_Domain\_Maximum:* 74000375

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (74), element number (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:* 740100002

*Range\_Domain\_Maximum:* 742201368

*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:* 074000001

*Range\_Domain\_Maximum:* 074000375

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* CONC

*Attribute\_Definition:*

The field CONC refers to "concentration," abundance, or density values, and contains counts of adult breeding individuals for each species present at a particular nesting site. In cases where no quantitative count was available, the field contains a descriptive term, such as "FAIRLY COMMON". In cases where no quantitative or qualitative information was available, the field contains the term "UNKNOWN". Counts were derived from the last surveyed date at each location, and were extracted from the 2002 US Fish & Wildlife Service "Beringian Seabird Colony Catalog".

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Any character

*Enumerated\_Domain\_Value\_Definition:* Free text

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

*Attribute:*

*Attribute\_Label:* SEASON\_ID

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* G\_SOURCE

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* S\_SOURCE

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

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

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

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

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

*Enumerated\_Domain\_Value\_Definition:*

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

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

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

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

*Enumerated\_Domain\_Value\_Definition:*

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

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

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SPECIES

*Entity\_Type\_Definition:*

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

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

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* NAME

*Attribute\_Definition:* Species common name

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: Species common name for the entire ESI data set

*Enumerated\_Domain\_Value\_Definition*: Free text

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

*Attribute*:

*Attribute\_Label*: GEN\_SPEC

*Attribute\_Definition*: Species scientific name

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: Species scientific name for the entire ESI data set.

*Enumerated\_Domain\_Value\_Definition*: Free text

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

*Attribute*:

*Attribute\_Label*: ELEMENT

*Attribute\_Definition*: Major categories of biological data

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: BIRD

*Enumerated\_Domain\_Value\_Definition*: Birds

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: FISH

*Enumerated\_Domain\_Value\_Definition*: Fish

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: HABITAT

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

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: INVERT

*Enumerated\_Domain\_Value\_Definition*: Invertebrates

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: M\_MAMMAL

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

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: REPTILE

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

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: T\_MAMMAL

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

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

*Attribute*:

*Attribute\_Label*: SUBELEMENT

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

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

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* alcid*Enumerated\_Domain\_Value\_Definition:* Alcid*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*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:* bivalve*Enumerated\_Domain\_Value\_Definition:* Bivalve*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* crab*Enumerated\_Domain\_Value\_Definition:* Crab*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* diadromous*Enumerated\_Domain\_Value\_Definition:* Diadromous fish*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* diving*Enumerated\_Domain\_Value\_Definition:* Diving bird*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* dolphin*Enumerated\_Domain\_Value\_Definition:* Dolphin*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* e\_nursery*Enumerated\_Domain\_Value\_Definition:* Estuarine nursery fish*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* freshwater*Enumerated\_Domain\_Value\_Definition:* Freshwater fish*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* gull\_tern*Enumerated\_Domain\_Value\_Definition:* Gull or tern*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* kelp*Enumerated\_Domain\_Value\_Definition:* Kelp habitat, community, or species



*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.  
*Attribute\_Domain\_Values*:  
*Enumerated\_Domain*:  
*Enumerated\_Domain\_Value*: m\_benthic  
*Enumerated\_Domain\_Value\_Definition*: Marine benthic fish  
*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:  
*Enumerated\_Domain*:  
*Enumerated\_Domain\_Value*: m\_pelagic  
*Enumerated\_Domain\_Value\_Definition*: Marine pelagic fish  
*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:  
*Enumerated\_Domain*:  
*Enumerated\_Domain\_Value*: passerine  
*Enumerated\_Domain\_Value\_Definition*: Passerine bird  
*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:  
*Enumerated\_Domain*:  
*Enumerated\_Domain\_Value*: pelagic  
*Enumerated\_Domain\_Value\_Definition*: Pelagic bird  
*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:  
*Enumerated\_Domain*:  
*Enumerated\_Domain\_Value*: pinniped  
*Enumerated\_Domain\_Value\_Definition*: Pinniped  
*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:  
*Enumerated\_Domain*:  
*Enumerated\_Domain\_Value*: raptor  
*Enumerated\_Domain\_Value\_Definition*: Raptor  
*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:  
*Enumerated\_Domain*:  
*Enumerated\_Domain\_Value*: sav  
*Enumerated\_Domain\_Value\_Definition*: Submersed aquatic vegetation  
*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:  
*Enumerated\_Domain*:  
*Enumerated\_Domain\_Value*: shorebird  
*Enumerated\_Domain\_Value\_Definition*: Shorebird  
*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:  
*Enumerated\_Domain*:  
*Enumerated\_Domain\_Value*: wading  
*Enumerated\_Domain\_Value\_Definition*: Wading bird  
*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:  
*Enumerated\_Domain*:  
*Enumerated\_Domain\_Value*: waterfowl  
*Enumerated\_Domain\_Value\_Definition*: Waterfowl  
*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:  
*Enumerated\_Domain*:  
*Enumerated\_Domain\_Value*: whale  
*Enumerated\_Domain\_Value\_Definition*: Whale  
*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: NHP

*Attribute\_Definition*: Natural Heritage Program global ranking

*Attribute\_Definition\_Source*: Network of Natural Heritage Program

*Attribute\_Domain\_Values:*

*Codeset\_Domain:*

*Codeset\_Name:* NHP Global Conservation Status Rank

*Codeset\_Source:* Natural Heritage Program

*Attribute:*

*Attribute\_Label:* DATE\_PUB

*Attribute\_Definition:* Date of NHP listing

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 0

*Enumerated\_Domain\_Value\_Definition:* Not ranked

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Numeric

*Enumerated\_Domain\_Value\_Definition:* mmyyyy

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

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

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

*Enumerated\_Domain\_Value\_Definition:*

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

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

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SEASONAL

*Entity\_Type\_Definition:*

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

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

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

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

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

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

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

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

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* N*Attribute:**Attribute\_Label:* JAN*Attribute\_Definition:* January*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* X*Enumerated\_Domain\_Value\_Definition:* Present in January*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* FEB*Attribute\_Definition:* February*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* X*Enumerated\_Domain\_Value\_Definition:* Present in February*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* MAR

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

*Attribute:*

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

*Attribute:*

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

*Attribute:*

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

*Attribute:*

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

*Attribute:*

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

*Attribute:*

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

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

*Attribute:*

*Attribute\_Label:* OCT

*Attribute\_Definition:* October

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

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

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

*Attribute:*

*Attribute\_Label:* NOV

*Attribute\_Definition:* November

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

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

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

*Attribute:*

*Attribute\_Label:* DEC

*Attribute\_Definition:* December

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

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

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

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

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

*Enumerated\_Domain\_Value\_Definition:*

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

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

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BREED

*Entity\_Type\_Definition:*

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

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

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

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

*Enumerated\_Domain\_Value\_Definition:*

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

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

*Attribute:*

*Attribute\_Label:* MONTH

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* 12

*Attribute:*

*Attribute\_Label:* BREED1

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED1 = nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning/mating; if ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M\_MAMMAL" then BREED1 = mating.

This attribute is not used for HABITAT or T\_MAMMAL elements.

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

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

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

*Attribute:*

*Attribute\_Label:* BREED2

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = 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 = juvenile; if ELEMENT is "INVERT" then BREED4 = juvenile; if ELEMENT is "REPTILE" then BREED4 = juvenile; if ELEMENT is "M\_MAMMAL" then BREED4 = molting. This attribute is not used for BIRD, HABITAT, or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* Y*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* N*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not

present

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

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

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

*Attribute:*

*Attribute\_Label:* BREED5

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

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

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

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SOURCES

*Entity\_Type\_Definition:*

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

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

*Attribute:*

*Attribute\_Label:* SOURCE\_ID

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* ORIGINATOR

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

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



*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Any character

*Enumerated\_Domain\_Value\_Definition:* Free text

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

*Attribute:*

*Attribute\_Label:* DATE\_PUB

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Numeric

*Enumerated\_Domain\_Value\_Definition:* mmyyyy

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

*Attribute:*

*Attribute\_Label:* TITLE

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Any character

*Enumerated\_Domain\_Value\_Definition:* Free text

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

*Attribute:*

*Attribute\_Label:* DATA\_FORMAT

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Any character

*Enumerated\_Domain\_Value\_Definition:* Free text

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

*Attribute:*

*Attribute\_Label:* PUBLICATION

*Attribute\_Definition:* Additional citation information

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Any character

*Enumerated\_Domain\_Value\_Definition:* Free text

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

*Attribute:*

*Attribute\_Label:* SCALE

*Attribute\_Definition:* Scale denominator of the source

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* integer

*Enumerated\_Domain\_Value\_Definition:* Any integer

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

*Attribute:*

*Attribute\_Label:* TIME\_PERIOD

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Numeric

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

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

*Entity\_Type\_Label:* STATUS

*Entity\_Type\_Definition:*

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

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

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

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

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

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:**Attribute\_Label:* STATE*Attribute\_Definition:* Two-letter state abbreviation*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* Any character*Enumerated\_Domain\_Value\_Definition:* Two-letter state abbreviation*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* S\_F*Attribute\_Definition:* State and Federal status.*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* F*Enumerated\_Domain\_Value\_Definition:* Federally listed*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* S*Enumerated\_Domain\_Value\_Definition:* State listed*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* S/F*Enumerated\_Domain\_Value\_Definition:* State and federally listed*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* T\_E*Attribute\_Definition:* Threatened and endangered status.*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* E*Enumerated\_Domain\_Value\_Definition:* Endangered on state or federal list*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* T*Enumerated\_Domain\_Value\_Definition:* Threatened on state or federal list*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* C*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service*Attribute:**Attribute\_Label:* DATE\_PUB*Attribute\_Definition:*

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

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

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

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

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

*Enumerated\_Domain\_Value\_Definition:*

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

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

*Distribution\_Information:*

*Distributor:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:* John Kaperick

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

*Contact\_Address:*

*Address\_Type:* Physical Address

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

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

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

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

*Resource\_Description:* ESI Atlas for Western 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:* 200307

*Metadata\_Review\_Date:* 200307

*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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# Western 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; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

*Publication\_Date:* 200307

*Title:* Western Alaska ESI: FISH (Fish Polygons)

*Edition:* First

*Geospatial\_Data\_Presentation\_Form:* Vector digital data

##### *Series\_Information:*

*Series\_Name:* None

*Issue\_Identification:* Western Alaska

##### *Publication\_Information:*

*Publication\_Place:* Seattle, Washington

##### *Publisher:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington

##### *Other\_Citation\_Details:*

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

### *Description:*

#### *Abstract:*

This data set contains sensitive biological resource data for marine, estuarine, and anadromous fish species in Western 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 Western 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 Western Alaska ESI database, for additional anadromous 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:* 2002

*Ending\_Date:* 2003

*Currentness\_Reference:*

The biological data were compiled during 2001-2003. The currentness dates for these data range from 1983 to 2002 and are documented in the Source\_Information section.

*Status:*

*Progress:* Complete

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

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -174.0

*East\_Bounding\_Coordinate:* -159.0

*North\_Bounding\_Coordinate:* 64.0

*South\_Bounding\_Coordinate:* 59.0

*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:* Western Alaska

*Place\_Keyword:* Alaska

*Access\_Constraints:* None

*Use\_Constraints:*

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* [datafig.jpg](#)

*Browse\_Graphic\_File\_Description:*

Relationships between spatial data layers and attribute data tables for the Western Alaska ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska;

Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) 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, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, invert.e00, lakes.e00, m\_mammal.e00, mgt.e00, nests.e00, socecon.e00, streams.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 "resources at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

*Completeness\_Report:*

These data represent a synthesis of expert knowledge and available hardcopy maps and digital data on fish distribution. Refer to the FISHL (Fish Lines) data layer for additional information on anadromous fish species. These data do not represent all fish occurrences in Western Alaska. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name, if applicable): 7, Pacific halibut, Hippoglossus stenolepis; 9, Rock sole, Lepidopsetta bilineata; 12, Starry flounder, Platichthys stellatus; 19, Pacific cod, Gadus macrocephalus; 22, Walleye pollock, Theragra chalcogramma; 66, Pacific herring, Clupea pallasii; 68, Chinook salmon, Oncorhynchus tshawytscha; 69, Coho salmon (silver), Oncorhynchus kisutch; 70, Pink salmon (humpy), Oncorhynchus gorbuscha; 72, Chum salmon (dog), Oncorhynchus keta; 78, Capelin, Mallotus villosus; 84, Rainbow smelt, Osmerus mordax; 135, Dolly varden, Salvelinus malma; 459, Alaska plaice, Pleuronectes quadrituberculatus; 461, Yellowfin sole, Limanda aspera; 567, Sculpin, Cottidae; 697, Whitefish; 698, Sheefish, Stenodus leucichthys nelma; 699, Saffron cod, Eleqinus gracilis; 905,



Arctic lamprey, *Lampetra camtschatica*.

*Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy\_Report:*

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

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* Bue, F. (ADF&G, Fairbanks)

*Publication\_Date:* Unpublished material

*Title:* Anadromous fish distribution and seasonality

*Geospatial\_Data\_Presentation\_Form:* Expert knowledge

*Type\_of\_Source\_Media:* Personal communication

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2001

*Source\_Currentness\_Reference:* Date of communication

*Source\_Citation\_Abbreviation:* None

*Source\_Contribution:* Fish information

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* Lean, C. (NPS, Nome)

*Publication\_Date:* Unpublished material

*Title:* Fish and invertebrate concentration areas

*Geospatial\_Data\_Presentation\_Form:* Expert knowledge

*Type\_of\_Source\_Media:* Personal communication

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2001

*Source\_Currentness\_Reference:* Date of communication

*Source\_Citation\_Abbreviation:* None

*Source\_Contribution:* Fish information

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* ADF&G Commercial Fisheries (Anc.)

*Publication\_Date:* Unpublished material

*Title:* Marine fish distribution

*Geospatial\_Data\_Presentation\_Form:* Expert knowledge

*Type\_of\_Source\_Media:* Personal communication

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2002

*Source\_Currentness\_Reference:* Date of communication

*Source\_Citation\_Abbreviation:* None

*Source\_Contribution:* Fish information  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* Eagleton, M. (NMFS, Anchorage)  
*Publication\_Date:* Unpublished material  
*Title:* Essential Fish Habitat distribution/seasonality  
*Geospatial\_Data\_Presentation\_Form:* Expert knowledge  
*Type\_of\_Source\_Media:* Personal communication  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:* 2002  
*Source\_Currentness\_Reference:* Date of communication  
*Source\_Citation\_Abbreviation:* None  
*Source\_Contribution:* Fish information  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* DeCicco, F. (ADF&G, Fairbanks)  
*Publication\_Date:* Unpublished material  
*Title:* Anadromous fish distribution and seasonality  
*Geospatial\_Data\_Presentation\_Form:* Expert knowledge  
*Type\_of\_Source\_Media:* Personal communication  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:* 2001  
*Source\_Currentness\_Reference:* Date of communication  
*Source\_Citation\_Abbreviation:* None  
*Source\_Contribution:* Fish information  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* Alaska Dept. of Fish and Game (ADF&G).  
*Publication\_Date:* 1983  
*Title:* Offshore prospecting permits: coastal habitats  
*Geospatial\_Data\_Presentation\_Form:* Hardcopy map  
*Publication\_Information:*  
*Publication\_Place:* Unknown  
*Publisher:* Alaska Department of Fish & Game (ADF&G)  
*Source\_Scale\_Denominator:* 250,000  
*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:* Fish information  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* Alaska Dept. of Fish & Game (ADF&G)  
*Publication\_Date:* 1986  
*Title:* Alaska habitat management guide, arctic region, map atlas.  
*Geospatial\_Data\_Presentation\_Form:* Hardcopy map  
*Publication\_Information:*  
*Publication\_Place:* Juneau, AK  
*Publisher:* Alaska Dept. of Fish & Game, Habitat Division

*Source\_Scale\_Denominator:* 1,000,000  
*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:* Fish information  
*Source\_Information:*  
     *Source\_Citation:*  
         *Citation\_Information:*  
             *Originator:* Ward, T. (ADF&G, Bethel)  
             *Publication\_Date:* Unpublished material  
             *Title:* Pacific herring spawning sites  
             *Geospatial\_Data\_Presentation\_Form:* Expert knowledge  
     *Source\_Scale\_Denominator:* 24,000  
     *Type\_of\_Source\_Media:* Personal communication  
     *Source\_Time\_Period\_of\_Content:*  
         *Time\_Period\_Information:*  
             *Single\_Date/Time:*  
                 *Calendar\_Date:* 2002  
         *Source\_Currentness\_Reference:* Date of communication  
     *Source\_Citation\_Abbreviation:* None  
     *Source\_Contribution:* Fish information  
*Source\_Information:*  
     *Source\_Citation:*  
         *Citation\_Information:*  
             *Originator:* Pahlke, K. (ADF&G, Juneau)  
             *Publication\_Date:* Unpublished material  
             *Title:* Capelin spawning seasonality  
             *Geospatial\_Data\_Presentation\_Form:* Expert knowledge  
     *Type\_of\_Source\_Media:* Personal communication  
     *Source\_Time\_Period\_of\_Content:*  
         *Time\_Period\_Information:*  
             *Single\_Date/Time:*  
                 *Calendar\_Date:* 2002  
         *Source\_Currentness\_Reference:* Date of communication  
     *Source\_Citation\_Abbreviation:* None  
     *Source\_Contribution:* Fish information  
*Source\_Information:*  
     *Source\_Citation:*  
         *Citation\_Information:*  
             *Originator:* Salamone, P.  
             *Publication\_Date:* Unpublished material  
             *Title:* Pacific herring and eelgrass distribution and seasonality  
             *Geospatial\_Data\_Presentation\_Form:* Expert knowledge  
     *Type\_of\_Source\_Media:* Personal communication  
     *Source\_Time\_Period\_of\_Content:*  
         *Time\_Period\_Information:*  
             *Single\_Date/Time:*  
                 *Calendar\_Date:* 2002  
         *Source\_Currentness\_Reference:* Date of communication  
     *Source\_Citation\_Abbreviation:* None  
     *Source\_Contribution:* Fish information  
*Source\_Information:*  
     *Source\_Citation:*  
         *Citation\_Information:*  
             *Originator:* National Marine Fisheries Service  
             *Publication\_Date:* 1998

*Title:* Habitat assessment reports for Essential Fish Habitat  
*Geospatial\_Data\_Presentation\_Form:* Vector digital data

*Publication\_Information:*

*Publication\_Place:* Unknown

*Publisher:* NMFS, the North Pacific Fishery Management Council, and ADF&G

*Source\_Scale\_Denominator:* Unknown

*Type\_of\_Source\_Media:* Online

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 1998

*Source\_Currentness\_Reference:* Date of publication

*Source\_Citation\_Abbreviation:* None

*Source\_Contribution:* Fish information

*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 National Park Service (NPS), Alaska Department of Fish & Game (ADF&G), and NOAA National Marine Fisheries Service (NMFS); (2) 1983 ADF&G Offshore Prospecting Permits: Coastal Habitat Maps; and (3) 1998 NMFS Essential Fish Habitat (EFH) digital coverages depicting distribution of marine pelagic and benthic species. Information gathered during initial interviews and from hardcopy maps was compiled onto U.S. Geological Survey 1:250,000 topographic quadrangles. The compiled data were digitized off the base maps into an ArcInfo system to create the FISH data layer. The EFH digital coverages were incorporated into this data layer. All ESI, biology, and human-use data were plotted onto hardcopy draft maps. Following the creation of draft maps, a second set of interviews with resource experts was conducted. Participants who were unable to attend the meetings were sent a set of maps to review. Edits to the FISH data layer were made based on the recommendations of the resource experts, and final hardcopy maps were created.

*Process\_Date:* 200305

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

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

*Contact\_Person:* Jill Petersen

*Contact\_Address:*

*Address\_Type:* Physical address

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

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

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

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

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

*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:* Vector

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

*SDTS\_Terms\_Description:*

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

*Point\_and\_Vector\_Object\_Count:* 366

*SDTS\_Terms\_Description:*

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

*Point\_and\_Vector\_Object\_Count:* 366

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:* Complete chain*Point\_and\_Vector\_Object\_Count:* 1237*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:* Link*Point\_and\_Vector\_Object\_Count:* 330264*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:* Node, planar graph*Point\_and\_Vector\_Object\_Count:* 1138*Spatial\_Reference\_Information:**Horizontal\_Coordinate\_System\_Definition:**Geographic:**Latitude\_Resolution:* 0.00005*Longitude\_Resolution:* 0.00005*Geographic\_Coordinate\_Units:* Decimal degrees*Geodetic\_Model:**Horizontal\_Datum\_Name:* North American Datum of 1927*Ellipsoid\_Name:* Clarke 1866*Semi-major\_Axis:* 6378206.4*Denominator\_of\_Flattening\_Ratio:* 294.978698*Entity\_and\_Attribute\_Information:**Overview\_Description:**Entity\_and\_Attribute\_Overview:*

In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, FISH) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO\_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (for the Western Alaska atlas, the number is 74) an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN\_SPEC, S\_F, T\_E, NHP, DATE\_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G\_SOURCE, S\_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED\_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed\_Description of the BREED data table. The link to the BIOFILE may be made through the BIO\_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED\_DT is an auxiliary support data table to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to

BREED\_DT is the BREED item.

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

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* FISH.PAT

*Entity\_Type\_Definition:*

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

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

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (74), 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:* 740200002

*Range\_Domain\_Maximum:* 740200403

*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:* 74000148

*Range\_Domain\_Maximum:* 74000300

*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:* 74000001  
*Range\_Domain\_Maximum:* 74000375

*Attribute:**Attribute\_Label:* ID*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (74), element number (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:* 740100002*Range\_Domain\_Maximum:* 742201368*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:* 074000001*Range\_Domain\_Maximum:* 074000375*Attribute:**Attribute\_Label:* SPECIES\_ID*Attribute\_Definition:*

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

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

The field CONC refers to "concentration", abundance, or density value of a species at a particular location. No concentration information was available for fish, so the CONC field contains "-".

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* Any character*Enumerated\_Domain\_Value\_Definition:* Free text*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* SEASON\_ID*Attribute\_Definition:*

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

each species at a given location.

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

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1

*Range\_Domain\_Maximum*: N

*Attribute*:

*Attribute\_Label*: G\_SOURCE

*Attribute\_Definition*:

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

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

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1

*Range\_Domain\_Maximum*: N

*Attribute*:

*Attribute\_Label*: S\_SOURCE

*Attribute\_Definition*:

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

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

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1

*Range\_Domain\_Maximum*: N

*Attribute*:

*Attribute\_Label*: ELEMENT

*Attribute\_Definition*: Major categories of biological data

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: BIRD

*Enumerated\_Domain\_Value\_Definition*: Birds

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: FISH

*Enumerated\_Domain\_Value\_Definition*: Fish

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: HABITAT

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

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: INVERT

*Enumerated\_Domain\_Value\_Definition*: Invertebrates

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: M\_MAMMAL

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

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: REPTILE

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

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



*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* T\_MAMMAL*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* EL\_SPE*Attribute\_Definition:*

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

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

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

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

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

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

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

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

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

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

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* N*Attribute:**Attribute\_Label:* NAME*Attribute\_Definition:* Species common name*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:*

*Enumerated\_Domain\_Value*: Species common name for the entire ESI data set  
*Enumerated\_Domain\_Value\_Definition*: Free text  
*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute:*

*Attribute\_Label*: GEN\_SPEC  
*Attribute\_Definition*: Species scientific name  
*Attribute\_Definition\_Source*: Research Planning, Inc.  
*Attribute\_Domain\_Values*:

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value*: Species scientific name for the entire ESI data set.  
*Enumerated\_Domain\_Value\_Definition*: Free text  
*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute:*

*Attribute\_Label*: ELEMENT  
*Attribute\_Definition*: Major categories of biological data  
*Attribute\_Definition\_Source*: Research Planning, Inc.  
*Attribute\_Domain\_Values*:

*Enumerated\_Domain:*

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

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

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

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

*Enumerated\_Domain\_Value*: HABITAT  
*Enumerated\_Domain\_Value\_Definition*: Habitats and Plants  
*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

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

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

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

*Enumerated\_Domain\_Value*: M\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition*: Marine Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

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

*Enumerated\_Domain\_Value*: REPTILE  
*Enumerated\_Domain\_Value\_Definition*: Reptiles and Amphibians  
*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

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

*Enumerated\_Domain\_Value*: T\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition*: Terrestrial Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute:*

*Attribute\_Label*: SUBELEMENT  
*Attribute\_Definition*: Element subgroup delineating a logical grouping of species  
*Attribute\_Definition\_Source*: Research Planning, Inc.  
*Attribute\_Domain\_Values*:

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value*: alcid

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

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* crab  
*Enumerated\_Domain\_Value\_Definition:* Crab  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* diadromous  
*Enumerated\_Domain\_Value\_Definition:* Diadromous fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* diving  
*Enumerated\_Domain\_Value\_Definition:* Diving bird  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* dolphin  
*Enumerated\_Domain\_Value\_Definition:* Dolphin  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* e\_nursery  
*Enumerated\_Domain\_Value\_Definition:* Estuarine nursery fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* freshwater  
*Enumerated\_Domain\_Value\_Definition:* Freshwater fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* gull\_tern  
*Enumerated\_Domain\_Value\_Definition:* Gull or tern  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* kelp  
*Enumerated\_Domain\_Value\_Definition:* Kelp habitat, community, or species  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

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

*Enumerated\_Domain\_Value:* m\_benthic  
*Enumerated\_Domain\_Value\_Definition:* Marine benthic fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* m\_pelagic  
*Enumerated\_Domain\_Value\_Definition:* Marine pelagic fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* passerine  
*Enumerated\_Domain\_Value\_Definition:* Passerine bird  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* pelagic  
*Enumerated\_Domain\_Value\_Definition:* Pelagic bird  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* pinniped  
*Enumerated\_Domain\_Value\_Definition:* Pinniped  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* raptor  
*Enumerated\_Domain\_Value\_Definition:* Raptor  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* sav  
*Enumerated\_Domain\_Value\_Definition:* Submersed aquatic vegetation  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* shorebird  
*Enumerated\_Domain\_Value\_Definition:* Shorebird  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* wading  
*Enumerated\_Domain\_Value\_Definition:* Wading bird  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* waterfowl  
*Enumerated\_Domain\_Value\_Definition:* Waterfowl  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* whale  
*Enumerated\_Domain\_Value\_Definition:* Whale  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute:*  
*Attribute\_Label:* NHP  
*Attribute\_Definition:* Natural Heritage Program global ranking  
*Attribute\_Definition\_Source:* Network of Natural Heritage Program  
*Attribute\_Domain\_Values:*  
*Codeset\_Domain:*  
*Codeset\_Name:* NHP Global Conservation Status Rank

*Codeset\_Source*: Natural Heritage Program

*Attribute*:

*Attribute\_Label*: DATE\_PUB

*Attribute\_Definition*: Date of NHP listing

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: 0

*Enumerated\_Domain\_Value\_Definition*: Not ranked

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: Numeric

*Enumerated\_Domain\_Value\_Definition*: mmyyyy

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

*Attribute*:

*Attribute\_Label*: EL\_SPE

*Attribute\_Definition*:

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

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

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

*Enumerated\_Domain\_Value\_Definition*:

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

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

*Detailed\_Description*:

*Entity\_Type*:

*Entity\_Type\_Label*: SEASONAL

*Entity\_Type\_Definition*:

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

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

*Attribute*:

*Attribute\_Label*: ELEMENT

*Attribute\_Definition*: Major categories of biological data

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: BIRD

*Enumerated\_Domain\_Value\_Definition*: Birds

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: FISH

*Enumerated\_Domain\_Value\_Definition*: Fish

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: HABITAT

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

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

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

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

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

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* SEASON\_ID

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* JAN

*Attribute\_Definition:* January

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

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

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

*Attribute:*

*Attribute\_Label:* FEB

*Attribute\_Definition:* February

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

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

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

*Attribute:*

*Attribute\_Label:* MAR

*Attribute\_Definition:* March

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:**Enumerated\_Domain\_Value: X**Enumerated\_Domain\_Value\_Definition: Present in March**Enumerated\_Domain\_Value\_Definition\_Source: Research Planning, Inc.**Attribute:**Attribute\_Label: APR**Attribute\_Definition: April**Attribute\_Definition\_Source: Research Planning, Inc.**Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value: X**Enumerated\_Domain\_Value\_Definition: Present in April**Enumerated\_Domain\_Value\_Definition\_Source: Research Planning, Inc.**Attribute:**Attribute\_Label: MAY**Attribute\_Definition: May**Attribute\_Definition\_Source: Research Planning, Inc.**Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value: X**Enumerated\_Domain\_Value\_Definition: Present in May**Enumerated\_Domain\_Value\_Definition\_Source: Research Planning, Inc.**Attribute:**Attribute\_Label: JUN**Attribute\_Definition: June**Attribute\_Definition\_Source: Research Planning, Inc.**Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value: X**Enumerated\_Domain\_Value\_Definition: Present in June**Enumerated\_Domain\_Value\_Definition\_Source: Research Planning, Inc.**Attribute:**Attribute\_Label: JUL**Attribute\_Definition: July**Attribute\_Definition\_Source: Research Planning, Inc.**Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value: X**Enumerated\_Domain\_Value\_Definition: Present in July**Enumerated\_Domain\_Value\_Definition\_Source: Research Planning, Inc.**Attribute:**Attribute\_Label: AUG**Attribute\_Definition: August**Attribute\_Definition\_Source: Research Planning, Inc.**Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value: X**Enumerated\_Domain\_Value\_Definition: Present in August**Enumerated\_Domain\_Value\_Definition\_Source: Research Planning, Inc.**Attribute:**Attribute\_Label: SEP**Attribute\_Definition: September**Attribute\_Definition\_Source: Research Planning, Inc.**Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value: X**Enumerated\_Domain\_Value\_Definition: Present in September**Enumerated\_Domain\_Value\_Definition\_Source: Research Planning, Inc.**Attribute:**Attribute\_Label: OCT*

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

*Attribute:*

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

*Attribute:*

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

*Attribute:*

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

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

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

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA  
*Attribute\_Definition:*  
 Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BREED data table to records in the BIoRES and SEASONAL data tables.  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:* E#####  
         *Enumerated\_Domain\_Value\_Definition:*  
             Where E is the first character of ELEMENT, the next five



characters are SPECIES\_ID, and the last two characters are SEASON\_ID (eg. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

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

*Attribute:*

*Attribute\_Label:* MONTH

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* 12

*Attribute:*

*Attribute\_Label:* BREED1

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

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

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

*Attribute:*

*Attribute\_Label:* BREED2

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = 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 = juvenile; if ELEMENT is "INVERT" then BREED4 = juvenile; if ELEMENT is "REPTILE" then BREED4 = juvenile; if ELEMENT is "M\_MAMMAL" then BREED4 = molting. This attribute is not used for BIRD, HABITAT, or T\_MAMMAL elements.

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:**Enumerated\_Domain\_Value:* -*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* BREED5*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* Y*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* N*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* -*Enumerated\_Domain\_Value\_Definition:*

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

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

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

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

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* N*Attribute:**Attribute\_Label:* ORIGINATOR*Attribute\_Definition:* Author or developer of source material or data set*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* Any character

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

*Attribute:*

*Attribute\_Label:* DATE\_PUB  
*Attribute\_Definition:*  
 Date of source material, publication, or date of personal communication with expert source  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* Numeric  
*Enumerated\_Domain\_Value\_Definition:* mmyyyy  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* TITLE  
*Attribute\_Definition:* Title of source material or data  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* Any character  
*Enumerated\_Domain\_Value\_Definition:* Free text  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* DATA\_FORMAT  
*Attribute\_Definition:* The format of the source material  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* Any character  
*Enumerated\_Domain\_Value\_Definition:* Free text  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* PUBLICATION  
*Attribute\_Definition:* Additional citation information  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* Any character  
*Enumerated\_Domain\_Value\_Definition:* Free text  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SCALE  
*Attribute\_Definition:* Scale denominator of the source  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* integer  
*Enumerated\_Domain\_Value\_Definition:* Any integer  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* TIME\_PERIOD  
*Attribute\_Definition:*  
 Date(s) of data collection that the source material is based upon.  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* Numeric  
*Enumerated\_Domain\_Value\_Definition:* yyyy  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Detailed\_Description:*

*Entity\_Type:**Entity\_Type\_Label:* STATUS*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* ELEMENT*Attribute\_Definition:* Major categories of biological data*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* BIRD*Enumerated\_Domain\_Value\_Definition:* Birds*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* FISH*Enumerated\_Domain\_Value\_Definition:* Fish*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* HABITAT*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* INVERT*Enumerated\_Domain\_Value\_Definition:* Invertebrates*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* M\_MAMMAL*Enumerated\_Domain\_Value\_Definition:* Marine Mammals*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* REPTILE*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* T\_MAMMAL*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* SPECIES\_ID*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* N*Attribute:**Attribute\_Label:* STATE*Attribute\_Definition:* Two-letter state abbreviation

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Any character

*Enumerated\_Domain\_Value\_Definition:* Two-letter state abbreviation

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

*Attribute:*

*Attribute\_Label:* S\_F

*Attribute\_Definition:* State and Federal status

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* F

*Enumerated\_Domain\_Value\_Definition:* Federally listed

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* S

*Enumerated\_Domain\_Value\_Definition:* State listed

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* S/F

*Enumerated\_Domain\_Value\_Definition:* State and federally listed

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

*Attribute:*

*Attribute\_Label:* T\_E

*Attribute\_Definition:* Threatened and endangered status

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* C

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

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

*Attribute:*

*Attribute\_Label:* DATE\_PUB

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Numeric

*Enumerated\_Domain\_Value\_Definition:* mmyyyy

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

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

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

*Enumerated\_Domain\_Value\_Definition:*

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

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

*Distribution\_Information:*

*Distributor:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:* John Kaperick

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

*Contact\_Address:*

*Address\_Type:* Physical Address

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

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

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

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

*Resource\_Description:* ESI Atlas for Western 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:* 200307

*Metadata\_Review\_Date:* 200307

*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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# Western 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; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

*Publication\_Date:* 200307

*Title:* Western Alaska ESI: FISHL (Fish Lines)

*Edition:* First

*Geospatial\_Data\_Presentation\_Form:* Vector digital data

##### *Series\_Information:*

*Series\_Name:* None

*Issue\_Identification:* Western Alaska

##### *Publication\_Information:*

*Publication\_Place:* Seattle, Washington

##### *Publisher:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington

##### *Other\_Citation\_Details:*

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

### *Description:*

#### *Abstract:*

This data set contains sensitive biological resource data for anadromous fish species in Western Alaska. Vector lines in this data set represent species occurrences in rivers and streams. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for Western 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 Western Alaska ESI database, for additional anadromous 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:* 2002

*Ending\_Date:* 2003

*Currentness\_Reference:*

The biological data were compiled during 2002-2003. The currentness dates for these data range from 1998 to 2002 and are documented in the Source\_Information section.

*Status:*

*Progress:* Complete

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

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -174.0

*East\_Bounding\_Coordinate:* -159.0

*North\_Bounding\_Coordinate:* 64.0

*South\_Bounding\_Coordinate:* 59.0

*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:* Western Alaska

*Place\_Keyword:* Alaska

*Access\_Constraints:* None

*Use\_Constraints:*

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* [datafig.jpg](#)

*Browse\_Graphic\_File\_Description:*

Relationships between spatial data layers and attribute data tables for the Western Alaska ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska;

Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) 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, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, invert.e00, lakes.e00, m\_mammal.e00, mgt.e00, nests.e00, socecon.e00, streams.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 data and expert knowledge on anadromous fish species distribution. Refer to the FISH (Fish Polygons) data layer for additional anadromous fish species occurrence data. These data do not necessarily represent all anadromous fish occurrences in Western Alaska. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name, if applicable): 68, Chinook salmon, *Oncorhynchus tshawytscha*; 69, Coho salmon (silver), *Oncorhynchus kisutch*; 70, Pink salmon (humpy), *Oncorhynchus gorbuscha*; 71, Sockeye salmon (red), *Oncorhynchus nerka*; 72, Chum salmon (dog), *Oncorhynchus keta*; 74, Rainbow trout (steelhead), *Oncorhynchus mykiss*; 84, Rainbow smelt, *Osmerus mordax*; 135, Dolly varden, *Salvelinus malma*; 189, Arctic char, *Salvelinus alpinus*; 697, Whitefish; 698, Sheefish, *Stenodus leucichthys nelma*; 905, Arctic lamprey, *Lampetra camtschatica*.

*Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy\_Report:*

This biological data set was developed from pre-existing digital sources and reflects the positional accuracy of these original data. See the Lineage and Process\_Description sections for more information on the original data source and how these data were integrated or manipulated to create the final data set. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources.

*Lineage:**Source\_Information:**Source\_Citation:**Citation\_Information:**Originator:* Bue, F. (ADF&G, Fairbanks)*Publication\_Date:* Unpublished material*Title:* Anadromous fish distribution and seasonality*Geospatial\_Data\_Presentation\_Form:* Expert knowledge*Type\_of\_Source\_Media:* Personal communication*Source\_Time\_Period\_of\_Content:**Time\_Period\_Information:**Single\_Date/Time:**Calendar\_Date:* 2001*Source\_Currentness\_Reference:* Date of communication*Source\_Citation\_Abbreviation:* None*Source\_Contribution:* Fish information*Source\_Information:**Source\_Citation:**Citation\_Information:**Originator:* DeCicco, F. (ADF&G, Fairbanks)*Publication\_Date:* Unpublished material*Title:* Anadromous fish distribution and seasonality*Geospatial\_Data\_Presentation\_Form:* Expert knowledge*Type\_of\_Source\_Media:* Personal communication*Source\_Time\_Period\_of\_Content:**Time\_Period\_Information:**Single\_Date/Time:**Calendar\_Date:* 2001*Source\_Currentness\_Reference:* Date of communication*Source\_Citation\_Abbreviation:* None*Source\_Contribution:* Fish information*Source\_Information:**Source\_Citation:**Citation\_Information:**Originator:* Alaska Dept. of Fish & Game (ADF&G)*Publication\_Date:* 2002*Title:* Anadromous streams*Geospatial\_Data\_Presentation\_Form:* Vector digital data*Publication\_Information:**Publication\_Place:* Anchorage, AK*Publisher:* Alaska Department of Fish & Game (ADF&G)*Source\_Scale\_Denominator:* 63,360*Type\_of\_Source\_Media:* Unknown*Source\_Time\_Period\_of\_Content:**Time\_Period\_Information:**Range\_of\_Dates/Times:**Beginning\_Date:* 1998*Ending\_Date:* 2002*Source\_Currentness\_Reference:* Date of survey*Source\_Citation\_Abbreviation:* None*Source\_Contribution:* Fish information*Source\_Information:*

*Source\_Citation:**Citation\_Information:**Originator:* Togiak NWR map (Dillingham, AK)*Publication\_Date:* Unpublished material*Title:* Togiak NWR species distribution*Geospatial\_Data\_Presentation\_Form:* Hardcopy map*Source\_Scale\_Denominator:* 250,000*Type\_of\_Source\_Media:* Paper*Source\_Time\_Period\_of\_Content:**Time\_Period\_Information:**Single\_Date/Time:**Calendar\_Date:* 2002*Source\_Currentness\_Reference:* Date of communication*Source\_Citation\_Abbreviation:* None*Source\_Contribution:* Fish information*Process\_Step:**Process\_Description:*

Two main sources of data were used for this data layer: (1) personal interviews with resource experts from Alaska Dept. of Fish & Game (ADF&G); and (2) a 2002 vector arc "Anadromous Streams - Arctic Region" coverage. Occurrences of anadromous fish species were depicted as lines that represented the extent of their distribution in each stream. The 2002 ADF&G vector arc data was the basis of the FISHL data layer. This data layer was incorporated into the ArcInfo system along with the other biology data layers, and hardcopy draft maps were created using U.S. Geological Survey 1:250,000 topographic quadrangles as base maps. Following the creation of draft maps, a set of interviews was conducted with the resource experts. Participants who were unable to attend the meetings were sent a set of maps to review. Edits to the FISHL data layer were made based on the recommendations of the resource experts, and final hardcopy maps were created. The resource experts provided seasonality information.

*Process\_Date:* 200305*Process\_Contact:**Contact\_Information:**Contact\_Organization\_Primary:**Contact\_Organization:* NOAA, Office of Response and Restoration*Contact\_Person:* Jill Petersen*Contact\_Address:**Address\_Type:* Physical address*Address:* 7600 Sand Point Way, N.E.*City:* Seattle*State\_or\_Province:* Washington*Postal\_Code:* 98115-6349*Contact\_Voice\_Telephone:* (206) 526-6944*Contact\_Facsimile\_Telephone:* (206) 526-6329*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov*Spatial\_Data\_Organization\_Information:**Direct\_Spatial\_Reference\_Method:* Vector*Point\_and\_Vector\_Object\_Information:**SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:* Complete chain*Point\_and\_Vector\_Object\_Count:* 1368*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:* Link*Point\_and\_Vector\_Object\_Count:* 223790*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:* Node, planar graph

*Point\_and\_Vector\_Object\_Count:* 16799

---

*Spatial\_Reference\_Information:*

*Horizontal\_Coordinate\_System\_Definition:*

*Geographic:*

*Latitude\_Resolution:* 0.00005

*Longitude\_Resolution:* 0.00005

*Geographic\_Coordinate\_Units:* Decimal degrees

*Geodetic\_Model:*

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

*Ellipsoid\_Name:* Clarke 1866

*Semi-major\_Axis:* 6378206.4

*Denominator\_of\_Flattening\_Ratio:* 294.978698

---

*Entity\_and\_Attribute\_Information:*

*Overview\_Description:*

*Entity\_and\_Attribute\_Overview:*

In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, FISHL) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO\_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (for Western Alaska, the number is 74), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN\_SPEC, S\_F, T\_E, NHP, DATE\_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G\_SOURCE, S\_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED\_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed\_Description of the BREED data table. The link to the BIOFILE may be made through the BIO\_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED\_DT is an auxiliary support data table to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to BREED\_DT is the BREED item.

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

data table is NOT described in detail below.

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* FISHL.AAT

*Entity\_Type\_Definition:*

The FISHL.AAT table contains attribute information for the vector lines representing anadromous fish streams. Note that all attribute information is stored in a series of relational files, described below. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure

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

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (74), 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:* 742200001

*Range\_Domain\_Maximum:* 742201368

*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:* 74000151

*Range\_Domain\_Maximum:* 74000156

*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:* 74000001

*Range\_Domain\_Maximum:* 74000375

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (74), element number (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:* 740100002

*Range\_Domain\_Maximum:* 742201368

*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:* 074000001

*Range\_Domain\_Maximum:* 074000375

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* CONC

*Attribute\_Definition:*

The field CONC refers to "concentration", abundance, or density value of a species at a particular location. In this data layer, the CONC field contains a "-" because no information on the concentrations of species in anadromous streams was available.

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Any character

*Enumerated\_Domain\_Value\_Definition:* Free text

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

*Attribute:*

*Attribute\_Label:* SEASON\_ID

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* G\_SOURCE



*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* S\_SOURCE

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

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

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

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

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

*Enumerated\_Domain\_Value\_Definition:*

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

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

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

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

*Enumerated\_Domain\_Value\_Definition:*

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

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

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SPECIES

*Entity\_Type\_Definition:*

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

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

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* NAME

*Attribute\_Definition:* Species common name

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Species common name for the entire ESI data set

*Enumerated\_Domain\_Value\_Definition:* Free text

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

*Attribute:*

*Attribute\_Label:* GEN\_SPEC

*Attribute\_Definition:* Species scientific name

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

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* Species scientific name for the entire ESI data set.*Enumerated\_Domain\_Value\_Definition:* Free text*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* ELEMENT*Attribute\_Definition:* Major categories of biological data*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* BIRD*Enumerated\_Domain\_Value\_Definition:* Birds*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* FISH*Enumerated\_Domain\_Value\_Definition:* Fish*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* HABITAT*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* INVERT*Enumerated\_Domain\_Value\_Definition:* Invertebrates*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* M\_MAMMAL*Enumerated\_Domain\_Value\_Definition:* Marine Mammals*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* REPTILE*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* T\_MAMMAL*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* SUBELEMENT*Attribute\_Definition:* Element subgroup delineating a logical grouping of species*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* alcid*Enumerated\_Domain\_Value\_Definition:* Alcid*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*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:* bivalve  
*Enumerated\_Domain\_Value\_Definition:* Bivalve  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* crab  
*Enumerated\_Domain\_Value\_Definition:* Crab  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* diadromous  
*Enumerated\_Domain\_Value\_Definition:* Diadromous fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* diving  
*Enumerated\_Domain\_Value\_Definition:* Diving bird  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* dolphin  
*Enumerated\_Domain\_Value\_Definition:* Dolphin  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* e\_nursery  
*Enumerated\_Domain\_Value\_Definition:* Estuarine nursery fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* freshwater  
*Enumerated\_Domain\_Value\_Definition:* Freshwater fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* gull\_tern  
*Enumerated\_Domain\_Value\_Definition:* Gull or tern  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* kelp  
*Enumerated\_Domain\_Value\_Definition:* Kelp habitat, community, or species  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* m\_benthic  
*Enumerated\_Domain\_Value\_Definition:* Marine benthic fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* m\_pelagic  
*Enumerated\_Domain\_Value\_Definition:* Marine pelagic fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* passerine*Enumerated\_Domain\_Value\_Definition:* Passerine bird*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* pelagic*Enumerated\_Domain\_Value\_Definition:* Pelagic bird*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* pinniped*Enumerated\_Domain\_Value\_Definition:* Pinniped*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* raptor*Enumerated\_Domain\_Value\_Definition:* Raptor*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* sav*Enumerated\_Domain\_Value\_Definition:* Submersed aquatic vegetation*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* shorebird*Enumerated\_Domain\_Value\_Definition:* Shorebird*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* wading*Enumerated\_Domain\_Value\_Definition:* Wading bird*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* waterfowl*Enumerated\_Domain\_Value\_Definition:* Waterfowl*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* whale*Enumerated\_Domain\_Value\_Definition:* Whale*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* NHP*Attribute\_Definition:* Natural Heritage Program global ranking*Attribute\_Definition\_Source:* Network of Natural Heritage Program*Attribute\_Domain\_Values:**Codeset\_Domain:**Codeset\_Name:* NHP Global Conservation Status Rank*Codeset\_Source:* Natural Heritage Program*Attribute:**Attribute\_Label:* DATE\_PUB*Attribute\_Definition:* Date of NHP listing*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* 0

*Enumerated\_Domain\_Value\_Definition:* Not ranked

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Numeric

*Enumerated\_Domain\_Value\_Definition:* mmyyyy

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

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

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

*Enumerated\_Domain\_Value\_Definition:*

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

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

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SEASONAL

*Entity\_Type\_Definition:*

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

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

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

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

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

*Attribute\_Domain\_Values:*

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

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

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

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* N*Attribute:**Attribute\_Label:* JAN*Attribute\_Definition:* January*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* X*Enumerated\_Domain\_Value\_Definition:* Present in January*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* FEB*Attribute\_Definition:* February*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* X*Enumerated\_Domain\_Value\_Definition:* Present in February*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* MAR*Attribute\_Definition:* March*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* X*Enumerated\_Domain\_Value\_Definition:* Present in March*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* APR*Attribute\_Definition:* April*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

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

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

*Attribute:*

*Attribute\_Label:* MAY

*Attribute\_Definition:* May

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

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

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

*Attribute:*

*Attribute\_Label:* JUN

*Attribute\_Definition:* June

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

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

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

*Attribute:*

*Attribute\_Label:* JUL

*Attribute\_Definition:* July

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

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

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

*Attribute:*

*Attribute\_Label:* AUG

*Attribute\_Definition:* August

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

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

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

*Attribute:*

*Attribute\_Label:* SEP

*Attribute\_Definition:* September

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

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

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

*Attribute:*

*Attribute\_Label:* OCT

*Attribute\_Definition:* October

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

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

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

*Attribute:*



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

*Attribute:*

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

*Attribute:*

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

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

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

*Attribute:*

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

*Attribute:*

*Attribute\_Label:* MONTH  
*Attribute\_Definition:*  
 Two-digit calendar month. Each life history stage or activity type for a particular

species can have up to 12 records to account for each month of the year.

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

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* 12

*Attribute:*

*Attribute\_Label:* BREED1

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED1 = nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning/mating; if ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M\_MAMMAL" then BREED1 = mating.

This attribute is not used for HABITAT or T\_MAMMAL elements.

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

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

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

*Attribute:*

*Attribute\_Label:* BREED2

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = 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 = juvenile; if ELEMENT is "INVERT" then BREED4 = juvenile; if ELEMENT is "REPTILE" then BREED4 = juvenile; if ELEMENT is "M\_MAMMAL" then BREED4 = molting. This attribute is not used for BIRD, HABITAT, or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* Y*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* N*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* -*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* BREED5

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

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

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

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SOURCES

*Entity\_Type\_Definition:*

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

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

*Attribute:*

*Attribute\_Label:* SOURCE\_ID

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* ORIGINATOR

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Any character

*Enumerated\_Domain\_Value\_Definition:* Free text

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

*Attribute:*

*Attribute\_Label:* DATE\_PUB

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* Numeric*Enumerated\_Domain\_Value\_Definition:* mmyyyy*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* TITLE*Attribute\_Definition:* Title of source material or data*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* Any character*Enumerated\_Domain\_Value\_Definition:* Free text*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* DATA\_FORMAT*Attribute\_Definition:* The format of the source material*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* Any character*Enumerated\_Domain\_Value\_Definition:* Free text*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* PUBLICATION*Attribute\_Definition:* Additional citation information*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* Any character*Enumerated\_Domain\_Value\_Definition:* Free text*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* SCALE*Attribute\_Definition:* Scale denominator of the source*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* integer*Enumerated\_Domain\_Value\_Definition:* Any integer*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* TIME\_PERIOD*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* Numeric*Enumerated\_Domain\_Value\_Definition:* yyyy*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:* STATUS*Entity\_Type\_Definition:*

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

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

*Attribute:**Attribute\_Label:* ELEMENT*Attribute\_Definition:* Major categories of biological data*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* BIRD*Enumerated\_Domain\_Value\_Definition:* Birds*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* FISH*Enumerated\_Domain\_Value\_Definition:* Fish*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* HABITAT*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* INVERT*Enumerated\_Domain\_Value\_Definition:* Invertebrates*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* M\_MAMMAL*Enumerated\_Domain\_Value\_Definition:* Marine Mammals*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* REPTILE*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* T\_MAMMAL*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* SPECIES\_ID*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* N*Attribute:**Attribute\_Label:* STATE*Attribute\_Definition:* Two-letter state abbreviation*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* Any character*Enumerated\_Domain\_Value\_Definition:* Two-letter state abbreviation*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* S\_F

*Attribute\_Definition:* State and Federal status  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:* F  
         *Enumerated\_Domain\_Value\_Definition:* Federally listed  
         *Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:* S  
         *Enumerated\_Domain\_Value\_Definition:* State listed  
         *Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:* S/F  
         *Enumerated\_Domain\_Value\_Definition:* State and federally listed  
         *Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* T\_E  
*Attribute\_Definition:* Threatened and endangered status.  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:* E  
         *Enumerated\_Domain\_Value\_Definition:* Endangered on state or federal list  
         *Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:* T  
         *Enumerated\_Domain\_Value\_Definition:* Threatened on state or federal list  
         *Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:* C  
         *Enumerated\_Domain\_Value\_Definition:* Species of Special Concern  
         *Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service

*Attribute:*

*Attribute\_Label:* DATE\_PUB  
*Attribute\_Definition:*  
     Publication date of source material used to assign state and federal status values for each species, if used.  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:* Numeric  
         *Enumerated\_Domain\_Value\_Definition:* mmyyyy  
         *Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE  
*Attribute\_Definition:*  
     Concatenation of ELEMENT and SPECIES\_ID. This item links the STATUS data table to the BIORRES and SPECIES data tables.  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

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

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

---

*Distribution\_Information:**Distributor:**Contact\_Information:**Contact\_Person\_Primary:*

*Contact\_Person:* John Kaperick

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

*Contact\_Address:*

*Address\_Type:* Physical Address

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

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

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

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

*Resource\_Description:* ESI Atlas for Western 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:* 200307

*Metadata\_Review\_Date:* 200307

*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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# Western Alaska ESI: INVERT (Invertebrate Polygons)

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

## Metadata:

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

### *Identification\_Information:*

#### *Citation:*

##### *Citation\_Information:*

##### *Originator:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

*Publication\_Date:* 200307

*Title:* Western Alaska ESI: INVERT (Invertebrate Polygons)

*Edition:* First

*Geospatial\_Data\_Presentation\_Form:* Vector digital data

##### *Series\_Information:*

*Series\_Name:* None

*Issue\_Identification:* Western Alaska

##### *Publication\_Information:*

*Publication\_Place:* Seattle, Washington

##### *Publisher:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington

##### *Other\_Citation\_Details:*

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

### *Description:*

#### *Abstract:*

This data set contains sensitive biological resource data for marine and estuarine invertebrate species in Western Alaska. Vector polygons in this data set represent invertebrate distribution. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for Western 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:* 2002

*Ending\_Date:* 2003

*Currentness\_Reference:*

The biological data were compiled during 2002-2003. The currentness dates for these data range from 1985 to 2001 and are documented in the Source\_Information section.

*Status:*

*Progress:* Complete

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

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -174.0

*East\_Bounding\_Coordinate:* -159.0

*North\_Bounding\_Coordinate:* 64.0

*South\_Bounding\_Coordinate:* 59.0

*Keywords:*

*Theme:*

*Theme\_Keyword\_Thesaurus:* None

*Theme\_Keyword:* ESI

*Theme\_Keyword:* Sensitivity maps

*Theme\_Keyword:* Coastal resources

*Theme\_Keyword:* Oil spill planning

*Theme\_Keyword:* Coastal Zone Management

*Theme\_Keyword:* Wildlife

*Theme\_Keyword:* Invertebrate

*Place:*

*Place\_Keyword\_Thesaurus:* None

*Place\_Keyword:* Western Alaska

*Place\_Keyword:* Alaska

*Access\_Constraints:* None

*Use\_Constraints:*

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* [datafig.jpg](#)

*Browse\_Graphic\_File\_Description:*

Relationships between spatial data layers and attribute data tables for the Western Alaska ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response

Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) 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, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, invert.e00, lakes.e00, m\_mammal.e00, mgt.e00, nests.e00, socecon.e00, streams.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 and digital maps on invertebrate distribution. These data do not necessarily represent all invertebrate occurrences in Western Alaska. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name, if applicable): 21, Butter clam, Saxidomus giganteus; 25, Softshell clam, Mya arenaria; 39, Red king crab, Paralithodes camtschaticus; 180, Siberia softshell clam, Mya uzenensis; 181, Alaska razor clam, Siliqua alta; 185, Crenulate astarte, Astarte crenata; 192, Blue king crab, Paralithodes platypus; 202, Snow crab, Chionoecetes opilio; 210, Helmet crab, Telmessus cheiragonus; 435, Pinkneck clam, Spisula polynyma.

*Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy\_Report:*

Some of the spatial components of the biological data sets are developed using

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

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* Lean, C. (NPS, Nome)

*Publication\_Date:* Unpublished Material

*Title:* Fish and invertebrate concentration areas

*Geospatial\_Data\_Presentation\_Form:* Expert knowledge

*Type\_of\_Source\_Media:* Personal communication

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2001

*Source\_Currentness\_Reference:* Date of communication

*Source\_Citation\_Abbreviation:* None

*Source\_Contribution:* Invertebrate information

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* National Marine Fisheries Service

*Publication\_Date:* 1998

*Title:* Habitat assessment reports for Essential Fish Habitat

*Geospatial\_Data\_Presentation\_Form:* Vector digital data

*Publication\_Information:*

*Publication\_Place:* Unknown

*Publisher:* NMFS, the North Pacific Fishery Management Council, and SDF & G

*Source\_Scale\_Denominator:* Unknown

*Type\_of\_Source\_Media:* Online

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 1998

*Source\_Currentness\_Reference:* Date of publication

*Source\_Citation\_Abbreviation:* None

*Source\_Contribution:* Invertebrate information

*Process\_Step:*

*Process\_Description:*

Two main sources of data were used to depict invertebrate distribution for this data layer: (1) personal interviews with resource experts from the National Park Service (NPS) and local villages; and (2) 1998 National Marine Fisheries Service (NMFS) Essential Fish Habitat (EFH) digital coverages, depicting distribution of blue king crab, red king crab, and snow crab. Information gathered from resource experts was compiled onto U.S. Geological Survey 1:250,000 topographic quadrangles. The compiled data were digitized off the base maps into an ArcInfo system to create the INVERT data layer. The EFH digital coverages were incorporated into this data layer. All ESI, biology, and human-use data were plotted onto hardcopy draft maps. Following the creation of draft maps, a second set of interviews with resource experts was conducted. Participants who were unable to attend the meetings were sent a set of maps to review. Edits to the INVERT data layer were made based on

recommendations made by the resource experts, and final hardcopy maps were created.

*Process\_Date:* 200305

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

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

*Contact\_Person:* Jill Petersen

*Contact\_Address:*

*Address\_Type:* Physical address

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

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

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

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

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

---

*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:* Vector

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

*SDTS\_Terms\_Description:*

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

*Point\_and\_Vector\_Object\_Count:* 72

*SDTS\_Terms\_Description:*

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

*Point\_and\_Vector\_Object\_Count:* 72

*SDTS\_Terms\_Description:*

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

*Point\_and\_Vector\_Object\_Count:* 215

*SDTS\_Terms\_Description:*

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

*Point\_and\_Vector\_Object\_Count:* 64884

*SDTS\_Terms\_Description:*

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

*Point\_and\_Vector\_Object\_Count:* 208

---

*Spatial\_Reference\_Information:*

*Horizontal\_Coordinate\_System\_Definition:*

*Geographic:*

*Latitude\_Resolution:* 0.00005

*Longitude\_Resolution:* 0.00005

*Geographic\_Coordinate\_Units:* Decimal degrees

*Geodetic\_Model:*

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

*Ellipsoid\_Name:* Clarke 1866

*Semi-major\_Axis:* 6378206.4

*Denominator\_of\_Flattening\_Ratio:* 294.978698

---

*Entity\_and\_Attribute\_Information:*

*Overview\_Description:*

*Entity\_and\_Attribute\_Overview:*

In addition to the geographic data layers, six relational attribute or data tables, BIORES,

BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, INVERT) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO\_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (for Western Alaska, the number is 74), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN\_SPEC, S\_F, T\_E, NHP, DATE\_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G\_SOURCE, S\_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED\_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed\_Description of the BREED data table. The link to the BIOFILE may be made through the BIO\_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED\_DT is an auxiliary support data table to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to BREED\_DT is the BREED item.

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

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* INVERT.PAT

*Entity\_Type\_Definition:*

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

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

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (74), element number (7), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 740700002

*Range\_Domain\_Maximum:* 740700067

*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:* 74000306

*Range\_Domain\_Maximum:* 74000309

*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:* 74000001

*Range\_Domain\_Maximum:* 74000375

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (74), element number (7), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 740100002

*Range\_Domain\_Maximum:* 742201368

*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:* 074000001*Range\_Domain\_Maximum:* 074000375*Attribute:**Attribute\_Label:* SPECIES\_ID*Attribute\_Definition:*

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

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

The field CONC refers to "concentration", abundance, or density value of a species at a particular location. In this data layer, the CONC field contains a "-" because no concentration information was available for invertebrates.

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* Any character*Enumerated\_Domain\_Value\_Definition:* Free text*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* SEASON\_ID*Attribute\_Definition:*

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

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

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

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

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

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* N*Attribute:**Attribute\_Label:* ELEMENT*Attribute\_Definition:* Major categories of biological data*Attribute\_Definition\_Source:* Research Planning, Inc.

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

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

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

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

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

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

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

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

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

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SPECIES

*Entity\_Type\_Definition:*

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

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

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

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

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

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* NAME

*Attribute\_Definition:* Species common name

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Species common name for the entire ESI data set

*Enumerated\_Domain\_Value\_Definition:* Free text

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

*Attribute:*

*Attribute\_Label:* GEN\_SPEC

*Attribute\_Definition:* Species scientific name

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Species scientific name for the entire ESI data set.

*Enumerated\_Domain\_Value\_Definition:* Free text

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

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT  
*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:* Marine Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE  
*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SUBELEMENT

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

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

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* diving

*Enumerated\_Domain\_Value\_Definition:* Diving bird  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* dolphin  
*Enumerated\_Domain\_Value\_Definition:* Dolphin  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* e\_nursery  
*Enumerated\_Domain\_Value\_Definition:* Estuarine nursery fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* freshwater  
*Enumerated\_Domain\_Value\_Definition:* Freshwater fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* gull\_tern  
*Enumerated\_Domain\_Value\_Definition:* Gull or tern  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* kelp  
*Enumerated\_Domain\_Value\_Definition:* Kelp habitat, community, or species  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* m\_benthic  
*Enumerated\_Domain\_Value\_Definition:* Marine benthic fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* m\_pelagic  
*Enumerated\_Domain\_Value\_Definition:* Marine pelagic fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* passerine  
*Enumerated\_Domain\_Value\_Definition:* Passerine bird  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* pelagic  
*Enumerated\_Domain\_Value\_Definition:* Pelagic bird  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* pinniped  
*Enumerated\_Domain\_Value\_Definition:* Pinniped  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* raptor  
*Enumerated\_Domain\_Value\_Definition:* Raptor  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* sav  
*Enumerated\_Domain\_Value\_Definition:* Submersed aquatic vegetation  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* shorebird  
*Enumerated\_Domain\_Value\_Definition:* Shorebird  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* wading  
*Enumerated\_Domain\_Value\_Definition:* Wading bird  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* waterfowl  
*Enumerated\_Domain\_Value\_Definition:* Waterfowl  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* whale  
*Enumerated\_Domain\_Value\_Definition:* Whale  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute:*  
*Attribute\_Label:* NHP  
*Attribute\_Definition:* Natural Heritage Program global ranking  
*Attribute\_Definition\_Source:* Network of Natural Heritage Program  
*Attribute\_Domain\_Values:*  
*Codeset\_Domain:*  
*Codeset\_Name:* NHP Global Conservation Status Rank  
*Codeset\_Source:* Natural Heritage Program  
*Attribute:*  
*Attribute\_Label:* DATE\_PUB  
*Attribute\_Definition:* Date of NHP listing  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* 0  
*Enumerated\_Domain\_Value\_Definition:* Not ranked  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* Numeric  
*Enumerated\_Domain\_Value\_Definition:* mmyyyy  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute:*  
*Attribute\_Label:* EL\_SPE  
*Attribute\_Definition:*  
Concatenation of ELEMENT and SPECIES\_ID. This item links records in the SPECIES data table to records in the BIORRES and STATUS data tables.  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* E#####  
*Enumerated\_Domain\_Value\_Definition:*  
Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (eg. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Detailed\_Description:*

*Entity\_Type:**Entity\_Type\_Label:* SEASONAL*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* ELEMENT*Attribute\_Definition:* Major categories of biological data*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* BIRD*Enumerated\_Domain\_Value\_Definition:* Birds*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* FISH*Enumerated\_Domain\_Value\_Definition:* Fish*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* HABITAT*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* INVERT*Enumerated\_Domain\_Value\_Definition:* Invertebrates*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* M\_MAMMAL*Enumerated\_Domain\_Value\_Definition:* Marine Mammals*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* REPTILE*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* T\_MAMMAL*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* SPECIES\_ID*Attribute\_Definition:*

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

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

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

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

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* JAN

*Attribute\_Definition:* January

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

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

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

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* FEB

*Attribute\_Definition:* February

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in February

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* MAR

*Attribute\_Definition:* March

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in March

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* APR

*Attribute\_Definition:* April

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in April

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* MAY

*Attribute\_Definition:* May

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in May

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* JUN

*Attribute\_Definition:* June

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in June



*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* JUL

*Attribute\_Definition:* July

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in July

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* AUG

*Attribute\_Definition:* August

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in August

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SEP

*Attribute\_Definition:* September

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in September

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* OCT

*Attribute\_Definition:* October

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in October

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* NOV

*Attribute\_Definition:* November

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in November

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* DEC

*Attribute\_Definition:* December

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in December

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the SEASONAL data table to records in the BIORRES and BREED data

tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (eg. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BREED

*Entity\_Type\_Definition:*

The data table BREED identifies the monthly presence of certain life-history stages or activities for each species at a given location.

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BREED data table to records in the BIORRES and SEASONAL data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (eg. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* MONTH

*Attribute\_Definition:*

Two-digit calendar month. Each life history stage or activity type for a particular species can have up to 12 records to account for each month of the year.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* 12

*Attribute:*

*Attribute\_Label:* BREED1

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED1 = nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning/mating; if ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M\_MAMMAL" then BREED1 = mating.

This attribute is not used for HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:**Enumerated\_Domain\_Value:* N*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* -*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* BREED2*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = 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 = juvenile; if ELEMENT is "INVERT" then BREED4 = juvenile; if ELEMENT is "REPTILE" then BREED4 = juvenile; if ELEMENT is "M\_MAMMAL" then BREED4 = molting. This attribute is not used for BIRD, HABITAT, or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* BREED5

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 = adults; if ELEMENT is "INVERT" then BREED5 = adults; if ELEMENT is "REPTILE" then BREED5 = adults. This attribute is not used for BIRD, M\_MAMMAL, HABITAT, or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SOURCES

*Entity\_Type\_Definition:*

The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SOURCE\_ID

*Attribute\_Definition:*

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table, and to G\_SOURCE and S\_SOURCE in the BIORES table.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* ORIGINATOR

*Attribute\_Definition:* Author or developer of source material or data set

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Any character

*Enumerated\_Domain\_Value\_Definition:* Free text

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* DATE\_PUB

*Attribute\_Definition:*

Date of source material, publication, or date of personal communication with expert source

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Numeric

*Enumerated\_Domain\_Value\_Definition:* mmyyyy

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* TITLE

*Attribute\_Definition:* Title of source material or data

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Any character

*Enumerated\_Domain\_Value\_Definition:* Free text

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* DATA\_FORMAT

*Attribute\_Definition:* The format of the source material

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Any character

*Enumerated\_Domain\_Value\_Definition:* Free text

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* PUBLICATION

*Attribute\_Definition:* Additional citation information

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Any character

*Enumerated\_Domain\_Value\_Definition:* Free text

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SCALE

*Attribute\_Definition:* Scale denominator of the source

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* integer

*Enumerated\_Domain\_Value\_Definition:* Any integer

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* TIME\_PERIOD

*Attribute\_Definition:*

Date(s) of data collection that the source material is based upon.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Numeric

*Enumerated\_Domain\_Value\_Definition:* yyyy

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* STATUS

*Entity\_Type\_Definition:*

The data table STATUS identifies the species that are listed as either threatened or endangered by a state or federal authority. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* STATE

*Attribute\_Definition:* Two-letter state abbreviation

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Any character

*Enumerated\_Domain\_Value\_Definition:* Two-letter state abbreviation

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* S\_F

*Attribute\_Definition:* State and Federal status

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* F

*Enumerated\_Domain\_Value\_Definition:* Federally listed

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* S

*Enumerated\_Domain\_Value\_Definition:* State listed

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* S/F

*Enumerated\_Domain\_Value\_Definition:* State and federally listed

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* T\_E

*Attribute\_Definition:* Threatened and endangered status

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:**Enumerated\_Domain\_Value:* E*Enumerated\_Domain\_Value\_Definition:* Endangered on state or federal list*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* T*Enumerated\_Domain\_Value\_Definition:* Threatened on state or federal list*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* C*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service*Attribute:**Attribute\_Label:* DATE\_PUB*Attribute\_Definition:*

Publication date of source material used to assign state and federal status values for each species, if used.

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* Numeric*Enumerated\_Domain\_Value\_Definition:* mmyyyy*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* EL\_SPE*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links the STATUS data table to the BIORRES and SPECIES data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* E#####*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (eg. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Distribution\_Information:**Distributor:**Contact\_Information:**Contact\_Person\_Primary:**Contact\_Person:* John Kaperick*Contact\_Organization:* NOAA, Office of Response and Restoration*Contact\_Address:**Address\_Type:* Physical Address*Address:* 7600 Sand Point Way N.E.*City:* Seattle*State\_or\_Province:* Washington*Postal\_Code:* 98115-6349*Contact\_Voice\_Telephone:* (206) 526-6400*Contact\_Facsimile\_Telephone:* (206) 526-6329



*Resource\_Description:* ESI Atlas for Western 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:* 200307

*Metadata\_Review\_Date:* 200307

*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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Generated by [mp](#) version 2.8.2 on Wed Jul 16 14:20:17 2003

# Western 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](#)

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### Identification\_Information:

#### Citation:

##### Citation\_Information:

##### Originator:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

*Publication\_Date:* 200307

*Title:* Western Alaska ESI: M\_MAMMAL (Marine Mammal Polygons)

*Edition:* First

*Geospatial\_Data\_Presentation\_Form:* Vector digital data

##### Series\_Information:

*Series\_Name:* None

*Issue\_Identification:* Western Alaska

##### Publication\_Information:

*Publication\_Place:* Seattle, Washington

##### Publisher:

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington

##### Other\_Citation\_Details:

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

### Description:

#### Abstract:

This data set contains sensitive biological resource data for seals, whales, dolphins, walrus, and Steller sea lions in Western Alaska. Vector polygons in this data set represent marine mammal distribution and haul-out sites. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for Western 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:* 2002

*Ending\_Date:* 2003

*Currentness\_Reference:*

The biological data were compiled during 2002-2003. The currentness dates for these data range from 1983 to 2002 and are documented in the Source\_Information section.

*Status:*

*Progress:* Complete

*Maintenance\_and\_Update\_Frequency:* None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -174.0

*East\_Bounding\_Coordinate:* -159.0

*North\_Bounding\_Coordinate:* 64.0

*South\_Bounding\_Coordinate:* 59.0

*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:* Western Alaska

*Place\_Keyword:* Alaska

*Access\_Constraints:* None

*Use\_Constraints:*

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* [datafig.jpg](#)

*Browse\_Graphic\_File\_Description:*

Relationships between spatial data layers and attribute data tables for the Western Alaska ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response

Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) 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, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, invert.e00, lakes.e00, m\_mammal.e00, mgt.e00, nests.e00, socecon.e00, streams.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 "resources at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

*Completeness\_Report:*

These data represent a synthesis of expert knowledge, hardcopy maps, and published documents on marine mammal distribution. These data do not necessarily represent all marine mammal occurrences in Western Alaska. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name, if applicable): 1, Steller (Northern) sea lion, Eumetopias jubatus; 2, Harbor seal, Phoca vitulina; 6, Harbor porpoise, Phocoena phocoena; 9, Beluga whale, Delphinapterus leucas; 12, Minke whale, Balaenoptera acutorostrata; 15, Bearded seal, Erignathus barbatus; 16, Walrus, Odobenus rosmarus; 26, Gray whale, Eschrichtius robustus; 91, Spotted seal, Phoca largha; 92, Ringed seal, Pusa hispida; 93, Ribbon seal, Histriophoca fasciata.

*Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy\_Report:*

Most of the spatial components of the biological data sets are developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy base maps with a scale of 1:250,000. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources.

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* McCaffery, B. (NPS, Bethel)

*Publication\_Date:* Unpublished Material

*Title:* Yukon Delta NWR species distribution

*Geospatial\_Data\_Presentation\_Form:* Expert knowledge

*Type\_of\_Source\_Media:* Personal communication

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2002

*Source\_Currentness\_Reference:* Date of communication

*Source\_Citation\_Abbreviation:* None

*Source\_Contribution:* Marine mammal information

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* Rugh D. (NMFS, NMML, Seattle)

*Publication\_Date:* 1993

*Title:*

Sept. '93 Aerial Surveys: Belugas in Cook Inlet/spotted seals on west coast AK

*Geospatial\_Data\_Presentation\_Form:* Hardcopy text

*Publication\_Information:*

*Publication\_Place:* Seattle, WA

*Publisher:* NOAA, NMML

*Type\_of\_Source\_Media:* Paper

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 1993

*Source\_Currentness\_Reference:* Date of survey

*Source\_Citation\_Abbreviation:* None

*Source\_Contribution:* Marine mammal information

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* Alaska Regional Response Team (ARRT)

*Publication\_Date:* 2001

*Title:*

Northwest Arctic subarea contingency plan: sensitive areas section

*Geospatial\_Data\_Presentation\_Form:* Hardcopy report

*Publication\_Information:*

*Publication\_Place:* Unknown

*Publisher:* 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:* 2001

*Source\_Currentness\_Reference:* Date of publication

*Source\_Citation\_Abbreviation:* None

*Source\_Contribution:* Marine mammal information  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* Alaska Dept. of Fish & Game (ADF&G)  
*Publication\_Date:* 1983  
*Title:* Offshore prospecting permits: coastal habitats  
*Geospatial\_Data\_Presentation\_Form:* Hardcopy map  
*Publication\_Information:*  
*Publication\_Place:* Unknown  
*Publisher:* Alaska Department of Fish & Game (ADF&G)  
*Source\_Scale\_Denominator:* 250,000  
*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:* Marine mammal information  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* Alaska Dept of Fish and Game (ADF&G)  
*Publication\_Date:* 1986  
*Title:* Alaska habitat management guide, arctic region, map atlas.  
*Geospatial\_Data\_Presentation\_Form:* Hardcopy map  
*Publication\_Information:*  
*Publication\_Place:* Juneau, Alaska  
*Publisher:* ADF&G, Habitat Division  
*Source\_Scale\_Denominator:* 1,000,000  
*Type\_of\_Source\_Media:* Hardcopy map  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:* 1986  
*Source\_Currentness\_Reference:* Date of publication  
*Source\_Citation\_Abbreviation:* None  
*Source\_Contribution:* Marine mammal information  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* National Marine Fisheries Service  
*Publication\_Date:* 2002  
*Title:* NMFS Stock Assessment Reports for ringed and bearded seals  
*Geospatial\_Data\_Presentation\_Form:* Hardcopy text  
*Publication\_Information:*  
*Publication\_Place:* Unknown  
*Publisher:*  
[www.nmfs.noaa.gov/prot\\_res/PR2/Stock\\_Assessment\\_Program/sars.html](http://www.nmfs.noaa.gov/prot_res/PR2/Stock_Assessment_Program/sars.html)  
*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:* Marine mammal information  
*Source\_Information:*  
*Source\_Citation:*

*Citation\_Information:*

*Originator:* Frost, K.J., L.F. Lowry, and J.J. Burns

*Publication\_Date:* 1982

*Title:*

Distribution of marine mammals in the coastal zone of the Bering Sea during Summer and Autumn

*Geospatial\_Data\_Presentation\_Form:* Hardcopy text

*Publication\_Information:*

*Publication\_Place:* Unknown

*Publisher:*

OCSEAP: Environmental Assessment of the Alaskan Continental Shelf. Vol. 20

*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:* Marine mammal information

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* Alaska Regional Response Team (ARRT)

*Publication\_Date:* 2001

*Title:*

Western Alaska subarea contingency plan: sensitive areas section

*Geospatial\_Data\_Presentation\_Form:* Hardcopy text

*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:* Marine mammal information

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* Wynne, K.

*Publication\_Date:* 1997

*Title:* Guide to Marine Mammals of Alaska (75 pp.)

*Geospatial\_Data\_Presentation\_Form:* Hardcopy text

*Publication\_Information:*

*Publication\_Place:* Fairbanks, Alaska

*Publisher:* Alaska Sea Grant College Program

*Type\_of\_Source\_Media:* Paper

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 1997

*Source\_Currentness\_Reference:* Date of publication

*Source\_Citation\_Abbreviation:* None

*Source\_Contribution:* Marine mammal information

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* Alaska Dept. of Fish & Game (ADF&G)

*Publication\_Date:* 1986

*Title:*

Alaska Habitat Management Guide: Western and Interior Regions  
Map Atlas

*Geospatial\_Data\_Presentation\_Form*: Hardcopy text

*Publication\_Information*:

*Publication\_Place*: Juneau, Alaska

*Publisher*: ADF&G Habitat Division

*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*: Marine mammal information

*Source\_Information*:

*Source\_Citation*:

*Citation\_Information*:

*Originator*: Ivanoff, H. (USFWS, Bethel)

*Publication\_Date*: Unpublished Material

*Title*: Eelgrass locations around Nunivak Island

*Geospatial\_Data\_Presentation\_Form*: Expert knowledge

*Source\_Scale\_Denominator*: 24,000

*Type\_of\_Source\_Media*: Personal communication

*Source\_Time\_Period\_of\_Content*:

*Time\_Period\_Information*:

*Single\_Date/Time*:

*Calendar\_Date*: 2002

*Source\_Currentness\_Reference*: Date of communication

*Source\_Citation\_Abbreviation*: None

*Source\_Contribution*: Marine mammal information

*Source\_Information*:

*Source\_Citation*:

*Citation\_Information*:

*Originator*: Sease, J. (NMFS NMML, Seattle)

*Publication\_Date*: 2002

*Title*: Steller sea lion haul-out sites

*Geospatial\_Data\_Presentation\_Form*: Digital table

*Publication\_Information*:

*Publication\_Place*: Seattle, WA

*Publisher*: NMFS, NMML

*Type\_of\_Source\_Media*: Email

*Source\_Time\_Period\_of\_Content*:

*Time\_Period\_Information*:

*Single\_Date/Time*:

*Calendar\_Date*: 2002

*Source\_Currentness\_Reference*: Date of communication

*Source\_Citation\_Abbreviation*: None

*Source\_Contribution*: Marine mammal information

*Source\_Information*:

*Source\_Citation*:

*Citation\_Information*:

*Originator*: Garlich-Miller, J. (USFWS)

*Publication\_Date*: Unpublished Material

*Title*: Walrus concentration areas

*Geospatial\_Data\_Presentation\_Form*: Expert knowledge

*Type\_of\_Source\_Media*: Personal communication

*Source\_Time\_Period\_of\_Content*:

*Time\_Period\_Information*:

*Single\_Date/Time*:



*Calendar\_Date:* 2002  
*Source\_Currentness\_Reference:* Date of communication  
*Source\_Citation\_Abbreviation:* None  
*Source\_Contribution:* Marine mammal information  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* Lentfer, J.W.  
*Publication\_Date:* 1988  
*Title:* Selected Marine Mammals of Alaska: Species Accounts  
*Geospatial\_Data\_Presentation\_Form:* Hardcopy text  
*Publication\_Information:*  
*Publication\_Place:* Washington, D.C.  
*Publisher:* Marine Mammal Commission  
*Type\_of\_Source\_Media:* Paper  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:* 1988  
*Source\_Currentness\_Reference:* Date of publication  
*Source\_Citation\_Abbreviation:* None  
*Source\_Contribution:* Marine mammal information  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* Quakenbush, L. (ADF&G, Fairbanks)  
*Publication\_Date:* Unpublished Material  
*Title:* Marine mammal distribution  
*Geospatial\_Data\_Presentation\_Form:* Expert knowledge  
*Type\_of\_Source\_Media:* Personal communication  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:* 2002  
*Source\_Currentness\_Reference:* Date of communication  
*Source\_Citation\_Abbreviation:* None  
*Source\_Contribution:* Marine mammal information  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* Fay, F., G. Ray, and A. Kibal'chich  
*Publication\_Date:* 1984  
*Title:*  
Time and location of mating and associated behavior of the Pacific  
walrus  
*Geospatial\_Data\_Presentation\_Form:* Hardcopy text  
*Publication\_Information:*  
*Publication\_Place:* unknown  
*Publisher:*  
In Soviet-American cooperative research on marine  
mammals. NOAA Tech. Rep.12:89-99  
*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:* Marine mammal information  
*Process\_Step:*

*Process\_Description:*

Three main sources of data were used to depict distributions of marine mammals for this data layer, including: (1) personal interviews with resource experts from U.S. Fish and Wildlife Service (USFWS), Alaska Department of Fish and Game (ADF&G), and NOAA National Marine Fisheries Service (NMFS); (2) hardcopy maps, including the 1983 ADF&G Offshore Prospecting Permits: Coastal Habitats Maps and the 1986 Alaska Habitat Management Guide, Western Alaska and Interior Region; and (3) published reports/books, including the Frost, K.J., L.F. Lowry, and J.J. Burns source [1982. Distribution of marine mammals in the coastal zone of the Bering Sea during Summer and Autumn, pp. 365-561. In National Oceanic and Atmospheric Administration, National Ocean Service, Office of Oceanography and Marine Services, Ocean Assessments Division and Minerals Management Service. 1983. Outer Continental Shelf Environmental Assessment Program (OCSEAP): Environmental Assessment of the Alaskan Continental Shelf. Final Reports of Principal Investigators, Vol. 20. National Oceanic and Atmospheric Administration, Juneau, Alaska, 650 pp.].

Information gathered during a set of interviews and from hardcopy maps and reports was compiled onto US Geological Survey 1:250,000 topographic quadrangles. The compiled data were digitized off the base maps into an ArcInfo system to create the M\_MAMMAL data layer. All ESI, biology, and human-use data were plotted onto hardcopy draft maps. Following the creation of draft maps, a second set of interviews with resource experts was conducted. Participants who were unable to attend the meetings were sent a set of maps to review. Edits to the M\_MAMMAL data layer were made based on the recommendations of the resource experts, and final hardcopy maps were created. Concentration and seasonality information was provided by resource experts or was extracted from published sources.

*Process\_Date:* 200305

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Person:* Jill Petersen

*Contact\_Address:*

*Address\_Type:* Physical address

*Address:* 7600 Sand Point Way, N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6944

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:* Vector

*Point\_and\_Vector\_Object\_Information:*

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* GT-polygon composed of rings

*Point\_and\_Vector\_Object\_Count:* 374

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Area point

*Point\_and\_Vector\_Object\_Count:* 374

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Complete chain

*Point\_and\_Vector\_Object\_Count:* 1610

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Link

*Point\_and\_Vector\_Object\_Count:* 496641  
*SDTS\_Terms\_Description:*  
*SDTS\_Point\_and\_Vector\_Object\_Type:* Node, planar graph  
*Point\_and\_Vector\_Object\_Count:* 1500

---

*Spatial\_Reference\_Information:**Horizontal\_Coordinate\_System\_Definition:**Geographic:*

*Latitude\_Resolution:* 0.00005  
*Longitude\_Resolution:* 0.00005  
*Geographic\_Coordinate\_Units:* Decimal degrees

*Geodetic\_Model:*

*Horizontal\_Datum\_Name:* North American Datum of 1927  
*Ellipsoid\_Name:* Clark 1866  
*Semi-major\_Axis:* 6378206.4  
*Denominator\_of\_Flattening\_Ratio:* 294.978698

---

*Entity\_and\_Attribute\_Information:**Overview\_Description:**Entity\_and\_Attribute\_Overview:*

In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, M\_MAMMAL) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO\_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (for Western Alaska, it is 74), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN\_SPEC, S\_F, T\_E, NHP, DATE\_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G\_SOURCE, S\_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED\_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed\_Description of the BREED data table. The link to the BIOFILE may be made through the BIO\_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED\_DT is an auxiliary support data table to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to BREED\_DT is the BREED item.

A second supporting data table is SOURCES. This is the same as the source file described above, and the link from the flat file is both G\_SOURCE and S\_SOURCE. It should be noted that although the flat file eases data query, it is not a normalized database structure, and

actual updates performed by the states and other responsible agencies should be done using the relational data tables. The entity-relationship diagram, describing relationships between attribute tables in the ESI data structure, does NOT include the BIOFILE data table, and this data table is NOT described in detail below.

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* M\_MAMMAL.PAT

*Entity\_Type\_Definition:*

The M\_MAMMAL.PAT table contains attribute information for the vector polygons representing marine mammal distribution. Note that all attribute information is stored in a series of relational files, described below. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (74), 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:* 740400002

*Range\_Domain\_Maximum:* 740400391

*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:* 74000312

*Range\_Domain\_Maximum:* 74000374

*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:* 74000001

*Range\_Domain\_Maximum:* 74000375

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (74), element number (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:* 740100002

*Range\_Domain\_Maximum:* 742201368

*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:* 074000001

*Range\_Domain\_Maximum:* 074000375

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* CONC

*Attribute\_Definition:*

The field CONC refers to "concentration", abundance, or density values. In this data layer, the field may contain counts of individuals (XX marine mammals) for each species potentially present at a particular haul-out site, or in cases where no quantitative count information was available, the field may contain a descriptive term, such as "HIGH" or "COMMON". In cases where no concentration information was available from any source, the field contains "-". Counts were derived from a variety of surveys, and may range in date.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Any character

*Enumerated\_Domain\_Value\_Definition:* Free text

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SEASON\_ID

*Attribute\_Definition:*

Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1

*Range\_Domain\_Maximum*: N

*Attribute*:

*Attribute\_Label*: G\_SOURCE

*Attribute\_Definition*:

Geographic source identifier that links records in the BIORES data table to records in the SOURCES data table.

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1

*Range\_Domain\_Maximum*: N

*Attribute*:

*Attribute\_Label*: S\_SOURCE

*Attribute\_Definition*:

Seasonality source identifier that links records in the BIORES data table to records in the SOURCES data table.

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1

*Range\_Domain\_Maximum*: N

*Attribute*:

*Attribute\_Label*: ELEMENT

*Attribute\_Definition*: Major categories of biological data

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: BIRD

*Enumerated\_Domain\_Value\_Definition*: Birds

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: FISH

*Enumerated\_Domain\_Value\_Definition*: Fish

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: HABITAT

*Enumerated\_Domain\_Value\_Definition*: Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: INVERT

*Enumerated\_Domain\_Value\_Definition*: Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition*: Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: REPTILE

*Enumerated\_Domain\_Value\_Definition*: Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links records in the BIORES data table to records in the SPECIES and STATUS data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (eg. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BIORES data table to records in the SEASONAL and BREED data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (eg. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SPECIES

*Entity\_Type\_Definition:*

The data table SPECIES identifies all species in the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

Refer to the Completeness\_Report for a list of layer-specific species.

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* NAME

*Attribute\_Definition:* Species common name

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Species common name for the entire ESI

data set

*Enumerated\_Domain\_Value\_Definition:* Free text

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* GEN\_SPEC

*Attribute\_Definition:* Species scientific name

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Species scientific name for the entire ESI data set.

*Enumerated\_Domain\_Value\_Definition:* Free text

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SUBELEMENT

*Attribute\_Definition:* Element subgroup delineating a logical grouping of species

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* alcid

*Enumerated\_Domain\_Value\_Definition:* Alcid



*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.  
*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*: bivalve  
*Enumerated\_Domain\_Value\_Definition*: Bivalve  
*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:  
*Enumerated\_Domain*:  
*Enumerated\_Domain\_Value*: crab  
*Enumerated\_Domain\_Value\_Definition*: Crab  
*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:  
*Enumerated\_Domain*:  
*Enumerated\_Domain\_Value*: diadromous  
*Enumerated\_Domain\_Value\_Definition*: Diadromous fish  
*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:  
*Enumerated\_Domain*:  
*Enumerated\_Domain\_Value*: diving  
*Enumerated\_Domain\_Value\_Definition*: Diving bird  
*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:  
*Enumerated\_Domain*:  
*Enumerated\_Domain\_Value*: dolphin  
*Enumerated\_Domain\_Value\_Definition*: Dolphin  
*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:  
*Enumerated\_Domain*:  
*Enumerated\_Domain\_Value*: e\_nursery  
*Enumerated\_Domain\_Value\_Definition*: Estuarine nursery fish  
*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:  
*Enumerated\_Domain*:  
*Enumerated\_Domain\_Value*: freshwater  
*Enumerated\_Domain\_Value\_Definition*: Freshwater fish  
*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:  
*Enumerated\_Domain*:  
*Enumerated\_Domain\_Value*: gull\_tern  
*Enumerated\_Domain\_Value\_Definition*: Gull or tern  
*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:  
*Enumerated\_Domain*:  
*Enumerated\_Domain\_Value*: kelp  
*Enumerated\_Domain\_Value\_Definition*: Kelp habitat, community, or species  
*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:  
*Enumerated\_Domain*:  
*Enumerated\_Domain\_Value*: m\_benthic

*Enumerated\_Domain\_Value\_Definition*: Marine benthic fish  
*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:  
*Enumerated\_Domain*:  
*Enumerated\_Domain\_Value*: m\_pelagic  
*Enumerated\_Domain\_Value\_Definition*: Marine pelagic fish  
*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:  
*Enumerated\_Domain*:  
*Enumerated\_Domain\_Value*: passerine  
*Enumerated\_Domain\_Value\_Definition*: Passerine bird  
*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:  
*Enumerated\_Domain*:  
*Enumerated\_Domain\_Value*: pelagic  
*Enumerated\_Domain\_Value\_Definition*: Pelagic bird  
*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:  
*Enumerated\_Domain*:  
*Enumerated\_Domain\_Value*: pinniped  
*Enumerated\_Domain\_Value\_Definition*: Pinniped  
*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:  
*Enumerated\_Domain*:  
*Enumerated\_Domain\_Value*: raptor  
*Enumerated\_Domain\_Value\_Definition*: Raptor  
*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:  
*Enumerated\_Domain*:  
*Enumerated\_Domain\_Value*: sav  
*Enumerated\_Domain\_Value\_Definition*: Submersed aquatic vegetation  
*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:  
*Enumerated\_Domain*:  
*Enumerated\_Domain\_Value*: shorebird  
*Enumerated\_Domain\_Value\_Definition*: Shorebird  
*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:  
*Enumerated\_Domain*:  
*Enumerated\_Domain\_Value*: wading  
*Enumerated\_Domain\_Value\_Definition*: Wading bird  
*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:  
*Enumerated\_Domain*:  
*Enumerated\_Domain\_Value*: waterfowl  
*Enumerated\_Domain\_Value\_Definition*: Waterfowl  
*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:  
*Enumerated\_Domain*:  
*Enumerated\_Domain\_Value*: whale  
*Enumerated\_Domain\_Value\_Definition*: Whale  
*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: NHP  
*Attribute\_Definition*: Natural Heritage Program global ranking  
*Attribute\_Definition\_Source*: Network of Natural Heritage Program  
*Attribute\_Domain\_Values*:  
*Codeset\_Domain*:  
*Codeset\_Name*: NHP Global Conservation Status Rank  
*Codeset\_Source*: Natural Heritage Program

*Attribute:*

*Attribute\_Label:* DATE\_PUB

*Attribute\_Definition:* Date of NHP listing

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 0

*Enumerated\_Domain\_Value\_Definition:* Not ranked

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Numeric

*Enumerated\_Domain\_Value\_Definition:* mmyyyy

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links records in the SPECIES data table to records in the BIORES and STATUS data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (eg. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SEASONAL

*Entity\_Type\_Definition:*

The data table SEASONAL contains information on the seasonal presence of each species associated with each spatial vector object. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* M\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:* Marine Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* REPTILE  
*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* T\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SPECIES\_ID  
*Attribute\_Definition:*  
Numeric identifier for each species that is unique within each element and refers to a nationwide ESI species list maintained at NOAA.  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Range\_Domain:*  
*Range\_Domain\_Minimum:* 1  
*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* SEASON\_ID  
*Attribute\_Definition:*  
Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Range\_Domain:*  
*Range\_Domain\_Minimum:* 1  
*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* JAN  
*Attribute\_Definition:* January  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in January  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* FEB  
*Attribute\_Definition:* February  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in February  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* MAR  
*Attribute\_Definition:* March  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: X*  
*Enumerated\_Domain\_Value\_Definition: Present in March*  
*Enumerated\_Domain\_Value\_Definition\_Source: Research Planning, Inc.*

*Attribute:*

*Attribute\_Label: APR*  
*Attribute\_Definition: April*  
*Attribute\_Definition\_Source: Research Planning, Inc.*  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: X*  
*Enumerated\_Domain\_Value\_Definition: Present in April*  
*Enumerated\_Domain\_Value\_Definition\_Source: Research Planning, Inc.*

*Attribute:*

*Attribute\_Label: MAY*  
*Attribute\_Definition: May*  
*Attribute\_Definition\_Source: Research Planning, Inc.*  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: X*  
*Enumerated\_Domain\_Value\_Definition: Present in May*  
*Enumerated\_Domain\_Value\_Definition\_Source: Research Planning, Inc.*

*Attribute:*

*Attribute\_Label: JUN*  
*Attribute\_Definition: June*  
*Attribute\_Definition\_Source: Research Planning, Inc.*  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: X*  
*Enumerated\_Domain\_Value\_Definition: Present in June*  
*Enumerated\_Domain\_Value\_Definition\_Source: Research Planning, Inc.*

*Attribute:*

*Attribute\_Label: JUL*  
*Attribute\_Definition: July*  
*Attribute\_Definition\_Source: Research Planning, Inc.*  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: X*  
*Enumerated\_Domain\_Value\_Definition: Present in July*  
*Enumerated\_Domain\_Value\_Definition\_Source: Research Planning, Inc.*

*Attribute:*

*Attribute\_Label: AUG*  
*Attribute\_Definition: August*  
*Attribute\_Definition\_Source: Research Planning, Inc.*  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: X*  
*Enumerated\_Domain\_Value\_Definition: Present in August*  
*Enumerated\_Domain\_Value\_Definition\_Source: Research Planning, Inc.*

*Attribute:*

*Attribute\_Label: SEP*  
*Attribute\_Definition: September*  
*Attribute\_Definition\_Source: Research Planning, Inc.*  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: X*  
*Enumerated\_Domain\_Value\_Definition: Present in September*  
*Enumerated\_Domain\_Value\_Definition\_Source: Research Planning, Inc.*

*Attribute:*

*Attribute\_Label: OCT*  
*Attribute\_Definition: October*

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in October

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* NOV

*Attribute\_Definition:* November

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in November

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* DEC

*Attribute\_Definition:* December

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in December

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the SEASONAL data table to records in the BIORRES and BREED data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (eg. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BREED

*Entity\_Type\_Definition:*

The data table BREED identifies the monthly presence of certain life-history stages or activities for each species at a given location.

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BREED data table to records in the BIORRES and SEASONAL data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are

SEASON\_ID (eg. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* MONTH

*Attribute\_Definition:*

Two-digit calendar month. Each life history stage or activity type for a particular species can have up to 12 records to account for each month of the year.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* 12

*Attribute:*

*Attribute\_Label:* BREED1

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED1 = nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning/mating; if ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M\_MAMMAL" then BREED1 = mating. This attribute is not used for HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* BREED2

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = 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 = juvenile; if ELEMENT is "INVERT" then BREED4 = juvenile; if ELEMENT is "REPTILE" then BREED4 = juvenile; if ELEMENT is "M\_MAMMAL" then BREED4 = molting. This attribute is not used for BIRD, HABITAT, or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*



*Enumerated\_Domain\_Value:* -  
*Enumerated\_Domain\_Value\_Definition:*  
Breed category not used or not appropriate for record(s) in question  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* BREED5  
*Attribute\_Definition:*  
Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 = adults; if ELEMENT is "INVERT" then BREED5 = adults; if ELEMENT is "REPTILE" then BREED5 = adults. This attribute is not used for BIRD, M\_MAMMAL, HABITAT, or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SOURCES

*Entity\_Type\_Definition:*

The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SOURCE\_ID

*Attribute\_Definition:*

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table, and to G\_SOURCE and S\_SOURCE in the BIORRES table.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* ORIGINATOR

*Attribute\_Definition:* Author or developer of source material or data set

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Any character

*Enumerated\_Domain\_Value\_Definition:* Free text

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: DATE\_PUB

*Attribute\_Definition*:

Date of source material, publication, or date of personal communication with expert source

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: Numeric

*Enumerated\_Domain\_Value\_Definition*: mmyyyy

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: TITLE

*Attribute\_Definition*: Title of source material or data

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: Any character

*Enumerated\_Domain\_Value\_Definition*: Free text

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: DATA\_FORMAT

*Attribute\_Definition*: The format of the source material

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: Any character

*Enumerated\_Domain\_Value\_Definition*: Free text

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: PUBLICATION

*Attribute\_Definition*: Additional citation information

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: Any character

*Enumerated\_Domain\_Value\_Definition*: Free text

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: SCALE

*Attribute\_Definition*: Scale denominator of the source

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: integer

*Enumerated\_Domain\_Value\_Definition*: Any integer

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: TIME\_PERIOD

*Attribute\_Definition*:

Date(s) of data collection that the source material is based upon.

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: Numeric

*Enumerated\_Domain\_Value\_Definition*: yyyy

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Detailed\_Description*:

*Entity\_Type*:

*Entity\_Type\_Label:* STATUS

*Entity\_Type\_Definition:*

The data table STATUS identifies the species that are listed as either threatened or endangered by a state or federal authority. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* STATE

*Attribute\_Definition:* Two-letter state abbreviation

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Any character

*Enumerated\_Domain\_Value\_Definition:* Two-letter state abbreviation

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* S\_F

*Attribute\_Definition:* State and Federal status.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* F

*Enumerated\_Domain\_Value\_Definition:* Federally listed

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* S

*Enumerated\_Domain\_Value\_Definition:* State listed

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* S/F

*Enumerated\_Domain\_Value\_Definition:* State and federally listed

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* T\_E

*Attribute\_Definition:* Threatened and endangered status.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

*Enumerated\_Domain\_Value\_Definition:* Endangered on state or federal list

*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T

*Enumerated\_Domain\_Value\_Definition:* Threatened on state or federal list

*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* C

*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service

*Attribute:*

*Attribute\_Label:* DATE\_PUB

*Attribute\_Definition:*

Publication date of source material used to assign state and federal status values for each species, if used.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Numeric

*Enumerated\_Domain\_Value\_Definition:* mmyyyy

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links the STATUS data table to the BIORRES and SPECIES data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (eg. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

---

*Distribution\_Information:*

*Distributor:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:* John Kaperick

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Address:*

*Address\_Type:* Physical Address

*Address:* 7600 Sand Point Way N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6400

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Resource\_Description:* ESI Atlas for Western 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:* 200307

*Metadata\_Review\_Date:* 200307

*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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# Western 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; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

*Publication\_Date:* 200307

*Title:* Western Alaska ESI: T\_MAMMAL (Terrestrial Mammal Polygons)

*Edition:* First

*Geospatial\_Data\_Presentation\_Form:* Vector digital data

##### *Series\_Information:*

*Series\_Name:* None

*Issue\_Identification:* Western Alaska

##### *Publication\_Information:*

*Publication\_Place:* Seattle, Washington

##### *Publisher:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington

##### *Other\_Citation\_Details:*

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

### *Description:*

#### *Abstract:*

This data set contains sensitive biological resource data for brown bears in Western 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 Western 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:* 2002

*Ending\_Date:* 2003

*Currentness\_Reference:*

The biological data were compiled during 2002-2003. The currentness date for these data is 2002 and is documented in the Source\_Information section.

*Status:*

*Progress:* Complete

*Maintenance\_and\_Update\_Frequency:* None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -174.0

*East\_Bounding\_Coordinate:* -159.0

*North\_Bounding\_Coordinate:* 64.0

*South\_Bounding\_Coordinate:* 59.0

*Keywords:*

*Theme:*

*Theme\_Keyword\_Thesaurus:* None

*Theme\_Keyword:* ESI

*Theme\_Keyword:* Sensitivity maps

*Theme\_Keyword:* Coastal resources

*Theme\_Keyword:* Oil spill planning

*Theme\_Keyword:* Coastal Zone Management

*Theme\_Keyword:* Wildlife

*Theme\_Keyword:* Terrestrial Mammals

*Place:*

*Place\_Keyword\_Thesaurus:* None

*Place\_Keyword:* Western Alaska

*Place\_Keyword:* Alaska

*Access\_Constraints:* None

*Use\_Constraints:*

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* [datafig.jpg](#)

*Browse\_Graphic\_File\_Description:*

Relationships between spatial data layers and attribute data tables for the Western Alaska ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska;



Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) 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, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, invert.e00, lakes.e00, m\_mammal.e00, mgt.e00, nests.e00, soecon.e00, streams.e00, t\_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio\_lut, biofile, biores, breed, breed\_dt, seasonal, soc\_dat, soc\_lut, sources, species, and status.

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*Data\_Quality\_Information:*

*Attribute\_Accuracy:*

*Attribute\_Accuracy\_Report:*

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

*Logical\_Consistency\_Report:*

A multi-stage error checking process, described in the above Attribute\_Accuracy\_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and SQL SERVER(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 information depicted on hardcopy maps on terrestrial mammal concentration areas. These data do not represent all terrestrial mammal concentration areas in Western Alaska. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name, if applicable): 55, Brown bear, Ursus arctos.

*Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy\_Report:*

Most of the spatial components of the biological data sets are developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy basemaps with a scale of 1:250,000. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the

positional accuracy of vector digital objects representing these resources.

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* Alaska Regional Response Team (ARRT)

*Publication\_Date:* 2001

*Title:*

Western Alaska subarea contingency plan: sensitive areas section

*Geospatial\_Data\_Presentation\_Form:* Hardcopy text

*Publication\_Information:*

*Publication\_Place:* Unknown

*Publisher:* Alaska Regional Response Team (ARRT), pp. D1-D82

*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:* Terrestrial mammal information

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* Alaska Dept. of Fish & Game (ADF&G)

*Publication\_Date:* 1986

*Title:*

Alaska Habitat Management Guide: Western and Interior Regions  
Map Atlas

*Geospatial\_Data\_Presentation\_Form:* Hardcopy text

*Publication\_Information:*

*Publication\_Place:* Juneau, AK

*Publisher:* ADF&G Habitat Division

*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:* Terrestrial mammal information

*Process\_Step:*

*Process\_Description:*

The main source of data used to depict brown bear distribution for this data layer, as identified during personal interviews, was a 1986 Alaska Dept. of Fish & Game (ADF&G) Habitat Management Guide, Western Alaska and Interior Region, Map Atlas. Information gathered from the ADF&G atlas was compiled onto U.S. Geological Survey (USGS) 1:250,000 topographic quadrangles. The compiled data were digitized off the base maps into an ArcInfo system to create the T\_MAMMAL data layer. All ESI, biology, and human-use data were plotted onto hardcopy draft maps. Following the creation of draft maps, a second set of interviews with resource experts was conducted. Participants who were unable to attend the meetings were sent a set of maps to review. Edits to the T\_MAMMAL data layer were made based on the recommendations of the resource experts, and final hardcopy maps were created.

*Process\_Date:* 200305

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:* NOAA, Office of Response and

Restoration

*Contact\_Person:* Jill Petersen

*Contact\_Address:*

*Address\_Type:* Physical address

*Address:* 7600 Sand Point Way, N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6944

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

---

*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:* Vector

*Point\_and\_Vector\_Object\_Information:*

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* GT-polygon composed of rings

*Point\_and\_Vector\_Object\_Count:* 8

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Area point

*Point\_and\_Vector\_Object\_Count:* 8

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Complete chain

*Point\_and\_Vector\_Object\_Count:* 187

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Link

*Point\_and\_Vector\_Object\_Count:* 82953

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Node, planar graph

*Point\_and\_Vector\_Object\_Count:* 187

---

*Spatial\_Reference\_Information:*

*Horizontal\_Coordinate\_System\_Definition:*

*Geographic:*

*Latitude\_Resolution:* 0.00005

*Longitude\_Resolution:* 0.00005

*Geographic\_Coordinate\_Units:* Decimal degrees

*Geodetic\_Model:*

*Horizontal\_Datum\_Name:* North American Datum of 1927

*Ellipsoid\_Name:* Clarke 1866

*Semi-major\_Axis:* 6378206.400000

*Denominator\_of\_Flattening\_Ratio:* 294.978698

---

*Entity\_and\_Attribute\_Information:*

*Overview\_Description:*

*Entity\_and\_Attribute\_Overview:*

In addition to the geographic data layers, six relational attribute or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, T\_MAMMAL) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO\_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (for the Western Alaska atlas, the number is 74), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique

combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN\_SPEC, S\_F, T\_E, NHP, DATE\_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G\_SOURCE, S\_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED\_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed\_Description of the BREED data table. The link to the BIOFILE may be made through the BIO\_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED\_DT is an auxiliary support data table to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to BREED\_DT is the BREED item.

A second supporting data table is SOURCES. This is the same as the source file described above, and the link from the flat file is both G\_SOURCE and S\_SOURCE. It should be noted that although the flat file eases data query, it is not a normalized database structure, and actual updates performed by the states and other responsible agencies should be done using the relational data tables. The entity-relationship diagram, describing relationships between attribute tables in the ESI data structure, does NOT include the BIOFILE data table, and this data table is NOT described in detail below.

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* T\_MAMMAL.PAT

*Entity\_Type\_Definition:*

The T\_MAMMAL.PAT table contains attribute information for the vector polygons representing brown bear distribution. Note that all attribute information is stored in a series of relational files, described below. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (74), element number (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:* 740900002

*Range\_Domain\_Maximum:* 740900009

*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:* 74000375

*Range\_Domain\_Maximum:* 74000375

*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:* 74000001

*Range\_Domain\_Maximum:* 74000375

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (74), element number (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:* 740100002

*Range\_Domain\_Maximum:* 742201368

*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:* 074000001

*Range\_Domain\_Maximum:* 074000375

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* CONC

*Attribute\_Definition:*

The field CONC refers to "concentration", abundance, or density values. In this data layer, no concentration information was available, so the CONC field contains "-".

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Any character

*Enumerated\_Domain\_Value\_Definition:* Free text

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SEASON\_ID

*Attribute\_Definition:*

Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* G\_SOURCE

*Attribute\_Definition:*

Geographic source identifier that links records in the BIORES data table to records in the SOURCES data table.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* S\_SOURCE

*Attribute\_Definition:*

Seasonality source identifier that links records in the BIORES data table to records in the SOURCES data table.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links records in the BIORES data table to records in the SPECIES and STATUS data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (eg. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BIORES data table to records in the SEASONAL and BREED data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (eg. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SPECIES

*Entity\_Type\_Definition:*

The data table SPECIES identifies all species in the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure. Refer to the Completeness\_Report for a list of layer-specific species.

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* NAME

*Attribute\_Definition:* Species common name

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Species common name for the entire ESI data set

*Enumerated\_Domain\_Value\_Definition:* Free text

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* GEN\_SPEC

*Attribute\_Definition:* Species scientific name

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Species scientific name for the entire ESI data set.

*Enumerated\_Domain\_Value\_Definition:* Free text

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.



*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SUBELEMENT

*Attribute\_Definition:* Element subgroup delineating a logical grouping of species

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* alcid

*Enumerated\_Domain\_Value\_Definition:* Alcid

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*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:* bivalve

*Enumerated\_Domain\_Value\_Definition:* Bivalve

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* crab

*Enumerated\_Domain\_Value\_Definition:* Crab

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* diadromous

*Enumerated\_Domain\_Value\_Definition:* Diadromous fish

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* diving

*Enumerated\_Domain\_Value\_Definition:* Diving bird

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* dolphin

*Enumerated\_Domain\_Value\_Definition:* Dolphin

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* e\_nursery  
*Enumerated\_Domain\_Value\_Definition:* Estuarine nursery fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* freshwater  
*Enumerated\_Domain\_Value\_Definition:* Freshwater fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* gull\_tern  
*Enumerated\_Domain\_Value\_Definition:* Gull or tern  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* kelp  
*Enumerated\_Domain\_Value\_Definition:* Kelp habitat, community, or species  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* m\_benthic  
*Enumerated\_Domain\_Value\_Definition:* Marine benthic fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* m\_pelagic  
*Enumerated\_Domain\_Value\_Definition:* Marine pelagic fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* passerine  
*Enumerated\_Domain\_Value\_Definition:* Passerine bird  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* pelagic  
*Enumerated\_Domain\_Value\_Definition:* Pelagic bird  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* pinniped  
*Enumerated\_Domain\_Value\_Definition:* Pinniped  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* raptor  
*Enumerated\_Domain\_Value\_Definition:* Raptor  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* sav  
*Enumerated\_Domain\_Value\_Definition:* Submersed aquatic vegetation  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* shorebird  
*Enumerated\_Domain\_Value\_Definition:* Shorebird  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* wading

*Enumerated\_Domain\_Value\_Definition:* Wading bird

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* waterfowl

*Enumerated\_Domain\_Value\_Definition:* Waterfowl

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* whale

*Enumerated\_Domain\_Value\_Definition:* Whale

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* NHP

*Attribute\_Definition:* Natural Heritage Program global ranking

*Attribute\_Definition\_Source:* Network of Natural Heritage Program

*Attribute\_Domain\_Values:*

*Codeset\_Domain:*

*Codeset\_Name:* NHP Global Conservation Status Rank

*Codeset\_Source:* Natural Heritage Program

*Attribute:*

*Attribute\_Label:* DATE\_PUB

*Attribute\_Definition:* Date of NHP listing

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* 0

*Enumerated\_Domain\_Value\_Definition:* Not ranked

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Numeric

*Enumerated\_Domain\_Value\_Definition:* mmyyyy

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links records in the SPECIES data table to records in the BIORRES and STATUS data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (eg. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SEASONAL

*Entity\_Type\_Definition:*

The data table SEASONAL contains information on the seasonal presence of each species associated with each spatial vector object. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

Numeric identifier for each species that is unique within each element and refers to a nationwide ESI species list maintained at NOAA.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* SEASON\_ID

*Attribute\_Definition:*

Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* JAN  
*Attribute\_Definition:* January  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
    *Enumerated\_Domain:*  
        *Enumerated\_Domain\_Value:* X  
        *Enumerated\_Domain\_Value\_Definition:* Present in January  
        *Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* FEB  
*Attribute\_Definition:* February  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
    *Enumerated\_Domain:*  
        *Enumerated\_Domain\_Value:* X  
        *Enumerated\_Domain\_Value\_Definition:* Present in February  
        *Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* MAR  
*Attribute\_Definition:* March  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
    *Enumerated\_Domain:*  
        *Enumerated\_Domain\_Value:* X  
        *Enumerated\_Domain\_Value\_Definition:* Present in March  
        *Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* APR  
*Attribute\_Definition:* April  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
    *Enumerated\_Domain:*  
        *Enumerated\_Domain\_Value:* X  
        *Enumerated\_Domain\_Value\_Definition:* Present in April  
        *Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* MAY  
*Attribute\_Definition:* May  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
    *Enumerated\_Domain:*  
        *Enumerated\_Domain\_Value:* X  
        *Enumerated\_Domain\_Value\_Definition:* Present in May  
        *Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* JUN  
*Attribute\_Definition:* June  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
    *Enumerated\_Domain:*  
        *Enumerated\_Domain\_Value:* X  
        *Enumerated\_Domain\_Value\_Definition:* Present in June  
        *Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* JUL  
*Attribute\_Definition:* July  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
    *Enumerated\_Domain:*  
        *Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in July  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* AUG  
*Attribute\_Definition:* August  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in August  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SEP  
*Attribute\_Definition:* September  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in September  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* OCT  
*Attribute\_Definition:* October  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in October  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* NOV  
*Attribute\_Definition:* November  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in November  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* DEC  
*Attribute\_Definition:* December  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* X  
*Enumerated\_Domain\_Value\_Definition:* Present in December  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA  
*Attribute\_Definition:*  
Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the SEASONAL data table to records in the BIORRES and BREED data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* E#####  
*Enumerated\_Domain\_Value\_Definition:*  
Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are

SEASON\_ID (eg. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BREED

*Entity\_Type\_Definition:*

The data table BREED identifies the monthly presence of certain life-history stages or activities for each species at a given location.

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BREED data table to records in the BIORRES and SEASONAL data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (eg. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* MONTH

*Attribute\_Definition:*

Two-digit calendar month. Each life history stage or activity type for a particular species can have up to 12 records to account for each month of the year.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* 12

*Attribute:*

*Attribute\_Label:* BREED1

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED1 = nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning/mating; if ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M\_MAMMAL" then BREED1 = mating.

This attribute is not used for HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* BREED2

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = 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 = juvenile; if ELEMENT is "INVERT" then BREED4 = juvenile; if ELEMENT is "REPTILE" then BREED4 = juvenile; if ELEMENT is "M\_MAMMAL" then BREED4 = molting. This attribute is not used for BIRD, HABITAT, or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* BREED5

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 = adults; if ELEMENT is "INVERT" then BREED5 = adults; if ELEMENT is "REPTILE" then BREED5 = adults. This attribute is not used for BIRD, M\_MAMMAL, HABITAT, or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SOURCES

*Entity\_Type\_Definition:*

The data table SOURCES contains the primary sources used to create the ESI data

set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: SOURCE\_ID

*Attribute\_Definition*:

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table, and to G\_SOURCE and S\_SOURCE in the BIORES table.

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1

*Range\_Domain\_Maximum*: N

*Attribute*:

*Attribute\_Label*: ORIGINATOR

*Attribute\_Definition*: Author or developer of source material or data set

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: Any character

*Enumerated\_Domain\_Value\_Definition*: Free text

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: DATE\_PUB

*Attribute\_Definition*:

Date of source material, publication, or date of personal communication with expert source

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: Numeric

*Enumerated\_Domain\_Value\_Definition*: mmyyyy

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: TITLE

*Attribute\_Definition*: Title of source material or data

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: Any character

*Enumerated\_Domain\_Value\_Definition*: Free text

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: DATA\_FORMAT

*Attribute\_Definition*: The format of the source material

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: Any character

*Enumerated\_Domain\_Value\_Definition*: Free text

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: PUBLICATION

*Attribute\_Definition*: Additional citation information

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: Any character

*Enumerated\_Domain\_Value\_Definition:* Free text  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SCALE  
*Attribute\_Definition:* Scale denominator of the source  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* integer  
*Enumerated\_Domain\_Value\_Definition:* Any integer  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* TIME\_PERIOD  
*Attribute\_Definition:*  
Date(s) of data collection that the source material is based upon.  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* Numeric  
*Enumerated\_Domain\_Value\_Definition:* yyyy  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* STATUS  
*Entity\_Type\_Definition:*  
The data table STATUS identifies the species that are listed as either threatened or endangered by a state or federal authority. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.  
*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* ELEMENT  
*Attribute\_Definition:* Major categories of biological data  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* BIRD  
*Enumerated\_Domain\_Value\_Definition:* Birds  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* FISH  
*Enumerated\_Domain\_Value\_Definition:* Fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* HABITAT  
*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* INVERT  
*Enumerated\_Domain\_Value\_Definition:* Invertebrates  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* M\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:* Marine Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* STATE

*Attribute\_Definition:* Two-letter state abbreviation

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Any character

*Enumerated\_Domain\_Value\_Definition:* Two-letter state abbreviation

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* S\_F

*Attribute\_Definition:* State and Federal status

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* F

*Enumerated\_Domain\_Value\_Definition:* Federally listed

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* S

*Enumerated\_Domain\_Value\_Definition:* State listed

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* S/F

*Enumerated\_Domain\_Value\_Definition:* State and federally listed

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* T\_E

*Attribute\_Definition:* Threatened and endangered status

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E

*Enumerated\_Domain\_Value\_Definition:* Endangered on state or federal list

*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T  
*Enumerated\_Domain\_Value\_Definition:* Threatened on state or federal list  
*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* C  
*Enumerated\_Domain\_Value\_Definition:* Species of Special Concern  
*Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service

*Attribute:*

*Attribute\_Label:* DATE\_PUB

*Attribute\_Definition:*

Publication date of source material used to assign state and federal status values for each species, if used.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Numeric  
*Enumerated\_Domain\_Value\_Definition:* mmyyyy  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links the STATUS data table to the BIORRES and SPECIES data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####  
*Enumerated\_Domain\_Value\_Definition:*  
Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (eg. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

---

*Distribution\_Information:*

*Distributor:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:* John Kaperick

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Address:*

*Address\_Type:* Physical Address

*Address:* 7600 Sand Point Way N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6400

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Resource\_Description:* ESI Atlas for Western 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:* 200307

*Metadata\_Review\_Date:* 200307

*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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# Western 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; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

*Publication\_Date:* 200307

*Title:* Western Alaska ESI: HABITATS (Habitat Polygons)

*Edition:* First

*Geospatial\_Data\_Presentation\_Form:* Vector digital data

##### *Series\_Information:*

*Series\_Name:* None

*Issue\_Identification:* Western Alaska

##### *Publication\_Information:*

*Publication\_Place:* Seattle, Washington

##### *Publisher:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington

##### *Other\_Citation\_Details:*

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

### *Description:*

#### *Abstract:*

This data set contains sensitive biological resource data for submerged aquatic vegetation (SAV) in Western Alaska. Vector polygons in this data set represent habitat distribution. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the Environmental Sensitivity Index (ESI) data for Western 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:* 2002

*Ending\_Date:* 2003

*Currentness\_Reference:*

The biological data were compiled during 2002-2003. The currentness date for these data is 2001 and is documented in the Source\_Information section.

*Status:*

*Progress:* Complete

*Maintenance\_and\_Update\_Frequency:* None Scheduled

*Spatial\_Domain:**Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -174.0

*East\_Bounding\_Coordinate:* -159.0

*North\_Bounding\_Coordinate:* 64.0

*South\_Bounding\_Coordinate:* 59.0

*Keywords:**Theme:*

*Theme\_Keyword\_Thesaurus:* None

*Theme\_Keyword:* ESI

*Theme\_Keyword:* Sensitivity maps

*Theme\_Keyword:* Coastal resources

*Theme\_Keyword:* Oil spill planning

*Theme\_Keyword:* Coastal Zone Management

*Theme\_Keyword:* Wildlife

*Theme\_Keyword:* Habitats

*Theme\_Keyword:* Plants

*Place:*

*Place\_Keyword\_Thesaurus:* None

*Place\_Keyword:* Western Alaska

*Place\_Keyword:* Alaska

*Access\_Constraints:* None

*Use\_Constraints:*

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* [datafig.jpg](#)

*Browse\_Graphic\_File\_Description:*

Relationships between spatial data layers and attribute data tables for the Western Alaska, ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and



Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) 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, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, invert.e00, lakes.e00, m\_mammal.e00, mgt.e00, nests.e00, socecon.e00, streams.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 on eelgrass and kelp distribution. These data do not represent total submerged aquatic vegetation distribution in Western Alaska. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name, if applicable): 1, Eelgrass, *Zostera marina*; 1056, Kelp.

*Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy\_Report:*

Some of the spatial components of the biological data sets are developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy basemaps with a scale of 1:250,000. The rest of the spatial components of the biological data sets are developed from pre-existing digital sources and reflect the positional accuracy of these original data. See the Lineage and Process\_Description

sections for more information on the original data source and how these data were integrated or manipulated to create the final data set. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources.

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* Leon, C. (NPS, Nome)

*Publication\_Date:* Unpublished Material

*Title:* Fish and invertebrate concentration areas

*Geospatial\_Data\_Presentation\_Form:* Expert knowledge

*Type\_of\_Source\_Media:* Personal communication

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2001

*Source\_Currentness\_Reference:* Date of communication

*Source\_Citation\_Abbreviation:* None

*Source\_Contribution:* Habitat information

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* Ivanoff, H. (USFWS, Bethel)

*Publication\_Date:* Unpublished Material

*Title:* Eelgrass locations around Nunivak Island

*Geospatial\_Data\_Presentation\_Form:* Expert knowledge

*Type\_of\_Source\_Media:* Personal communication

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2002

*Source\_Currentness\_Reference:* Date of communication

*Source\_Citation\_Abbreviation:* None

*Source\_Contribution:* Habitat information

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* Togiak NWR map (Dillingham, AK)

*Publication\_Date:* Unpublished Material

*Title:* Togiak NWR species distribution

*Geospatial\_Data\_Presentation\_Form:* Hardcopy map

*Source\_Scale\_Denominator:* 250,000

*Type\_of\_Source\_Media:* Paper

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2002

*Source\_Currentness\_Reference:* Date of communication

*Source\_Citation\_Abbreviation:* None

*Source\_Contribution:* Habitat information

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* NWR Wilderness boundaries

*Publication\_Date:* 2002

*Title:* Wilderness Area boundaries

*Geospatial\_Data\_Presentation\_Form:* Vector digital data

*Publication\_Information:*

*Publication\_Place:* Unknown

*Publisher:* U.S.Fish and Wildlife Service, Region 7, Division of Realty

*Type\_of\_Source\_Media:* Email

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:* 2002

*Source\_Currentness\_Reference:* Date of communication

*Source\_Citation\_Abbreviation:* None

*Source\_Contribution:* Habitat information

*Process\_Step:*

*Process\_Description:*

The main source of data used to depict habitat distribution for this data layer was personal interviews with resource experts from National Park Service (NPS), U.S. Fish and Wildlife Service (USFWS), and Alaska Department of Fish and Game (ADF&G). Information on eelgrass and kelp was gathered during interviews and was compiled onto U.S. Geological Survey (USGS) 1:250,000 topographic quadrangles. The compiled data were digitized off the base maps into an ArcInfo system to create the HABITATS data layer. All ESI, biology, and human-use data were plotted onto hardcopy draft maps. Following the creation of draft maps, a second interview with the resource experts was conducted. Edits to the HABITATS data layer were made based on the resource experts' recommendations, and final hardcopy maps were created.

*Process\_Date:* 200305

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Person:* Jill Petersen

*Contact\_Address:*

*Address\_Type:* Physical address

*Address:* 7600 Sand Point Way, N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6944

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:* Vector

*Point\_and\_Vector\_Object\_Information:*

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* GT-polygon composed of rings

*Point\_and\_Vector\_Object\_Count:* 67

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Area point

*Point\_and\_Vector\_Object\_Count:* 67

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Complete chain

*Point\_and\_Vector\_Object\_Count:* 145

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Link

*Point\_and\_Vector\_Object\_Count:* 42661

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Node, planar graph

*Point\_and\_Vector\_Object\_Count:* 145

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*Spatial\_Reference\_Information:*

*Horizontal\_Coordinate\_System\_Definition:*

*Geographic:*

*Latitude\_Resolution:* 0.00005

*Longitude\_Resolution:* 0.00005

*Geographic\_Coordinate\_Units:* Decimal degrees

*Geodetic\_Model:*

*Horizontal\_Datum\_Name:* North American Datum of 1927

*Ellipsoid\_Name:* Clarke 1866

*Semi-major\_Axis:* 6378206.4

*Denominator\_of\_Flattening\_Ratio:* 294.978698

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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 Western Alaska, the number is 74 an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN\_SPEC, S\_F, T\_E, NHP, DATE\_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G\_SOURCE, S\_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables described below, except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED\_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed\_Description of the BREED data table. The link to the BIOFILE may be made through the BIO\_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED\_DT is an auxiliary support data table to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to BREED\_DT is the BREED item.

A second supporting data table is SOURCES. This is the same as the source file described above, and the link from the flat file is both G\_SOURCE and S\_SOURCE. It should be noted that although the flat file eases data query, it is not a normalized database structure, and actual updates performed by the states and other responsible agencies should be done using the relational data tables. The entity-relationship diagram, describing relationships between attribute tables in the ESI data structure, does NOT include the BIOFILE data table, and this

data table is NOT described in detail below.

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* HABITATS.PAT

*Entity\_Type\_Definition:*

The HABITATS.PAT table contains attribute information for the vector polygons representing eelgrass and kelp concentration areas. Note that all attribute information is stored in a series of relational files, described below. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (74), element number (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:* 740300002

*Range\_Domain\_Maximum:* 740300068

*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:* 74000301

*Range\_Domain\_Maximum:* 74000305

*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:* 74000001

*Range\_Domain\_Maximum:* 74000375

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (74), element number (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*: 740100002

*Range\_Domain\_Maximum*: 742201368

*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*: 074000001

*Range\_Domain\_Maximum*: 074000375

*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 the "concentration", abundance, or density value of a habitat at a particular location. No information on eelgrass or kelp concentration was available, so the CONC field contains "-".

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: Any character

*Enumerated\_Domain\_Value\_Definition*: Free text

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: SEASON\_ID

*Attribute\_Definition*:

Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1

*Range\_Domain\_Maximum*: N

*Attribute*:

*Attribute\_Label*: G\_SOURCE

*Attribute\_Definition:*

Geographic source identifier that links records in the BIORES data table to records in the SOURCES data table.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* S\_SOURCE

*Attribute\_Definition:*

Seasonality source identifier that links records in the BIORES data table to records in the SOURCES data table.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* REPTILE

*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links records in the BIORES data table to records in the SPECIES and STATUS data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (eg. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BIORES data table to records in the SEASONAL and BREED data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (eg. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SPECIES

*Entity\_Type\_Definition:*

The data table SPECIES identifies all species in the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure. Refer to the Completeness\_Report for a list of layer-specific species.

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SPECIES\_ID

*Attribute\_Definition:*

Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* NAME

*Attribute\_Definition:* Species common name

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Species common name for the entire ESI data set

*Enumerated\_Domain\_Value\_Definition:* Free text

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* GEN\_SPEC

*Attribute\_Definition:* Species scientific name

*Attribute\_Definition\_Source:* Research Planning, Inc.



*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* Species scientific name for the entire ESI data set.*Enumerated\_Domain\_Value\_Definition:* Free text*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* ELEMENT*Attribute\_Definition:* Major categories of biological data*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* BIRD*Enumerated\_Domain\_Value\_Definition:* Birds*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* FISH*Enumerated\_Domain\_Value\_Definition:* Fish*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* HABITAT*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* INVERT*Enumerated\_Domain\_Value\_Definition:* Invertebrates*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* M\_MAMMAL*Enumerated\_Domain\_Value\_Definition:* Marine Mammals*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* REPTILE*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* T\_MAMMAL*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* SUBELEMENT*Attribute\_Definition:* Element subgroup delineating a logical grouping of species*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* alcid*Enumerated\_Domain\_Value\_Definition:* Alcid*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*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:* bivalve  
*Enumerated\_Domain\_Value\_Definition:* Bivalve  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* crab  
*Enumerated\_Domain\_Value\_Definition:* Crab  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* diadromous  
*Enumerated\_Domain\_Value\_Definition:* Diadromous fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* diving  
*Enumerated\_Domain\_Value\_Definition:* Diving bird  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* dolphin  
*Enumerated\_Domain\_Value\_Definition:* Dolphin  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* e\_nursery  
*Enumerated\_Domain\_Value\_Definition:* Estuarine nursery fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* freshwater  
*Enumerated\_Domain\_Value\_Definition:* Freshwater fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* gull\_tern  
*Enumerated\_Domain\_Value\_Definition:* Gull or tern  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* kelp  
*Enumerated\_Domain\_Value\_Definition:* Kelp habitat, community, or species  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* m\_benthic  
*Enumerated\_Domain\_Value\_Definition:* Marine benthic fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* m\_pelagic  
*Enumerated\_Domain\_Value\_Definition:* Marine pelagic fish  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* passerine*Enumerated\_Domain\_Value\_Definition:* Passerine bird*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* pelagic*Enumerated\_Domain\_Value\_Definition:* Pelagic bird*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* pinniped*Enumerated\_Domain\_Value\_Definition:* Pinniped*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* raptor*Enumerated\_Domain\_Value\_Definition:* Raptor*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* sav*Enumerated\_Domain\_Value\_Definition:* Submersed aquatic vegetation*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* shorebird*Enumerated\_Domain\_Value\_Definition:* Shorebird*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* wading*Enumerated\_Domain\_Value\_Definition:* Wading bird*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* waterfowl*Enumerated\_Domain\_Value\_Definition:* Waterfowl*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* whale*Enumerated\_Domain\_Value\_Definition:* Whale*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* NHP*Attribute\_Definition:* Natural Heritage Program global ranking*Attribute\_Definition\_Source:* Network of Natural Heritage Program*Attribute\_Domain\_Values:**Codeset\_Domain:**Codeset\_Name:* NHP Global Conservation Status Rank*Codeset\_Source:* Natural Heritage Program*Attribute:**Attribute\_Label:* DATE\_PUB*Attribute\_Definition:* Date of NHP listing*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* 0

*Enumerated\_Domain\_Value\_Definition:* Not ranked

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Numeric

*Enumerated\_Domain\_Value\_Definition:* mmyyyy

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links records in the SPECIES data table to records in the BIORES and STATUS data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (eg. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SEASONAL

*Entity\_Type\_Definition:*

The data table SEASONAL contains information on the seasonal presence of each species associated with each spatial vector object. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* ELEMENT

*Attribute\_Definition:* Major categories of biological data

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* BIRD

*Enumerated\_Domain\_Value\_Definition:* Birds

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* FISH

*Enumerated\_Domain\_Value\_Definition:* Fish

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* HABITAT

*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* INVERT

*Enumerated\_Domain\_Value\_Definition:* Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:* Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:**Enumerated\_Domain\_Value:* REPTILE*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* T\_MAMMAL*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* SPECIES\_ID*Attribute\_Definition:*

Numeric identifier for each species that is unique within each element and refers to a nationwide ESI species list maintained at NOAA.

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* N*Attribute:**Attribute\_Label:* SEASON\_ID*Attribute\_Definition:*

Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* N*Attribute:**Attribute\_Label:* JAN*Attribute\_Definition:* January*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* X*Enumerated\_Domain\_Value\_Definition:* Present in January*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* FEB*Attribute\_Definition:* February*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* X*Enumerated\_Domain\_Value\_Definition:* Present in February*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* MAR*Attribute\_Definition:* March*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* X*Enumerated\_Domain\_Value\_Definition:* Present in March*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* APR*Attribute\_Definition:* April*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in April

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* MAY

*Attribute\_Definition:* May

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in May

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* JUN

*Attribute\_Definition:* June

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in June

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* JUL

*Attribute\_Definition:* July

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in July

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* AUG

*Attribute\_Definition:* August

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in August

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SEP

*Attribute\_Definition:* September

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in September

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* OCT

*Attribute\_Definition:* October

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in October

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* NOV

*Attribute\_Definition:* November

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in November

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* DEC

*Attribute\_Definition:* December

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* X

*Enumerated\_Domain\_Value\_Definition:* Present in December

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the SEASONAL data table to records in the BIORRES and BREED data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (eg. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* BREED

*Entity\_Type\_Definition:*

The data table BREED identifies the monthly presence of certain life-history stages or activities for each species at a given location.

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BREED data table to records in the BIORRES and SEASONAL data tables.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (eg. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* MONTH

*Attribute\_Definition:*

Two-digit calendar month. Each life history stage or activity type for a particular

species can have up to 12 records to account for each month of the year.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* 12

*Attribute:*

*Attribute\_Label:* BREED1

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED1 = nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning/mating; if ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M\_MAMMAL" then BREED1 = mating.

This attribute is not used for HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* BREED2

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = 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 = juvenile; if ELEMENT is "INVERT" then BREED4 = juvenile; if ELEMENT is "REPTILE" then BREED4 = juvenile; if ELEMENT is "M\_MAMMAL" then BREED4 = molting. This attribute is not used for BIRD, HABITAT, or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* Y*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* N*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* -*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* BREED5

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 = adults; if ELEMENT is "INVERT" then BREED5 = adults; if ELEMENT is "REPTILE" then BREED5 = adults. This attribute is not used for BIRD, M\_MAMMAL, HABITAT, or T\_MAMMAL elements.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Y

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* N

*Enumerated\_Domain\_Value\_Definition:* Life-history stage or activity not present

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:* SOURCES

*Entity\_Type\_Definition:*

The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SOURCE\_ID

*Attribute\_Definition:*

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table, and to G\_SOURCE and S\_SOURCE in the BIORES table.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* ORIGINATOR

*Attribute\_Definition:* Author or developer of source material or data set

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Any character

*Enumerated\_Domain\_Value\_Definition:* Free text

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* DATE\_PUB

*Attribute\_Definition:*

Date of source material, publication, or date of personal communication with expert source

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* Numeric*Enumerated\_Domain\_Value\_Definition:* mmyyyy*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* TITLE*Attribute\_Definition:* Title of source material or data*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* Any character*Enumerated\_Domain\_Value\_Definition:* Free text*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* DATA\_FORMAT*Attribute\_Definition:* The format of the source material*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* Any character*Enumerated\_Domain\_Value\_Definition:* Free text*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* PUBLICATION*Attribute\_Definition:* Additional citation information*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* Any character*Enumerated\_Domain\_Value\_Definition:* Free text*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* SCALE*Attribute\_Definition:* Scale denominator of the source*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* integer*Enumerated\_Domain\_Value\_Definition:* Any integer*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* TIME\_PERIOD*Attribute\_Definition:*

Date(s) of data collection that the source material is based upon.

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* Numeric*Enumerated\_Domain\_Value\_Definition:* yyyy*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:* STATUS*Entity\_Type\_Definition:*

The data table STATUS identifies the species that are listed as either threatened or endangered by a state or federal authority. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:**Attribute\_Label:* ELEMENT*Attribute\_Definition:* Major categories of biological data*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* BIRD*Enumerated\_Domain\_Value\_Definition:* Birds*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* FISH*Enumerated\_Domain\_Value\_Definition:* Fish*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* HABITAT*Enumerated\_Domain\_Value\_Definition:* Habitats and Plants*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* INVERT*Enumerated\_Domain\_Value\_Definition:* Invertebrates*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* M\_MAMMAL*Enumerated\_Domain\_Value\_Definition:* Marine Mammals*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* REPTILE*Enumerated\_Domain\_Value\_Definition:* Reptiles and Amphibians*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* T\_MAMMAL*Enumerated\_Domain\_Value\_Definition:* Terrestrial Mammals*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* SPECIES\_ID*Attribute\_Definition:*

Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* N*Attribute:**Attribute\_Label:* STATE*Attribute\_Definition:* Two-letter state abbreviation*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* Any character*Enumerated\_Domain\_Value\_Definition:* Two-letter state abbreviation*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* S\_F

*Attribute\_Definition:* State and Federal status  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:* F  
         *Enumerated\_Domain\_Value\_Definition:* Federally listed  
         *Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:* S  
         *Enumerated\_Domain\_Value\_Definition:* State listed  
         *Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:* S/F  
         *Enumerated\_Domain\_Value\_Definition:* State and federally listed  
         *Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* T\_E  
*Attribute\_Definition:* Threatened and endangered status  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:* E  
         *Enumerated\_Domain\_Value\_Definition:* Endangered on state or federal list  
         *Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:* T  
         *Enumerated\_Domain\_Value\_Definition:* Threatened on state or federal list  
         *Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:* C  
         *Enumerated\_Domain\_Value\_Definition:* Species of Special Concern  
         *Enumerated\_Domain\_Value\_Definition\_Source:* U.S. Fish and Wildlife Service

*Attribute:*

*Attribute\_Label:* DATE\_PUB  
*Attribute\_Definition:*  
     Publication date of source material used to assign state and federal status values for each species, if used.  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:* Numeric  
         *Enumerated\_Domain\_Value\_Definition:* mmyyyy  
         *Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* EL\_SPE  
*Attribute\_Definition:*  
     Concatenation of ELEMENT and SPECIES\_ID. This item links the STATUS data table to the BIORRES and SPECIES data tables.  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:* E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (eg. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

---

*Distribution\_Information:**Distributor:**Contact\_Information:**Contact\_Person\_Primary:*

*Contact\_Person:* John Kaperick

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Address:*

*Address\_Type:* Physical Address

*Address:* 7600 Sand Point Way N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6400

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Resource\_Description:* ESI Atlas for Western 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:* 200307

*Metadata\_Review\_Date:* 200307

*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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# Western 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; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

*Publication\_Date:* 200307

*Title:* Western Alaska ESI: MGT (Management Area Polygons)

*Edition:* First

*Geospatial\_Data\_Presentation\_Form:* Vector digital data

##### *Series\_Information:*

*Series\_Name:* None

*Issue\_Identification:* Western Alaska

##### *Publication\_Information:*

*Publication\_Place:* Seattle, Washington

##### *Publisher:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington

##### *Other\_Citation\_Details:*

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

### *Description:*

#### *Abstract:*

This data set contains management area data for Designated Critical Habitats, Wildlife Refuges, Wild and Scenic Rivers, and State Parks. 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 Western 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 Western 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:* 2002

*Ending\_Date:* 2003

*Currentness\_Reference:*

The biological data were compiled during 2002-2003. The currentness dates for these data range from 1993 to 2000 and are documented in the Source\_Information section.

*Status:*

*Progress:* Complete

*Maintenance\_and\_Update\_Frequency:* None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -174.0

*East\_Bounding\_Coordinate:* -159.0

*North\_Bounding\_Coordinate:* 64.0

*South\_Bounding\_Coordinate:* 59.0

*Keywords:*

*Theme:*

*Theme\_Keyword\_Thesaurus:* None

*Theme\_Keyword:* ESI

*Theme\_Keyword:* Sensitivity maps

*Theme\_Keyword:* Coastal resources

*Theme\_Keyword:* Oil spill planning

*Theme\_Keyword:* Coastal Zone Management

*Theme\_Keyword:* Wildlife

*Theme\_Keyword:* Management areas

*Theme\_Keyword:* Human-use resources

*Place:*

*Place\_Keyword\_Thesaurus:* None

*Place\_Keyword:* Western Alaska

*Place\_Keyword:* Alaska

*Access\_Constraints:* None

*Use\_Constraints:*

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* [datafig.jpg](#)

*Browse\_Graphic\_File\_Description:*

Relationships between spatial data layers and attribute data tables for the Western Alaska ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) 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, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, invert.e00, lakes.e00, m\_mammal.e00, mgt.e00, nests.e00, socecon.e00, streams.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 a synthesis of digital boundaries for management areas. Refer to the SOCECON (Socioeconomic Resource Points and Lines) data layer for additional human-use information. These data do not necessarily represent all management areas in Western Alaska.

*Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy\_Report:*

The MGT data set was developed from pre-existing digital sources and reflects the positional accuracy of these original data. See the Lineage and Process\_Description sections for more information on the original data source and how these data were integrated or manipulated to create the final data set.

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:* USFWS, Ecological Services

*Publication\_Date:* 2002

*Title:* Spectacled/Steller's eider critical habitat boundaries

*Geospatial\_Data\_Presentation\_Form:* Vector digital data

*Publication\_Information:*

*Publication\_Place:* Anchorage, AK

*Publisher:* USFWS, Ecological Services  
*Source\_Scale\_Denominator:* Unknown  
*Type\_of\_Source\_Media:* Email  
*Source\_Time\_Period\_of\_Content:*  
     *Time\_Period\_Information:*  
         *Single\_Date/Time:*  
             *Calendar\_Date:* 2002  
     *Source\_Currentness\_Reference:* Date of communication  
*Source\_Citation\_Abbreviation:* None  
*Source\_Contribution:* Management information  
*Source\_Information:*  
     *Source\_Citation:*  
         *Citation\_Information:*  
             *Originator:* USFWS, Endangered Species Program  
             *Publication\_Date:* Unpublished material  
             *Title:*  
                 Spectacled eider critical habitat, wintering, and molting concentrations  
             *Geospatial\_Data\_Presentation\_Form:* Vector digital data  
     *Type\_of\_Source\_Media:* Email  
     *Source\_Time\_Period\_of\_Content:*  
         *Time\_Period\_Information:*  
             *Range\_of\_Dates/Times:*  
                 *Beginning\_Date:* 1993  
                 *Ending\_Date:* 1997  
     *Source\_Currentness\_Reference:* Date of survey  
*Source\_Citation\_Abbreviation:* None  
*Source\_Contribution:* Management information  
*Source\_Information:*  
     *Source\_Citation:*  
         *Citation\_Information:*  
             *Originator:* Alaska Dept. of Natural Resources  
             *Publication\_Date:* 2000  
             *Title:* Administrative large parcel boundaries  
             *Geospatial\_Data\_Presentation\_Form:* Vector digital data  
             *Publication\_Information:*  
                 *Publication\_Place:* Anchorage, AK  
                 *Publisher:* ADNRR, Land Records Information Section.  
     *Source\_Scale\_Denominator:* 63,360  
     *Type\_of\_Source\_Media:* Online  
     *Source\_Time\_Period\_of\_Content:*  
         *Time\_Period\_Information:*  
             *Single\_Date/Time:*  
                 *Calendar\_Date:* 2000  
     *Source\_Currentness\_Reference:* Date of publication  
*Source\_Citation\_Abbreviation:* None  
*Source\_Contribution:* Management information  
*Source\_Information:*  
     *Source\_Citation:*  
         *Citation\_Information:*  
             *Originator:* NWR Wilderness boundaries  
             *Publication\_Date:* 2002  
             *Title:* Wilderness Area boundaries  
             *Geospatial\_Data\_Presentation\_Form:* Vector digital data  
             *Publication\_Information:*  
                 *Publication\_Place:* Unknown  
                 *Publisher:* USFWS, Region 7, Division of Realty.  
     *Source\_Scale\_Denominator:* Unknown  
     *Type\_of\_Source\_Media:* Email  
     *Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:* 2002  
*Source\_Currentness\_Reference:* Date of communication  
*Source\_Citation\_Abbreviation:* None  
*Source\_Contribution:* Management information  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* Alaska Maritime NWR boundary  
*Publication\_Date:* 2002  
*Title:* Alaska Maritime NWR boundary  
*Geospatial\_Data\_Presentation\_Form:* Vector digital data  
*Publication\_Information:*  
*Publication\_Place:* Unknown  
*Publisher:* USFWS, Region 7, Division of Realty.  
*Source\_Scale\_Denominator:* 63,360-250,000  
*Type\_of\_Source\_Media:* Online  
*Source\_Time\_Period\_of\_Content:*  
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*Calendar\_Date:* 2002  
*Source\_Currentness\_Reference:* Date of publication  
*Source\_Citation\_Abbreviation:* None  
*Source\_Contribution:* Management information  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* NMFS (Juneau)  
*Publication\_Date:* 2003  
*Title:* Steller sea lion Designated Critical Habitat  
*Geospatial\_Data\_Presentation\_Form:* Vector digital data  
*Publication\_Information:*  
*Publication\_Place:* Juneau, AK  
*Publisher:* NMFS  
*Source\_Scale\_Denominator:* Unknown  
*Type\_of\_Source\_Media:* Email  
*Source\_Time\_Period\_of\_Content:*  
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*Calendar\_Date:* 2003  
*Source\_Currentness\_Reference:* Date of communication  
*Source\_Citation\_Abbreviation:* None  
*Source\_Contribution:* Management information  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* USGS  
*Publication\_Date:* 2001  
*Title:* Wild and Scenic River boundaries  
*Geospatial\_Data\_Presentation\_Form:* Vector digital data  
*Publication\_Information:*  
*Publication\_Place:* Reston, VA  
*Publisher:* USGS  
*Source\_Scale\_Denominator:* 1,000,000-2,000,000  
*Type\_of\_Source\_Media:* Online  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:* 2001

*Source\_Currentness\_Reference:* Date of publication

*Source\_Citation\_Abbreviation:* None

*Source\_Contribution:* Management information

*Process\_Step:*

*Process\_Description:*

Six major 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) 2002 US Fish & Wildlife Service (USFWS) Spectacled and Steller's Eider Designated Critical Habitat vector polygon coverages; (3) a 2002 US Fish & Wildlife Service (USFWS) Realty Division National Wildlife Area Wilderness Areas vector polygon coverage, (4) a 2002 USFWS Realty Division Alaska Maritime National Wildlife Refuge vector polygon coverage; (5) a National Marine Fisheries Service (NMFS) Steller sea lion Designated Critical Habitat vector polygon coverage; and (6) a 2001 US Geological Survey (USGS) Wild and Scenic Rivers vector polygon coverage. During personal interviews, resource experts provided all coverages, excluding the 2000 ADNR coverage that was downloaded from the Alaska State Geospatial Data Clearinghouse (ASGDC) website. The MGT data layer was incorporated into an ArcInfo system along with the SOCECON and biology data layers, and hardcopy draft maps were created using USGS 1:250,000 topographic quadrangles as base maps. Following the creation of draft maps, a second set of interviews was conducted with the resource experts. Participants who were unable to attend the meetings were sent a set of maps to review. Edits to the MGT data layer were made based on the recommendations of the resource experts, and final hardcopy maps were created.

*Process\_Date:* 200305

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Person:* Jill Petersen

*Contact\_Address:*

*Address\_Type:* Physical address

*Address:* 7600 Sand Point Way, N.E.

*City:* Seattle

*State\_or\_Province:* Washington

*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6944

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:* Vector

*Point\_and\_Vector\_Object\_Information:*

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* GT-polygon composed of rings

*Point\_and\_Vector\_Object\_Count:* 159

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Area point

*Point\_and\_Vector\_Object\_Count:* 159

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Complete chain

*Point\_and\_Vector\_Object\_Count:* 408

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Link

*Point\_and\_Vector\_Object\_Count:* 87553

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Node, planar graph

*Point\_and\_Vector\_Object\_Count: 370*

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*Spatial\_Reference\_Information:*

*Horizontal\_Coordinate\_System\_Definition:*

*Geographic:*

*Latitude\_Resolution: 0.00005*

*Longitude\_Resolution: 0.00005*

*Geographic\_Coordinate\_Units: Decimal degrees*

*Geodetic\_Model:*

*Horizontal\_Datum\_Name: North American Datum of 1927*

*Ellipsoid\_Name: Clarke 1866*

*Semi-major\_Axis: 6378206.4*

*Denominator\_of\_Flattening\_Ratio: 294.978698*

---

*Entity\_and\_Attribute\_Information:*

*Overview\_Description:*

*Entity\_and\_Attribute\_Overview:*

In addition to the geographic data layers, two relational attribute or data tables, SOC\_DAT and SOURCES, are used to store the complex socioeconomic data in the ESI data structure. The geographic data layer containing socioeconomic resource information (in this case, MGT) is linked to the Socioeconomic Resources table (SOC\_DAT) using the unique ID and the lookup table SOC\_LUT, or it can be linked directly using HUNUM. HUNUM is a unique reference number concatenated with the atlas number (for the Western Alaska atlas, the number is 74). ID is a unique combination of the atlas number (74), 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 the management boundaries. Note that all attribute information is stored in a series of relational files, described below. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source: Research Planning, Inc.*

*Attribute:*

*Attribute\_Label: TYPE*

*Attribute\_Definition:*

The human-use features depicted on the maps are those that could be impacted by an oil spill or could provide access for response operations

*Attribute\_Definition\_Source: Research Planning, Inc.*

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: CH*

*Enumerated\_Domain\_Value\_Definition: Designated Critical Habitat*

*Enumerated\_Domain\_Value\_Definition\_Source: Research Planning, Inc.*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: P*

*Enumerated\_Domain\_Value\_Definition: Park*

*Enumerated\_Domain\_Value\_Definition\_Source: Research Planning, Inc.*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value: SR*

*Enumerated\_Domain\_Value\_Definition: Scenic River*

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* WR  
*Enumerated\_Domain\_Value\_Definition:* Wildlife Refuge  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* ID  
*Attribute\_Definition:*  
 An identifier that links vector objects in the human-use data layers to records in the SOC\_LUT data table. ID is a concatenation of atlas number (74), 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:* 741100002  
*Range\_Domain\_Maximum:* 741100164

*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:* 74000003  
*Range\_Domain\_Maximum:* 74000032

*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:* 74000003  
*Range\_Domain\_Maximum:* 74000032

*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 (74), 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:* 741000001  
*Range\_Domain\_Maximum:* 741100164

*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:* 74000003*Range\_Domain\_Maximum:* 74000032*Attribute:**Attribute\_Label:* TYPE*Attribute\_Definition:* Identifies the feature type*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* AIRPORT*Enumerated\_Domain\_Value\_Definition:* Airport*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Enumerated\_Domain:**Enumerated\_Domain\_Value:* CRITICAL HABITAT*Enumerated\_Domain\_Value\_Definition:* Designated Critical Habitat*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Enumerated\_Domain:**Enumerated\_Domain\_Value:* MINE SITE*Enumerated\_Domain\_Value\_Definition:* Mine Site*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Enumerated\_Domain:**Enumerated\_Domain\_Value:* PARK*Enumerated\_Domain\_Value\_Definition:* Park*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Enumerated\_Domain:**Enumerated\_Domain\_Value:* SCENIC RIVER*Enumerated\_Domain\_Value\_Definition:* Scenic River*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Enumerated\_Domain:**Enumerated\_Domain\_Value:* WILDLIFE REFUGE*Enumerated\_Domain\_Value\_Definition:* Wildlife Refuge*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* NAME*Attribute\_Definition:* The feature name*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* Any character*Enumerated\_Domain\_Value\_Definition:* Free text*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* CONTACT*Attribute\_Definition:* Contact person or entity*Attribute\_Definition\_Source:* Research Planning, Inc.



*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* Any character*Enumerated\_Domain\_Value\_Definition:* Free text*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* PHONE*Attribute\_Definition:* Contact telephone number*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:* Any character*Enumerated\_Domain\_Value\_Definition:* Free text*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* G\_SOURCE*Attribute\_Definition:*

Geographic source integer identifier that links records in the SOC\_DAT data table to records in the SOURCES data table.

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* N*Attribute:**Attribute\_Label:* A\_SOURCE*Attribute\_Definition:*

Attribute source integer identifier that links records in the SOC\_DAT data table to records in the SOURCES data table.

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* N*Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:* SOURCES*Entity\_Type\_Definition:*

The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.*Attribute:**Attribute\_Label:* SOURCE\_ID*Attribute\_Definition:*

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table, and to G\_SOURCE and S\_SOURCE in the BIORES table.

*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:* 1*Range\_Domain\_Maximum:* N*Attribute:**Attribute\_Label:* ORIGINATOR*Attribute\_Definition:* Author or developer of source material or data set*Attribute\_Definition\_Source:* Research Planning, Inc.*Attribute\_Domain\_Values:**Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Any character  
*Enumerated\_Domain\_Value\_Definition:* Free text  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* DATE\_PUB  
*Attribute\_Definition:*  
 Date of source material, publication, or date of personal communication with expert source  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* Numeric  
*Enumerated\_Domain\_Value\_Definition:* mmyyyy  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* TITLE  
*Attribute\_Definition:* Title of source material or data  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* Any character  
*Enumerated\_Domain\_Value\_Definition:* Free text  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* DATA\_FORMAT  
*Attribute\_Definition:* The format of the source material  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* Any character  
*Enumerated\_Domain\_Value\_Definition:* Free text  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* PUBLICATION  
*Attribute\_Definition:* Additional citation information  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* Any character  
*Enumerated\_Domain\_Value\_Definition:* Free text  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SCALE  
*Attribute\_Definition:* Scale denominator of the source  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* integer  
*Enumerated\_Domain\_Value\_Definition:* Any integer  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* TIME\_PERIOD  
*Attribute\_Definition:*  
 Date(s) of data collection that the source material is based upon.  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:* Numeric  
*Enumerated\_Domain\_Value\_Definition:* yyyy  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

---

*Distribution\_Information:**Distributor:**Contact\_Information:**Contact\_Person\_Primary:**Contact\_Person:* John Kaperick*Contact\_Organization:* NOAA, Office of Response and Restoration*Contact\_Address:**Address\_Type:* Physical Address*Address:* 7600 Sand Point Way N.E.*City:* Seattle*State\_or\_Province:* Washington*Postal\_Code:* 98115-6349*Contact\_Voice\_Telephone:* (206) 526-6400*Contact\_Facsimile\_Telephone:* (206) 526-6329*Resource\_Description:* ESI Atlas for Western 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:* 200307*Metadata\_Review\_Date:* 200307*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

# Western Alaska ESI: SOCECON (Socioeconomic Resource Points and Lines)

Metadata also available as - [[Parseable text](#)] - [[SGML](#)]

## Metadata:

- [Identification Information](#)
- [Data Quality Information](#)
- [Spatial Data Organization Information](#)
- [Spatial Reference Information](#)
- [Entity and Attribute Information](#)
- [Distribution Information](#)
- [Metadata Reference Information](#)

---

### *Identification\_Information:*

#### *Citation:*

#### *Citation\_Information:*

#### *Originator:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

*Publication\_Date:* 200307

#### *Title:*

Western Alaska ESI: SOCECON (Socioeconomic Resource Points and Lines)

*Edition:* First

*Geospatial\_Data\_Presentation\_Form:* Vector digital data

#### *Series\_Information:*

*Series\_Name:* None

*Issue\_Identification:* Western Alaska

#### *Publication\_Information:*

*Publication\_Place:* Seattle, Washington

#### *Publisher:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington

#### *Other\_Citation\_Details:*

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

### *Description:*

#### *Abstract:*

This data set contains human-use resource data for airports, mining sites, area boundaries, and scenic rivers in Western Alaska. Vector points and lines in this data set represent the human-use 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

Western 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 Western 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:* 2002

*Ending\_Date:* 2003

*Currentness\_Reference:*

These data were compiled during 2002-2003. The currentness dates for these data range from 2001 to 2002 and are documented in the Source\_Information section.

*Status:*

*Progress:* Complete

*Maintenance\_and\_Update\_Frequency:* None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:* -174.0

*East\_Bounding\_Coordinate:* -159.0

*North\_Bounding\_Coordinate:* 64.0

*South\_Bounding\_Coordinate:* 59.0

*Keywords:*

*Theme:*

*Theme\_Keyword\_Thesaurus:* None

*Theme\_Keyword:* ESI

*Theme\_Keyword:* Sensitivity maps

*Theme\_Keyword:* Coastal resources

*Theme\_Keyword:* Oil spill planning

*Theme\_Keyword:* Coastal Zone Management

*Theme\_Keyword:* Wildlife

*Theme\_Keyword:* Socioeconomic resources

*Theme\_Keyword:* Human-use resources

*Place:*

*Place\_Keyword\_Thesaurus:* None

*Place\_Keyword:* Western Alaska

*Place\_Keyword:* Alaska

*Access\_Constraints:* None

*Use\_Constraints:*

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:* [datafig.jpg](#)

*Browse\_Graphic\_File\_Description:*

Relationships between spatial data layers and attribute data tables for Western Alaska ESI data.

*Browse\_Graphic\_File\_Type:* JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Hazardous Materials Response Division, Seattle, Washington and Anchorage, Alaska; Oil Spill Recovery Institute, Cordova, Alaska; Alaska CHADUX Corporation, Anchorage, Alaska; National Marine Fisheries Service, Juneau and Anchorage, Alaska; and State of Alaska - Coastal Impact Assistance Program (CIAP), Juneau, Alaska.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(r) (version 8.3) 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, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, invert.e00, lakes.e00, m\_mammal.e00, mgt.e00, nests.e00, socecon.e00, streams.e00, t\_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio\_lut, biofile, biores, breed, breed\_dt, seasonal, soc\_dat, soc\_lut, sources, species, and status.

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*Data\_Quality\_Information:*

*Attribute\_Accuracy:*

*Attribute\_Accuracy\_Report:*

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

*Logical\_Consistency\_Report:*

A multi-stage error checking process, described in the above Attribute\_Accuracy\_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and SQL SERVER(r) to ARC/INFO(r) consistencies. A final review is made by the GIS manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks.

*Completeness\_Report:*

These data represent a synthesis of expert knowledge and digital data on socioeconomic resources in Western Alaska. Refer to the MGT (Management Area Polygons) data layer for additional human-use information. These data do not necessarily represent all human-use sites in Western Alaska.

*Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy\_Report:*

The spatial components of the SOCECON data set are developed from pre-existing digital and hardcopy sources and regional experts. It is difficult to estimate the positional accuracy of such data, except to state that hardcopy data were compiled on base maps with a scale of 1:250,000. 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:* Togiak NWR map (Dillingham, AK)

*Publication\_Date:* Unpublished material

*Title:* Togiak NWR species distribution  
*Geospatial\_Data\_Presentation\_Form:* Hardcopy map  
*Source\_Scale\_Denominator:* 250,000  
*Type\_of\_Source\_Media:* Paper  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:* 2002  
*Source\_Currentness\_Reference:* date of communication  
*Source\_Citation\_Abbreviation:* None  
*Source\_Contribution:* Socioeconomic information  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:* Alaska Dept. of Natural Resources (ADNR)  
*Publication\_Date:* 1995  
*Title:* Airports  
*Geospatial\_Data\_Presentation\_Form:* Vector digital data  
*Publication\_Information:*  
*Publication\_Place:* Anchorage, AK  
*Publisher:* ADNR, Land Records Information Section  
*Source\_Scale\_Denominator:* 63,360  
*Type\_of\_Source\_Media:* Online  
*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:* Airport point locations  
*Process\_Step:*  
*Process\_Description:*  
During personal interviews with resource experts, two main sources of data were identified and used to depict human-use resources for this data layer: (1) a map provided by the US Fish & Wildlife Service (USFWS) Togiak National Wildlife Refuge staff and (2) a 1995 Alaska Department of Natural Resources (ADNR) Land Records vector point coverage of airport locations. Information gathered from hardcopy maps was compiled as point and line features onto US Geological Survey 1:250,000 topographic quadrangles. The compiled data were digitized off the base maps into an ArcInfo system to create the SOCECON data layer. The digital airport coverage was then incorporated into this data layer. All ESI, biology, and human-use data were plotted onto hardcopy draft maps. Following the creation of draft maps, a second set of interviews with resource experts was conducted. Participants who were unable to attend the meetings were sent a set of maps to review. Edits to the SOCECON data layer were made based on the recommendations of the resource experts, and final hardcopy maps were created.  
*Process\_Date:* 200305  
*Process\_Contact:*  
*Contact\_Information:*  
*Contact\_Organization\_Primary:*  
*Contact\_Organization:* NOAA, Office of Response and Restoration  
*Contact\_Person:* Jill Petersen  
*Contact\_Address:*  
*Address\_Type:* Physical address  
*Address:* 7600 Sand Point Way, N.E.  
*City:* Seattle  
*State\_or\_Province:* Washington  
*Postal\_Code:* 98115-6349  
*Contact\_Voice\_Telephone:* (206) 526-6944

*Contact\_Facsimile\_Telephone:* (206) 526-6329  
*Contact\_Electronic\_Mail\_Address:* Jill.Petersen@noaa.gov

---

*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:* Vector

*Point\_and\_Vector\_Object\_Information:*

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Complete Chain

*Point\_and\_Vector\_Object\_Count:* 649

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Link

*Point\_and\_Vector\_Object\_Count:* 77367

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Entity Point

*Point\_and\_Vector\_Object\_Count:* 47

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:* Node, planar graph

*Point\_and\_Vector\_Object\_Count:* 5099

---

*Spatial\_Reference\_Information:*

*Horizontal\_Coordinate\_System\_Definition:*

*Geographic:*

*Latitude\_Resolution:* 0.00005

*Longitude\_Resolution:* 0.00005

*Geographic\_Coordinate\_Units:* Decimal degrees

*Geodetic\_Model:*

*Horizontal\_Datum\_Name:* North American Datum of 1927

*Ellipsoid\_Name:* Clarke 1866

*Semi-major\_Axis:* 6378206.4

*Denominator\_of\_Flattening\_Ratio:* 294.978698

---

*Entity\_and\_Attribute\_Information:*

*Overview\_Description:*

*Entity\_and\_Attribute\_Overview:*

In addition to the geographic data layers, two relational attribute or data tables, SOC\_DAT and SOURCES, are used to store the complex socioeconomic data in the ESI data structure. The geographic data layer containing socioeconomic resource information (in this case, SOCECON) is linked to the Socioeconomic Resources table (SOC\_DAT) using the unique ID and the lookup table SOC\_LUT, or it can be linked directly using HUNUM. HUNUM is a unique reference number concatenated with the atlas number (for the Western Alaska atlas, the number is 74). ID is a unique combination of the atlas number (74), 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 Coastal Resource Service Area (CRSA) boundaries, Alaska Coastal Management Program (ACMP) boundaries, and Scenic Rivers.

*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.

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* SR

*Enumerated\_Domain\_Value\_Definition:* Scenic River

*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 mining sites and airports. Note that all attribute information is stored in a series of relational files, described below. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure

*Entity\_Type\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* TYPE

*Attribute\_Definition:*

The human-use features depicted on the maps are those that could be impacted by an oil spill or could provide access for response operations

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* A

*Enumerated\_Domain\_Value\_Definition:* AIRPORT

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* M2

*Enumerated\_Domain\_Value\_Definition:* MINE SITE

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* ID

*Attribute\_Definition:*

An identifier that links vector objects in the human-use data layers to records in the SOC\_LUT data table. ID is a concatenation of atlas number (74), element number (10), and record number.

*Attribute\_Definition\_Source:* NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 741000001

*Range\_Domain\_Maximum:* 741000047

*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:* 74000007

*Range\_Domain\_Maximum:* 74000020

*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:* 74000003

*Range\_Domain\_Maximum:* 74000032

*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 (74), 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:* 741000001

*Range\_Domain\_Maximum:* 741100164

*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:* 74000003

*Range\_Domain\_Maximum:* 74000032

*Attribute:*

*Attribute\_Label:* TYPE

*Attribute\_Definition:* Identifies the feature type

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* AIRPORT

*Enumerated\_Domain\_Value\_Definition:* Airport

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* CRITICAL HABITAT

*Enumerated\_Domain\_Value\_Definition:* Designated Critical Habitat  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* MINE SITE

*Enumerated\_Domain\_Value\_Definition:* Mine Site

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* PARK

*Enumerated\_Domain\_Value\_Definition:* Park

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* SCENIC RIVER

*Enumerated\_Domain\_Value\_Definition:* Scenic River

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* WILDLIFE REFUGE

*Enumerated\_Domain\_Value\_Definition:* Wildlife Refuge

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* NAME

*Attribute\_Definition:* The feature name

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Any character

*Enumerated\_Domain\_Value\_Definition:* Free text

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* CONTACT

*Attribute\_Definition:* Contact person or entity

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Any character

*Enumerated\_Domain\_Value\_Definition:* Free text

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* PHONE

*Attribute\_Definition:* Contact telephone number

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Any character

*Enumerated\_Domain\_Value\_Definition:* Free text

*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* G\_SOURCE

*Attribute\_Definition:*

Geographic source integer identifier that links records in the SOC\_DAT data table to records in the SOURCES data table.

*Attribute\_Definition\_Source:* Research Planning, Inc.

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:* 1

*Range\_Domain\_Maximum:* N

*Attribute:*

*Attribute\_Label:* A\_SOURCE

*Attribute\_Definition:*

Attribute source integer identifier that links records in the SOC\_DAT data table to records in the SOURCES data table.

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1

*Range\_Domain\_Maximum*: N

*Detailed\_Description*:

*Entity\_Type*:

*Entity\_Type\_Label*: SOURCES

*Entity\_Type\_Definition*:

The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: SOURCE\_ID

*Attribute\_Definition*:

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table, and to G\_SOURCE and S\_SOURCE in the BIORES table.

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Range\_Domain*:

*Range\_Domain\_Minimum*: 1

*Range\_Domain\_Maximum*: N

*Attribute*:

*Attribute\_Label*: ORIGINATOR

*Attribute\_Definition*: Author or developer of source material or data set

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: Any character

*Enumerated\_Domain\_Value\_Definition*: Free text

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: DATE\_PUB

*Attribute\_Definition*:

Date of source material, publication, or date of personal communication with expert source

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: Numeric

*Enumerated\_Domain\_Value\_Definition*: mmyyyy

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: TITLE

*Attribute\_Definition*: Title of source material or data

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value*: Any character

*Enumerated\_Domain\_Value\_Definition*: Free text

*Enumerated\_Domain\_Value\_Definition\_Source*: Research Planning, Inc.

*Attribute*:

*Attribute\_Label*: DATA\_FORMAT

*Attribute\_Definition*: The format of the source material

*Attribute\_Definition\_Source*: Research Planning, Inc.

*Attribute\_Domain\_Values*:

*Enumerated\_Domain*:

*Enumerated\_Domain\_Value:* Any character  
*Enumerated\_Domain\_Value\_Definition:* Free text  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* PUBLICATION  
*Attribute\_Definition:* Additional citation information  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Any character  
*Enumerated\_Domain\_Value\_Definition:* Free text  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* SCALE  
*Attribute\_Definition:* Scale denominator of the source  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* integer  
*Enumerated\_Domain\_Value\_Definition:* Any integer  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

*Attribute:*

*Attribute\_Label:* TIME\_PERIOD  
*Attribute\_Definition:*  
Date(s) of data collection that the source material is based upon.  
*Attribute\_Definition\_Source:* Research Planning, Inc.  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:* Numeric  
*Enumerated\_Domain\_Value\_Definition:* yyyy  
*Enumerated\_Domain\_Value\_Definition\_Source:* Research Planning, Inc.

---

*Distribution\_Information:*

*Distributor:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:* John Kaperick  
*Contact\_Organization:* NOAA, Office of Response and Restoration

*Contact\_Address:*

*Address\_Type:* Physical Address  
*Address:* 7600 Sand Point Way N.E.  
*City:* Seattle  
*State\_or\_Province:* Washington  
*Postal\_Code:* 98115-6349

*Contact\_Voice\_Telephone:* (206) 526-6400

*Contact\_Facsimile\_Telephone:* (206) 526-6329

*Resource\_Description:* ESI Atlas for Western 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:* 200307

*Metadata\_Review\_Date:* 200307

*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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# Western Alaska ESI Entity Relationship Diagram

## Relationships between spatial data layers and attribute data tables

### Geographic Themes

BIOINDEX (POLYS)  
 TILE-NAME (32, 32, C)  
 TOPO-NAME (255, 255, C)  
 SCALE (7, 7, I)  
 MAPANGLE (4, 8, F, 3)  
 PAGESIZE (11, 11, C)  
 ESI (LINES)  
 ESI (10, 10, C)  
 LINE (1, 1, C)  
 SOURCE\_ID (6, 6, I)  
 ENVIR (1, 1, C)  
 ESI (POLYS)  
 ESI (10, 10, C)  
 WATER\_CODE (1, 1, C)  
 ENVIR (1, 1, C)  
 HYDRO (LINES)  
 LINE (1, 1, C)  
 SOURCE\_ID (6, 6, I)  
 HYDRO (POLYS)  
 WATER\_CODE (1, 1, C)  
 INDEX (POLYS)  
 TILE-NAME (32, 32, C)  
 TOPO-NAME (255, 255, C)  
 SCALE (7, 7, I)  
 MAPANGLE (4, 8, F, 3)  
 PAGESIZE (11, 11, C)  
 LAKES (LINES)  
 LINE (1, 1, C)  
 SOURCE\_ID (6, 6, I)  
 LAKES (POLYS)  
 WATER\_CODE (1, 1, C)  
 STREAMS (LINES)  
 LINE (1, 1, C)  
 SOURCE\_ID (6, 6, I)

MGT (POLYS)  
 TYPE (2, 2, C)  
 ID (10, 10, I)  
 HUNUM (9, 9, I)  
 SOCECON (LINES)  
 TYPE (2, 2, C)  
 SOCECON (POINTS)  
 TYPE (2, 2, C)  
 ID (10, 10, I)  
 HUNUM (9, 9, I)

BIRDS (POLYS)  
 ID (10, 10, I)  
 RARNUM (9, 9, I)  
 FISH (POLYS)  
 ID (10, 10, I)  
 RARNUM (9, 9, I)  
 FISHL (LINES)  
 ID (10, 10, I)  
 RARNUM (9, 9, I)  
 HABITATS (POLYS)  
 ID (10, 10, I)  
 RARNUM (9, 9, I)  
 INVERT (POLYS)  
 ID (10, 10, I)  
 RARNUM (9, 9, I)  
 M\_MAMMAL (POLYS)  
 ID (10, 10, I)  
 RARNUM (9, 9, I)  
 NESTS (POINTS)  
 ID (10, 10, I)  
 RARNUM (9, 9, I)  
 T\_MAMMAL (POLYS)  
 ID (10, 10, I)  
 RARNUM (9, 9, I)

### Lookup Tables

**SOC\_LUT**  
 HUNUM (9, 9, I)  
 ID (10, 10, I)

(The SOC\_LUT table can be bypassed by linking the human-use tables to SOC\_DAT using HUNUM.)

**BIO\_LUT**  
 RARNUM (9, 9, I)  
 ID (10, 10, I)

(The BIO\_LUT table can be bypassed by linking the biology tables to BIORES using RARNUM.)

### Data Tables

**SOC\_DAT**  
 HUNUM (9, 9, I)  
 TYPE (20, 20, C)  
 NAME (40, 40, C)  
 CONTACT (80, 80, C)  
 PHONE (20, 20, C)  
 G\_SOURCE (6, 6, I)  
 A\_SOURCE (6, 6, I)

**BIORES**  
 RARNUM (9, 9, I)  
 SPECIES\_ID (5, 5, I)  
 CONC (20, 20, C)  
 SEASON\_ID (2, 2, I)  
 G\_SOURCE (6, 6, I)  
 S\_SOURCE (6, 6, I)  
 ELEMENT (10, 10, C)  
 EL\_SPE (6, 6, C)  
 EL\_SPE\_SEA (8, 8, C)

**SOURCES**  
 SOURCE\_ID (6, 6, I)  
 ORIGINATOR (35, 35, C)  
 DATE\_PUB (10, 10, I)  
 TITLE (80, 80, C)  
 DATA\_FORMAT (80, 80, C)  
 PUBLICATION (120, 120, C)  
 SCALE (20, 20, C)  
 TIME\_PERIOD (22, 22, C)

**SPECIES**  
 SPECIES\_ID (5, 5, I)  
 NAME (35, 35, C)  
 GEN\_SPEC (45, 45, C)  
 ELEMENT (10, 10, C)  
 SUBELEMENT (10, 10, C)  
 NHP (10, 10, C)  
 DATE\_PUB (10, 10, I)  
 EL\_SPE (6, 6, C)

**SEASONAL**  
 ELEMENT (10, 10, C)  
 SPECIES\_ID (5, 5, I)  
 SEASON\_ID (2, 2, I)  
 JAN (1, 1, C)  
 FEB (1, 1, C)  
 MAR (1, 1, C)  
 APR (1, 1, C)  
 MAY (1, 1, C)  
 JUN (1, 1, C)  
 JUL (1, 1, C)  
 AUG (1, 1, C)  
 SEP (1, 1, C)  
 OCT (1, 1, C)  
 NOV (1, 1, C)  
 DEC (1, 1, C)  
 EL\_SPE\_SEA (8, 8, C)

**STATUS**  
 ELEMENT (10, 10, C)  
 SPECIES\_ID (5, 5, I)  
 STATE (2, 2, C)  
 S\_F (3, 3, C)  
 T\_E (3, 3, C)  
 DATE\_PUB (10, 10, I)  
 EL\_SPE (6, 6, C)

**BREED**  
 EL\_SPE\_SEA (8, 8, C)  
 MONTH (2, 2, I)  
 BREED1 (1, 1, C)  
 BREED2 (1, 1, C)  
 BREED3 (1, 1, C)  
 BREED4 (1, 1, C)  
 BREED5 (1, 1, C)

