

KODIAK ISLAND AND  
SHELIKOF STRAIT  
ENVIRONMENTAL SENSITIVITY  
INDEX SUMMARY METADATA

January 1998

*Prepared By:*

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FILE DESCRIBES: Digital data for 1997 Kodiak Island and Shelikof Strait, Alaska  
Environmental Sensitivity Index Summary

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FILE CREATED ON: 19980120

COMMENTS: Information was developed using the U.S. Federal Geographic Data Committee's Content Standards for Digital Geospatial Metadata, June 8, 1994. The numbering scheme matches the Metadata Standard in order to facilitate referencing definitions of the elements. The items in **bold** are required elements and the others are optional elements. The Spatial Data Transfer Standard (SDTS), ver. 03/92, was referenced to properly identify the geographic entities.

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## **1.0. IDENTIFICATION INFORMATION**

### **1.1. CITATION**

#### **1.1.1. ORIGINATOR:**

National Oceanic and Atmospheric Administration (NOAA), Office of Ocean Resources Conservation and Assessment, Seattle, Washington 98115; and Research Planning, Inc. (RPI), 1200 Park Street, Post Office Box 328, Columbia, South Carolina 29202

#### **1.1.2. PUBLICATION DATE:**

199708

#### **1.1.4. TITLE:**

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Kodiak Island and Shelikof Strait, Alaska

#### **1.1.5. EDITION:**

First

#### **1.1.6. GEOSPATIAL DATA PRESENTATION FORM:**

Maps

#### **1.1.7. SERIES INFORMATION**

##### **1.1.7.1. SERIES NAME:**

None

##### **1.1.7.2. ISSUE IDENTIFICATION:**

Kodiak Island and Shelikof Strait, Alaska

#### **1.1.8. PUBLICATION INFORMATION**

##### **1.1.8.1. PUBLICATION PLACE:**

Seattle, Washington

##### **1.1.8.2. PUBLISHER:**

NOAA, Office of Ocean Resources Conservation and Assessment

#### **1.1.9. OTHER CITATION DETAILS:**

Prepared by Research Planning, Inc., Columbia, South Carolina for the Hazardous Materials Response and Assessment Division, National Oceanic and Atmospheric Administration, Seattle, Washington

#### **1.1.11. LARGER WORK CITATION:**

None

## **1.2. DESCRIPTION**

### **1.2.1. ABSTRACT:**

This data set comprises the Environmental Sensitivity Index (ESI) maps for the shoreline of Kodiak Island and Shelikof Strait, Alaska. ESI data characterize estuarine 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

### **1.2.2. 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

## **1.3. TIME PERIOD OF CONTENT**

### **1.3.1. TIME PERIOD INFORMATION**

#### **1.3.1.3. RANGE OF DATES/TIMES:**

The intertidal habitats of Shelikof Strait were originally mapped during overflights and ground surveys conducted in 1983. The biological and human-use resources data were compiled by regional biologists in 1996 and 1997. The dates for these data vary and are documented in Section 2.5.1

## **1.4. STATUS**

### **1.4.1. PROGRESS:**

Complete

### **1.4.2. MAINTENANCE AND UPDATE FREQUENCY:**

None planned

## **1.5. SPATIAL DOMAIN**

### **1.5.1. BOUNDING COORDINATES**

#### **1.5.1.1. WEST BOUNDING COORDINATE:**

-157.292

#### **1.5.1.2. EAST BOUNDING COORDINATE:**

-151.439

**1.5.1.3. NORTH BOUNDING COORDINATE:**

55.667

**1.5.1.4. SOUTH BOUNDING COORDINATE:**

58.995

**1.6 KEYWORDS**

**1.6.1. THEME**

**1.6.1.1. THEME KEYWORD THESAURUS:**

None

**1.6.1.2. THEME KEYWORD:**

Sensitivity maps; ESI; coastal resources; oil spill planning;  
and coastal zone management

**1.6.2. PLACE**

**1.6.2.1. THESAURUS:**

None

**1.6.2.2. PLACE KEYWORD:**

Kodiak Island; Shelikof Strait; Alaska

**1.7. ACCESS CONSTRAINTS:**

None

**1.8. USE CONSTRAINTS:**

DO NOT USE ESI MAPS FOR NAVIGATIONAL PURPOSES.

Besides the above warning, there are no use constraints on this data.

Acknowledgment of NOAA, RPI, and other contributing sources listed in  
1.11. would be appreciated in products derived from these data

**1.11. DATA SET CREDIT:**

This project was supported by the Alaska Department of Environmental Conservation, Alaska Chadux Corporation, Cook Inlet Regional Citizens Council, Cook Inlet Spill Prevention and Response, Inc., and Prince William Sound Regional Citizens Advisory Council. Robert Pavia, with NOAA's Hazardous Materials Response and Assessment Division, served as contract manager.

Nearly all of the data on the maps were provided in digital form from the Alaska Department of Natural Resources (DNR), the Kodiak Island Borough, and Alyeska's Graphical Resource Database. Contributions and helpful

suggestions were also provided by: Brad Smith, John Sease, and David Withrow, National Marine Fisheries Service; Claudia Slater, Mark Fink, and Jim McCullough, Alaska Department of Fish and Game; Richard McMahon and Dorothy Mortenson, Alaska DNR; Denny Zwiefelhofer, Angela Doroff, Vivian Mendenhall, John Nichols, and Catherine Berg, U.S. Fish and Wildlife Service; Joel Cusick, Buddy Goatcher, and Bud Rice, National Park Service; Linda Freed and Jim Woitel, Kodiak Island Borough; David O'Brien, EMCON Alaska; Alison Smith, Dames & Moore; and Susan Saupe, Cook Inlet RCAC. The data collection effort was coordinated by John Whitney, NOAA Scientific Support Coordinator, Anchorage, Alaska.

At RPI, Joe Holmes was the project cartographer. Jeffrey Dahlin was the project biologist and responsible for the collection of data. William Holton generated the map and digital products and coordinated system administration. Graphics were provided by Joe Holmes. Dot Zaino prepared the final text.

### **1.13. NATIVE DATA SET ENVIRONMENT:**

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO® (version 7.0.3) and ORACLE® RDBMS (version 6.0.36.1.1). The hardware configuration is Hewlett Packard workstations (models 715/50 and 712/80i with 4 X-terminals) with UNIX operating system (HP-UX Release A.09.01). The following files are included in the data set:

|              |              |              |
|--------------|--------------|--------------|
| arc_lut.e00  | bathymet.e00 | birds.e00    |
| biores.e00   | breed.e00    | esi.e00      |
| fish.e00     | hydro.e00    | index.e00    |
| invert.e00   | mgt.e00      | migrate.e00  |
| m_mammal.e00 | m_mampt.e00  | nests.e00    |
| pnts_lut.e00 | poly_lut.e00 | seasonal.e00 |
| soc_dat.e00  | soc_lut.e00  | socecon.e00  |
| sources.e00  | species.e00  | status.e00   |

The entire data set is approximately 50 megabytes.



## **2.0. DATA QUALITY INFORMATION**

### **2.1. ATTRIBUTE ACCURACY**

#### **2.1.1. ATTRIBUTE ACCURACY REPORT:**

The attribute accuracy is estimated to be “good” given the years of ESI experience, the data input methodology, the quality control review sessions, and the digital logical consistency checks.

### **2.2. LOGICAL CONSISTENCY REPORT:**

The digitization of shoreline types, biological resources, and human-use resources is a complex and highly quality-controlled process. However, the data were digitized elsewhere and compiled for this project. Topological, geographical, and data attribute problems were corrected during the compilation process. All data layers use the shoreline as the geographic reference so that there are no digital discrepancies in the geographic coordinates. The shoreline and shoreline types were obtained in digital form from Alaska DNR. The shorelines were checked for topological and attribute accuracy for the following ESI classifications: 7 (exposed tidal flat); 8A (sheltered rocky shore); 9A (sheltered tidal flat); and 10A (marsh). The biological and human-use data were checked using both digital and on-screen procedures, plotted, and sent out for review by the regional specialists. The edited maps were updated, checked once again, and the final product plotted (at approximately 1:450,000 scale). A team of specialists reviewed the entire set of maps, checked all data, and made final edits.

To finalize the data checking process, each coverage is checked using a standardized form by two GIS personnel (a technician and the GIS manager), and each attribute database is checked using several programs that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and ORACLE® to ARC/INFO® consistencies. A final review is made by the GIS manager, where data is written to tape and metadata is written.

### **2.3. COMPLETENESS REPORT:**

The maps were intended to provide a regional overview of the environmentally sensitive resources of Kodiak Island and Shelikof Strait. The resources were selected based on their high sensitivity and vulnerability to

spilled oil or their special management status. Kodiak Island and Shelikof Strait are rich in biological resources and it was not possible to include all of the resources sensitive to oil. Species with widespread, ubiquitous distributions are not shown. Instead, the sensitive resources are depicted where they are most at risk. The following criteria were used: large numbers of individuals concentrated in a relatively small area; early life stages present in restricted areas; come ashore for birthing, resting, or molting; areas important to specific life stages or migration patterns; threatened or endangered; and a significant percentage of the population is likely to be exposed to oil during a spill.

#### Shoreline Habitat Mapping:

The shoreline and shoreline habitat were obtained in digital form from Alaska DNR. While the map products only display four shoreline types, all of the shoreline classifications are in the digital product. However, only the four shoreline types (exposed and sheltered tidal flats, sheltered rocky shores, and marshes) were checked and edited during the review process.

Prediction of the behavior and persistence of oil on intertidal habitats is based on an understanding of the dynamics of the coastal environments, not just the substrate type and grain size. The vulnerability of a particular habitat is an integration of the following factors:

- 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

All of these factors are used to determine the relative sensitivity of intertidal habitats. Key to the sensitivity ranking is an understanding of the relationships between: physical processes, substrate, shoreline type, product type, fate and effect, and sediment transport patterns. The intensity of energy expended upon a shoreline by wave action, boat wake, tidal action, 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.

These concepts have been used in the development of the ESI, which ranks shoreline environments as to their relative sensitivity to oil spills, potential

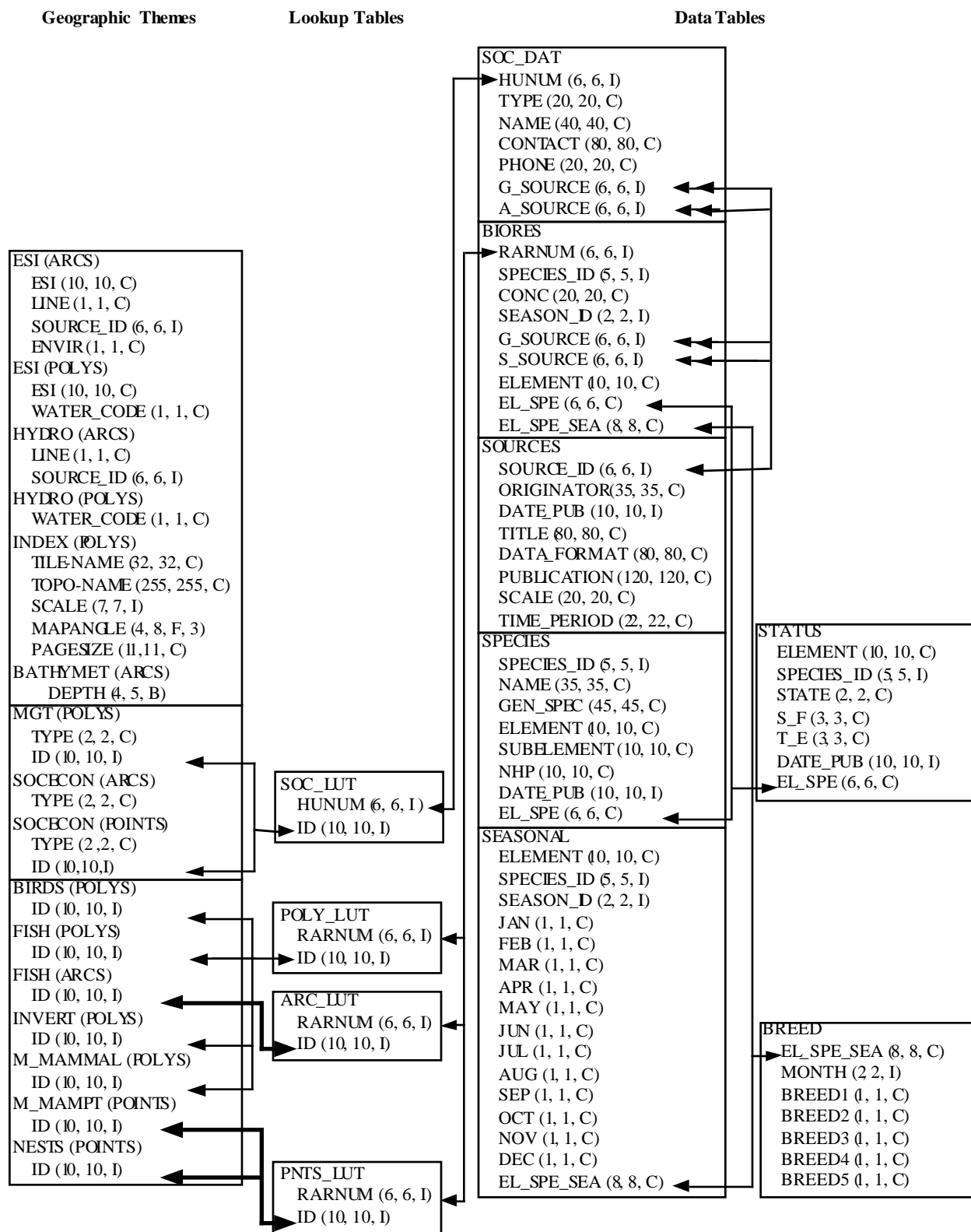
biological injury, and ease of cleanup. Generally speaking, areas exposed to high levels of physical energy, such as wave action and tidal currents, and low biological activity rank low on the scale, whereas sheltered areas with associated high biological activity have the highest ranking.

#### Sensitive Biological Resources:

These data denote the key biological resources that are most likely at risk in the event of an oil spill. Four major categories, or ELEMENTs, of biological resources were considered during the data compilation: birds, fish, invertebrates, and marine mammals.

The ELEMENTs generally correspond to the coverage or geographic data layer names. There are also six attribute, or data tables, BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS, that are used to store the complex biological data (Fig. 1). Each biological polygon coverage (BIRDS, FISH, INVERT, and M\_MAMMAL) is linked to the Biological Resources table (BIORES) using the lookup table POLY\_LUT and the items ID and RARNUM. Each biological point coverage (M\_MAMPT and NESTS) is linked to the BIORES table using the lookup table PNTS\_LUT and the items ID and RARNUM. Each biological arc coverage (FISH and MIGRATE) is linked to the BIORES table using the ARC\_LUT and the items ID and RARNUM. ID is a concatenation of atlas number (57), element number (BIRD = 01, FISH = 02, INVERT = 07, M\_MAMMAL = 04, and NESTS = 05), and unique record number. RARNUM is the resources at risk number and is determined for each unique combination of SPECIES\_ID, SEASON\_ID, CONC, G\_SOURCE, S\_SOURCE, and ELEMENT. The items in BIORES are: RARNUM, SPECIES\_ID, CONC, SEASON\_ID, G\_SOURCE, S\_SOURCE, ELEMENT, EL\_SPE, and EL\_SPE\_SEA. SPECIES\_ID is the numeric identifier of each species and is unique within each ELEMENT. CONC is the concentration of the species and can be descriptive (LOW, MEDIUM, HIGH, etc.) or an actual count of the number of individuals or nests associated with a polygon, point, or arc. SEASON\_ID contains a numeric identifier for the unique monthly presence and life history characteristics of each species at a given location. There can be one seasonality record per species, or the same species can have different monthly presence or breeding activities at different sites. When this

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**FIGURE 1.** Relationship between biology coverages and attribute files.

occurs, a new record with a different SEASON\_ID is referenced. G\_SOURCE contains the SOURCE\_ID for geographic information and S\_SOURCE contains the SOURCE\_ID for seasonality information. Both items link to the SOURCES data table. EL\_SPE is a concatenation of ELEMENT and SPECIES\_ID and links to the SPECIES and STATUS data tables and EL\_SPE\_SEA is a concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID and links to the SEASONAL and BREED data tables.

The SPECIES data table contains the SPECIES\_ID (described above), common name (NAME), scientific name (GEN\_SPEC), date the Natural Heritage Program (NHP) rankings was published (DATE\_PUB), biological element (ELEMENT), biological subelement (SUBELEMENT), and the NHP global conservation status rank (NHP). The item SUBELEMENT refers to the grouping of the species:

| ELEMENT       | SUBELEMENT |
|---------------|------------|
| BIRD          | alcid      |
|               | diving     |
|               | gull_tern  |
|               | pelagic    |
|               | raptor     |
|               | shorebird  |
|               | waterfowl  |
| FISH          | anadromous |
|               | kelp_sp    |
| INVERTEBRATE  | bivalve    |
| MARINE MAMMAL | pinniped   |
|               | sea_otter  |
|               | seal       |
|               | whale      |

The STATUS data table contains records for each species that is threatened or endangered on state or federal lists. The items include: ELEMENT, SPECIES\_ID, STATE (two-letter state abbreviations), S\_F (state or federal status), T\_E (threatened or endangered status), DATE\_PUB, and EL\_SPE.

The SEASONAL data table stores the monthly presence of each species where each month is defined as three-character monthly abbreviations and contains an "X" when present. The BIORES table is linked to the SEASONAL table using either the combination of SPECIES\_ID, ELEMENT, and SEASON\_ID items, or the item EL\_SPE\_SEA.

The BREED data table contains the life stage or life history data for each unique combination of ELEMENT, SPECIES\_ID, and SEASON\_ID (or EL\_SPE\_SEA), and up to 12 records (corresponding to each month of the year) can have different attributes and therefore separate records. The categories for each element of the items BREED1 through BREED5 are:

| ELEMENT  | BREED 1  | BREED 2      | BREED 3  | BREED 4  | BREED 5 |
|----------|----------|--------------|----------|----------|---------|
| BIRD     | nesting  | laying       | hatching | fledging |         |
| FISH     | spawning | outmigration | larvae   | juvenile | adults  |
| INVERT   | spawning | larvae       | mating   | juvenile | adults  |
| M_MAMMAL | mating   | calving      | pupping  | molting  |         |

NOTE: There are no BREED variables for HABITATS.

The SOURCES data table contains metadata for each biological and human-use source listed in the ESI atlas. The items in SOURCES are: SOURCE\_ID, ORIGINATOR (author), DATE\_PUB (date of publication), TITLE (title of the data set), DATA\_FORMAT (digital type, hardcopy maps, etc.), PUBLICATION (additional citation), SCALE (source scale denominator), and TIME\_PERIOD (beginning and ending dates of original data collection). The SOURCES data table is linked to all biological and human-use data at the feature-level.

#### Human-Use Resources:

Several human-use, or socioeconomic, features are included in the summary maps. Entity points and complete chains (arcs) are digitized into the coverage SOCECON and managed area polygonal data are stored in the MGT coverage. Both data sets are linked to the data table SOC\_DAT using the SOC\_LUT lookup table and the items HUNUM and ID. ID is a concatenation of atlas number (57), element number (SOCECON = 10 and MGT = 11), and unique record number. HUNUM is the human-use number and is determined for each unique combination of TYPE, NAME, G\_SOURCE, and A\_SOURCE.

All features are attributed using the item TYPE and identify the type of feature:

| Entity Points      |      | Polygons        |      |
|--------------------|------|-----------------|------|
| Feature            | TYPE | Feature         | TYPE |
| Airport            | A    | Community       | CO   |
| Aquaculture        | AQ   | Management Area | MA   |
| Community          | CO   | National Park   | NP   |
| Marina             | M    | State Park      | P    |
| State Park         | P    | Wildlife Refuge | WR   |
|                    |      |                 |      |
| Complete Chains    |      |                 |      |
| Feature            | TYPE |                 |      |
| Municipal Boundary | CB   |                 |      |
| Road               | R    |                 |      |
| Set-net location   | SN   |                 |      |

The table SOC\_DAT contains the human-use number (HUNUM), feature type (TYPE), name of the facility (NAME), contact person (CONTACT), telephone number (PHONE), geographic source (G\_SOURCE), and attribute source (A\_SOURCE).

## 2.4. POSITIONAL ACCURACY

### 2.4.1. HORIZONTAL POSITIONAL ACCURACY

#### 2.4.1.1. HORIZONTAL POSITIONAL ACCURACY REPORT:

The shoreline classification and hydrology data were digitized from U.S. Geological Survey (USGS) 1:63,360 topographic quadrangles. It is estimated that the ESI classification has a minimum mapping unit of 100 feet. The biological data sets are developed primarily using regional experts who estimate concentration areas. Unlike shorelines, which maintain relative spatial stability through time, the biological data by nature migrate across the landscape. Therefore, the 1:250,000 USGS quadrangles are used as a base map in gathering the data but the data have “fuzzy” boundaries which must be understood when utilizing this information.

**2.5. LINEAGE****2.5.1. SOURCE INFORMATION:**

Coverage or theme name: BATHYMET

**2.5.1.1. SOURCE CITATION**

| <b>2.5.1.1.1</b><br><b>Originator</b> | <b>2.5.1.1.2</b><br><b>Publication Date</b> | <b>2.5.1.1.4</b><br><b>Title</b>                                   | <b>2.5.1.1.6</b><br><b>Geospatial Data Presentation Form</b> | <b>2.5.1.1.8</b><br><b>Publication Information</b> | <b>2.5.1.2</b><br><b>Source Scale Denominator</b> | <b>2.5.1.4</b><br><b>Source Time Period</b> |
|---------------------------------------|---------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------|---------------------------------------------------|---------------------------------------------|
| National Ocean Service                | 1996                                        | <i>Exxon Valdez</i> Oil Spill Database Summary – 20 Meter Contours | Digital arcs                                                 | Alaska DNR Land Records Information Section        | 250000                                            | 1990                                        |

**2.5.1. SOURCE INFORMATION:**

Coverage or theme name: BIRDS

**2.5.1.1. SOURCE CITATION**

| <b>2.5.1.1.1</b><br><b>Originator</b>              | <b>2.5.1.1.2</b><br><b>Publication Date</b> | <b>2.5.1.1.4</b><br><b>Title</b>                            | <b>2.5.1.1.6</b><br><b>Geospatial Data Presentation Form</b> | <b>2.5.1.1.8</b><br><b>Publication Information</b> | <b>2.5.1.2</b><br><b>Source Scale Denominator</b> | <b>2.5.1.4</b><br><b>Source Time Period</b> |
|----------------------------------------------------|---------------------------------------------|-------------------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------|---------------------------------------------------|---------------------------------------------|
| Alaska Department of Fish and Game                 | 1996                                        | Graphical Resource Database - Waterfowl Concentration Areas | Digital Polygons                                             | Alyeska Pipeline Service Company, Anchorage, AK    | 250000                                            | 1983                                        |
| McCullough, J., Alaska Department of Fish and Game | 1997                                        | Waterfowl Concentration Areas                               | Expert knowledge                                             | N/A                                                | N/A                                               | N/A                                         |



**2.5.1. SOURCE INFORMATION:**

Coverage or theme name: ESI

**2.5.1.1. SOURCE CITATION**

| <b>2.5.1.1.1</b><br><b>Originator</b>  | <b>2.5.1.1.2</b><br><b>Publication Date</b> | <b>2.5.1.1.4</b><br><b>Title</b> | <b>2.5.1.1.6</b><br><b>Geospatial Data Presentation Form</b> | <b>2.5.1.1.8</b><br><b>Publication Information</b> | <b>2.5.1.2</b><br><b>Source Scale Denominator</b> | <b>2.5.1.4</b><br><b>Source Time Period</b> |
|----------------------------------------|---------------------------------------------|----------------------------------|--------------------------------------------------------------|----------------------------------------------------|---------------------------------------------------|---------------------------------------------|
| Alaska Department of Natural Resources | N/A                                         | ESI Shoreline Classification     | Digital arcs                                                 | N/A                                                | 24000                                             | 1996                                        |
| Holton, W., Research Planning, Inc.    | 1997                                        | Map Index                        | Digital polygons                                             | NOAA                                               | 63360                                             | 1997                                        |
| Research Planning, Inc.                | 1994                                        | Cook Inlet Summary ESI           | Digital arcs                                                 | NOAA HAZMAT                                        | 63360                                             | 1984                                        |

**2.5.1. SOURCE INFORMATION:**

Coverage or theme name: FISH

**2.5.1.1. SOURCE CITATION**

| <b>2.5.1.1.1</b><br><b>Originator</b>              | <b>2.5.1.1.2</b><br><b>Publication Date</b> | <b>2.5.1.1.4</b><br><b>Title</b>                                              | <b>2.5.1.1.6</b><br><b>Geospatial Data Presentation Form</b> | <b>2.5.1.1.8</b><br><b>Publication Information</b> | <b>2.5.1.2</b><br><b>Source Scale Denominator</b> | <b>2.5.1.4</b><br><b>Source Time Period</b> |
|----------------------------------------------------|---------------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------|---------------------------------------------------|---------------------------------------------|
| Alaska Department of Fish and Game                 | 1996                                        | Graphical Resource Database - Herring Spawning Areas                          | Digital polygons                                             | Alyeska Pipeline Service Company, Anchorage, AK    | Unknown                                           | Unknown                                     |
| Alaska Department of Fish and Game                 | 1996                                        | <i>Exxon Valdez</i> Oil Spill Database - Catalog of Waters of Anadromous Fish | Digital arcs                                                 | Alaska DNR Land Records Information Section        | 63360                                             | 1996                                        |
| McCullough, J., Alaska Department of Fish and Game | 1997                                        | Herring Spawning Areas                                                        | Expert knowledge                                             | N/A                                                | N/A                                               | N/A                                         |

**2.5.1. SOURCE INFORMATION:**

Coverage or theme name: HYDRO

**2.5.1.1. SOURCE CITATION**

| <b>2.5.1.1.1</b><br><b>Originator</b>  | <b>2.5.1.1.2</b><br><b>Publication Date</b> | <b>2.5.1.1.4</b><br><b>Title</b>                                    | <b>2.5.1.1.6</b><br><b>Geospatial Data Presentation Form</b> | <b>2.5.1.1.8</b><br><b>Publication Information</b>        | <b>2.5.1.2</b><br><b>Source Scale Denominator</b> | <b>2.5.1.4</b><br><b>Source Time Period</b> |
|----------------------------------------|---------------------------------------------|---------------------------------------------------------------------|--------------------------------------------------------------|-----------------------------------------------------------|---------------------------------------------------|---------------------------------------------|
| U.S. Minerals Management Service/NOAA  | 1996                                        | <i>Exxon Valdez</i> Oil Spill Database Summary – ESI                | Digital arcs and polygons                                    | Alaska DNR Land Records Information Section               | 80000                                             | 1990                                        |
| Alaska Department of Natural Resources | Unknown                                     | Coastal Morphology/ Environmental Sensitivity Index                 | Digital arcs                                                 | Alaska DNR                                                | 63360                                             | 1984                                        |
| Kodiak Island Borough                  | 1996                                        | Coastal Boundary/ Zoning Map                                        | Digital arcs                                                 | Kodiak Island Borough Community Development Department    | Unknown                                           | Unknown                                     |
| Alaska Department of Fish and Game     | 1996                                        | <i>Exxon Valdez</i> Oil Spill Database Summary – Anadromous Streams | Digital arcs                                                 | Alaska DNR Land Records Information Section               | 63360                                             | 1994                                        |
| U.S. Geological Survey                 | 1996                                        | Hydrography                                                         | Digital arcs                                                 | National Park Service<br>Database<br>Contact: Joel Cusick | 63360                                             | 1995                                        |
| Holton, W., Research Planning, Inc.    | 1997                                        | Map Index                                                           | Digital polygons                                             | NOAA                                                      | 63360                                             | 1997                                        |
| Research Planning, Inc.                | 1994                                        | Cook Inlet Summary ESI                                              | Digital arcs                                                 | NOAA HAZMAT                                               | 63360                                             | 1984                                        |

**2.5.1. SOURCE INFORMATION:**

Coverage or theme name: INDEX

**2.5.1.1. SOURCE CITATION**

| <b>2.5.1.1.1</b>                    | <b>2.5.1.1.2</b>        | <b>2.5.1.1.4</b> | <b>2.5.1.1.6</b>                         | <b>2.5.1.1.8</b>               | <b>2.5.1.2</b>                  | <b>2.5.1.4</b>            |
|-------------------------------------|-------------------------|------------------|------------------------------------------|--------------------------------|---------------------------------|---------------------------|
| <b>Originator</b>                   | <b>Publication Date</b> | <b>Title</b>     | <b>Geospatial Data Presentation Form</b> | <b>Publication Information</b> | <b>Source Scale Denominator</b> | <b>Source Time Period</b> |
| Holton, W., Research Planning, Inc. | 1997                    | Map Index        | Digital polygons                         | NOAA                           | 63360                           | 1997                      |

**2.5.1. SOURCE INFORMATION:**

Coverage or theme name: INVERT

**2.5.1.1. SOURCE CITATION**

| <b>2.5.1.1.1</b>                                   | <b>2.5.1.1.2</b>        | <b>2.5.1.1.4</b>                                      | <b>2.5.1.1.6</b>                         | <b>2.5.1.1.8</b>                                  | <b>2.5.1.2</b>                  | <b>2.5.1.4</b>            |
|----------------------------------------------------|-------------------------|-------------------------------------------------------|------------------------------------------|---------------------------------------------------|---------------------------------|---------------------------|
| <b>Originator</b>                                  | <b>Publication Date</b> | <b>Title</b>                                          | <b>Geospatial Data Presentation Form</b> | <b>Publication Information</b>                    | <b>Source Scale Denominator</b> | <b>Source Time Period</b> |
| Alaska Department of Fish and Game                 | 1984                    | Habitat Management Guide, Southwest Region, Volume IV | Hardcopy maps                            | Alaska Department of Fish and Game, Anchorage, AK | 250000                          | 1983                      |
| McCullough, J., Alaska Department of Fish and Game | 1997                    | Razor Clam Beds                                       | Expert knowledge                         | N/A                                               | N/A                             | N/A                       |

**2.5.1. SOURCE INFORMATION:**

Coverage or theme name: MGT

**2.5.1.1. SOURCE CITATION**

| <b>2.5.1.1.1</b>               | <b>2.5.1.1.2</b>        | <b>2.5.1.1.4</b>           | <b>2.5.1.1.6</b>                         | <b>2.5.1.1.8</b>                  | <b>2.5.1.2</b>                  | <b>2.5.1.4</b>            |
|--------------------------------|-------------------------|----------------------------|------------------------------------------|-----------------------------------|---------------------------------|---------------------------|
| <b>Originator</b>              | <b>Publication Date</b> | <b>Title</b>               | <b>Geospatial Data Presentation Form</b> | <b>Publication Information</b>    | <b>Source Scale Denominator</b> | <b>Source Time Period</b> |
| National Park Service          | 1995                    | Administrative Boundaries  | Digital polygons                         | Database Contact: Joel Cusick     | 63360                           | 1989-1991                 |
| U.S. Fish and Wildlife Service | 1997                    | Management Area Boundaries | Digital polygons                         | Database Contact: Doug Vandegraft | Unknown                         | Unknown                   |

**2.5.1. SOURCE INFORMATION:**

Coverage or theme name: MIGRATE

**2.5.1.1. SOURCE CITATION**

| <b>2.5.1.1.1</b>                                | <b>2.5.1.1.2</b>        | <b>2.5.1.1.4</b>             | <b>2.5.1.1.6</b>                         | <b>2.5.1.1.8</b>               | <b>2.5.1.2</b>                  | <b>2.5.1.4</b>            |
|-------------------------------------------------|-------------------------|------------------------------|------------------------------------------|--------------------------------|---------------------------------|---------------------------|
| <b>Originator</b>                               | <b>Publication Date</b> | <b>Title</b>                 | <b>Geospatial Data Presentation Form</b> | <b>Publication Information</b> | <b>Source Scale Denominator</b> | <b>Source Time Period</b> |
| Smith, B.,<br>National Marine Fisheries Service | 1997                    | Gray Whale Migration Periods | Expert knowledge                         | N/A                            | N/A                             | N/A                       |

**2.5.1. SOURCE INFORMATION:**

Coverage or theme name: M\_MAMMAL

**2.5.1.1. SOURCE CITATION**

| <b>2.5.1.1.1</b>                                                     | <b>2.5.1.1.2</b>        | <b>2.5.1.1.4</b>                                                       | <b>2.5.1.1.6</b>                         | <b>2.5.1.1.8</b>                                | <b>2.5.1.2</b>                  | <b>2.5.1.4</b>            |
|----------------------------------------------------------------------|-------------------------|------------------------------------------------------------------------|------------------------------------------|-------------------------------------------------|---------------------------------|---------------------------|
| <b>Originator</b>                                                    | <b>Publication Date</b> | <b>Title</b>                                                           | <b>Geospatial Data Presentation Form</b> | <b>Publication Information</b>                  | <b>Source Scale Denominator</b> | <b>Source Time Period</b> |
| Alaska Department of Fish and Game/National Marine Fisheries Service | 1996                    | Graphical Resource Database Alaska West: Harbor Seal Sites             | Digital points and polygons              | Alyeska Pipeline Service Company, Anchorage, AK | 250000                          | 1982-1983                 |
| Alaska Department of Fish and Game                                   | 1996                    | Graphical Resource Database Alaska West: Sea Otter Concentration Areas | Digital polygons                         | Alyeska Pipeline Service Company, Anchorage, AK | 250000                          | 1982-1983                 |
| Withrow, D.,<br>National Marine Fisheries Service                    | 1997                    | Harbor Seal Location Survey                                            | Expert knowledge                         | N/A                                             | N/A                             | N/A                       |
| McCullough, J.,<br>Alaska Department of Fish and Game                | 1997                    | Harbor Seal Concentration Areas                                        | Expert knowledge                         | N/A                                             | N/A                             | N/A                       |

**2.5.1. SOURCE INFORMATION:**

Coverage or theme name: M\_MAMPT

**2.5.1.1. SOURCE CITATION**

| <b>2.5.1.1.1</b><br><b>Originator</b>            | <b>2.5.1.1.2</b><br><b>Publication Date</b> | <b>2.5.1.1.4</b><br><b>Title</b>                        | <b>2.5.1.1.6</b><br><b>Geospatial Data Presentation Form</b> | <b>2.5.1.1.8</b><br><b>Publication Information</b> | <b>2.5.1.2</b><br><b>Source Scale Denominator</b> | <b>2.5.1.4</b><br><b>Source Time Period</b> |
|--------------------------------------------------|---------------------------------------------|---------------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------|---------------------------------------------------|---------------------------------------------|
| Alaska Department of Fish and Game               | 1996                                        | Graphical Resource Database Alaska West: Sea Lion Sites | Digital points and polygons                                  | Alyeska Pipeline Service Company, Anchorage, AK    | 250000                                            | 1982-1983                                   |
| National Marine Fisheries Service                | 1996                                        | Graphical Resource Database Alaska West: Whales         | Digital polygons                                             | Alyeska Pipeline Service Company, Anchorage, AK    | Unknown                                           | 1996                                        |
| Zwiefelhofer, D., U.S. Fish and Wildlife Service | 1997                                        | Sea Lion Concentration Areas                            | Expert knowledge                                             | N/A                                                | N/A                                               | N/A                                         |
| Goatcher, B., National Park Service              | 1997                                        | Sea Lion Concentration Areas                            | Expert knowledge                                             | N/A                                                | N/A                                               | N/A                                         |

**2.5.1. SOURCE INFORMATION:**

Coverage or theme name: NESTS

**2.5.1.1. SOURCE CITATION**

| <b>2.5.1.1.1</b><br><b>Originator</b> | <b>2.5.1.1.2</b><br><b>Publication Date</b> | <b>2.5.1.1.4</b><br><b>Title</b>                                  | <b>2.5.1.1.6</b><br><b>Geospatial Data Presentation Form</b> | <b>2.5.1.1.8</b><br><b>Publication Information</b> | <b>2.5.1.2</b><br><b>Source Scale Denominator</b> | <b>2.5.1.4</b><br><b>Source Time Period</b> |
|---------------------------------------|---------------------------------------------|-------------------------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------|---------------------------------------------------|---------------------------------------------|
| U.S. Fish and Wildlife Service        | 1996                                        | <i>Exxon Valdez</i> Oil Spill Database Summary – Seabird Colonies | Digital points                                               | Alaska DNR Land Records Information Section        | Varies                                            | 1996                                        |
| U.S. Fish and Wildlife Service        | 1996                                        | Graphical Resource Database Alaska West: Bald Eagle Nest Sites    | Digital points                                               | Alyeska Pipeline Service Company, Anchorage, AK    | Unknown                                           | 1989-1992                                   |

| <b>2.5.1.1.1</b>                   | <b>2.5.1.1.2</b>        | <b>2.5.1.1.4</b>      | <b>2.5.1.1.6</b>                         | <b>2.5.1.1.8</b>               | <b>2.5.1.2</b>                  | <b>2.5.1.4</b>            |
|------------------------------------|-------------------------|-----------------------|------------------------------------------|--------------------------------|---------------------------------|---------------------------|
| <b>Originator</b>                  | <b>Publication Date</b> | <b>Title</b>          | <b>Geospatial Data Presentation Form</b> | <b>Publication Information</b> | <b>Source Scale Denominator</b> | <b>Source Time Period</b> |
| Alaska Department of Fish and Game | 1997                    | Bald Eagle Nest Sites | Expert knowledge                         | N/A                            | N/A                             | N/A                       |

**2.5.1. SOURCE INFORMATION:**

Coverage or theme name: SOCECON

**2.5.1.1. SOURCE CITATION**

| <b>2.5.1.1.1</b>                                          | <b>2.5.1.1.2</b>        | <b>2.5.1.1.4</b>                                            | <b>2.5.1.1.6</b>                         | <b>2.5.1.1.8</b>                                       | <b>2.5.1.2</b>                  | <b>2.5.1.4</b>            |
|-----------------------------------------------------------|-------------------------|-------------------------------------------------------------|------------------------------------------|--------------------------------------------------------|---------------------------------|---------------------------|
| <b>Originator</b>                                         | <b>Publication Date</b> | <b>Title</b>                                                | <b>Geospatial Data Presentation Form</b> | <b>Publication Information</b>                         | <b>Source Scale Denominator</b> | <b>Source Time Period</b> |
| Kodiak Island Borough                                     | 1996                    | Graphical Resource Database Alaska West: Hatchery Sites     | Digital points                           | Alyeska Pipeline Service Company, Anchorage, AK        | Unknown                         | Unknown                   |
| Kodiak Island Borough                                     | 1996                    | Coastal Boundary/ Zoning Map                                | Digital arcs                             | Kodiak Island Borough Community Development Department | Unknown                         | Unknown                   |
| Kodiak Island Borough                                     | 1996                    | Graphical Resource Database Alaska West: Communities        | Digital points                           | Alyeska Pipeline Service Company, Anchorage, AK        | Unknown                         | Unknown                   |
| U.S. Geological Survey                                    | N/A                     | U.S. Geological Survey 1:250,000 Topographic Quadrangles    | Hardcopy maps                            | U.S. Geological Survey, Reston, VA                     | 250000                          | Varies                    |
| Alaska Department of Transportation and Public Facilities | 1996                    | Graphical Resource Database Alaska West: Small Boat Harbors | Digital points                           | Alyeska Pipeline Service Company, Anchorage, AK        | Unknown                         | 1995                      |

**2.5.2. PROCESS STEP****2.5.2.1. PROCESS DESCRIPTION:**

The collection of the basemap data, biological resources, and human-use resources was a complex and highly quality controlled process. The first layer of information collected was the shoreline (ESI). The collected data were checked for completeness (for ESI classifications 7 through 10), topological, and logical consistency and then plotted. Any errors in the shoreline classification were updated prior to digitization of biological and human-use layers. All data use the shoreline as the geographic reference so that there are no slivers in the geographic layers. The biological information was collected, synthesized against the shoreline, checked using both digital and on-screen procedures, plotted, and sent out for review by the regional specialists. The edited maps were updated, checked once again, and plotted at a final map scale of 1:450,000. A team of specialists reviewed the entire series of maps, checked all data, and made final edits. A final quality control check for topological consistency, rules for geography, and database to geography correspondence were performed and reported to the GIS manager.

**2.5.2.3. PROCESS DATE:**

199701-199708

**2.5.2.6. PROCESS CONTACT****2.5.2.6.1. CONTACT PERSON PRIMARY****2.5.2.6.1.1. CONTACT PERSON:**

Jill Petersen

**2.5.2.6.1.2. CONTACT ORGANIZATION:**

NOAA HMRAD

**2.5.2.6.3. CONTACT POSITION:**

GIS Manager

**2.5.2.6.4. CONTACT ADDRESS****2.5.2.6.4.1. ADDRESS TYPE:**

Physical Address

**2.5.2.6.4.2. ADDRESS:**

7600 Sand Point Way, N.E.  
Bin C15700

**2.5.2.6.4.3. CITY:**

Seattle

**2.5.2.6.4.4. STATE OR PROVINCE:**

W A

**2.5.2.6.4.5. POSTAL CODE:**

98115

**2.5.2.6.5. CONTACT VOICE TELEPHONE:**

(206) 526-6944

**2.5.2.6.7. CONTACT FACSIMILE TELEPHONE:**

(206) 526-6329

**2.5.2.6.8. CONTACT ELECTRONIC MAIL ADDRESS:**

jill\_petersen@hazmat.noaa.gov.us



**3.0. SPATIAL DATA ORGANIZATION INFORMATION****3.2. DIRECT SPATIAL REFERENCE METHOD:**

Vector

**3.3. POINT AND VECTOR OBJECT INFORMATION****3.3.1. SDTS TERMS DESCRIPTION:****3.3.1.1. SDTS POINT AND VECTOR OBJECT TYPE, and****3.3.1.2. POINT AND VECTOR OBJECT COUNT:**

| Theme    | Universe Polygon | GT-Polygons | Area Points | Complete Chains | Line Segments | Label Points | Entity Points | Nodes |
|----------|------------------|-------------|-------------|-----------------|---------------|--------------|---------------|-------|
| BATHYMET |                  |             |             | 1,203           | 179,362       |              |               | 8340  |
| BIRDS    | 1                | 127         | 127         | 272             | 55,175        |              |               | 221   |
| ESI      | 1                | 1,214       | 1,214       | 8,044           | 239,848       |              |               | 7,925 |
| FISH     | 1                | 1,134       | 1,134       | 2845            | 174,285       |              |               | 3,208 |
| HYDRO    | 1                | 5,085       | 5,085       | 7,090           | 381,695       | 180          |               | 7,046 |
| INDEX    | 1                | 1           | 1           | 4               | 4             |              |               | 4     |
| INVERT   | 1                | 140         | 140         | 142             | 9,637         |              |               | 142   |
| MGT      | 1                | 1,263       | 1,263       | 1,533           | 141,947       |              |               | 1,480 |
| MIGRATE  |                  |             |             | 6               | 1,546         |              |               | 66    |
| M_MAMMAL | 1                | 4,278       | 4,278       | 4,744           | 262,842       |              |               | 4,606 |
| M_MAMPT  |                  |             |             |                 |               |              | 49            |       |
| NESTS    |                  |             |             |                 |               |              | 2,040         |       |
| SOCECON  |                  |             |             | 49              | 5,232         |              | 24            | 187   |

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#### **4.0. SPATIAL REFERENCE INFORMATION**

##### **4.1. HORIZONTAL COORDINATE SYSTEM DEFINITION**

###### **4.1.1. GEOGRAPHIC**

###### **4.1.1.1. LATITUDE RESOLUTION:**

0.00005

###### **4.1.1.2. LONGITUDE RESOLUTION:**

0.00005

###### **4.1.1.3. GEOGRAPHIC COORDINATE UNITS:**

Decimal Degrees

###### **4.1.4. GEODETIC MODEL**

###### **4.1.4.1. HORIZONTAL DATUM NAME:**

North American Datum of 1983

###### **4.1.4.2. ELLIPSOID NAME:**

GRS 1980

###### **4.1.4.3. SEMI-MAJOR AXIS:**

6,378,206.4

###### **4.1.4.4. DENOMINATOR FLATTENING RATIO:**

294.98

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## 5.0. ENTITY AND ATTRIBUTE INFORMATION

### 5.1. DETAILED DESCRIPTION: ARC\_LUT

Lookup table to link biology arc data layers to BIORES data table.

#### 5.1.1. ENTITY TYPES:

| 5.1.1.1. ENTITY TYPE LABEL: | 5.1.1.2. ENTITY TYPE DEFINITION: |         |
|-----------------------------|----------------------------------|---------|
| <u>Attributes</u>           | RARNUM                           | integer |
|                             | ID                               | integer |

#### 5.1.2. ATTRIBUTES:

##### 5.1.2.1. ATTRIBUTE LABEL:

RARNUM

##### 5.1.2.2. ATTRIBUTE DEFINITION:

An identifier that links to the BIORES data table

##### 5.1.2.3. ATTRIBUTE DEFINITION SOURCE:

Research Planning, Inc.

##### 5.1.2.4. ATTRIBUTE DOMAIN VALUES:

##### 5.1.2.4.1. ENUMERATED DOMAIN:

##### 5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:

---

344

372

373

375

401

---

##### 5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:

Research Planning, Inc.

##### 5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:nominal

**5.1.2.1. ATTRIBUTE LABEL:**

ID

**5.1.2.2. ATTRIBUTE DEFINITION:**

An identifier that links to the FISH data layer. The values range from 0100002-08

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4. ATTRIBUTE DOMAIN VALUES:**

Values are a concatenation of atlas number (57), element number (02), and unique record number 00001 through N)

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

**5.1. DETAILED DESCRIPTION: BATHYMET**

The data layer BATHYMET contains arcs representing bathymetric contour intervals. This data layer does not match the shoreline and, in some places, the contours intersect with land. For the purposes of this project, the data set was left as is

**5.1.1. ENTITY TYPES:****5.1.1.1. ENTITY TYPE LABEL:**Complete Chain**5.1.1.2. ENTITY TYPE DEFINITION:**

DEPTH

binary

**5.1.2. ATTRIBUTES:****5.1.2.1. ATTRIBUTE LABEL:**

DEPTH

**5.1.2.2. ATTRIBUTE DEFINITION:**

An integer denoting bathymetric depth in meters

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

National Ocean Service

**5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:****5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:**

-20

20 meter bathymetric contour

-80

80 meter bathymetric contour

-120

120 meter bathymetric contour

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:**

National Ocean Service

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**

ordered

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**5.1. DETAILED DESCRIPTION: BIORES**

The data table BIORES contains the attributes necessary for linking to spatial data layers and data tables.

**5.1.1. ENTITY TYPES:****5.1.1.1. ENTITY TYPE LABEL:**Attributes**5.1.1.2. ENTITY TYPE DEFINITION:**

|            |           |
|------------|-----------|
| RARNUM     | integer   |
| SPECIES_ID | integer   |
| CONC       | character |
| SEASON_ID  | integer   |
| G_SOURCE   | integer   |
| S_SOURCE   | integer   |
| ELEMENT    | character |
| EL_SPE     | character |
| EL_SPE_SEA | character |

**5.1.2. ATTRIBUTES:****5.1.2.1. ATTRIBUTE LABEL:**

RARNUM

**5.1.2.2. ATTRIBUTE DEFINITION:**

An identifier that links to the POLY\_LUT, PNTS\_LUT, and ARC\_LUT lookup tables

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:**

1-N

**5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:**

Unique number

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**

nominal

**5.1.2.1. ATTRIBUTE LABEL:**

SPECIES\_ID

**5.1.2.2. ATTRIBUTE DEFINITION:**

Numeric identifier for each species and is unique within each ELEMENT and refers to a nationwide ESI species list maintained at RPI and NOAA

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED  
DOMAIN VALUE:**

**5.1.2.4.1.2. ENUMERATED DOMAIN  
VALUE DEFINITION:**

1-N

Unique number

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**

nominal

**5.1.2.1. ATTRIBUTE LABEL:**

CONC

**5.1.2.2. ATTRIBUTE DEFINITION:**

Relative concentration or actual count of a species at a specific location. Field is blank if no data is available

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

See SOURCES for each data layer  
given in Section 2

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**

nominal

**5.1.2.1. ATTRIBUTE LABEL:**

SEASON\_ID

**5.1.2.2. ATTRIBUTE DEFINITION:**

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

There can be one seasonality record per species, or the same species can have different monthly presence or breeding activities at different sites. When this occurs, a new record with a different SEASON\_ID is referenced. The concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID links to the SEASONAL data table

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED  
DOMAIN VALUE:**

**5.1.2.4.1.2. ENUMERATED DOMAIN  
VALUE DEFINITION:**

1-N

Unique number

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**

nominal

**5.1.2.1. ATTRIBUTE LABEL:**

G\_SOURCE

**5.1.2.2. ATTRIBUTE DEFINITION:**

Geographic source identifier that links to the SOURCES data table

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED  
DOMAIN VALUE:**

**5.1.2.4.1.2. ENUMERATED DOMAIN  
VALUE DEFINITION:**

1-N

Unique number

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**

nominal

**5.1.2.1. ATTRIBUTE LABEL:**

S\_SOURCE

**5.1.2.2. ATTRIBUTE DEFINITION:**

Seasonality source identifier that links to the SOURCES data table

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED  
DOMAIN VALUE:**

**5.1.2.4.1.2. ENUMERATED DOMAIN  
VALUE DEFINITION:**

1-N

Unique number

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**

nominal

**5.1.2.1. ATTRIBUTE LABEL:**

ELEMENT

**5.1.2.2. ATTRIBUTE DEFINITION:**

Major categories of biological data

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED  
DOMAIN VALUE:**

**5.1.2.4.1.2. ENUMERATED DOMAIN  
VALUE DEFINITION:**

BIRD

Birds

FISH

Fish

INVERT

Invertebrates

M\_MAMMAL

Marine Mammals

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**

nominal

**5.1.2.1. ATTRIBUTE LABEL:**

EL\_SPE

**5.1.2.2. ATTRIBUTE DEFINITION:**

Concatenation of the ELEMENT and SPECIES\_ID

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4. ATTRIBUTE DOMAIN VALUES:**

**5.1.2.4.1. ENUMERATED DOMAIN:**

**5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:**

---

B00008

B00010

B00036

B00041

B00046

B00047

B00048

B00049

B00050

B00051

B00068

B00076

B00079

B00080

B00081

B00084

B00096

B00099

B00100

B00101

B00102

B00103

B00104

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**ENUMERATED DOMAIN VALUE:**

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B00105  
 B00106  
 B00111  
 B00129  
 B00273  
 B01003  
 B01008  
 B01021  
 F00066  
 F01022  
 I00028  
 M00001  
 M00002  
 M00007  
 M00026

---

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
 DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

**5.1.2.1. ATTRIBUTE LABEL:**

EL\_SPE\_SEA

**5.1.2.2. ATTRIBUTE DEFINITION:**

Concatenation of the ELEMENT, SPECIES\_ID, and  
 SEASON\_ID

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4. ATTRIBUTE DOMAIN VALUES:**

**5.1.2.4.1. ENUMERATED DOMAIN:**

**5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:**

---

B0000801  
 B0001001  
 B0003601  
 B0004101  
 B0004601

---

**ENUMERATED DOMAIN VALUE:**

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B0004701  
B0004801  
B0004901  
B0005001  
B0005101  
B0006801  
B0007601  
B0007602  
B0007901  
B0008001  
B0008101  
B0008401  
B0009601  
B0009901  
B0010001  
B0010101  
B0010201  
B0010301  
B0010401  
B0010501  
B0010601  
B0011101  
B0012901  
B0027301  
B0027303  
B0100301  
B0100302  
B0100303  
B0100304  
B0100305  
B0100306  
B0100307  
B0100308  
B0100801  
B0102101  
B0102102  
B0102103  
F0006601

---

**ENUMERATED DOMAIN VALUE:**

---

F0102201  
I0002801  
M0000101  
M0000102  
M0000201  
M0000701  
M0002601  
M0002602

---

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:nominal**



**5.1. DETAILED DESCRIPTION: BIRDS**

The data layer BIRDS contains the polygons with bird species. The polygons represent concentration areas for waterfowl. Waterfowl populations are highest during the spring migration in April and May and during the arrival of the summer breeding population.

**5.1.1. ENTITY TYPES:**

| <b>5.1.1.1. ENTITY TYPE LABEL:</b> | <b>5.1.1.2. ENTITY TYPE DEFINITION:</b> |
|------------------------------------|-----------------------------------------|
| <u>GT-Polygons</u>                 | ID integer                              |

**5.1.2. ATTRIBUTES:****5.1.2.1. ATTRIBUTE LABEL:**

ID

**5.1.2.2. ATTRIBUTE DEFINITION:**

A unique identifier that links to the POLY\_LUT table. ID is a concatenation of atlas number (57), element number (1), and record number. ID values of zero are holes in polygons and do not contain information

The following BIRDS species are found in the bird coverage:

| <b>SPECIES ID</b> | <b>NAME</b> |
|-------------------|-------------|
| 273               | Geese       |
| 1,003             | Waterfowl   |
| 1,021             | Ducks       |

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**

nominal

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**5.1. DETAILED DESCRIPTION: BREED**

The data table BREED identifies the life stages, by month, for each species.

**5.1.1. ENTITY TYPES:****5.1.1.1. ENTITY TYPE LABEL:**

Attributes

**5.1.1.2. ENTITY TYPE DEFINITION:**

|            |           |
|------------|-----------|
| EL_SPE_SEA | character |
| MONTH      | integer   |
| BREED1     | character |
| BREED2     | character |
| BREED3     | character |
| BREED4     | character |
| BREED5     | character |

**5.1.2. ATTRIBUTES:****5.1.2.1. ATTRIBUTE LABEL:**

EL\_SPE\_SEA

**5.1.2.2. ATTRIBUTE DEFINITION:**

Concatenation of the first character of the ELEMENT, SPECIES\_ID, and SEASON\_ID. Links to BIORES and SEASONAL data tables. If a species has any different monthly presence or breeding activity, a new seasonality record is used to accommodate the variable nature of the species across the study area. There can be up to 12 records (representing each month) for each seasonality for each species

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:**

1-N

**5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:**

Unique number

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**

nominal

**5.1.2.1. ATTRIBUTE LABEL:**

MONTH

**5.1.2.2. ATTRIBUTE DEFINITION:**

Two-digit calendar month when the species is present

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED  
DOMAIN VALUE:****5.1.2.4.1.2. ENUMERATED DOMAIN  
VALUE DEFINITION:**


---

|    |           |
|----|-----------|
| 1  | January   |
| 2  | February  |
| 3  | March     |
| 4  | April     |
| 5  | May       |
| 6  | June      |
| 7  | July      |
| 8  | August    |
| 9  | September |
| 10 | October   |
| 11 | November  |
| 12 | December  |

---

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**

nominal

**5.1.2.1. ATTRIBUTE LABEL:**

BREED1

**5.1.2.2. ATTRIBUTE DEFINITION:**

The BREED items contain “Y” for occurring and “N” for not occurring. Species’ breeding or life stage information for BREED1:

if EL\_SPE\_SEA contains “B” then BREED1 = nesting;

if EL\_SPE\_SEA contains “F” then BREED1 = spawning;

if EL\_SPE\_SEA contains “I” then BREED1 = spawning;

if EL\_SPE\_SEA contains “M” then BREED1 = mating

Only BIRD (“B”) and FISH (“F”) species have BREED1 activities occurring in these data

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED  
DOMAIN VALUE:****5.1.2.4.1.2. ENUMERATED DOMAIN  
VALUE DEFINITION:**


---

|   |               |
|---|---------------|
| N | Not occurring |
| Y | Occurring     |

---

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**

nominal

**5.1.2.1. ATTRIBUTE LABEL:**

BREED2

**5.1.2.2. ATTRIBUTE DEFINITION:**

The BREED items contain “Y” for occurring and “N” for not occurring. Species’ breeding or life stage information for BREED2:

if EL\_SPE\_SEA contains “B” then BREED2 = laying;

if EL\_SPE\_SEA contains “F” then BREED2 = outmigration;

if EL\_SPE\_SEA contains “I” then BREED2 = larvae;

if EL\_SPE\_SEA contains “M” then BREED2 = calving

No species have BREED2 activities in these data

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED  
DOMAIN VALUE:****5.1.2.4.1.2. ENUMERATED DOMAIN  
VALUE DEFINITION:**


---

|   |               |
|---|---------------|
| N | Not occurring |
|---|---------------|

---

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**

nominal

**5.1.2.1. ATTRIBUTE LABEL:**

BREED3

**5.1.2.2. ATTRIBUTE DEFINITION:**

The BREED items contain “Y” for occurring and “N” for not occurring. Species’ breeding or life stage information for BREED3:

if EL\_SPE\_SEA contains “B” then BREED3 = hatching;

if EL\_SPE\_SEA contains “F” then BREED3 = larvae;

if EL\_SPE\_SEA contains “I” then BREED3 = mating;

if EL\_SPE\_SEA contains “M” then BREED3 = pupping

Only M\_MAMMAL (“M”) species have BREED3 activities occurring in these data

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED  
DOMAIN VALUE:****5.1.2.4.1.2. ENUMERATED DOMAIN  
VALUE DEFINITION:**

|   |               |
|---|---------------|
| N | Not occurring |
| Y | Occurring     |

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**

nominal

**5.1.2.1. ATTRIBUTE LABEL:**

BREED4

**5.1.2.2. ATTRIBUTE DEFINITION:**

The BREED items contain “Y” for occurring and “N” for not occurring. Species’ breeding or life stage information for BREED4:

if EL\_SPE\_SEA contains “B” then BREED4 = fledging;

if EL\_SPE\_SEA contains “F” then BREED4 = juvenile;

if EL\_SPE\_SEA contains “I” then BREED4 = juvenile

if EL\_SPE\_SEA contains “M” then BREED4 = molting

Only M\_MAMMAL (“M”) species have BREED4 activities occurring in these data

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED  
DOMAIN VALUE:****5.1.2.4.1.2. ENUMERATED DOMAIN  
VALUE DEFINITION:**

|   |               |
|---|---------------|
| N | Not occurring |
| Y | Occurring     |

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**

nominal

**5.1.2.1. ATTRIBUTE LABEL:**

BREED5

**5.1.2.2. ATTRIBUTE DEFINITION:**

The BREED items contain “Y” for occurring, “N” for not occurring, and “-” when not applicable. Species’ breeding or life stage information for BREED5:

if EL\_SPE\_SEA contains “F” then BREED5 = adults;

if EL\_SPE\_SEA contains “I” then BREED5 = adults

No species have BREED5 activity in these data

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED  
DOMAIN VALUE:****5.1.2.4.1.2. ENUMERATED DOMAIN  
VALUE DEFINITION:**

|   |                |
|---|----------------|
| N | Not occurring  |
| - | Not applicable |

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**

nominal

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**5.1. DETAILED DESCRIPTION: ESI**

The data layer ESI contains arc (Complete Chains) and polygonal (GT-Polygons) features for the ESI shoreline classification and is based on *Environmental Sensitivity Index Guidelines, Version 2.0* (Halls, J., J. Michel, S. Zengel, and J. Dahlin, 1996, Hazardous Materials Response and Assessment Division, NOAA).

**5.1.1. ENTITY TYPES:**

| 5.1.1.1. ENTITY TYPE LABEL: | 5.1.1.2. ENTITY TYPE DEFINITION: |
|-----------------------------|----------------------------------|
| <u>Complete Chain</u>       | ESI character                    |
|                             | LINE character                   |
|                             | SOURCE_ID integer                |
|                             | ENVIR character                  |
| <u>GT-Polygons</u>          | ESI character                    |
|                             | WATER_CODE character             |

**5.1.2. ATTRIBUTES:****5.1.2.1. ATTRIBUTE LABEL:**

ESI

**5.1.2.2. ATTRIBUTE DEFINITION:**

The item ESI contains values according to the ESI ranking of the shorelines and polygons. The ESI rankings progress from low to high susceptibility to oil spills. In many cases, the shorelines are also ranked with multiple codes such as 10A/8B. The first number is the most landward shoreline type, marsh, with sheltered, solid man-made structures being the shoreline type closest to the water. Only shoreline types of 7 through 10 were reviewed for accuracy and accepted by the regional specialists.

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

| <b>5.1.2.4.1.1.<br/>ENUMERATED<br/>DOMAIN VALUE:</b> | <b>5.1.2.4.1.2.<br/>ENUMERATED DOMAIN<br/>VALUE DEFINITION:</b>                                                                |
|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| 1A                                                   | Exposed Rocky Shores                                                                                                           |
| 1A/2A                                                | Exposed Rocky Shores/Exposed Wave-cut Platform in<br>Bedrock, Mud, or Clay                                                     |
| 1A/5                                                 | Exposed Rocky Shores/Mixed Sand and Gravel Beaches                                                                             |
| 1A/6A                                                | Exposed Rocky Shores/Gravel Beaches                                                                                            |
| 1A/7                                                 | Exposed Rocky Shores/Exposed Tidal Flats                                                                                       |
| 1B                                                   | Exposed, Solid Man-made Structures                                                                                             |
| 2A                                                   | Exposed Wave-cut Platform in Bedrock, Mud, or Clay                                                                             |
| 2A/1A                                                | Exposed Wave-cut Platform in Bedrock, Mud, or Clay/<br>Exposed Rocky Shores                                                    |
| 2A/5                                                 | Exposed Wave-cut Platform in Bedrock, Mud, or<br>Clay/Mixed Sand and Gravel Beaches                                            |
| 2A/5/7                                               | Exposed Wave-cut Platform in Bedrock, Mud, or<br>Clay/Mixed Sand and Gravel Beaches/Exposed Tidal<br>Flats                     |
| 2A/6A                                                | Exposed Wave-cut Platform in Bedrock, Mud, or<br>Clay/Gravel Beaches                                                           |
| 2A/7                                                 | Exposed Wave-cut Platform in Bedrock, Mud, or Clay/<br>Exposed Tidal Flats                                                     |
| 2A/8A                                                | Exposed Wave-cut Platform in Bedrock, Mud, or Clay/<br>Sheltered Rocky Shores and Sheltered Scarps in Bedrock,<br>Mud, or Clay |
| 2A/9A                                                | Exposed Wave-Cut Platform in Bedrock, Mud, or Clay/<br>Sheltered Tidal Flats                                                   |
| 3A                                                   | Fine- to Medium-grained Sand Beaches                                                                                           |
| 3A/7                                                 | Fine- to Medium-grained Sand Beaches/Exposed Tidal<br>Flats                                                                    |
| 4                                                    | Coarse-grained Sand Beaches                                                                                                    |
| 4/7                                                  | Coarse-grained Sand Beaches/Exposed Tidal Flats                                                                                |
| 4/9A                                                 | Coarse-grained Sand Beaches/Sheltered Tidal Flats                                                                              |
| 5                                                    | Mixed Sand and Gravel Beaches                                                                                                  |
| 5/2A                                                 | Mixed Sand and Gravel Beaches/Exposed Wave-cut<br>Platform in Bedrock, Mud, or Clay                                            |
| 5/7                                                  | Mixed Sand and Gravel Beaches/Exposed Tidal Flats                                                                              |
| 5/9A                                                 | Mixed Sand and Gravel Beaches/Sheltered Tidal Flats                                                                            |
| 5/10A                                                | Mixed Sand and Gravel Beaches/Salt-Marsh                                                                                       |
| 6A                                                   | Gravel Beaches                                                                                                                 |

| 5.1.2.4.1.1.<br>ENUMERATED<br>DOMAIN VALUE: | 5.1.2.4.1.2.<br>ENUMERATED DOMAIN<br>VALUE DEFINITION:                                                                   |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| 6A/2A                                       | Gravel Beaches/Exposed Wave-cut Platform in Bedrock, Mud, or Clay                                                        |
| 6A/5                                        | Gravel Beaches/Mixed Sand and Gravel Beaches                                                                             |
| 6A/7                                        | Gravel Beaches/Exposed Tidal Flats                                                                                       |
| 6A/9A                                       | Gravel Beaches/Sheltered Tidal Flats                                                                                     |
| 7                                           | Exposed Tidal Flats                                                                                                      |
| 7/5                                         | Exposed Tidal Flats/Mixed Sand and Gravel Beaches                                                                        |
| 8A                                          | Sheltered Rocky Shores and Sheltered Scarps in Bedrock, Mud, or Clay                                                     |
| 8A/5/9A                                     | Sheltered Rocky Shores and Sheltered Scarps in Bedrock, Mud, or Clay/Mixed Sand and Gravel Beaches/Sheltered Tidal Flats |
| 8A/6A                                       | Sheltered Rocky Shores and Sheltered Scarps in Bedrock, Mud, or Clay/Gravel Beaches                                      |
| 8A/9A                                       | Sheltered Rocky Shores and Sheltered Scarps in Bedrock, Mud, or Clay/Sheltered Tidal Flats                               |
| 8A/10A                                      | Sheltered Rocky Shores and Sheltered Scarps in Bedrock, Mud, or Clay/Salt-Marsh                                          |
| 9A                                          | Sheltered Tidal Flats                                                                                                    |
| 9A/5                                        | Sheltered Tidal Flats/Mixed Sand and Gravel Beaches                                                                      |
| 9A/6A                                       | Sheltered Tidal Flats/Gravel Beaches                                                                                     |
| 9A/7                                        | Sheltered Tidal Flats/Exposed Tidal Flats                                                                                |
| 9A/8A                                       | Sheltered Tidal Flats/Sheltered Rocky Shores and Sheltered Scarps in Bedrock, Mud, or Clay                               |
| 9A/10A                                      | Sheltered Tidal Flats/Salt-Marsh                                                                                         |
| 10A                                         | Salt-Marsh                                                                                                               |
| 10A/2A                                      | Salt-Marsh/Exposed Wave-cut Platform in Bedrock, Mud, or Clay                                                            |
| 10A/5                                       | Salt-Marsh/Mixed Sand and Gravel Beaches                                                                                 |
| 10A/5/7                                     | Salt-Marsh Mixed Sand and Gravel Beaches/ Exposed Tidal Flats                                                            |
| 10A/5/9A                                    | Salt-Marsh/Mixed Sand and Gravel Beaches/Sheltered Tidal Flats                                                           |
| 10A/6A                                      | Salt-Marsh/Gravel Beaches                                                                                                |
| 10A/7                                       | Salt-Marsh/Exposed Tidal Flats                                                                                           |
| 10A/8A                                      | Salt-Marsh/ Sheltered Rocky Shores and Sheltered Scarps in Bedrock, Mud, or Clay                                         |
| 10A/8A/9A                                   | Salt-Marsh/ Sheltered Rocky Shores and Sheltered Scarps in Bedrock, Mud, or Clay/Sheltered Tidal Flats                   |

| 5.1.2.4.1.1.<br>ENUMERATED<br>DOMAIN VALUE:                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 5.1.2.4.1.2.<br>ENUMERATED DOMAIN<br>VALUE DEFINITION: |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| 10A/9A<br>U                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Salt-Marsh/Sheltered Tidal Flats<br>Unranked           |
| <p data-bbox="665 399 1380 504">5.1.2.4.1.3. ENUMERATED DOMAIN VALUE<br/>DEFINITION SOURCE:<br/>Research Planning, Inc.</p> <p data-bbox="389 546 1169 651">5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:<br/>ordered</p> <p data-bbox="389 672 844 777">5.1.2.1. ATTRIBUTE LABEL:<br/>LINE</p> <p data-bbox="389 777 941 882">5.1.2.2. ATTRIBUTE DEFINITION:<br/>Type of geographic feature</p> <p data-bbox="389 882 1071 976">5.1.2.3. ATTRIBUTE DEFINITION SOURCE:<br/>Research Planning, Inc.</p>             |                                                        |
| 5.1.2.4.1.1. ENUMERATED<br>DOMAIN VALUE:                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 5.1.2.4.1.2. ENUMERATED DOMAIN<br>VALUE DEFINITION:    |
| F<br>H<br>M<br>S                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Flat<br>Hydro<br>Marsh<br>Shoreline                    |
| <p data-bbox="665 1281 1380 1428">5.1.2.4.1.3. ENUMERATED DOMAIN VALUE<br/>DEFINITION SOURCE:<br/>Research Planning, Inc.</p> <p data-bbox="389 1428 1169 1533">5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:<br/>nominal</p> <p data-bbox="389 1554 844 1659">5.1.2.1. ATTRIBUTE LABEL:<br/>SOURCE_ID</p> <p data-bbox="389 1659 941 1764">5.1.2.2. ATTRIBUTE DEFINITION:<br/>Data source for the ESI</p> <p data-bbox="389 1764 1071 1837">5.1.2.3. ATTRIBUTE DEFINITION SOURCE:<br/>Research Planning, Inc.</p> |                                                        |

**5.1.2.4.1.1. ENUMERATED  
DOMAIN VALUE:**

**5.1.2.4.1.2. ENUMERATED DOMAIN  
VALUE DEFINITION:**

---

|   |                                    |
|---|------------------------------------|
| 1 | ADNR shoreline with ESI attributes |
| 2 | Cookinlet ESI Summary Maps         |
| 6 | Digitized from scanned topos       |

---

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**

nominal

**5.1.2.1. ATTRIBUTE LABEL:**

ENVIR

**5.1.2.2. ATTRIBUTE DEFINITION:**

Regional environment

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED  
DOMAIN VALUE:**

**5.1.2.4.1.2. ENUMERATED DOMAIN  
VALUE DEFINITION:**

---

|   |           |
|---|-----------|
| E | Estuarine |
|---|-----------|

---

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

**5.1.2.1. ATTRIBUTE LABEL:**

WATER\_CODE

**5.1.2.2. ATTRIBUTE DEFINITION:**

Specifies a polygon as either water or land

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED  
DOMAIN VALUE:**

**5.1.2.4.1.2. ENUMERATED DOMAIN  
VALUE DEFINITION:**

---

L  
W

---

Land  
Water

---

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**

nominal

**5.1. DETAILED DESCRIPTION: FISH**

The data layer FISH contains polygons and arcs for fish species.

The polygons represent Pacific herring spawning areas. Pacific herring spawn in mass during May to mid-June, congregating near shallow beaches and outcrops. The northern Shelikof Strait and the coast of Kodiak Island provide important rearing, feeding, and over-wintering habitat.

The arcs represent anadromous fish bearing streams within the area.

**5.1.1. ENTITY TYPES:**

| <b>5.1.1.1. ENTITY TYPE LABEL:</b> | <b>5.1.1.2. ENTITY TYPE DEFINITION:</b> |
|------------------------------------|-----------------------------------------|
| <u>Complete Chains</u>             | ID integer                              |
| <u>GT-Polygons</u>                 | ID integer                              |

**5.1.2. ATTRIBUTES:****5.1.2.1. ATTRIBUTE LABEL:**

ID

**5.1.2.2. ATTRIBUTE DEFINITION:**

A unique identifier that links to the POLY\_LUT lookup table for polygon features or ARC\_LUT lookup table for arc features. ID is a concatenation of atlas number (57), element number (2), and record number. ID values of zero are holes in polygons or arcs that do not contain information

The following FISH species are found in the atlas:

| <b>SPECIES ID</b> | <b>NAME</b>     |
|-------------------|-----------------|
| 66                | Pacific herring |
| 1022              | Anadromous fish |

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**

nominal

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**5.1. DETAILED DESCRIPTION: HYDRO**

The data layer HYDRO contains polygonal water and land features as well as linear features for rivers and streams.

**5.1.1. ENTITY TYPES:**

| <b>5.1.1.1. ENTITY TYPE LABEL:</b> | <b>5.1.1.2. ENTITY TYPE DEFINITION:</b> |
|------------------------------------|-----------------------------------------|
| <u>GT-Polygons</u>                 | WATER_CODE    character                 |
| <u>Complete Chains</u>             | LINE            character               |
|                                    | SOURCE_ID    integer                    |

The LINE, SOURCE\_ID, and WATER\_CODE attributes are the same as in the ESI data layer. 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 socio-economic features; and hydro or water features.

**5.1.2. ATTRIBUTES:****5.1.2.1. ATTRIBUTE LABEL:**

WATER\_CODE

**5.1.2.2. ATTRIBUTE DEFINITION:**

Specifies a polygon as either water or land

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

| <b>5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:</b> | <b>5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:</b> |
|----------------------------------------------|---------------------------------------------------------|
|----------------------------------------------|---------------------------------------------------------|

|   |       |
|---|-------|
| L | Land  |
| W | Water |

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**

nominal

**5.1.2.1. ATTRIBUTE LABEL:**

LINE

**5.1.2.2. ATTRIBUTE DEFINITION:**

Type of geographic feature

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED  
DOMAIN VALUE:**

**5.1.2.4.1.2. ENUMERATED DOMAIN  
VALUE DEFINITION:**

---

|   |                                |
|---|--------------------------------|
| H | Hydrography or stream features |
| I | Index                          |
| S | Shoreline                      |

---

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**

nominal

**5.1.2.1. ATTRIBUTE LABEL:**

SOURCE\_ID

**5.1.2.2. ATTRIBUTE DEFINITION:**

Data source for the ESI

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED  
DOMAIN VALUE:**

**5.1.2.4.1.2. ENUMERATED DOMAIN  
VALUE DEFINITION:**

---

|   |                                 |
|---|---------------------------------|
| 1 | ADNR shoreline                  |
| 2 | Cookinlet Summary Maps          |
| 3 | Kodiak Island Borough shoreline |
| 4 | ADFG anadromous streams         |
| 5 | NPS hydrography                 |
| 6 | Atlas index coverage            |

---

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**

nominal

**5.1. DETAILED DESCRIPTION: INDEX**

The data layer INDEX contains the map or polygon boundaries for the map area.

**5.1.1. ENTITY TYPES:**

| <b>5.1.1.1. ENTITY TYPE LABEL:</b> | <b>5.1.1.2. ENTITY TYPE DEFINITION:</b> |                |
|------------------------------------|-----------------------------------------|----------------|
| <u>GT-Polygons</u>                 | TILE-NAME                               | character      |
|                                    | TOPO-NAME                               | character      |
|                                    | SCALE                                   | integer        |
|                                    | MAPANGLE                                | floating point |
|                                    | PAGESIZE                                | character      |

**5.1.2. ATTRIBUTES:****5.1.2.1. ATTRIBUTE LABEL:**

TILE-NAME

**5.1.2.2. ATTRIBUTE DEFINITION:**

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

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:**

1

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**

nominal

**5.1.2.1. ATTRIBUTE LABEL:**

TOPO-NAME

**5.1.2.2. ATTRIBUTE DEFINITION:**

The TOPO-NAME contains the descriptive name of the area being mapped.

**5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:**

Kodiak Island and Shelikof Strait

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE**

**DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**

nominal

**5.1.2.1. ATTRIBUTE LABEL:**

SCALE

**5.1.2.2. ATTRIBUTE DEFINITION:**

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

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:**

450,000

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE**

**DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**

nominal

**5.1.2.1. ATTRIBUTE LABEL:**

MAPANGLE

**5.1.2.2. ATTRIBUTE DEFINITION:**

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

**5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:**

0.000

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE**

**DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**

nominal

**5.1.2.1. ATTRIBUTE LABEL:**

PAGESIZE

**5.1.2.2. ATTRIBUTE DEFINITION:**

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

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:**

---

31.5,38

---

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**

nominal

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**5.1. DETAILED DESCRIPTION: INVERT**

The data layer INVERT contains polygons representing Razor clam beds.

**5.1.1. ENTITY TYPES:**

| <b>5.1.1.1. ENTITY TYPE LABEL:</b> | <b>5.1.1.2. ENTITY TYPE DEFINITION:</b> |
|------------------------------------|-----------------------------------------|
| <u>GT-Polygons</u>                 | ID integer                              |

**5.1.2. ATTRIBUTES:****5.1.2.1. ATTRIBUTE LABEL:**

ID

**5.1.2.2. ATTRIBUTE DEFINITION:**

A unique identifier that links to the POLY\_LUT lookup table. ID is a concatenation of atlas number (57), element number (7), and record number. ID values of zero are holes in polygons and do not contain information.

The following INVERT species are found in the atlas:

| <b>SPECIES ID</b> | <b>NAME</b>        |
|-------------------|--------------------|
| 28                | Pacific razor clam |

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**

nominal

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**5.1. DETAILED DESCRIPTION: MGT**

The data layer MGT contains the managed area polygons.

**5.1.1. ENTITY TYPES:**

| <b>5.1.1.1. ENTITY TYPE LABEL:</b> | <b>5.1.1.2. ENTITY TYPE DEFINITION:</b> |                   |
|------------------------------------|-----------------------------------------|-------------------|
| <u>GT-Polygons</u>                 | TYPE ID                                 | character integer |

**5.1.2. ATTRIBUTES:****5.1.2.1. ATTRIBUTE LABEL:**

TYPE

**5.1.2.2. ATTRIBUTE DEFINITION:**

Identifies polygons with a socio-economic, or human-use, feature. This attribute allows direct access to the type of feature instead of linking to the more detailed SOC\_DAT table. Where there are overlapping areas, a precedence was used (where national wildlife refuges took precedence over parks) to identify the type of feature. However, all data are listed in SOC\_DAT

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

| <b>5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:</b> | <b>5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:</b> |
|----------------------------------------------|---------------------------------------------------------|
|----------------------------------------------|---------------------------------------------------------|

|     |                     |
|-----|---------------------|
| CO  | Community           |
| MA  | Management Area     |
| NP  | National Park       |
| P   | State/Regional Park |
| W R | Wildlife Refuge     |

| <b>5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:</b> |
|----------------------------------------------------------------|
|----------------------------------------------------------------|

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**

nominal

**5.1.2.1. ATTRIBUTE LABEL:**

ID

**5.1.2.2. ATTRIBUTE DEFINITION:**

A unique identifier that links to the SOC\_LUT table and from there to the SOC\_DAT data table. ID is a concatenation of atlas number (57), element number (11), and record number

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**

nominal

**5.1. DETAILED DESCRIPTION: MIGRATE**

The data layer MIGRATE contains arcs representing migration routes for gray whales.

**5.1.1. ENTITY TYPES:****5.1.1.1. ENTITY TYPE LABEL:**


---

Complete Chains

---

**5.1.1.2. ENTITY TYPE DEFINITION:**

ID

integer

**5.1.2. ATTRIBUTES:****5.1.2.1. ATTRIBUTE LABEL:**

ID

**5.1.2.2. ATTRIBUTE DEFINITION:**

A unique identifier that links to the ARC\_LUT lookup table. ID is a concatenation of atlas number (57), element number (4), and record number

The following M\_MAMMAL species are found in the MIGRATE data layer:

**SPECIES ID****NAME**

26

Gray whale

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**

nominal

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**5.1. DETAILED DESCRIPTION: M\_MAMMAL**

The data layer M\_MAMMAL contains polygons representing concentration areas for harbor seals and sea otters.

**5.1.1. ENTITY TYPES:**

| <b>5.1.1.1. ENTITY TYPE LABEL:</b> | <b>5.1.1.2. ENTITY TYPE DEFINITION:</b> |
|------------------------------------|-----------------------------------------|
| <u>GT-Polygons</u>                 | ID integer                              |

**5.1.2. ATTRIBUTES:****5.1.2.1. ATTRIBUTE LABEL:**

ID

**5.1.2.2. ATTRIBUTE DEFINITION:**

A unique identifier that links to the POLY\_LUT table. ID is a concatenation of atlas number (57), element number (4), and record number. ID values of zero are holes in polygons and do not contain information

The following M\_MAMMAL species are found in the Georgia ESI atlas:

| <b>SPECIES ID</b> | <b>NAME</b> |
|-------------------|-------------|
| 2                 | Harbor seal |
| 7                 | Sea otter   |

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**

nominal

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**5.1. DETAILED DESCRIPTION: M\_MAMPT**

The data layer M\_MAMPT contains points representing concentration areas for sea lions.

**5.1.1. ENTITY TYPES:**

| <b>5.1.1.1. ENTITY TYPE LABEL:</b> | <b>5.1.1.2. ENTITY TYPE DEFINITION:</b> |
|------------------------------------|-----------------------------------------|
| <u>Entity Points</u>               | ID integer                              |

**5.1.2. ATTRIBUTES:****5.1.2.1. ATTRIBUTE LABEL:**

ID

**5.1.2.2. ATTRIBUTE DEFINITION:**

A unique identifier that links to the PNTS\_LUT lookup table. ID is a concatenation of atlas number (57), element number (4), and record number

The following M\_MAMMAL species are found in the M\_MAMPT data layer:

| <b>SPECIES ID</b> | <b>NAME</b>                 |
|-------------------|-----------------------------|
| 1                 | Northern (stellar) sea lion |

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**

nominal

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**5.1. DETAILED DESCRIPTION: NESTS**

The data layer NESTS contains entity points representing bald eagle nesting sites and seabird colony sites.

**5.1.1. ENTITY TYPES:**

| <b>5.1.1.1. ENTITY TYPE LABEL:</b> | <b>5.1.1.2. ENTITY TYPE DEFINITION:</b> |
|------------------------------------|-----------------------------------------|
| <u>Entity Points</u>               | ID integer                              |

**5.1.2. ATTRIBUTES:****5.1.2.1. ATTRIBUTE LABEL:**

ID

**5.1.2.2. ATTRIBUTE DEFINITION:**

A unique identifier that links to the PNTS\_LUT lookup table. ID is a concatenation of atlas number (57), element number (5), and record number.

The following species are found in the NESTS coverage:

| <b>SPECIES ID</b> | <b>NAME</b>              |
|-------------------|--------------------------|
| 8                 | Double-crested cormorant |
| 10                | Pelagic cormorant        |
| 36                | Glaucous-winged gull     |
| 41                | Mew gull                 |
| 46                | Common murre             |
| 47                | Pigeon guillemot         |
| 48                | Marbled murrelet         |
| 49                | Cassin's auklet          |
| 50                | Rhinoceros auklet        |
| 51                | Tufted puffin            |
| 68                | Black oystercatcher      |
| 76                | Bald eagle               |
| 79                | Cormorant                |
| 80                | Arctic tern              |
| 81                | Horned puffin            |
| 84                | Parakeet auklet          |
| 96                | Leach's storm-petrel     |
| 99                | Red-faced cormorant      |
| 100               | Black-legged kittiwake   |
| 101               | Aleutian tern            |
| 102               | Fork-tailed storm-petrel |
| 103               | Common eider             |

| SPECIES ID | NAME               |
|------------|--------------------|
| 104        | Murre              |
| 105        | Thick-billed murre |
| 106        | Ancient murrelet   |
| 111        | Least auklet       |
| 129        | Northern fulmar    |
| 1008       | Terns              |

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**

nominal

**5.1. DETAILED DESCRIPTION: PNTS\_LUT**

Lookup table to link NESTS and M\_MAMPT to the BIORES data table.

**5.1.1. ENTITY TYPES:**

| <b>5.1.1.1. ENTITY TYPE LABEL:</b> | <b>5.1.1.2. ENTITY TYPE DEFINITION:</b> |         |
|------------------------------------|-----------------------------------------|---------|
| <u>Attributes</u>                  | RARNUM                                  | integer |
|                                    | ID                                      | integer |

**5.1.2. ATTRIBUTES:****5.1.2.1. ATTRIBUTE LABEL:**

RARNUM

**5.1.2.2. ATTRIBUTE DEFINITION:**

An identifier that links to the BIORES lookup table. The values range from 1-406 and there can be multiple values of RARNUM for each unique ID value

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal**5.1.2.1. ATTRIBUTE LABEL:**

ID

**5.1.2.2. ATTRIBUTE DEFINITION:**

An identifier that links to the NESTS and M\_MAMPT coverages

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

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**5.1. DETAILED DESCRIPTION: POLY\_LUT**

Lookup table to link biology polygon data layers to the BIORES data table.

**5.1.1. ENTITY TYPES:**

| <b>5.1.1.1. ENTITY TYPE LABEL:</b> | <b>5.1.1.2. ENTITY TYPE DEFINITION:</b> |         |
|------------------------------------|-----------------------------------------|---------|
| <u>Attributes</u>                  | RARNUM                                  | integer |
|                                    | ID                                      | integer |

**5.1.2. ATTRIBUTES:****5.1.2.1. ATTRIBUTE LABEL:**

RARNUM

**5.1.2.2. ATTRIBUTE DEFINITION:**

An identifier that links to the BIORES lookup table. The values range from 376-410 and there can be multiple values of RARNUM for each unique ID value

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal**5.1.2.1. ATTRIBUTE LABEL:**

ID

**5.1.2.2. ATTRIBUTE DEFINITION:**

An identifier that links to the BIRDS, FISH, INVERT, and M\_MAMMAL biology data layers

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

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**5.1. DETAILED DESCRIPTION: SEASONAL**

The data table SEASONAL specifies the month when each species is present.

**5.1.1. ENTITY TYPES:****5.1.1.1. ENTITY TYPE LABEL:**

Attributes

**5.1.1.2. ENTITY TYPE DEFINITION:**

|            |           |
|------------|-----------|
| ELEMENT    | character |
| SPECIES_ID | integer   |
| SEASON_ID  | integer   |
| JAN        | character |
| FEB        | character |
| MAR        | character |
| APR        | character |
| MAY        | character |
| JUN        | character |
| JUL        | character |
| AUG        | character |
| SEP        | character |
| OCT        | character |
| NOV        | character |
| DEC        | character |
| EL_SPE_SEA | character |

**5.1.2. ATTRIBUTES:****5.1.2.1. ATTRIBUTE LABEL:**

ELEMENT

**5.1.2.2. ATTRIBUTE DEFINITION:**

Major categories of biological data

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:**

BIRD  
FISH  
INVERT  
M\_MAMMAL

**5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:**

Birds  
Fish  
Invertebrates  
Marine Mammals

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

**5.1.2.1. ATTRIBUTE LABEL:**

SPECIES\_ID

**5.1.2.2. ATTRIBUTE DEFINITION:**

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

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED  
DOMAIN VALUE:**

**5.1.2.4.1.2. ENUMERATED DOMAIN  
VALUE DEFINITION:**

1-N

Unique number

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

**5.1.2.1. ATTRIBUTE LABEL:**

SEASON\_ID

**5.1.2.2. ATTRIBUTE DEFINITION:**

Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location. There can be one seasonality record per species, or the same species can have different monthly presence or breeding activities at different sites. When this occurs, a new record with a different SEASON\_ID is referenced

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.



**5.1.2.4.1.1. ENUMERATED  
DOMAIN VALUE:**

**5.1.2.4.1.2. ENUMERATED DOMAIN  
VALUE DEFINITION:**

1-N

Unique number

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

**5.1.2.1. ATTRIBUTE LABEL:**

JAN

**5.1.2.2. ATTRIBUTE DEFINITION:**

Present in January

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED  
DOMAIN VALUE:**

**5.1.2.4.1.2. ENUMERATED DOMAIN  
VALUE DEFINITION:**

X

Present

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

**5.1.2.1. ATTRIBUTE LABEL:**

FEB

**5.1.2.2. ATTRIBUTE DEFINITION:**

Present in February

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

| 5.1.2.4.1.1. ENUMERATED<br>DOMAIN VALUE:                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 5.1.2.4.1.2. ENUMERATED DOMAIN<br>VALUE DEFINITION: |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Present                                             |
| <div data-bbox="665 430 1380 567"> 5.1.2.4.1.3. ENUMERATED DOMAIN VALUE<br/>DEFINITION SOURCE:<br/>Research Planning, Inc. </div> <div data-bbox="397 577 1291 619">5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:nominal</div> <div data-bbox="397 651 836 745">5.1.2.1. ATTRIBUTE LABEL:<br/>MAR</div> <div data-bbox="397 745 933 840">5.1.2.2. ATTRIBUTE DEFINITION:<br/>Present in March</div> <div data-bbox="397 840 1071 934">5.1.2.3. ATTRIBUTE DEFINITION SOURCE:<br/>Research Planning, Inc. </div> |                                                     |
| 5.1.2.4.1.1. ENUMERATED<br>DOMAIN VALUE:                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 5.1.2.4.1.2. ENUMERATED DOMAIN<br>VALUE DEFINITION: |
| X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Present                                             |
| <div data-bbox="665 1176 1380 1312"> 5.1.2.4.1.3. ENUMERATED DOMAIN VALUE<br/>DEFINITION SOURCE:<br/>Research Planning, Inc. </div> <div data-bbox="397 1323 1291 1365">5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:nominal</div> <div data-bbox="397 1396 836 1491">5.1.2.1. ATTRIBUTE LABEL:<br/>APR</div> <div data-bbox="397 1491 933 1585">5.1.2.2. ATTRIBUTE DEFINITION:<br/>Present in April </div>                                                                                                   |                                                     |

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED  
DOMAIN VALUE:**

**5.1.2.4.1.2. ENUMERATED DOMAIN  
VALUE DEFINITION:**

X

Present

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

**5.1.2.1. ATTRIBUTE LABEL:**

MAY

**5.1.2.2. ATTRIBUTE DEFINITION:**

Present in May

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED  
DOMAIN VALUE:**

**5.1.2.4.1.2. ENUMERATED DOMAIN  
VALUE DEFINITION:**

X

Present

**DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

**5.1.2.1. ATTRIBUTE LABEL:**

JUN

**5.1.2.2. ATTRIBUTE DEFINITION:**

Present in June

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED  
DOMAIN VALUE:****5.1.2.4.1.2. ENUMERATED DOMAIN  
VALUE DEFINITION:**

X

Present

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal**5.1.2.1. ATTRIBUTE LABEL:**

JUL

**5.1.2.2. ATTRIBUTE DEFINITION:**

Present in July

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED  
DOMAIN VALUE:****5.1.2.4.1.2. ENUMERATED DOMAIN  
VALUE DEFINITION:**

X

Present

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

**5.1.2.1. ATTRIBUTE LABEL:**

AUG

**5.1.2.2. ATTRIBUTE DEFINITION:**

Present in August

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED  
DOMAIN VALUE:**

**5.1.2.4.1.2. ENUMERATED DOMAIN  
VALUE DEFINITION:**

X

Present

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

**5.1.2.1. ATTRIBUTE LABEL:**

SEP

**5.1.2.2. ATTRIBUTE DEFINITION:**

Present in September

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED  
DOMAIN VALUE:**

**5.1.2.4.1.2. ENUMERATED DOMAIN  
VALUE DEFINITION:**

X

Present

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

**5.1.2.1. ATTRIBUTE LABEL:**

OCT

**5.1.2.2. ATTRIBUTE DEFINITION:**

Present in October

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED  
DOMAIN VALUE:**

**5.1.2.4.1.2. ENUMERATED DOMAIN  
VALUE DEFINITION:**

X

Present

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

**5.1.2.1. ATTRIBUTE LABEL:**

NOV

**5.1.2.2. ATTRIBUTE DEFINITION:**

Present in November

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED  
DOMAIN VALUE:**

**5.1.2.4.1.2. ENUMERATED DOMAIN  
VALUE DEFINITION:**

X

Present

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

**5.1.2.1. ATTRIBUTE LABEL:**

DEC

**5.1.2.2. ATTRIBUTE DEFINITION:**

Present in December

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED  
DOMAIN VALUE:**

**5.1.2.4.1.2. ENUMERATED DOMAIN  
VALUE DEFINITION:**

X

Present

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

**5.1.2.1. ATTRIBUTE LABEL:**

EL\_SPE\_SEA

**5.1.2.2. ATTRIBUTE DEFINITION:**

Concatenation of the first character of the ELEMENT,  
SPECIES\_ID, and SEASON

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED  
DOMAIN VALUE:**

**5.1.2.4.1.2. ENUMERATED DOMAIN  
VALUE DEFINITION:**

1-N

Unique number

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

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**5.1. DETAILED DESCRIPTION: SOC\_DAT**

The data table SOC\_DAT contains the human-use attributes and links to the data layers MGT and SOCECON using the SOC\_LUT lookup table.

**5.1.1. ENTITY TYPES:****5.1.1.1. ENTITY TYPE LABEL:**

Attributes

**5.1.1.2. ENTITY TYPE DEFINITION:**

|          |           |
|----------|-----------|
| HUNUM    | integer   |
| TYPE     | character |
| NAME     | character |
| CONTACT  | character |
| PHONE    | character |
| G_SOURCE | integer   |
| A_SOURCE | integer   |

**5.1.2. ATTRIBUTES:****5.1.2.1. ATTRIBUTE LABEL:**

HUNUM

**5.1.2.2. ATTRIBUTE DEFINITION:**

A unique identifier that links to the SOC\_LUT lookup table

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:**

1-N

**5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:**

Unique link

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:nominal****5.1.2.1. ATTRIBUTE LABEL:**

TYPE

**5.1.2.2. ATTRIBUTE DEFINITION:**

Identifies the feature type

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED  
DOMAIN VALUE:**

**5.1.2.4.1.2. ENUMERATED DOMAIN  
VALUE DEFINITION:**

|                 |                  |
|-----------------|------------------|
| AIRPORT         | Airport          |
| AQUACULTURE     | Aquaculture Site |
| COMMUNITY       | Community        |
| MARINA          | Marina           |
| NATIONAL PARK   | National Park    |
| PARK            | Park             |
| WILDLIFE REFUGE | Wildlife Refuge  |

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

**5.1.2.1. ATTRIBUTE LABEL:**

NAME

**5.1.2.2. ATTRIBUTE DEFINITION:**

The feature name

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:**

---

Afognak Island State Park  
 Akhiok  
 Akhiok Landing Strip  
 Alaska Maritime National Wildlife Refuge  
 Alaska Peninsula National Wildlife Refuge  
 Becharof National Wildlife Refuge  
 Buskin River State Recreation Area  
 Chiniak  
 Karluk  
 Karluk Landing Strip  
 Katmai National Park

**ENUMERATED DOMAIN VALUE:**

---

Kodiak  
Kodiak Airport  
Kodiak City Float  
Kodiak National Wildlife Refuge  
Kodiak St. Herman's Boat Harbor  
Kodiak St. Paul Boat Harbor  
Kitoi Bay Hatchery  
Larsen Bay  
Larsen Bay Landing Strip  
Marmot Island Special Use Area  
McNeil River State Game Sanctuary  
Old Harbor  
Old Harbor Dock  
Old Harbor Float  
Old Harbor Landing Strip  
Ouzinkie  
Ouzinkie Landing Strip  
Pasaqshak State Recreation Site  
Port Lion Small Boat Harbor  
Port Lions  
Pillar Bay Hatchery  
Shuyak State Park  
Tugidak Island Critical Habitat Area  
Woody Island State Recreation Site

---

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

**5.1.2.1. ATTRIBUTE LABEL:**

CONTACT

**5.1.2.2. ATTRIBUTE DEFINITION:**

Contact person

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

**5.1.2.1. ATTRIBUTE LABEL:**

PHONE

**5.1.2.2. ATTRIBUTE DEFINITION:**

Telephone number

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

**5.1.2.1. ATTRIBUTE LABEL:**

G\_SOURCE

**5.1.2.2. ATTRIBUTE DEFINITION:**

Geographic source identifier that links to the SOURCES data table

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED  
DOMAIN VALUE:**

**5.1.2.4.1.2. ENUMERATED DOMAIN  
VALUE DEFINITION:**

1-N

Unique link

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

**5.1.2.1. ATTRIBUTE LABEL:**

A\_SOURCE

**5.1.2.2. ATTRIBUTE DEFINITION:**

Attribute source identifier that links to the SOURCES data table

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED  
DOMAIN VALUE:**

**5.1.2.4.1.2. ENUMERATED DOMAIN  
VALUE DEFINITION:**

1-N

Unique link

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

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**5.1. DETAILED DESCRIPTION: SOC\_LUT**

Lookup table to link SOC\_DAT to SOCECON and MGT data layers.

**5.1.1. ENTITY TYPES:**

| <b>5.1.1.1. ENTITY TYPE LABEL:</b> | <b>5.1.1.2. ENTITY TYPE DEFINITION:</b> |         |
|------------------------------------|-----------------------------------------|---------|
| <u>Attributes</u>                  | HUNUM                                   | integer |
|                                    | ID                                      | integer |

**5.1.2. ATTRIBUTES:****5.1.2.1. ATTRIBUTE LABEL:**

HUNUM

**5.1.2.2. ATTRIBUTE DEFINITION:**

A unique identifier that links to the SOC\_DAT data table

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal**5.1.2.1. ATTRIBUTE LABEL:**

ID

**5.1.2.2. ATTRIBUTE DEFINITION:**

A unique identifier that links to the SOCECON or MGT data layers. ID is a concatenation of the atlas number (53), element number (SOCECON = 10 and MGT = 11), and record number

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

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**5.1. DETAILED DESCRIPTION: SOCECON**

The data layer SOCECON contains the entity points and complete chains for the human-use data.

**5.1.1. ENTITY TYPES:**

| <b>5.1.1.1. ENTITY TYPE LABEL:</b> | <b>5.1.1.2. ENTITY TYPE DEFINITION:</b> |           |
|------------------------------------|-----------------------------------------|-----------|
| <u>Complete Chains</u>             | TYPE                                    | character |
| <u>Entity Points</u>               | TYPE                                    | character |
|                                    | ID                                      | integer   |

**5.1.2. ATTRIBUTES:****5.1.2.1. ATTRIBUTE LABEL:**

TYPE

**5.1.2.2. ATTRIBUTE DEFINITION:**

Identifies a line or point with a socio-economic, or human-use, feature. This attribute allows direct access to the type of feature instead of linking to the more detailed SOC\_DAT table

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

| <b>5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:</b> | <b>5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:</b> |
|----------------------------------------------|---------------------------------------------------------|
|----------------------------------------------|---------------------------------------------------------|

|    |                             |
|----|-----------------------------|
| A  | Airport (Point)             |
| AQ | Aquaculture (Point)         |
| CB | Municipal Boundary (Chain)  |
| CO | Community (Point)           |
| HS | Historical Site (Point)     |
| M  | Marina (Point)              |
| P  | State/Regional Park (Point) |
| R  | Road                        |
| SN | Set-Net Site (Chain)        |

|                                                                |
|----------------------------------------------------------------|
| <b>5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:</b> |
|----------------------------------------------------------------|

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

**5.1.2.1. ATTRIBUTE LABEL:**

ID

**5.1.2.2. ATTRIBUTE DEFINITION:**

A unique identifier that links to the SOC\_LUT table. ID is a concatenation of atlas number (57), element number (10), and record number

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:nominal**

**5.1. DETAILED DESCRIPTION: SOURCES**

The data table SOURCES contains the primary sources used to create the ESI atlas.

**5.1.1. ENTITY TYPES:****5.1.1.1. ENTITY TYPE LABEL:**Attributes**5.1.1.2. ENTITY TYPE DEFINITION:**

|             |           |
|-------------|-----------|
| SOURCE_ID   | integer   |
| ORIGINATOR  | character |
| DATE_PUB    | integer   |
| TITLE       | character |
| DATA_FORMAT | character |
| PUBLICATION | character |
| SCALE       | character |
| TIME_PERIOD | character |

**5.1.2. ATTRIBUTES:****5.1.2.1. ATTRIBUTE LABEL:**

SOURCE\_ID

**5.1.2.2. ATTRIBUTE DEFINITION:**

Source identifier that links to G\_SOURCE, S\_SOURCE (IN BIORES), and A\_SOURCE (IN SOC\_DAT)

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:**

1-N

**5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:**

Unique number

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:nominal**

**5.1.2.1. ATTRIBUTE LABEL:**

ORIGINATOR

**5.1.2.2. ATTRIBUTE DEFINITION:**

Author of the data set

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

**5.1.2.1. ATTRIBUTE LABEL:**

DATE\_PUB

**5.1.2.2. ATTRIBUTE DEFINITION:**

Date of data collection or publication

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED  
DOMAIN VALUE:**

**5.1.2.4.1.2. ENUMERATED DOMAIN  
VALUE DEFINITION:**

1-N

The first two integers are the month and the last four are the year. If month is unknown, only the four-digit year is entered

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

**5.1.2.1. ATTRIBUTE LABEL:**

TITLE

**5.1.2.2. ATTRIBUTE DEFINITION:**

Title of the source data set or document

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Originator who provided data, or RPI for personal interviews with resource experts

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

**5.1.2.1. ATTRIBUTE LABEL:**

DATA\_FORMAT

**5.1.2.2. ATTRIBUTE DEFINITION:**

The format of the source data set

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:**

---

Digital Arcs

Digital Points

Digital Points and Polygons

Digital Polygons

Expert Knowledge

Hardcopy Maps

---

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

**5.1.2.1. ATTRIBUTE LABEL:**

PUBLICATION

**5.1.2.2. ATTRIBUTE DEFINITION:**

Additional citation information

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

**5.1.2.1. ATTRIBUTE LABEL:**

SCALE

**5.1.2.2. ATTRIBUTE DEFINITION:**

Source scale denominator

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**ordinal

**5.1.2.1. ATTRIBUTE LABEL:**

TIME\_PERIOD

**5.1.2.2. ATTRIBUTE DEFINITION:**

Date(s) of data collection

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:nominal**

**5.1. DETAILED DESCRIPTION: SPECIES**

The data table SPECIES identifies all species used in the ESI atlas.

**5.1.1. ENTITY TYPES:****5.1.1.1. ENTITY TYPE LABEL:**

Attributes

**5.1.1.2. ENTITY TYPE DEFINITION:**

|            |           |
|------------|-----------|
| SPECIES_ID | integer   |
| NAME       | character |
| GEN_SPEC   | character |
| ELEMENT    | character |
| SUBELEMENT | character |
| NHP        | character |
| DATE_PUB   | integer   |
| EL_SPE     | character |

**5.1.2. ATTRIBUTES:****5.1.2.1. ATTRIBUTE LABEL:**

SPECIES\_ID

**5.1.2.2. ATTRIBUTE DEFINITION:**

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

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:**

1-N

**5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:**

Unique number

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:nominal**

**5.1.2.1. ATTRIBUTE LABEL:**

NAME

**5.1.2.2. ATTRIBUTE DEFINITION:**

Species common name

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:**

---

Aleutian tern  
Anadromous fish  
Ancient murrelet  
Arctic tern  
Bald eagle  
Black oystercatcher  
Black-legged kittiwake  
Cassin's auklet  
Common eider  
Common murre  
Cormorant  
Double-crested cormorant  
Ducks  
Fork-tailed storm-petrel  
Geese  
Glaucous-winged gull  
Gray whale  
Harbor seal  
Horned puffin  
Leach's storm-petrel  
Least auklet  
Marbled murrelet  
Mew gull  
Murre  
Northern (Steller) sea lion  
Northern fulmar  
Pacific herring  
Pacific razor clam  
Parakeet auklet  
Pelagic cormorant  
Pigeon guillemot  
Red-faced cormorant



**ENUMERATED DOMAIN VALUE:**

---

Rhinoceros auklet  
Sea otter  
Terns  
Thick-billed murre  
Tufted puffin  
Waterfowl

---

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

**5.1.2.1. ATTRIBUTE LABEL:**

GEN\_SPEC

**5.1.2.2. ATTRIBUTE DEFINITION:**

Species scientific name

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:**

---

Aethia psittacula  
Aethia pusilla  
Brachyramphus marmoratus  
Cepphus columba  
Cerorhinca monocerata  
Clupea pallasii  
Enhydra lutris  
Eschrichtius robustus  
Eumetopias jubatus  
Fratrercula cirrhata  
Fratrercula corniculata  
Fulmarus glacialis  
Haematopus bachmani  
Haliaeetus leucocephalus  
Larus canus  
Larus glaucescens  
Oceanodroma furcata

**ENUMERATED DOMAIN VALUE:**

---

Oceanodroma leucorhoa  
 Phalacrocorax auritus  
 Phalacrocorax pelagicus  
 Phalacrocorax sp.  
 Phalacrocorax urile  
 Phoca vitulina  
 Ptychoramphus aleuticus  
 Rissa tridactyla  
 Siliqua patula  
 Somateria mollissima  
 Sterna aleutica  
 Sterna paradisaea  
 Synthliboramphus antiquus  
 Uria aalge  
 Uria lomvia  
 Uria sp.

---

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

**5.1.2.1. ATTRIBUTE LABEL:**

ELEMENT

**5.1.2.2. ATTRIBUTE DEFINITION:**

Biological element

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:**

BIRD  
 FISH  
 INVERT  
 M\_MAMMAL

**5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:**

Birds  
 Fish  
 Invertebrates  
 Marine Mammals

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

**5.1.2.1. ATTRIBUTE LABEL:**

SUBELEMENT

**5.1.2.2. ATTRIBUTE DEFINITION:**

Species subgroup

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:**

---

alcid  
anadromous  
bivalve  
diving  
gull\_tern  
kelp\_sp  
pelagic  
pinniped  
raptor  
sea\_otter  
shorebird  
waterfowl  
whale

---

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

**5.1.2.1. ATTRIBUTE LABEL:**

NHP

**5.1.2.2. ATTRIBUTE DEFINITION:**

Natural Heritage Program global ranking

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

NHP

**5.1.2.4.1.1. ENUMERATED  
DOMAIN VALUE:**

G3  
G4  
G5  
G5?

**5.1.2.4.1.2. ENUMERATED DOMAIN  
VALUE DEFINITION:**

Vulnerable  
Apparently Secure  
Secure  
Secure (inexact rank)

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**  
NHP

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**ordered**5.1.2.1. ATTRIBUTE LABEL:**

DATE\_PUB

**5.1.2.2. ATTRIBUTE DEFINITION:**

Date of NHP listing

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED  
DOMAIN VALUE:**

0  
71996  
31997

**5.1.2.4.1.2. ENUMERATED DOMAIN  
VALUE DEFINITION:**

Not NHP listed in this project  
Date of NHP list

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal**5.1.2.1. ATTRIBUTE LABEL:**

EL\_SPE

**5.1.2.2. ATTRIBUTE DEFINITION:**

Concatenation of the first character of the ELEMENT and  
SPECIES\_ID

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED  
DOMAIN VALUE:**

**5.1.2.4.1.2. ENUMERATED DOMAIN  
VALUE DEFINITION:**

1-N

Unique number

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

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**5.1. DETAILED DESCRIPTION: STATUS**

The data table STATUS identifies the species that are listed as either threatened or endangered on state or federal lists.

**5.1.1. ENTITY TYPES:****5.1.1.1. ENTITY TYPE LABEL:**Attributes**5.1.1.2. ENTITY TYPE DEFINITION:**

|            |           |
|------------|-----------|
| ELEMENT    | character |
| SPECIES_ID | integer   |
| STATE      | character |
| S_F        | character |
| T_E        | character |
| DATE_PUB   | integer   |
| EL_SPE     | character |

**5.1.2. ATTRIBUTES:****5.1.2.1. ATTRIBUTE LABEL:**

ELEMENT

**5.1.2.2. ATTRIBUTE DEFINITION:**

Major categories of biological data

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:**

M\_MAMMAL

**5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:**

Marine Mammals

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:nominal**

**5.1.2.1. ATTRIBUTE LABEL:**

SPECIES\_ID

**5.1.2.2. ATTRIBUTE DEFINITION:**

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

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED  
DOMAIN VALUE:**

**5.1.2.4.1.2. ENUMERATED DOMAIN  
VALUE DEFINITION:**

1

Species ID = 1

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

**5.1.2.1. ATTRIBUTE LABEL:**

STATE

**5.1.2.2. ATTRIBUTE DEFINITION:**

Two-letter state abbreviation

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED  
DOMAIN VALUE:**

**5.1.2.4.1.2. ENUMERATED DOMAIN  
VALUE DEFINITION:**

AK

Alaska

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal



**5.1.2.1. ATTRIBUTE LABEL:**

S\_F

**5.1.2.2. ATTRIBUTE DEFINITION:**

State and Federal status

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED  
DOMAIN VALUE:**

**5.1.2.4.1.2. ENUMERATED DOMAIN  
VALUE DEFINITION:**

F

Federally listed

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

USFWS

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

**5.1.2.1. ATTRIBUTE LABEL:**

T\_E

**5.1.2.2. ATTRIBUTE DEFINITION:**

Threatened and endangered status

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED  
DOMAIN VALUE:**

**5.1.2.4.1.2. ENUMERATED DOMAIN  
VALUE DEFINITION:**

E

Federal endangered

**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE  
DEFINITION SOURCE:**

USFWS

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

**5.1.2.1. ATTRIBUTE LABEL:**

DATE\_PUB

**5.1.2.2. ATTRIBUTE DEFINITION:**

Date of threatened or endangered status

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:**

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031997

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**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

**5.1.2.1. ATTRIBUTE LABEL:**

EL\_SPE

**5.1.2.2. ATTRIBUTE DEFINITION:**

Concatenation of the first character of the ELEMENT and SPECIES\_ID and links to BIORES, SPECIES, and SEASONAL databases

**5.1.2.3. ATTRIBUTE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.4.1.1. ENUMERATED DOMAIN VALUE:**

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M\_00001

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**5.1.2.4.1.2. ENUMERATED DOMAIN VALUE DEFINITION:**

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Marine Mammal, Specis ID = 1

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**5.1.2.4.1.3. ENUMERATED DOMAIN VALUE DEFINITION SOURCE:**

Research Planning, Inc.

**5.1.2.5. ATTRIBUTE UNITS OF MEASUREMENT:**nominal

## **6.0. DISTRIBUTION INFORMATION**

### **6.1. DISTRIBUTOR**

#### **6.1.1. CONTACT PERSON PRIMARY**

##### **6.1.1.1. CONTACT PERSON:**

John Kaperick

##### **6.1.1.2. CONTACT ORGANIZATION:**

NOAA

#### **6.1.4. CONTACT ADDRESS**

##### **6.1.4.1. ADDRESS TYPE:**

Physical Address

##### **6.1.4.2. ADDRESS:**

7600 Sand Point Way N.E., Bin C15700

##### **6.1.4.3. CITY:**

Seattle

##### **6.1.4.4. STATE OR PROVINCE:**

W A

##### **6.1.4.5. POSTAL CODE:**

98115

#### **6.1.5. CONTACT VOICE TELEPHONE:**

(206) 526-6400

#### **6.1.7. CONTACT FACSIMILE TELEPHONE:**

(206) 526-6329

### **6.2. RESOURCE DESCRIPTION:**

ESI Summary Maps for Kodiak Island and Shelikof Strait, Alaska

### **6.3. DISTRIBUTION LIABILITY:**

Although this data has 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.

### **6.5. CUSTOM ORDER PROCESS**

Contact NOAA for distribution options (see 6.1.1.).

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## **7.0. METADATA REFERENCE INFORMATION**

### **7.1. METADATA DATE:**

19980120

### **7.2. METADATA REVIEW DATE:**

19980120

### **7.4. METADATA CONTACT**

#### **7.4.1. CONTACT PERSON PRIMARY**

##### **7.4.1.1. CONTACT PERSON:**

Jill Petersen

##### **7.4.1.2. CONTACT ORGANIZATION:**

NOAA HMRAD

#### **7.4.3. CONTACT POSITION:**

GIS Manager

#### **7.4.4. CONTACT ADDRESS**

##### **7.4.4.1. ADDRESS TYPE:**

Physical Address

##### **7.4.4.2. ADDRESS:**

7600 Sand Point Way, N.E., Bin C15700

##### **7.4.4.3. CITY:**

Seattle

##### **7.4.4.4. STATE OR PROVINCE:**

Washington

##### **7.4.4.5. POSTAL CODE:**

98115

#### **7.4.5. CONTACT VOICE TELEPHONE:**

(206) 526-6944

#### **7.4.7. CONTACT FACSIMILE TELEPHONE:**

(206) 526-6329

#### **7.4.8. CONTACT ELECTRONIC MAIL ADDRESS:**

jill\_petersen@hazmat.noaa.gov.us

### **7.5. METADATA STANDARD NAME:**

Content Standards for Digital Geospatial Metadata

### **7.6. METADATA STANDARD VERSION:**

19940608

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