1.0 Identification Information

1.1 Citation

1.1.1 Originator

Bureau of Safety and Environmental Enforcement (BSEE), U.S. Department of the Interior, Alaska Region: Anchorage, Alaska and National: Washington, D.C.

1.1.2 Publication Date

20231215

1.1.4 Title

BSEE Arctic Alaska (Chukchi and Beaufort Seas) Offshore Environmental Sensitivity Index (ESI): AOI (AOI Polygons)

1.1.5 Edition

First

1.1.6 Geospatial Data Presentation Form

vector digital data

1.1.7 Series Information

1.1.7.1 Series Name

None

1.1.7.2 Issue Identification

BSEE Arctic Alaska (Chukchi and Beaufort Seas)

1.1.8 Publication Information

1.1.8.1 Publication Place

Alaska Region: Anchorage, AK and National: Washington, D.C

1.1.8.2 Publisher

Bureau of Safety and Environmental Enforcement (BSEE), U.S. Department of the Interior

1.1.9 Other Citation Details

Prepared by Research Planning, Inc., Columbia, South Carolina for the Bureau of Safety and Environmental Enforcement (BSEE), U.S. Department of the Interior, Alaska Region: Anchorage, AK and National: Washington, D.C

1.1.10 Online Linkage

http://response.restoration.noaa.gov/esi

1.2 Description

1.2.1 Abstract

This data set contains vector polygons representing the boundaries of all digital data produced as part of the Environmental Sensitivity Index (ESI) for BSEE Arctic Alaska (Chukchi and Beaufort Seas). This data set comprises a portion of the ESI data for BSEE Arctic Alaska. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources.

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

1.3.3 Single\_Date/Time:

1.3.3.1 Calendar\_Date:

2023

1.3.1 Currentness Reference

The data were compiled during 2023. The currentness date for this data is 2023 and is documented in the Lineage section.

1.4 Status

1.4.1 Progress

Complete

1.4.2 Maintenance and Update Frequency

None Scheduled

1.5 Spatial Domain

1.5.1 Bounding Coordinates

1.5.1.1 West Bounding Coordinate

-168.97692

1.5.1.2 East Bounding Coordinate

-140.18723

1.5.1.3 North Bounding Coordinate

73.04760

1.5.1.4 South Bounding Coordinate

68.02701

1.6 Keywords

1.6.1 Theme

1.6.1.1 Theme Keyword Thesaurus

ISO 19115 Topic Category

1.6.1.2 Theme Keyword

biota

1.6.1.2 Theme Keyword

environment

1.6.1 Theme

1.6.1.1 Theme Keyword Thesaurus

None

1.6.1.2 Theme Keyword

Environmental Monitoring

1.6.1.2 Theme Keyword

ESI

1.6.1.2 Theme Keyword

Sensitivity maps

1.6.1.2 Theme Keyword

Coastal resources

1.6.1.2 Theme Keyword

Oil spill planning

1.6.1.2 Theme Keyword

Coastal Zone Management

1.6.1.2 Theme Keyword

Wildlife

1.6.2 Place

1.6.2.1 Place Keyword Thesaurus

None

1.6.2.2 Place Keyword

BSEE Arctic Alaska

1.7 Access Constraints

None

1.8 Use Constraints

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES.

Management boundaries are not to be considered legal boundaries. Edges may have been altered for cartographic processes. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc.

Besides the above warnings, there are no use constraints on these data.

Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

1.10 Browse Graphic

1.10.1 Browse Graphic File Name

datafig.jpg

1.10.2 Browse Graphic File Description

Depicts the relationships between spatial data layers and attribute data tables for the BSEE Arctic Alaska ESI data.

1.10.3 Browse Graphic File Type

JPEG

1.11 Data Set Credit

This project was funded by the Bureau of Safety and Environmental Enforcement (BSEE), U.S. Department of the Interior. We want to acknowledge the great support from Bryan Rogers and Steven Pearson (BSEE), Gabrielle McGrath (RPS), and from Bryan Rogers and Steven Pearson (BSEE), Gabrielle McGrath (RPS), and all who assisted greatly in all aspects of the project’s completion.

The biological data included on the maps were provided by numerous individuals and agencies. The individuals and agencies are listed in detail throughout the introductory pages of the ESI atlas. Staff at these organizations contributed a vast amount of information to this effort, including first-hand expertise, publications, maps, and digital data.

At Research Planning, Inc. in Columbia, South Carolina, numerous scientific, GIS, and graphic staff were involved with different phases of the project. Mark White, GIS Director, and Christine Boring, Biology Dept. Manager, were co-Project Managers. The biological data were collected and compiled onto base maps by Lauren Szathmary, Christine Boring, and Jennifer Weaver. Lee Diveley, Katy Beckham, Mark White, and Jeff Dahlin processed and produced the GIS data and metadata. Katy Beckham, Jacqueline Michel, Christine Boring, Lauren Szathmary, and Jen Weaver prepared the species profiles. Wendy Early produced the final documents.

1.13 Native Data Set Environment

The software packages used to develop the atlas are Environmental Systems Research Institute's ArcGIS for Desktop(R), ArcPro(R), and SQL SERVER(R). The hardware configuration is PC's with Microsoft Windows Operating System.

The following Geodatabase Feature Classes are included in the data set: aoi, benthic, benthicpt, birds, fish, invert, and m\_mammal. Associated relational and desktop data tables are bio\_lut, biocomb, biores, breed, seasonal, sources, species, and status.

2.0 Data Quality Information

2.1 Attribute Accuracy

2.1.1 Attribute Accuracy Report

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

2.2 Logical Consistency Report

A multi-stage error checking process, described in the above Attribute\_Accuracy\_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies, and SQL SERVER(R) to ArcGIS(R) consistencies. A final review is made by the ESI manager, where the data are written to CD-ROM and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks.

2.3 Completeness Report

These data represent the digital data extent for all data produced as part of the BSEE Arctic Alaska ESI atlas.

2.4 Positional Accuracy

2.4.1 Horizontal Positional Accuracy

2.4.1.1 Horizontal Positional Accuracy Report

The AOI data set was developed from pre-existing digital data and reflects the positional accuracy of these original data. See the Lineage and Process\_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

2.5 Lineage

Source\_Information

Source\_Citation:

Originator: RESEARCH PLANNING, INC.

Publication\_Date: 2023

Title: STUDY AREA BOUNDARY

Geospatial\_Data\_Presentation\_Form: VECTOR DIGITAL DATA

Source\_Scale\_Denominator: 1000000

Type\_of\_Source\_Media: EMAIL

Source\_Time\_Period\_of\_Content:

Time\_Period\_Information:

Single\_Date/Time:

Calendar\_Date: 2023

Source\_Currentness\_Reference: DATE OF PUBLICATION

Source\_Citation\_Abbreviation: NONE

Source\_Contribution: AOI INFORMATION

2.5.2 Process Step

2.5.2.1 Process Description

The AOI was generated from established State Waters Limits to 50 NM offshore in the Beaufort Sea and 100 NM offshore in the Chukchi Sea.

2.5.2.3 Process Date

20231215

2.5.2.6 Process Contact

2.5.2.6.2 Contact Organization Primary

2.5.2.6.1.2 Contact Organization

Bureau of Safety and Environmental Enforcement (BSEE), U.S. Department of the Interior

2.5.2.6.1.1 Contact Person

Bureau of Safety and Environmental Enforcement (BSEE), U.S. Department of the Interior Alaska OCS Region Program 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

3801 Centerpoint Dr Ste 500

2.5.2.6.4.3 City

Anchorage

2.5.2.6.4.4 State or Province

Alaska

2.5.2.6.4.5 Postal Code

99503-5820

2.5.2.6.5 Contact Voice Telephone

(907) 334-5300

2.5.2.6.8 CONTACT ELECTRONIC MAIL ADDRESS

[Guy.Hayes@bsee.gov](mailto:Guy.Hayes@bsee.gov)

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

GT-polygon composed of chains

3.3.1.2 Point and Vector Object Count

1

Spatial\_Reference\_Information:

Horizontal\_Coordinate\_System\_Definition:

Geographic:

Latitude\_Resolution: 0.000000001

Longitude\_Resolution: 0.000000001

Geographic\_Coordinate\_Units: Decimal degrees

Geodetic\_Model:

Horizontal\_Datum\_Name: North American Datum of 1983

Ellipsoid\_Name: Geodetic Reference System 80

Semi-major\_Axis: 6378137.000000

Denominator\_of\_Flattening\_Ratio: 298.257222

5.0 ENTITY AND ATTRIBUTE INFORMATION

Overview\_Description:

Entity\_and\_Attribute\_Overview:

In addition to the geographic data layers, relational attribute or data tables are used to store information in the ESI data structure. The entity-relationship diagram describes relationships between attribute tables in the ESI data structure. This particular geographic data layer (AOI) does not link to other ESI tables.

Entity\_and\_Attribute\_Detail\_Citation:

A complete description of entity types, attributes, and attribute values for ESI atlases can be found in the NOAA ESI Guidelines ([**https://response.restoration.noaa.gov/sites/default/files/ESI\_Guidelines.pdf**](https://response.restoration.noaa.gov/sites/default/files/ESI_Guidelines.pdf)).

5.1 DETAILED DESCRIPTION

5.1.1 ENTITY TYPE

5.1.1.1 ENTITY TYPE LABEL

AOI

5.1.1.2 ENTITY TYPE DEFINITION

The AOI table contains attribute information for the vector polygons representing the boundaries of the maps and/or digital data boundaries used in the creation of the ESI atlas.

5.1.1.3 ENTITY TYPE DEFINITION SOURCE

NOAA ESI Guidelines

5.1.2 ATTRIBUTE

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

NOAA ESI Guidelines

5.1.2.4 ATTRIBUTE DOMAIN VALUES

5.1.2.4.2 RANGE DOMAIN

5.1.2.4.2.1 RANGE DOMAIN MINIMUM

001

5.1.2.4.2.2 RANGE DOMAIN MAXIMUM

001

5.1.2 ATTRIBUTE

5.1.2.1 ATTRIBUTE LABEL

NAME

5.1.2.2 ATTRIBUTE DEFINITION

USGS Quad name or a descriptive name of region covered.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE

NOAA ESI Guidelines

5.1.2.4 ATTRIBUTE DOMAIN VALUES

5.1.2.4.4 UNREPRESENTABLE DOMAIN

Acceptable values change from atlas to atlas.

5.1.2 ATTRIBUTE

5.1.2.1 ATTRIBUTE LABEL

SCALE

5.1.2.2 ATTRIBUTE DEFINITION

The map production scale denominator.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE

NOAA ESI Guidelines

5.1.2.4 ATTRIBUTE DOMAIN VALUES

5.1.2.4.1 ENUMERATED DOMAIN

5.1.2.4.1.1 ENUMERATED DOMAIN VALUE

1000000

5.1.2.4.1.2 ENUMERATED DOMAIN VALUE DEFINITION

Scale = 1:1,000,000

5.1.2.4.1.3 ENUMERATED DOMAIN VALUE DEFINITION SOURCE

NOAA ESI Guidelines

5.1.2 ATTRIBUTE

5.1.2.1 ATTRIBUTE LABEL

UTM\_ZONE

5.1.2.2 ATTRIBUTE DEFINITION

UTM\_ZONE contains full projection definition for the appropriate UTM zone.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE

NOAA ESI Guidelines

5.1.2.4 ATTRIBUTE DOMAIN VALUES

5.1.2.4.4 UNREPRESENTABLE DOMAIN

Acceptable values change from atlas to atlas.

5.1.2 ATTRIBUTE

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

NOAA ESI Guidelines

5.1.2.4 ATTRIBUTE DOMAIN VALUES

5.1.2.4.4 UNREPRESENTABLE DOMAIN

Acceptable values change from atlas to atlas.

5.1.2 ATTRIBUTE

5.1.2.1 ATTRIBUTE LABEL

VIEW\_PDF

5.1.2.2 ATTRIBUTE DEFINITION

Link to ESI PDFs on the NOAA server.

5.1.2.3. ATTRIBUTE DEFINITION SOURCE

NOAA ESI Guidelines

5.1.2.4 ATTRIBUTE DOMAIN VALUES

5.1.2.4.4 UNREPRESENTABLE DOMAIN

Acceptable values change from atlas to atlas.

6.0 DISTRIBUTION INFORMATION

6.1 DISTRIBUTOR

6.1.1 CONTACT PERSON PRIMARY

6.1.1.1 CONTACT PERSON

Bureau of Safety and Environmental Enforcement (BSEE), U.S. Department of the Interior Alaska OCS Region Program Manager

6.1.1.2 CONTACT ORGANIZATION

Bureau of Safety and Environmental Enforcement (BSEE), U.S. Department of the Interior

6.1.4 CONTACT ADDRESS

6.1.4.1 ADDRESS TYPE

Physical Address

6.1.4.2 ADDRESS

3801 Centerpoint Dr Ste 500

6.1.4.3 CITY

Anchorage

6.1.4.4 STATE OR PROVINCE

Alaska

6.1.4.5 POSTAL CODE

99503-5820

6.1.5 CONTACT VOICE TELEPHONE

(907) 334-5300

6.2 RESOURCE DESCRIPTION

Downloadable Data

6.3 DISTRIBUTION LIABILITY

Although these data have been processed successfully on a computer system at Research Planning, Inc., no warranty, expressed or implied, is made by BSEE, DOI regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. BSEE, DOI 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 BSEE DOI for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users.

7.0 METADATA REFERENCE INFORMATION

7.1 METADATA DATE

20231215

7.2 METADATA REVIEW DATE

20231215

7.4 METADATA CONTACT

7.4.1 CONTACT PERSON PRIMARY

7.4.1.1 CONTACT PERSON

Bureau of Safety and Environmental Enforcement (BSEE), U.S. Department of the Interior Alaska OCS Region Program Manager

7.4.1.2 CONTACT ORGANIZATION

Bureau of Safety and Environmental Enforcement (BSEE), U.S. Department of the Interior

7.4.3 CONTACT POSITION

Bureau of Safety and Environmental Enforcement (BSEE), U.S. Department of the Interior Alaska OCS Region Program Manager

7.4.4 CONTACT ADDRESS

7.4.4.1 ADDRESS TYPE

Physical Address

7.4.4.2 ADDRESS

3801 Centerpoint Dr Ste 500

7.4.4.3 CITY

Anchorage

7.4.4.4 STATE OR PROVINCE

Alaska

7.4.4.5 POSTAL CODE

99503-5820

7.4.5 CONTACT VOICE TELEPHONE

(907) 334-5300

7.4.8 CONTACT ELECTRONIC MAIL ADDRESS

[Guy.Hayes@bsee.gov](mailto:Guy.Hayes@bsee.gov)

7.5 METADATA STANDARD NAME

Content Standards for Digital Geospatial Metadata

7.6 METADATA STANDARD VERSION

FGDC-STD-001-1998