

# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Southern California: HYDRO (Hydrography Lines and Polygons)

## Metadata:

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

### *Identification\_Information:*

#### *Citation:*

##### *Citation\_Information:*

##### *Originator:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington.

##### *Originator:*

Department of Homeland Security, United States Coast Guard, Office of Incident Management and Preparedness, Washington, D.C.

##### *Originator:*

Department of Fish and Game, Office of Spill Prevention and Response, Sacramento, California.

##### *Publication\_Date:*

201003

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Southern California: HYDRO (Hydrography Lines and Polygons)

##### *Edition:*

Second

##### *Geospatial\_Data\_Presentation\_Form:*

vector digital data

##### *Series\_Information:*

##### *Series\_Name:*

None

##### *Issue\_Identification:*

Southern California

##### *Publication\_Information:*

##### *Publication\_Place:*

Seattle, Washington

##### *Publisher:*

NOAA's Ocean Service, Office of Response and Restoration (OR&R),  
Emergency Response Division (ERD).

*Other\_Citation\_Details:*

Prepared by Research Planning, Inc., Columbia, South Carolina for the  
National Oceanic and Atmospheric Administration (NOAA), National Ocean  
Service, Office of Response and Restoration, Emergency Response Division,  
Seattle, Washington.

*Online\_Linkage:*

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

*Description:*

*Abstract:*

This data set contains vector lines and polygons representing coastal hydrography used in the creation of the Environmental Sensitivity Index (ESI) for Southern California. The HYDRO data layer contains all annotation used in producing the atlas. The annotation features are categorized into three subclasses in order to simplify the mapping and quality control procedures: GEOG for geographic features, SOC for socioeconomic features, and HYDRO for water features. This data set comprises a portion of the ESI data for Southern California. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources.

*Purpose:*

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

*Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:*

1977

*Ending\_Date:*

2009

*Currentness\_Reference:*

The data were compiled during 2008-2010. The currentness dates for the data range from 1977 to 2009 and are documented in the Lineage section.

*Status:*

*Progress:*

Complete

*Maintenance\_and\_Update\_Frequency:*

None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:*

-120.60100

*East\_Bounding\_Coordinate:*

-117.00100

*North\_Bounding\_Coordinate:*

34.50000

*South\_Bounding\_Coordinate:*

32.44500

*Keywords:**Theme:**Theme\_Keyword\_Thesaurus:*

ISO 19115 Topic Category

*Theme\_Keyword:*

biota

*Theme\_Keyword:*

environment

*Theme:**Theme\_Keyword\_Thesaurus:*

None

*Theme\_Keyword:*

Environmental Monitoring

*Theme\_Keyword:*

ESI

*Theme\_Keyword:*

Sensitivity maps

*Theme\_Keyword:*

Coastal resources

*Theme\_Keyword:*

Oil spill planning

*Theme\_Keyword:*

Coastal Zone Management

*Theme\_Keyword:*

Wildlife

*Theme\_Keyword:*

Hydrography

*Theme:**Theme\_Keyword\_Thesaurus:*

NOS Data Explorer Topic Category

*Theme\_Keyword:*

Environmental Monitoring

*Place:**Place\_Keyword\_Thesaurus:*

None

*Place\_Keyword:*

Southern California

*Access\_Constraints:*

None

*Use\_Constraints:*

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

derived from these data.

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:*

[datafig.jpg](#)

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and attribute data tables for the Southern California ESI data.

*Browse\_Graphic\_File\_Type:*

JPEG

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:*

[datafig2.jpg](#)

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and desktop data tables for the Southern California ESI data.

*Browse\_Graphic\_File\_Type:*

JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington; the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness Washington, D.C.; and the California Department of Fish and Game (CDF&G), Office of Spill Prevention and Response (OSPR), Sacramento, California.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 9.3) and SQL SERVER(R) (version 2000). The hardware configuration is PC's with Windows Operating System (2000/XP/2003). The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in the data set: acp.e00, birds.e00, esi.e00, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, and t\_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio\_lut.e00, biofile.e00, biores.e00, breed.e00, breed\_dt.e00, seasonal.e00, soc\_dat.e00, soc\_lut.e00, sources.e00, species.e00, and status.e00.

*Program\_Affiliation:*

*Program\_Name:*

National Ocean Service Data Explorer

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*Data\_Quality\_Information:*

*Attribute\_Accuracy:*

*Attribute\_Accuracy\_Report:*

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

more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

*Logical\_Consistency\_Report:*

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

*Completeness\_Report:*

These data represent linear and polygonal hydrography for Southern California.

*Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy\_Report:*

The hydrography data set was developed from pre-existing digital data and reflects the positional accuracy of these original data. The horizontal positional accuracy of the 1:24,000 USGS topographic quads should conform to National Map Accuracy Standards at scales of 1:24,000. See the Lineage and Process\_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

CALIFORNIA COASTAL RECORDS PROJECT

*Publication\_Date:*

20051004

*Title:*

PHOTOGRAPHIC DATABASE DOCUMENTING  
CALIFORNIA'S COAST

*Geospatial\_Data\_Presentation\_Form:*

PHOTOGRAPH

*Online\_Linkage:*

<http://www.californiacoastline.org>

*Type\_of\_Source\_Media:*

online

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:*

2005

*Source\_Currentness\_Reference:*

DATE OF SURVEY

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

## HYDRO INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

GOOGLE EARTH PRO

*Publication\_Date:*

2009

*Title:*

IMAGERY OF CALIFORNIA SHORELINE FOR ESI  
ANALYSIS

*Geospatial\_Data\_Presentation\_Form:*

remote-sensing image

*Publication\_Information:*

*Publication\_Place:*

MOUNTAIN VIEW, CA

*Publisher:*

GOOGLE, INC.

*Other\_Citation\_Details:*

IMAGE DATES RANGE FROM 2006 TO 2009. IMAGE  
SOURCES INCLUDE DIGITAL GLOBE, U.S.  
GEOLOGICAL SURVEY, AND TERRA METRICS.

*Type\_of\_Source\_Media:*

online

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

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:*

2006

*Ending\_Date:*

2009

*Source\_Currentness\_Reference:*

DATE OF SURVEY

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

HYDRO INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

NATIONAL OCEANIC AND ATMOSPHERIC  
ADMINISTRATION (NOAA), NATIONAL OCEAN  
SERVICE (NOS), OFFICE OF RESPONSE AND  
RESTORATION (OR&R), EMERGENCY RESPONSE  
DIVISION (ERD)

*Publication\_Date:*

1995

*Title:*

SENSITIVITY OF COASTAL ENVIRONMENTS AND  
WILDLIFE TO SPILLED OIL: SOUTHERN

CALIFORNIA : ESI : HYDRO  
*Geospatial\_Data\_Presentation\_Form:*  
vector digital data  
*Publication\_Information:*  
*Publication\_Place:*  
SEATTLE, WA  
*Publisher:*  
NOAA  
*Other\_Citation\_Details:*  
7600 SAND POINT WAY, SEATTLE, WA, 98115-6349  
*Online\_Linkage:*  
<http://response.restoration.noaa.gov/esi>  
*Source\_Scale\_Denominator:*  
24000  
*Type\_of\_Source\_Media:*  
CD-ROM  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
1995  
*Source\_Currentness\_Reference:*  
DATE OF PUBLICATION  
*Source\_Citation\_Abbreviation:*  
NONE  
*Source\_Contribution:*  
HYDRO INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
NOAA NATIONAL MARINE SANCTUARIES  
PROGRAM  
*Publication\_Date:*  
200806  
*Title:*  
CINM\_PY  
*Geospatial\_Data\_Presentation\_Form:*  
vector digital data  
*Publication\_Information:*  
*Publication\_Place:*  
SILVER SPRING, MD  
*Publisher:*  
NOAA NATIONAL MARINE SANCTUARIES  
PROGRAM  
*Online\_Linkage:*  
<http://sanctuaries.noaa.gov/>  
*Source\_Scale\_Denominator:*  
20000  
*Type\_of\_Source\_Media:*  
online

*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
 200806  
*Source\_Currentness\_Reference:*  
 DATE OF PUBLICATION  
*Source\_Citation\_Abbreviation:*  
 NONE  
*Source\_Contribution:*  
 HYDRO INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 RESEARCH PLANNING, INC.  
*Publication\_Date:*  
 2008  
*Title:*  
 ESI INDEX  
*Geospatial\_Data\_Presentation\_Form:*  
 vector digital data  
*Other\_Citation\_Details:*  
 UNPUBLISHED  
*Source\_Scale\_Denominator:*  
 24000  
*Type\_of\_Source\_Media:*  
 DIGITAL  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
 2008  
*Source\_Currentness\_Reference:*  
 DATE OF PUBLICATION  
*Source\_Citation\_Abbreviation:*  
 NONE  
*Source\_Contribution:*  
 HYDRO INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 U.S. FISH AND WILDLIFE SERVICE  
*Publication\_Date:*  
 2006  
*Title:*  
 NATIONAL WETLANDS INVENTORY POLYGONS  
 (CALIFORNIA STATEWIDE)  
*Geospatial\_Data\_Presentation\_Form:*  
 vector digital data



*Publication\_Information:**Publication\_Place:*

WASHINGTON, D.C.

*Publisher:*U.S. FISH AND WILDLIFE SERVICE, BRANCH  
OF HABITAT ASSESSMENT*Source\_Scale\_Denominator:*

24000

*Type\_of\_Source\_Media:*

online

*Source\_Time\_Period\_of\_Content:**Time\_Period\_Information:**Range\_of\_Dates/Times:**Beginning\_Date:*

1977

*Ending\_Date:*

2004

*Source\_Currentness\_Reference:*

DATE OF SURVEY

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

HYDRO INFORMATION

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

The shoreline of the original ESI maps, published in 1995, were re-examined and updated using the following methods: interpretation of the 2008 contiguous aerial photography (California Coastal Records Project), USFWS Wetland coverages (used to classify marshes and swamps), Google Earth in areas where no other current data could be obtained, and through verification via overflights conducted in October 27- 30 of 2008. The above digital and/or hardcopy sources were compiled to create the HYDRO data layer. Depending on the type of source data, four general approaches are used for compiling the data layer: 1) hardcopy maps are digitized at their source scale; 2) digital data layers are evaluated and used "as is" or integrated with the other data sources; 3) overflight classifications are digitized from the scanned and registered hardcopy field maps; and/or 4) classifications are interpreted from oblique gps referenced photography or video taken during the overflights. After the initial shoreline classification, these data are edgematched and checked for logical consistency errors. Review maps are plotted at 1:24,000 scale for verification of polygonal and linear attributes. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the HYDRO data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:*

201003

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

NOAA, Office of Response and Restoration

*Contact\_Person:*

Jill Petersen

*Contact\_Address:**Address\_Type:*

Physical address

*Address:*

7600 Sand Point Way, N.E.

*City:*

Seattle

*State\_or\_Province:*

Washington

*Postal\_Code:*

98115-6349

*Contact\_Voice\_Telephone:*

(206) 526-6944

*Contact\_Facsimile\_Telephone:*

(206) 526-6329

*Contact\_Electronic\_Mail\_Address:*[Jill.Petersen@noaa.gov](mailto:Jill.Petersen@noaa.gov)[Back To Index](#)*Spatial\_Data\_Organization\_Information:**Direct\_Spatial\_Reference\_Method:*

Vector

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

GT-polygon composed of chains

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

835

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Area point

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

836

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Complete chain

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

5179

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Link

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

93014

*SDTS\_Terms\_Description:*

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

Label Point

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

608

*SDTS\_Terms\_Description:*

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

Node,planar graph

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

5170

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*Spatial\_Reference\_Information:*

*Horizontal\_Coordinate\_System\_Definition:*

*Geographic:*

*Latitude\_Resolution:*

0.0000001

*Longitude\_Resolution:*

0.0000001

*Geographic\_Coordinate\_Units:*

Decimal degrees

*Geodetic\_Model:*

*Horizontal\_Datum\_Name:*

North American Datum of 1983

*Ellipsoid\_Name:*

Geodetic Reference System 80

*Semi-major\_Axis:*

6378137.000000

*Denominator\_of\_Flattening\_Ratio:*

298.257222

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*Entity\_and\_Attribute\_Information:*

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:*

HYDRO.AAT

*Entity\_Type\_Definition:*

The HYDRO.AAT table contains attribute information for the vector lines representing linear hydrography features in the HYDRO data layer.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

LINE

*Attribute\_Definition:*

Type of geographic feature.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

## B

*Enumerated\_Domain\_Value\_Definition:*

Breakwater

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

H

*Enumerated\_Domain\_Value\_Definition:*

Hydrography

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

I

*Enumerated\_Domain\_Value\_Definition:*

Index

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

S

*Enumerated\_Domain\_Value\_Definition:*

Shoreline

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

SOURCE\_ID

*Attribute\_Definition:*

Source identifier that links to the SOURCES data table. This identifier indicates the source of a vector line segment.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

1

*Range\_Domain\_Maximum:*

N

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

HYDRO.PAT

*Entity\_Type\_Definition:*

The HYDRO.PAT table contains attribute information for the vector polygons representing polygonal hydrography features in the HYDRO data layer.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

WATER\_CODE

*Attribute\_Definition:*

Specifies a polygon as either water or land.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

L

*Enumerated\_Domain\_Value\_Definition:*

Land

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

W

*Enumerated\_Domain\_Value\_Definition:*

Water

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

ANNO.GEOG

*Entity\_Type\_Definition:*

The spatial data layer HYDRO contains label points representing annotation for geographic features.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

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

ANNO.HYDRO

*Entity\_Type\_Definition:*

The spatial data layer HYDRO contains label points representing annotation for water features.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

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

ANNO.SOC

*Entity\_Type\_Definition:*

The spatial data layer HYDRO contains label points representing annotation for socioeconomic features.

*Entity\_Type\_Definition\_Source:*

## NOAA ESI Guidelines

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

SOURCES

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

SOURCE\_ID

*Attribute\_Definition:*

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table; G\_SOURCE and S\_SOURCE in the BIORES table; and SOURCE\_ID and ESI\_SOURCE in the ESI and HYDRO data layers.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

ORIGINATOR

*Attribute\_Definition:*

Author or developer of source material or data set.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

DATE\_PUB

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

TITLE

*Attribute\_Definition:*

Title of source material or data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

DATA\_FORMAT

*Attribute\_Definition:*

The format of the source material.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

PUB\_PLACE

*Attribute\_Definition:*

Publication place.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

PUBLISHER

*Attribute\_Definition:*

Publisher.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

PUBLICATION

*Attribute\_Definition:*

Additional citation information.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

ONLINE\_LINK

*Attribute\_Definition:*

Online computer resource URL.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

SCALE

*Attribute\_Definition:*

Description of the source scale.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

TIME\_PERIOD

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Overview\_Description:**Entity\_and\_Attribute\_Overview:*

The geographic data layer containing resource information (in this case, HYDRO) is linked to the SOURCES table using the SOURCE\_ID. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

*Entity\_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

([http://response.restoration.noaa.gov/esi\\_guidelines](http://response.restoration.noaa.gov/esi_guidelines)).

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*Distribution\_Information:**Distributor:**Contact\_Information:**Contact\_Person\_Primary:**Contact\_Person:*

John Kaperick

*Contact\_Organization:*



## NOAA, Office of Response and Restoration

*Contact\_Address:**Address\_Type:*

Physical Address

*Address:*

7600 Sand Point Way N.E.

*City:*

Seattle

*State\_or\_Province:*

Washington

*Postal\_Code:*

98115-6349

*Contact\_Voice\_Telephone:*

(206) 526-6400

*Contact\_Facsimile\_Telephone:*

(206) 526-6329

*Resource\_Description:*

Downloadable Data

*Distribution\_Liability:*

Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer input peripherals, or when the physical medium is delivered in damaged condition.

*Custom\_Order\_Process:*

Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to the widest community of GIS/mapping users. Distribution formats include Geodatabase; ARC export, MOSS, and Shape files; and MARPLOT map folders. An ArcMap .mxd file, an ArcView 3.x ESI project, and an ESI\_Viewer product for use with the MARPLOT data are also included on the distribution CDs/DVDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

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*Metadata\_Reference\_Information:**Metadata\_Date:*

20100927

*Metadata\_Review\_Date:*

20100927

*Metadata\_Contact:**Contact\_Information:**Contact\_Person\_Primary:**Contact\_Person:*

Jill Petersen

*Contact\_Organization:*

NOAA, Office of Response and Restoration

*Contact\_Position:*

GIS Manager

*Contact\_Address:*

*Address\_Type:*

Physical Address

*Address:*

7600 Sand Point Way, N.E.

*City:*

Seattle

*State\_or\_Province:*

Washington

*Postal\_Code:*

98115-6349

*Contact\_Voice\_Telephone:*

(206) 526-6944

*Contact\_Facsimile\_Telephone:*

(206) 526-6329

*Contact\_Electronic\_Mail\_Address:*

[Jill.Petersen@noaa.gov](mailto:Jill.Petersen@noaa.gov)

*Metadata\_Standard\_Name:*

Content Standards for Digital Geospatial Metadata

*Metadata\_Standard\_Version:*

FGDC-STD-001-1998

*Metadata\_Extensions:*

*Online\_Linkage:*

[http://www.ncddc.noaa.gov/metadatarresource/metadatarreferences/files/ncddcmdprofile\\_v2.pdf](http://www.ncddc.noaa.gov/metadatarresource/metadatarreferences/files/ncddcmdprofile_v2.pdf)

*Profile\_Name:*

Content Specification for Metadata in the National Coastal Data Development Center's Data Catalog Version 2.0

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# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Southern California: ESI (Shoreline Types - Lines and Polygons)

## Metadata:

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

### *Identification\_Information:*

#### *Citation:*

##### *Citation\_Information:*

##### *Originator:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington.

##### *Originator:*

Department of Homeland Security, United States Coast Guard, Office of Incident Management and Preparedness, Washington, D.C.

##### *Originator:*

Department of Fish and Game, Office of Spill Prevention and Response, Sacramento, California.

##### *Publication\_Date:*

201003

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Southern California: ESI (Shoreline Types - Lines and Polygons)

##### *Edition:*

Second

##### *Geospatial\_Data\_Presentation\_Form:*

vector digital data

##### *Series\_Information:*

##### *Series\_Name:*

None

##### *Issue\_Identification:*

Southern California

##### *Publication\_Information:*

##### *Publication\_Place:*

Seattle, Washington

##### *Publisher:*

NOAA's Ocean Service, Office of Response and Restoration (OR&R),  
Emergency Response Division (ERD).

*Other\_Citation\_Details:*

Prepared by Research Planning, Inc., Columbia, South Carolina for the  
National Oceanic and Atmospheric Administration (NOAA), National Ocean  
Service, Office of Response and Restoration, Emergency Response Division,  
Seattle, Washington.

*Online\_Linkage:*

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

*Description:*

*Abstract:*

This data set contains vector lines and polygons representing the shoreline and coastal habitats of Southern California, classified according to the Environmental Sensitivity Index (ESI) classification system. This data set comprises a portion of the ESI data for Southern California. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources.

*Purpose:*

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

*Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:*

1977

*Ending\_Date:*

2009

*Currentness\_Reference:*

The data were compiled during 2008-2010. The currentness dates for the data range from 1977 to 2009 and are documented in the Lineage section.

*Status:*

*Progress:*

Complete

*Maintenance\_and\_Update\_Frequency:*

None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:*

-120.60100

*East\_Bounding\_Coordinate:*

-117.00100

*North\_Bounding\_Coordinate:*

34.50000

*South\_Bounding\_Coordinate:*

32.44500

*Keywords:*

*Theme:*

*Theme\_Keyword\_Thesaurus:*

ISO 19115 Topic Category

*Theme\_Keyword:*

biota

*Theme\_Keyword:*

environment

*Theme:*

*Theme\_Keyword\_Thesaurus:*

None

*Theme\_Keyword:*

Environmental Monitoring

*Theme\_Keyword:*

ESI

*Theme\_Keyword:*

Sensitivity maps

*Theme\_Keyword:*

Coastal resources

*Theme\_Keyword:*

Oil spill planning

*Theme\_Keyword:*

Coastal Zone Management

*Theme\_Keyword:*

Wildlife

*Theme:*

*Theme\_Keyword\_Thesaurus:*

NOS Data Explorer Topic Category

*Theme\_Keyword:*

Environmental Monitoring

*Place:*

*Place\_Keyword\_Thesaurus:*

None

*Place\_Keyword:*

Southern California

*Access\_Constraints:*

None

*Use\_Constraints:*

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

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:*

[datafig.jpg](#)

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and attribute data tables for the Southern California ESI data.

*Browse\_Graphic\_File\_Type:*

JPEG

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:*

[datafig2.jpg](#)

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and desktop data tables for the Southern California ESI data.

*Browse\_Graphic\_File\_Type:*

JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington; the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness Washington, D.C.; and the California Department of Fish and Game (CDF&G), Office of Spill Prevention and Response (OSPR), Sacramento, California.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 9.3) and SQL SERVER(R) (version 2000). The hardware configuration is PC's with Windows Operating System (2000/XP/2003). The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in the data set: acp.e00, birds.e00, esi.e00, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, and t\_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio\_lut.e00, biofile.e00, biores.e00, breed.e00, breed\_dt.e00, seasonal.e00, soc\_dat.e00, soc\_lut.e00, sources.e00, species.e00, and status.e00.

*Program\_Affiliation:*

*Program\_Name:*

National Ocean Service Data Explorer

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*Data\_Quality\_Information:*

*Attribute\_Accuracy:*

*Attribute\_Accuracy\_Report:*

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

*Logical\_Consistency\_Report:*

A multi-stage error checking process, described in the above Attribute\_Accuracy\_Report, is used to verify both attribute accuracy and logical

consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and SQL SERVER(R) to ARC/INFO(R) consistencies. A final review is made by the GIS manager, where the data are written to CD/DVD and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks.

*Completeness\_Report:*

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

*Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy\_Report:*

The spatial location of the ESI shoreline was developed from pre-existing digital sources and reflects the positional accuracy of these original data. The horizontal positional accuracy of the 1:24,000 USGS topographic quads should conform to National Map Accuracy Standards at scales of 1:24,000. The minimum mapping unit (MMU) of the actual shoreline classification segments is estimated at 50 meters where mapping is conducted using 1:24,000 hardcopy fieldmaps. Field verification has shown that the absolute positional accuracy of breaks between shoreline ESI types with a 95-percent error bound is approximately 58 meters. See the Lineage and Process\_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

CALIFORNIA COASTAL RECORDS PROJECT

*Publication\_Date:*

20051004

*Title:*

PHOTOGRAPHIC DATABASE DOCUMENTING  
CALIFORNIA'S COAST

*Geospatial\_Data\_Presentation\_Form:*

PHOTOGRAPH

*Online\_Linkage:*

<http://www.californiacoastline.org>

*Type\_of\_Source\_Media:*

online

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:*

2005

*Source\_Currentness\_Reference:*

DATE OF SURVEY

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*  
ESI INFORMATION

*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
GOOGLE EARTH PRO  
*Publication\_Date:*  
2009  
*Title:*  
IMAGERY OF CALIFORNIA SHORELINE FOR ESI  
ANALYSIS  
*Geospatial\_Data\_Presentation\_Form:*  
remote-sensing image  
*Publication\_Information:*  
*Publication\_Place:*  
MOUNTAIN VIEW, CA  
*Publisher:*  
GOOGLE, INC.  
*Other\_Citation\_Details:*  
IMAGE DATES RANGE FROM 2006 TO 2009. IMAGE  
SOURCES INCLUDE DIGITAL GLOBE, U.S.  
GEOLOGICAL SURVEY, AND TERRA METRICS.

*Type\_of\_Source\_Media:*  
online

*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Range\_of\_Dates/Times:*  
*Beginning\_Date:*  
2006  
*Ending\_Date:*  
2009

*Source\_Currentness\_Reference:*  
DATE OF SURVEY

*Source\_Citation\_Abbreviation:*  
NONE

*Source\_Contribution:*  
ESI INFORMATION

*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
NATIONAL OCEANIC AND ATMOSPHERIC  
ADMINISTRATION (NOAA), NATIONAL OCEAN  
SERVICE (NOS), OFFICE OF RESPONSE AND  
RESTORATION (OR&R), EMERGENCY RESPONSE  
DIVISION (ERD)  
*Publication\_Date:*  
1995  
*Title:*  
SENSITIVITY OF COASTAL ENVIRONMENTS AND



WILDLIFE TO SPILLED OIL: SOUTHERN  
CALIFORNIA : ESI : HYDRO  
*Geospatial\_Data\_Presentation\_Form:*  
vector digital data  
*Publication\_Information:*  
*Publication\_Place:*  
SEATTLE, WA  
*Publisher:*  
NOAA  
*Other\_Citation\_Details:*  
7600 SAND POINT WAY, SEATTLE, WA, 98115-6349  
*Online\_Linkage:*  
<http://response.restoration.noaa.gov/esi>  
*Source\_Scale\_Denominator:*  
24000  
*Type\_of\_Source\_Media:*  
CD-ROM  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
1995  
*Source\_Currentness\_Reference:*  
DATE OF PUBLICATION  
*Source\_Citation\_Abbreviation:*  
NONE  
*Source\_Contribution:*  
ESI INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
RESEARCH PLANNING, INC.  
*Publication\_Date:*  
2008  
*Title:*  
ESI INDEX  
*Geospatial\_Data\_Presentation\_Form:*  
vector digital data  
*Other\_Citation\_Details:*  
UNPUBLISHED  
*Source\_Scale\_Denominator:*  
24000  
*Type\_of\_Source\_Media:*  
DIGITAL  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
2008  
*Source\_Currentness\_Reference:*

DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

ESI INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

RESEARCH PLANNING, INC.

*Publication\_Date:*

2008

*Title:*

OVERFLIGHT OBLIQUES

*Geospatial\_Data\_Presentation\_Form:*

PHOTOGRAPH

*Other\_Citation\_Details:*

UNPUBLISHED

*Type\_of\_Source\_Media:*

DIGITAL PHOTOGRAPH

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:*

2008

*Source\_Currentness\_Reference:*

DATE OF SURVEY

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

ESI INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

U.S. FISH AND WILDLIFE SERVICE

*Publication\_Date:*

2006

*Title:*

NATIONAL WETLANDS INVENTORY POLYGONS  
(CALIFORNIA STATEWIDE)

*Geospatial\_Data\_Presentation\_Form:*

vector digital data

*Publication\_Information:*

*Publication\_Place:*

WASHINGTON, D.C.

*Publisher:*

U.S. FISH AND WILDLIFE SERVICE, BRANCH  
OF HABITAT ASSESSMENT

*Source\_Scale\_Denominator:*

24000

*Type\_of\_Source\_Media:*

online

*Source\_Time\_Period\_of\_Content:**Time\_Period\_Information:**Range\_of\_Dates/Times:**Beginning\_Date:*

1977

*Ending\_Date:*

2004

*Source\_Currentness\_Reference:*

DATE OF SURVEY

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

ESI INFORMATION

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

The shoreline habitats on the original ESI maps, published in 1995, were re-examined and updated using the following methods: interpretation of the 2008 contiguous aerial photography (California Coastal Records Project), U.S. Fish and Wildlife (USFWS) Wetland coverages (used to classify marshes and swamps), Google Earth in areas where no other current data could be obtained, and through verification via overflights conducted in October 27- 30 of 2008. Flights were conducted using fixed-wing aircraft flying at slow air speeds at altitudes of 400-600 feet, excluding areas near military installations (San Nicholas) where the altitudes of overflight were 1000 feet. All flights were scheduled to maximize optimal low tide conditions, flying approximately 2.5 hours preceding and 2.5 hours following peak low tides. During these flights a geomorphologist utilized a digital SLR camera to capture a continuous set of overlapping oblique images of the intertidal zone. Throughout the overflight mission a Global Positioning System (GPS) receiver collected and recorded flight path data. Following completion of the overflight mission, all digital photographs of the intertidal zone were georeferenced using photo-mapping software and the GPS flight path data. With Geographic Information System (GIS) software a geomorphologist reviewed each georeferenced oblique image of the intertidal zone and assigned ESI rankings to the digital shoreline. Where appropriate, multiple rankings were assigned. The above digital and/or hardcopy sources were compiled to create the ESI data layer. Depending on the type of source data, three general approaches are used for compiling the data layer: 1) hardcopy maps are digitized at their source scale; 2) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources; and 3) overflight changes are digitized from the scanned and registered hardcopy field maps or aerial photography. After the initial shoreline classification, these data are edgematched and checked for logical consistency errors. Review maps are plotted at 1:24,000 scale for verification of polygonal and linear attributes. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the

participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the ESI data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:*

201003

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:*

NOAA, Office of Response and Restoration

*Contact\_Person:*

Jill Petersen

*Contact\_Address:*

*Address\_Type:*

Physical address

*Address:*

7600 Sand Point Way, N.E.

*City:*

Seattle

*State\_or\_Province:*

Washington

*Postal\_Code:*

98115-6349

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*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:*

Vector

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

*SDTS\_Terms\_Description:*

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

GT-polygon composed of chains

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

1856

*SDTS\_Terms\_Description:*

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

Area point

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

1857

*SDTS\_Terms\_Description:*

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

Complete chain

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

6517

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Link

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

139657

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Node, planar graph

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

5920

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

0.0000001

*Longitude\_Resolution:*

0.0000001

*Geographic\_Coordinate\_Units:*

Decimal degrees

*Geodetic\_Model:**Horizontal\_Datum\_Name:*

North American Datum of 1983

*Ellipsoid\_Name:*

Geodetic Reference System 80

*Semi-major\_Axis:*

6378137.000000

*Denominator\_of\_Flattening\_Ratio:*

298.257222

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*Entity\_and\_Attribute\_Information:**Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:*

ESI.AAT

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

ESI

*Attribute\_Definition:*

The item ESI contains values representing the ESI shoreline type. In many cases shorelines are ranked with multiple codes, such as "6B/3A" (listed landward to seaward from left to right). The first code, "6B", is the most landward shoreline type and the second code, "3A", is the shoreline type closest to the water. Singular shoreline types are listed

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

1A

*Enumerated\_Domain\_Value\_Definition:*

Exposed Rocky Shores

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

1B

*Enumerated\_Domain\_Value\_Definition:*

Exposed, Solid Man-made Structures

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

2A

*Enumerated\_Domain\_Value\_Definition:*

Exposed Wave-cut Platforms in Bedrock

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

3A

*Enumerated\_Domain\_Value\_Definition:*

Fine- to Medium-grained Sand Beaches

*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 3B  
*Enumerated\_Domain\_Value\_Definition:*  
 Scarps and Steep Slopes in Sand  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 4  
*Enumerated\_Domain\_Value\_Definition:*  
 Coarse-grained Sand Beaches  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 5  
*Enumerated\_Domain\_Value\_Definition:*  
 Mixed Sand and Gravel Beaches  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 6A  
*Enumerated\_Domain\_Value\_Definition:*  
 Gravel Beaches  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 6B  
*Enumerated\_Domain\_Value\_Definition:*  
 Riprap  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 6D  
*Enumerated\_Domain\_Value\_Definition:*  
 Boulder Rubble  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:**Enumerated\_Domain\_Value:*

7

*Enumerated\_Domain\_Value\_Definition:*

Exposed Tidal Flats

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

8A

*Enumerated\_Domain\_Value\_Definition:*

Sheltered Rocky Shores

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

8B

*Enumerated\_Domain\_Value\_Definition:*

Sheltered, Solid Man-made Structures

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

8C

*Enumerated\_Domain\_Value\_Definition:*

Sheltered Riprap

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

9A

*Enumerated\_Domain\_Value\_Definition:*

Sheltered Tidal Flats

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

9B

*Enumerated\_Domain\_Value\_Definition:*

Vegetated Low Banks

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

9C



*Enumerated\_Domain\_Value\_Definition:*  
 Hypersaline Tidal Flats  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             10A  
         *Enumerated\_Domain\_Value\_Definition:*  
             Salt- and Brackish-water marshes  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             10B  
         *Enumerated\_Domain\_Value\_Definition:*  
             Freshwater Marshes  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             10C  
         *Enumerated\_Domain\_Value\_Definition:*  
             Swamps  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             10D  
         *Enumerated\_Domain\_Value\_Definition:*  
             Scrub-shrub Wetlands  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             U  
         *Enumerated\_Domain\_Value\_Definition:*  
             Unranked  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute:*  
     *Attribute\_Label:*  
         LINE  
     *Attribute\_Definition:*  
         Type of geographic feature.  
     *Attribute\_Definition\_Source:*  
         NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             B  
         *Enumerated\_Domain\_Value\_Definition:*  
             Breakwater  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             F  
         *Enumerated\_Domain\_Value\_Definition:*  
             Flat  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             H  
         *Enumerated\_Domain\_Value\_Definition:*  
             Hydrography  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             I  
         *Enumerated\_Domain\_Value\_Definition:*  
             Index  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             M  
         *Enumerated\_Domain\_Value\_Definition:*  
             Marsh  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             S  
         *Enumerated\_Domain\_Value\_Definition:*  
             Shoreline  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute:*  
     *Attribute\_Label:*  
         SOURCE\_ID

*Attribute\_Definition:*

Source identifier that links to the SOURCES data table. This identifier indicates the source of a vector line segment.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

ENVIR

*Attribute\_Definition:*

Type of regional environment.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

E

*Enumerated\_Domain\_Value\_Definition:*

Estuarine

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

U

*Enumerated\_Domain\_Value\_Definition:*

Unclassified

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

ESI\_SOURCE

*Attribute\_Definition:*

Source identifier that links to the SOURCES data table. This identifier indicates the source of the ESI classification of a line segment. Vector features that were not surveyed or do not qualify for an ESI classification have a value of -1.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

-1

*Range\_Domain\_Maximum:*

N

*Detailed\_Description:*

*Entity\_Type:**Entity\_Type\_Label:*

ESI.PAT

*Entity\_Type\_Definition:*

The ESI.PAT table contains attribute information for the vector polygons representing polygonal features with ESI classification.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

ESI

*Attribute\_Definition:*

The item ESI contains values representing the ESI polygon type.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

7

*Enumerated\_Domain\_Value\_Definition:*

Exposed Tidal Flats

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

9A

*Enumerated\_Domain\_Value\_Definition:*

Sheltered Tidal Flats

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

9C

*Enumerated\_Domain\_Value\_Definition:*

Hypersaline Tidal Flats

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

10A

*Enumerated\_Domain\_Value\_Definition:*

Salt- and Brackish-water marshes

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

10B

*Enumerated\_Domain\_Value\_Definition:*  
 Freshwater Marshes  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 10C  
*Enumerated\_Domain\_Value\_Definition:*  
 Swamps  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 10D  
*Enumerated\_Domain\_Value\_Definition:*  
 Scrub-shrub Wetlands  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 U  
*Enumerated\_Domain\_Value\_Definition:*  
 Unranked  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute:*  
*Attribute\_Label:*  
 WATER\_CODE  
*Attribute\_Definition:*  
 Specifies a polygon as either water or land.  
*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 L  
*Enumerated\_Domain\_Value\_Definition:*  
 Land  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 W  
*Enumerated\_Domain\_Value\_Definition:*  
 Water  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

ENVIR

*Attribute\_Definition:*

Type of regional environment.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

E

*Enumerated\_Domain\_Value\_Definition:*

Estuarine

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

U

*Enumerated\_Domain\_Value\_Definition:*

Unclassified

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

ESI\_SOURCE

*Attribute\_Definition:*

Source identifier that links to the SOURCES data table. This identifier indicates the source of the ESI classification of a polygon. Polygon features that do not have an associated ESI value are given an ESI\_SOURCE value of -1.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

-1

*Range\_Domain\_Maximum:*

N

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

SOURCES

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

SOURCE\_ID

*Attribute\_Definition:*

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table; G\_SOURCE and S\_SOURCE in the BIORES table; and SOURCE\_ID and ESI\_Source in the ESI and HYDRO data layers.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

ORIGINATOR

*Attribute\_Definition:*

Author or developer of source material or data set.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

DATE\_PUB

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

TITLE

*Attribute\_Definition:*

Title of source material or data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

DATA\_FORMAT

*Attribute\_Definition:*

The format of the source material.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

PUB\_PLACE

*Attribute\_Definition:*

Publication place.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

PUBLISHER

*Attribute\_Definition:*

Publisher.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

PUBLICATION

*Attribute\_Definition:*

Additional citation information.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

ONLINE\_LINK

*Attribute\_Definition:*

Online computer resource URL.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*



*Attribute\_Label:*

SCALE

*Attribute\_Definition:*

Description of the source scale.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

TIME\_PERIOD

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Overview\_Description:**Entity\_and\_Attribute\_Overview:*

The geographic data layer containing resource information (in this case, ESI) is linked to the SOURCES table using the SOURCE\_ID. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

*Entity\_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 ([http://response.restoration.noaa.gov/esi\\_guidelines](http://response.restoration.noaa.gov/esi_guidelines)).

[Back To Index](#)*Distribution\_Information:**Distributor:**Contact\_Information:**Contact\_Person\_Primary:**Contact\_Person:*

John Kaperick

*Contact\_Organization:*

NOAA, Office of Response and Restoration

*Contact\_Address:**Address\_Type:*

Physical Address

*Address:*

7600 Sand Point Way N.E.

*City:*

Seattle

*State\_or\_Province:*

Washington

*Postal\_Code:*

98115-6349

*Contact\_Voice\_Telephone:*

(206) 526-6400

*Contact\_Facsimile\_Telephone:*

(206) 526-6329

*Resource\_Description:*

Downloadable Data

*Distribution\_Liability:*

Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer input peripherals, or when the physical medium is delivered in damaged condition.

*Custom\_Order\_Process:*

Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to the widest community of GIS/mapping users. Distribution formats include Geodatabase; ARC export, MOSS, and Shape files; and MARPLOT map folders. An ArcMap .mxd file, an ArcView 3.x ESI project, and an ESI\_Viewer product for use with the MARPLOT data are also included on the distribution CDs/DVDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

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*Metadata\_Reference\_Information:**Metadata\_Date:*

20100927

*Metadata\_Review\_Date:*

20100927

*Metadata\_Contact:**Contact\_Information:**Contact\_Person\_Primary:**Contact\_Person:*

Jill Petersen

*Contact\_Organization:*

NOAA, Office of Response and Restoration

*Contact\_Position:*

GIS Manager

*Contact\_Address:**Address\_Type:*

Physical Address

*Address:*

7600 Sand Point Way, N.E.

*City:*

Seattle

*State\_or\_Province:*

Washington

*Postal\_Code:*

98115-6349

*Contact\_Voice\_Telephone:*

(206) 526-6944

*Contact\_Facsimile\_Telephone:*

(206) 526-6329

*Contact\_Electronic\_Mail\_Address:*

[Jill.Petersen@noaa.gov](mailto:Jill.Petersen@noaa.gov)

*Metadata\_Standard\_Name:*

Content Standards for Digital Geospatial Metadata

*Metadata\_Standard\_Version:*

FGDC-STD-001-1998

*Metadata\_Extensions:*

*Online\_Linkage:*

[http://www.ncddc.noaa.gov/metadataresource/metadata-references/files/ncddcmdprofile\\_v2.pdf](http://www.ncddc.noaa.gov/metadataresource/metadata-references/files/ncddcmdprofile_v2.pdf)

*Profile\_Name:*

Content Specification for Metadata in the National Coastal Data Development Center's Data Catalog Version 2.0

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# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Southern California: ACP (Area Contingency Plan Points)

## Metadata:

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

### *Identification\_Information:*

#### *Citation:*

##### *Citation\_Information:*

##### *Originator:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington.

##### *Originator:*

Department of Homeland Security, United States Coast Guard, Office of Incident Management and Preparedness, Washington, D.C.

##### *Originator:*

Department of Fish and Game, Office of Spill Prevention and Response, Sacramento, California.

##### *Publication\_Date:*

201003

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Southern California: ACP (Area Contingency Plan Points)

##### *Edition:*

Second

##### *Geospatial\_Data\_Presentation\_Form:*

vector digital data

##### *Series\_Information:*

##### *Series\_Name:*

None

##### *Issue\_Identification:*

Southern California

##### *Publication\_Information:*

##### *Publication\_Place:*

Seattle, Washington

##### *Publisher:*

NOAA's Ocean Service, Office of Response and Restoration (OR&R),  
Emergency Response Division (ERD).

*Other\_Citation\_Details:*

Prepared by Research Planning, Inc., Columbia, South Carolina for the  
National Oceanic and Atmospheric Administration (NOAA), National Ocean  
Service, Office of Response and Restoration, Emergency Response Division,  
Seattle, Washington.

*Online\_Linkage:*

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

*Description:*

*Abstract:*

This data set contains data for Area Contingency Plan (ACP) sensitive sites in Southern California. Vector points in this data set represent sites identified as sensitive for biological and/or human-use resources that should be prioritized for protection during spill response activities. This data set comprises a portion of the ESI data for Southern California. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources.

*Purpose:*

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

*Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:*

2000

*Ending\_Date:*

2010

*Currentness\_Reference:*

The data were compiled during 2008-2010. The currentness dates for the data range from 2000 to 2010 and are documented in the Lineage section.

*Status:*

*Progress:*

Complete

*Maintenance\_and\_Update\_Frequency:*

None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:*

-120.60100

*East\_Bounding\_Coordinate:*

-117.00100

*North\_Bounding\_Coordinate:*

34.50000

*South\_Bounding\_Coordinate:*

32.44500

*Keywords:*

*Theme:*

*Theme\_Keyword\_Thesaurus:*  
 ISO 19115 Topic Category  
*Theme\_Keyword:*  
 biota  
*Theme\_Keyword:*  
 environment

*Theme:*

*Theme\_Keyword\_Thesaurus:*  
 None  
*Theme\_Keyword:*  
 Environmental Monitoring  
*Theme\_Keyword:*  
 ESI  
*Theme\_Keyword:*  
 Sensitivity maps  
*Theme\_Keyword:*  
 Coastal resources  
*Theme\_Keyword:*  
 Oil spill planning  
*Theme\_Keyword:*  
 Coastal Zone Management  
*Theme\_Keyword:*  
 Wildlife  
*Theme\_Keyword:*  
 Area contingency plan

*Theme:*

*Theme\_Keyword\_Thesaurus:*  
 NOS Data Explorer Topic Category  
*Theme\_Keyword:*  
 Environmental Monitoring

*Place:*

*Place\_Keyword\_Thesaurus:*  
 None  
*Place\_Keyword:*  
 Southern California

*Access\_Constraints:*

None

*Use\_Constraints:*

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

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:*

[datafig.jpg](#)

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and attribute data tables for the Southern California ESI data.

*Browse\_Graphic\_File\_Type:*

JPEG

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:*

[datafig2.jpg](#)

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and desktop data tables for the Southern California ESI data.

*Browse\_Graphic\_File\_Type:*

JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington; the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness Washington, D.C.; and the California Department of Fish and Game (CDF&G), Office of Spill Prevention and Response (OSPR), Sacramento, California.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 9.3) and SQL SERVER(R) (version 2000). The hardware configuration is PC's with Windows Operating System (2000/XP/2003). The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in the data set: acp.e00, birds.e00, esi.e00, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, and t\_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio\_lut.e00, biofile.e00, biores.e00, breed.e00, breed\_dt.e00, seasonal.e00, soc\_dat.e00, soc\_lut.e00, sources.e00, species.e00, and status.e00.

*Program\_Affiliation:*

*Program\_Name:*

National Ocean Service Data Explorer

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*Data\_Quality\_Information:*

*Attribute\_Accuracy:*

*Attribute\_Accuracy\_Report:*

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

*Logical\_Consistency\_Report:*

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

*Completeness\_Report:*

These data represent the Los Angeles / Long Beach and San Diego Oil Spill Contingency Plans.

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

The ACP 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.

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

CDF&G OFFICE OF SPILL PREVENTION AND  
RESPONSE (OSPR)

*Publication\_Date:*

2009

*Title:*

ACP SENSITIVE SITES AND SHORELINE ACCESS  
POINTS

*Geospatial\_Data\_Presentation\_Form:*

vector digital data

*Other\_Citation\_Details:*

UNPUBLISHED

*Online\_Linkage:*

[http://www.dfg.ca.gov/ospr/Response/ACP\\_Marine.aspx](http://www.dfg.ca.gov/ospr/Response/ACP_Marine.aspx)

*Type\_of\_Source\_Media:*

CD-ROM

*Source\_Time\_Period\_of\_Content:**Time\_Period\_Information:**Single\_Date/Time:**Calendar\_Date:*

2009

*Source\_Currentness\_Reference:*

DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*



## ACP INFORMATION

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

These data were imported from digital data sets provided by the California Department of Fish and Game (CDF&G), Office of Spill Prevention and Response (OSPR). The point data and associated attribute information were plotted on hardcopy maps and reviewed for accuracy. Edits, if any, were made by the resource experts during the review period.

*Process\_Date:*

201003

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

NOAA, Office of Response and Restoration

*Contact\_Person:*

Jill Petersen

*Contact\_Address:**Address\_Type:*

Physical address

*Address:*

7600 Sand Point Way, N.E.

*City:*

Seattle

*State\_or\_Province:*

Washington

*Postal\_Code:*

98115-6349

*Contact\_Voice\_Telephone:*

(206) 526-6944

*Contact\_Facsimile\_Telephone:*

(206) 526-6329

*Contact\_Electronic\_Mail\_Address:*[Jill.Petersen@noaa.gov](mailto:Jill.Petersen@noaa.gov)[Back To Index](#)*Spatial\_Data\_Organization\_Information:**Direct\_Spatial\_Reference\_Method:*

Vector

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

Area point

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

148

[Back To Index](#)*Spatial\_Reference\_Information:**Horizontal\_Coordinate\_System\_Definition:*

Geographic:

*Latitude\_Resolution:*  
 0.0000001  
*Longitude\_Resolution:*  
 0.0000001  
*Geographic\_Coordinate\_Units:*  
 Decimal degrees  
*Geodetic\_Model:*  
*Horizontal\_Datum\_Name:*  
 North American Datum of 1983  
*Ellipsoid\_Name:*  
 Geodetic Reference System 80  
*Semi-major\_Axis:*  
 6378137.000000  
*Denominator\_of\_Flattening\_Ratio:*  
 298.257222

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*Entity\_and\_Attribute\_Information:*

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:*

ACP.PAT

*Entity\_Type\_Definition:*

The ACP.PAT table contains attribute information for the vector points representing sensitive area features in the ACP data layer.

*Entity\_Type\_Definition\_Source:*

California Department of Fish and Game (CDF&G),  
[http://www.dfg.ca.gov/ospr/Response/ACP\\_Marine.aspx](http://www.dfg.ca.gov/ospr/Response/ACP_Marine.aspx).

*Attribute:*

*Attribute\_Label:*

LATDD

*Attribute\_Definition:*

ACP site latitude in decimal degrees.

*Attribute\_Definition\_Source:*

CDF&G

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

-90

*Range\_Domain\_Maximum:*

90

*Attribute:*

*Attribute\_Label:*

LONDD

*Attribute\_Definition:*

ACP site longitude in decimal degrees.

*Attribute\_Definition\_Source:*

CDF&G

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

-180

*Range\_Domain\_Maximum:*

180

*Attribute:**Attribute\_Label:*

SITE\_NUM\_N

*Attribute\_Definition:*

ID of the ACP site.

*Attribute\_Definition\_Source:*

CDF&amp;G

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Free Text.

*Attribute:**Attribute\_Label:*

SITE\_NAME

*Attribute\_Definition:*

Name of the ACP site.

*Attribute\_Definition\_Source:*

CDF&amp;G

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Free Text.

*Attribute:**Attribute\_Label:*

DATE\_

*Attribute\_Definition:*

Date of the last ACP site survey.

*Attribute\_Definition\_Source:*

CDF&amp;G

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

MM/DD/YYYY

*Enumerated\_Domain\_Value\_Definition:*

MM for month, DD for day, and YYYY for year.

*Enumerated\_Domain\_Value\_Definition\_Source:*

CDF&amp;G

[Back To Index](#)*Distribution\_Information:**Distributor:**Contact\_Information:**Contact\_Person\_Primary:**Contact\_Person:*

John Kaperick

*Contact\_Organization:*

NOAA, Office of Response and Restoration

*Contact\_Address:**Address\_Type:*

Physical Address

*Address:*

7600 Sand Point Way N.E.

*City:*

Seattle

*State\_or\_Province:*

Washington

*Postal\_Code:*

98115-6349

*Contact\_Voice\_Telephone:*

(206) 526-6400

*Contact\_Facsimile\_Telephone:*

(206) 526-6329

*Resource\_Description:*

Downloadable Data

*Distribution\_Liability:*

Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer input peripherals, or when the physical medium is delivered in damaged condition.

*Custom\_Order\_Process:*

Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to the widest community of GIS/mapping users. Distribution formats include Geodatabase; ARC export, MOSS, and Shape files; and MARPLOT map folders. An ArcMap .mxd file, an ArcView 3.x ESI project, and an ESI\_Viewer product for use with the MARPLOT data are also included on the distribution CDs/DVDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

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*Metadata\_Reference\_Information:**Metadata\_Date:*

20100927

*Metadata\_Review\_Date:*

20100927

*Metadata\_Contact:**Contact\_Information:**Contact\_Person\_Primary:**Contact\_Person:*

Jill Petersen

*Contact\_Organization:*

NOAA, Office of Response and Restoration

*Contact\_Position:*

GIS Manager

*Contact\_Address:**Address\_Type:*

Physical Address

*Address:*

7600 Sand Point Way, N.E.

*City:*

Seattle

*State\_or\_Province:*

Washington

*Postal\_Code:*

98115-6349

*Contact\_Voice\_Telephone:*

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*Contact\_Facsimile\_Telephone:*

(206) 526-6329

*Contact\_Electronic\_Mail\_Address:*

[Jill.Petersen@noaa.gov](mailto:Jill.Petersen@noaa.gov)

*Metadata\_Standard\_Name:*

Content Standards for Digital Geospatial Metadata

*Metadata\_Standard\_Version:*

FGDC-STD-001-1998

*Metadata\_Extensions:*

*Online\_Linkage:*

[http://www.ncddc.noaa.gov/metadataresource/metadata-references/files/ncddcmdprofile\\_v2.pdf](http://www.ncddc.noaa.gov/metadataresource/metadata-references/files/ncddcmdprofile_v2.pdf)

*Profile\_Name:*

Content Specification for Metadata in the National Coastal Data Development Center's Data Catalog Version 2.0

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# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Southern California: INDEX (Index Polygons)

## Metadata:

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

### *Identification\_Information:*

#### *Citation:*

##### *Citation\_Information:*

##### *Originator:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington.

##### *Originator:*

Department of Homeland Security, United States Coast Guard, Office of Incident Management and Preparedness, Washington, D.C.

##### *Originator:*

Department of Fish and Game, Office of Spill Prevention and Response, Sacramento, California.

##### *Publication\_Date:*

201003

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Southern California: INDEX (Index Polygons)

##### *Edition:*

Second

##### *Geospatial\_Data\_Presentation\_Form:*

vector digital data

##### *Series\_Information:*

##### *Series\_Name:*

None

##### *Issue\_Identification:*

Southern California

##### *Publication\_Information:*

##### *Publication\_Place:*

Seattle, Washington

##### *Publisher:*

NOAA's Ocean Service, Office of Response and Restoration (OR&R),  
Emergency Response Division (ERD).

*Other\_Citation\_Details:*

Prepared by Research Planning, Inc., Columbia, South Carolina for the  
National Oceanic and Atmospheric Administration (NOAA), National Ocean  
Service, Office of Response and Restoration, Emergency Response Division,  
Seattle, Washington.

*Online\_Linkage:*

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

*Description:*

*Abstract:*

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

*Purpose:*

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

*Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:*

2009

*Currentness\_Reference:*

The data were compiled during 2008-2010. The currentness date for the data is 2009 and is documented in the Lineage section.

*Status:*

*Progress:*

Complete

*Maintenance\_and\_Update\_Frequency:*

None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:*

-120.60100

*East\_Bounding\_Coordinate:*

-117.00100

*North\_Bounding\_Coordinate:*

34.50000

*South\_Bounding\_Coordinate:*

32.44500

*Keywords:*

*Theme:*

*Theme\_Keyword\_Thesaurus:*

ISO 19115 Topic Category

*Theme\_Keyword:*

biota

*Theme\_Keyword:*

environment

*Theme:*

*Theme\_Keyword\_Thesaurus:*

None

*Theme\_Keyword:*

Environmental Monitoring

*Theme\_Keyword:*

ESI

*Theme\_Keyword:*

Sensitivity maps

*Theme\_Keyword:*

Coastal resources

*Theme\_Keyword:*

Oil spill planning

*Theme\_Keyword:*

Coastal Zone Management

*Theme\_Keyword:*

Wildlife

*Theme:*

*Theme\_Keyword\_Thesaurus:*

NOS Data Explorer Topic Category

*Theme\_Keyword:*

Environmental Monitoring

*Place:*

*Place\_Keyword\_Thesaurus:*

None

*Place\_Keyword:*

Southern California

*Access\_Constraints:*

None

*Use\_Constraints:*

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

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:*

[datafig.jpg](#)

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and attribute data tables for the Southern California ESI data.



*Browse\_Graphic\_File\_Type:*

JPEG

*Browse\_Graphic:**Browse\_Graphic\_File\_Name:*[datafig2.jpg](#)*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and desktop data tables for the Southern California ESI data.

*Browse\_Graphic\_File\_Type:*

JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington; the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness Washington, D.C.; and the California Department of Fish and Game (CDF&G), Office of Spill Prevention and Response (OSPR), Sacramento, California.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 9.3) and SQL SERVER(R) (version 2000). The hardware configuration is PC's with Windows Operating System (2000/XP/2003). The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in the data set: acp.e00, birds.e00, esi.e00, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, and t\_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio\_lut.e00, biofile.e00, biores.e00, breed.e00, breed\_dt.e00, seasonal.e00, soc\_dat.e00, soc\_lut.e00, sources.e00, species.e00, and status.e00.

*Program\_Affiliation:**Program\_Name:*

National Ocean Service Data Explorer

[Back To Index](#)*Data\_Quality\_Information:**Attribute\_Accuracy:**Attribute\_Accuracy\_Report:*

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

*Logical\_Consistency\_Report:*

A multi-stage error checking process, described in the above Attribute\_Accuracy\_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for

proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and SQL SERVER(R) to ARC/INFO(R) consistencies. A final review is made by the GIS manager, where the data are written to CD/DVD and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks.

*Completeness\_Report:*

These data represent the boundaries of all hardcopy cartographic products as part of the ESI Southern California, as well as digital data extents.

*Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy\_Report:*

The index polygons in this data layer were generated in ArcInfo from the coordinates of the USGS 1:24,000 topographic map corners. Some small amount of positional error may be present along the arcs forming the boundaries of these polygons, particularly away from the polygon corners. Some boundaries were developed from pre-existing digital and hardcopy sources and reflect the positional accuracy of these original data. See the Lineage and Process\_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

RESEARCH PLANNING, INC.

*Publication\_Date:*

2008

*Title:*

ESI INDEX

*Geospatial\_Data\_Presentation\_Form:*

vector digital data

*Other\_Citation\_Details:*

UNPUBLISHED

*Source\_Scale\_Denominator:*

24000

*Type\_of\_Source\_Media:*

DIGITAL

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:*

2008

*Source\_Currentness\_Reference:*

DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

INDEX INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:**Originator:*

U.S. GEOLOGICAL SURVEY

*Publication\_Date:*

2009

*Title:*

TOPOGRAPHIC MAPS

*Geospatial\_Data\_Presentation\_Form:*

raster digital data

*Publication\_Information:**Publication\_Place:*

RESTON, VA

*Publisher:*

USGS

*Source\_Scale\_Denominator:*

24000

*Type\_of\_Source\_Media:*

online

*Source\_Time\_Period\_of\_Content:**Time\_Period\_Information:**Range\_of\_Dates/Times:**Beginning\_Date:*

1943

*Ending\_Date:*

1988

*Source\_Currentness\_Reference:*

DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

ANACAPA ISLAND, CALIF. (1973); CARPINTERIA, CALIF. (1988); DANA POINT, CALIF. (1975); DEL MAR, CALIF. (1975); DOS PUEBLOS CANYON, CALIF. (1988); ENCINITAS, CALIF. (1975); GAVIOTA, CALIF. (1982); GOLETA, CALIF. (1988); IMPERIAL BEACH, CALIF.-BAJA CALIF. NORTE (1975); LA JOLLA, CALIF. (1975); LAGUNA BEACH, CALIF. (1981); LAS PULGAS CANYON, CALIF. (1975); LONG BEACH, CALIF. (1981); LOS ALAMITOS, CALIF. (1981); MALIBU, CALIF. (1981); NATIONAL CITY, CALIF. (1975); NEWPORT BEACH, CALIF. (1981); OCEANSIDE, CALIF. (1975); OXNARD, CALIF. (1967); PITAS POINT, CALIF. (1967); POINT CONCEPTION, CALIF. (1974); POINT DUME, CALIF. (1981); POINT LOMA, CALIF. (1975); POINT MUGU, CALIF. (1967); REDONDO BEACH, CALIF. (1981); SACATE, CALIF. (1953); SAN CLEMENTE ISLAND CENTRAL, CALIF. (1980); SAN CLEMENTE ISLAND NORTH, CALIF. (1980); SAN CLEMENTE ISLAND SOUTH, CALIF. (1980); SAN CLEMENTE, CALIF. (1975); SAN JUAN CAPISTRANO, CALIF. (1981); SAN LUIS REY, CALIF. (1975); SAN MIGUEL ISLAND EAST, CALIF. (1943); SAN MIGUEL ISLAND WEST, CALIF. (1943); SAN NICOLAS ISLAND, CALIF. (1956); SAN ONOFRE BLUFF, CALIF. (1975); SAN PEDRO, CALIF. (1981); SANTA BARBARA ISLAND, CALIF. (1973); SANTA

BARBARA, CALIF. (1988); SANTA CATALINA EAST, CALIF. (1980); SANTA CATALINA NORTH, CALIF. (1980); SANTA CATALINA SOUTH, CALIF. (1980); SANTA CATALINA WEST, CALIF. (1980); SANTA CRUZ ISLAND A, CALIF. (1974); SANTA CRUZ ISLAND B, CALIF. (1943); SANTA CRUZ ISLAND C, CALIF. (1974); SANTA CRUZ ISLAND D, CALIF. (1974); SANTA ROSA ISLAND EAST, CALIF. (1943); SANTA ROSA ISLAND NORTH, CALIF. (1943); SANTA ROSA ISLAND SOUTH, CALIF. (1943); SANTA ROSA ISLAND WEST, CALIF. (1943); SEAL BEACH, CALIF. (1981); TAJIGUAS, CALIF. (1982); TOPANGA, CALIF. (1981); TORRANCE, CALIF. (1981); TRIUNFO PASS, CALIF. (1967); VENICE, CALIF. (1981); VENTURA, CALIF. (1967); WHITE LEDGE PEAK, CALIF. (1967).

*Process\_Step:*

*Process\_Description:*

Primarily, 1:24,000 USGS topographic maps were used to provide boundaries for cartographic products. In some cases the polygons represent USGS topographic maps that were re-tiled, moved, or extended to provide better cartographic coverage of the study area.

*Process\_Date:*

201003

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:*

NOAA, Office of Response and Restoration

*Contact\_Person:*

Jill Petersen

*Contact\_Address:*

*Address\_Type:*

Physical address

*Address:*

7600 Sand Point Way, N.E.

*City:*

Seattle

*State\_or\_Province:*

Washington

*Postal\_Code:*

98115-6349

*Contact\_Voice\_Telephone:*

(206) 526-6944

*Contact\_Facsimile\_Telephone:*

(206) 526-6329

*Contact\_Electronic\_Mail\_Address:*

[Jill.Petersen@noaa.gov](mailto:Jill.Petersen@noaa.gov)

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*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:*

Vector

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

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

GT-polygon composed of chains

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

56

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Area point

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

57

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Complete chain

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

238

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Link

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

241

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Node, planar graph

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

187

[Back To Index](#)*Spatial\_Reference\_Information:**Horizontal\_Coordinate\_System\_Definition:**Geographic:**Latitude\_Resolution:*

0.0000001

*Longitude\_Resolution:*

0.0000001

*Geographic\_Coordinate\_Units:*

Decimal degrees

*Geodetic\_Model:**Horizontal\_Datum\_Name:*

North American Datum of 1983

*Ellipsoid\_Name:*

Geodetic Reference System 80

*Semi-major\_Axis:*

6378137.000000

*Denominator\_of\_Flattening\_Ratio:*

298.257222

[Back To Index](#)*Entity\_and\_Attribute\_Information:**Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:*

## INDEX.PAT

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

TILE-NAME

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

1

*Range\_Domain\_Maximum:*

53

*Attribute:**Attribute\_Label:*

TOPO-NAME

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

SCALE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

24000

*Enumerated\_Domain\_Value\_Definition:*

Scale = 1:24,000

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

MAPANGLE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

-5.4980

*Range\_Domain\_Maximum:*

23.7630

*Attribute\_Units\_of\_Measure:*

Degree

*Attribute:**Attribute\_Label:*

PAGESIZE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

11,17

*Enumerated\_Domain\_Value\_Definition:*

Page size= 11" by 17"

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Overview\_Description:**Entity\_and\_Attribute\_Overview:*

The entity-relationship diagram describes relationships between attribute tables in the ESI data structure. This particular geographic data layer (INDEX) 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 ([http://response.restoration.noaa.gov/esi\\_guidelines](http://response.restoration.noaa.gov/esi_guidelines)).

[Back To Index](#)

*Distribution\_Information:**Distributor:**Contact\_Information:**Contact\_Person\_Primary:**Contact\_Person:*

John Kaperick

*Contact\_Organization:*

NOAA, Office of Response and Restoration

*Contact\_Address:**Address\_Type:*

Physical Address

*Address:*

7600 Sand Point Way N.E.

*City:*

Seattle

*State\_or\_Province:*

Washington

*Postal\_Code:*

98115-6349

*Contact\_Voice\_Telephone:*

(206) 526-6400

*Contact\_Facsimile\_Telephone:*

(206) 526-6329

*Resource\_Description:*

Downloadable Data

*Distribution\_Liability:*

Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer input peripherals, or when the physical medium is delivered in damaged condition.

*Custom\_Order\_Process:*

Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to the widest community of GIS/mapping users. Distribution formats include Geodatabase; ARC export, MOSS, and Shape files; and MARPLOT map folders. An ArcMap .mxd file, an ArcView 3.x ESI project, and an ESI\_Viewer product for use with the MARPLOT data are also included on the distribution CDs/DVDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

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---

*Metadata\_Reference\_Information:**Metadata\_Date:*

20100927

*Metadata\_Review\_Date:*

20100927

*Metadata\_Contact:**Contact\_Information:**Contact\_Person\_Primary:**Contact\_Person:*

Jill Petersen

*Contact\_Organization:*

NOAA, Office of Response and Restoration

*Contact\_Position:*

GIS Manager

*Contact\_Address:**Address\_Type:*



Physical Address

*Address:*

7600 Sand Point Way, N.E.

*City:*

Seattle

*State\_or\_Province:*

Washington

*Postal\_Code:*

98115-6349

*Contact\_Voice\_Telephone:*

(206) 526-6944

*Contact\_Facsimile\_Telephone:*

(206) 526-6329

*Contact\_Electronic\_Mail\_Address:*

[Jill.Petersen@noaa.gov](mailto:Jill.Petersen@noaa.gov)

*Metadata\_Standard\_Name:*

Content Standards for Digital Geospatial Metadata

*Metadata\_Standard\_Version:*

FGDC-STD-001-1998

*Metadata\_Extensions:*

*Online\_Linkage:*

[http://www.ncddc.noaa.gov/metadataresource/metadata-references/files/ncddcmdprofile\\_v2.pdf](http://www.ncddc.noaa.gov/metadataresource/metadata-references/files/ncddcmdprofile_v2.pdf)

*Profile\_Name:*

Content Specification for Metadata in the National Coastal Data Development Center's Data Catalog Version 2.0

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# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Southern California: MGT (Management Area Polygons)

## Metadata:

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

### *Identification\_Information:*

#### *Citation:*

##### *Citation\_Information:*

##### *Originator:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington.

##### *Originator:*

Department of Homeland Security, United States Coast Guard, Office of Incident Management and Preparedness, Washington, D.C.

##### *Originator:*

Department of Fish and Game, Office of Spill Prevention and Response, Sacramento, California.

##### *Publication\_Date:*

201003

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Southern California: MGT (Management Area Polygons)

##### *Edition:*

Second

##### *Geospatial\_Data\_Presentation\_Form:*

vector digital data

##### *Series\_Information:*

##### *Series\_Name:*

None

##### *Issue\_Identification:*

Southern California

##### *Publication\_Information:*

##### *Publication\_Place:*

Seattle, Washington

##### *Publisher:*

NOAA's Ocean Service, Office of Response and Restoration (OR&R),  
Emergency Response Division (ERD).

*Other\_Citation\_Details:*

Prepared by Research Planning, Inc., Columbia, South Carolina for the  
National Oceanic and Atmospheric Administration (NOAA), National Ocean  
Service, Office of Response and Restoration, Emergency Response Division,  
Seattle, Washington.

*Online\_Linkage:*

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

*Description:*

*Abstract:*

This data set contains sensitive human-use data for critical habitats, fishery areas, management areas, marine sanctuaries, national forests, national parks, The Nature Conservancy (TNC) lands, parks, and wildlife refuges in Southern California. Vector polygons in this data set represent management areas. Location-specific type and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the ESI data for Southern California. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources. See also the SOCECON data layer, part of the larger Southern California ESI database, for additional human-use information.

*Purpose:*

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

*Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:*

2002

*Ending\_Date:*

2010

*Currentness\_Reference:*

The data were compiled during 2008-2010. The currentness dates for the data range from 2002 to 2010 and are documented in the Lineage section.

*Status:*

*Progress:*

Complete

*Maintenance\_and\_Update\_Frequency:*

None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:*

-120.60100

*East\_Bounding\_Coordinate:*

-117.00100

*North\_Bounding\_Coordinate:*

34.50000

*South\_Bounding\_Coordinate:*

32.44500

*Keywords:**Theme:**Theme\_Keyword\_Thesaurus:*

ISO 19115 Topic Category

*Theme\_Keyword:*

biota

*Theme\_Keyword:*

environment

*Theme:**Theme\_Keyword\_Thesaurus:*

None

*Theme\_Keyword:*

Environmental Monitoring

*Theme\_Keyword:*

ESI

*Theme\_Keyword:*

Sensitivity maps

*Theme\_Keyword:*

Coastal resources

*Theme\_Keyword:*

Oil spill planning

*Theme\_Keyword:*

Coastal Zone Management

*Theme\_Keyword:*

Wildlife

*Theme\_Keyword:*

Management

*Theme:**Theme\_Keyword\_Thesaurus:*

NOS Data Explorer Topic Category

*Theme\_Keyword:*

Environmental Monitoring

*Place:**Place\_Keyword\_Thesaurus:*

None

*Place\_Keyword:*

Southern California

*Access\_Constraints:*

None

*Use\_Constraints:*

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

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

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:*

[datafig.jpg](#)

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and attribute data tables for the Southern California ESI data.

*Browse\_Graphic\_File\_Type:*

JPEG

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:*

[datafig2.jpg](#)

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and desktop data tables for the Southern California ESI data.

*Browse\_Graphic\_File\_Type:*

JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington; the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness Washington, D.C.; and the California Department of Fish and Game (CDF&G), Office of Spill Prevention and Response (OSPR), Sacramento, California.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 9.3) and SQL SERVER(R) (version 2000). The hardware configuration is PC's with Windows Operating System (2000/XP/2003). The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in the data set: acp.e00, birds.e00, esi.e00, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, and t\_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio\_lut.e00, biofile.e00, biores.e00, breed.e00, breed\_dt.e00, seasonal.e00, soc\_dat.e00, soc\_lut.e00, sources.e00, species.e00, and status.e00.

*Program\_Affiliation:*

*Program\_Name:*

National Ocean Service Data Explorer

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*Data\_Quality\_Information:*

*Attribute\_Accuracy:*

*Attribute\_Accuracy\_Report:*

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

depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

*Logical\_Consistency\_Report:*

A multi-stage error checking process, described in the above Attribute\_Accuracy\_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and SQL SERVER(R) to ARC/INFO(R) consistencies. A final review is made by the GIS manager, where the data are written to CD/DVD and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resource at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

*Completeness\_Report:*

These data represent a synthesis of digital boundaries for management areas. See also the SOCECON data layer, part of the larger Southern California ESI database, for additional human-use information. These data do not necessarily represent all management areas in Southern California.

*Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy\_Report:*

Spatial components for the human-use data layers can come from expert interviews, hardcopy, or digital sources. Most of the spatial components of the human-use data layers are developed from pre-existing digital or hardcopy sources and reflect the positional accuracy of these original data. Some of the spatial components of the human-use data layers are compiled on hardcopy base maps with a scale of 1:24,000. See the Lineage and Process\_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

CAL STATE PARKS ACQUISITION AND  
DEVELOPMENT DIVISION

*Publication\_Date:*

2008

*Title:*

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*Geospatial\_Data\_Presentation\_Form:*  
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*Other\_Citation\_Details:*  
 CALIFORNIA STATE PARKS  
*Source\_Scale\_Denominator:*  
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*Type\_of\_Source\_Media:*  
 online  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
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*Calendar\_Date:*  
 2008  
*Source\_Currentness\_Reference:*  
 DATE OF PUBLICATION  
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*Source\_Contribution:*  
 MGT INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 CDF&G AND CHANNEL ISLANDS NATIONAL  
 MARINE SANCTUARY (CINMS)  
*Publication\_Date:*  
 2007  
*Title:*  
 BOUNDARIES OF MARINE PROTECTED AREAS  
 (MPAS) WITHIN THE CHANNEL ISLANDS NATIONAL  
 MARINE SANCTUARY  
*Geospatial\_Data\_Presentation\_Form:*  
 vector digital data  
*Other\_Citation\_Details:*  
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*Type\_of\_Source\_Media:*  
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*Source\_Time\_Period\_of\_Content:*  
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*Single\_Date/Time:*  
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*Source\_Citation:*

*Citation\_Information:*

*Originator:*

CDF&G MARINE REGION GIS

*Publication\_Date:*

2008

*Title:*

STATE MARINE PROTECTED AREAS WITHIN THE  
SOUTH COAST STUDY AREA

*Geospatial\_Data\_Presentation\_Form:*

vector digital data

*Other\_Citation\_Details:*

UNIVERSITY OF CALIFORNIA SANTA BARBARA,  
MARINE LIFE PROTECTION ACT (UCSB MLPA)

*Type\_of\_Source\_Media:*

online

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

*Time\_Period\_Information:*

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*Calendar\_Date:*

2008

*Source\_Currentness\_Reference:*

DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

MGT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

CDF&G OFFICE OF SPILL PREVENTION AND  
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*Publication\_Date:*

2009

*Title:*

FISHERY SEASONS

*Geospatial\_Data\_Presentation\_Form:*

spreadsheet

*Other\_Citation\_Details:*

UNPUBLISHED

*Type\_of\_Source\_Media:*

EMAIL

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:*

2009

*Source\_Currentness\_Reference:*

DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:*

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*Source\_Contribution:*  
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*Originator:*  
 California Department of Fish and Game  
*Publication\_Date:*  
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*Title:*  
 California Department of Fish and Game Owned Lands  
 (DFG Owned Lands)  
*Geospatial\_Data\_Presentation\_Form:*  
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*Online\_Linkage:*  
[http://ftp.dfg.ca.gov/Public/Wildlife\\_Branch/DFG\\_Lands/](http://ftp.dfg.ca.gov/Public/Wildlife_Branch/DFG_Lands/)  
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 MARINE LIFE PROTECTION ACT (MLPA)  
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*Publication\_Date:*  
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*Source\_Time\_Period\_of\_Content:*  
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*Citation\_Information:*  
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 National Park Service  
*Publication\_Date:*  
 20090401  
*Title:*  
 Current Administrative Boundaries of National Park System  
 Units 04/01/2009  
*Geospatial\_Data\_Presentation\_Form:*  
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*Ending\_Date:*  
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*Citation\_Information:*  
*Originator:*  
THE NATURE CONSERVANCY, U.S. GEOLOGICAL  
SURVEY  
*Publication\_Date:*  
2005  
*Title:*  
SANTA CRUZ ISLAND MAP  
*Geospatial\_Data\_Presentation\_Form:*  
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*Originator:*  
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*Publication\_Date:*  
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SEAL BEACH NAVAL WEAPONS RESERVE  
BOUNDARY

*Geospatial\_Data\_Presentation\_Form:*  
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*Source\_Contribution:*  
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*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 UNITED STATES FISH AND WILDLIFE SERVICE  
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*Publication\_Date:*  
 2009  
*Title:*  
 FWS CRITICAL HABITAT FOR THREATENED AND  
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<http://criticalhabitat.fws.gov/>  
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*Source\_Time\_Period\_of\_Content:*  
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*Source\_Citation:*  
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*Originator:*

USDA Forest Service - Pacific Southwest Region - Regional  
 Office  
*Publication\_Date:*  
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*Title:*  
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 USFWS, Region 1, Division of Refuge Planning  
*Publication\_Date:*  
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*Source\_Currentness\_Reference:*  
 DATE OF PUBLICATION  
*Source\_Citation\_Abbreviation:*  
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*Source\_Contribution:*

MGT INFORMATION

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

Numerous digital coverages were used to depict management areas for this data layer. Data layers were provided by: NOAA National Marine Sanctuaries, California State Parks (CSP), U.S. Fish and Wildlife Service (USFWS), University of California Marine Life Protection Act (MLPA), U.S. Department of Agriculture (USDA) Forest Service, National Park Service (NPS), California Department of Fish and Game (CDF&G), and The Nature Conservancy. The above digital and/or hardcopy sources were compiled by the project biologist to create the MGT data layer. Depending on the type of source data, three general approaches are used for compiling the data layer: 1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:24,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the MGT data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:*

201003

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

NOAA, Office of Response and Restoration

*Contact\_Person:*

Jill Petersen

*Contact\_Address:**Address\_Type:*

Physical address

*Address:*

7600 Sand Point Way, N.E.

*City:*

Seattle

*State\_or\_Province:*

Washington

*Postal\_Code:*

98115-6349

*Contact\_Voice\_Telephone:*

(206) 526-6944

*Contact\_Facsimile\_Telephone:*

(206) 526-6329

*Contact\_Electronic\_Mail\_Address:*[Jill.Petersen@noaa.gov](mailto:Jill.Petersen@noaa.gov)

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---

*Spatial\_Data\_Organization\_Information:**Direct\_Spatial\_Reference\_Method:*

Vector

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

GT-polygon composed of chains

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

1772

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Area point

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

1773

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Complete chain

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

3189

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Link

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

139696

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Node, planar graph

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

2267

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

0.0000001

*Longitude\_Resolution:*

0.0000001

*Geographic\_Coordinate\_Units:*

Decimal degrees

*Geodetic\_Model:**Horizontal\_Datum\_Name:*

North American Datum of 1983

*Ellipsoid\_Name:*

Geodetic Reference System 80

*Semi-major\_Axis:*

6378137.000000

*Denominator\_of\_Flattening\_Ratio:*

298.257222

[Back To Index](#)*Entity\_and\_Attribute\_Information:**Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:*

MGT.PAT

*Entity\_Type\_Definition:*

The MGT.PAT table contains attribute information for the vector polygons representing critical habitats, fishery areas, management areas, marine sanctuaries, national forests, national parks, The Nature Conservancy (TNC) lands, parks, and wildlife refuges. Note that all attribute information is stored in a series of relational files, described below and in the Overview\_Description section. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

TYPE

*Attribute\_Definition:*

The human-use features depicted on the maps are those that could be impacted by an oil spill or could provide access for response operations. TYPE can be used as a quick identifier for the managed polygon features. Greater detail about the object is provided in the SOC\_DAT table.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

CH

*Enumerated\_Domain\_Value\_Definition:*

Designated Critical Habitat

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

FA

*Enumerated\_Domain\_Value\_Definition:*

Fishery Area

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

FO

*Enumerated\_Domain\_Value\_Definition:*



National Forest  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
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*Enumerated\_Domain\_Value:*  
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 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
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 MI  
*Enumerated\_Domain\_Value\_Definition:*  
 Military  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
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*Enumerated\_Domain\_Value:*  
 MR  
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 Multiple Records - Signifies that multiple types overlap in  
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*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
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*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
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 NP  
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 National Park  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
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 P  
*Enumerated\_Domain\_Value\_Definition:*  
 Regional or State Park  
*Enumerated\_Domain\_Value\_Definition\_Source:*

## NOAA ESI Guidelines

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

WR

*Enumerated\_Domain\_Value\_Definition:*

Wildlife Refuge

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

ID

*Attribute\_Definition:*

An identifier that links vector objects in the human-use data layers to records in the SOC\_LUT data table. ID is a concatenation of atlas number (209), element number (11), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:*

NOAA

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

2091100002

*Range\_Domain\_Maximum:*

2091101855

*Attribute:**Attribute\_Label:*

HUNUM

*Attribute\_Definition:*

An identifier that links directly to the SOC\_DAT table. HUNUM values of 0 are holes in the polygons and do not contain information.

*Attribute\_Definition\_Source:*

NOAA

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

209000393

*Range\_Domain\_Maximum:*

209001158

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

SOC\_LUT

*Entity\_Type\_Definition:*

The data table SOC\_LUT is a lookup table that contains items necessary for linking vector objects in the human-use data layers with the SOC\_DAT data table. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

HUNUM

*Attribute\_Definition:*

An identifier that links records in the SOC\_LUT data table to records in the SOC\_DAT data table. HUNUM values of 0 are holes in the polygons and do not contain information.

*Attribute\_Definition\_Source:*

NOAA

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

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*Range\_Domain\_Maximum:*

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*Attribute:**Attribute\_Label:*

ID

*Attribute\_Definition:*

An identifier that links vector objects in the human-use data layers to records in the SOC\_LUT data table. ID is a concatenation of atlas number (209), element number (10=SOCECON, 11=MGT), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:*

NOAA

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

2091000001

*Range\_Domain\_Maximum:*

2091101855

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

SOC\_DAT

*Entity\_Type\_Definition:*

The data table SOC\_DAT contains both human-use attribute data and items necessary for linking the human-use spatial data layers to the SOURCES data table. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

HUNUM

*Attribute\_Definition:*

An identifier that links records in the SOC\_DAT data table to records in the SOC\_LUT data table. HUNUM values of 0 are holes in the polygons and do not contain information.

*Attribute\_Definition\_Source:*

NOAA

*Attribute\_Domain\_Values:*

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*Range\_Domain\_Minimum:*

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*Range\_Domain\_Maximum:*

209001158

*Attribute:*

*Attribute\_Label:*

TYPE

*Attribute\_Definition:*

The human-use features depicted on the maps are those that could be impacted by an oil spill or could provide access for response operations.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

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*Enumerated\_Domain\_Value\_Definition:*

Access

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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*Enumerated\_Domain\_Value:*

AIRPORT

*Enumerated\_Domain\_Value\_Definition:*

Airport

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

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*Enumerated\_Domain\_Value\_Definition:*

Aquaculture

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

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*Enumerated\_Domain\_Value:*

BEACH

*Enumerated\_Domain\_Value\_Definition:*

Beach

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

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*Enumerated\_Domain\_Value:*

## BOAT RAMP

*Enumerated\_Domain\_Value\_Definition:*

Boat Ramp

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

COAST GUARD

*Enumerated\_Domain\_Value\_Definition:*

Coast Guard

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

CRITICAL HABITAT

*Enumerated\_Domain\_Value\_Definition:*

Designated Critical Habitat

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

FISHERY AREA

*Enumerated\_Domain\_Value\_Definition:*

Fishery Area

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

MANAGEMENT AREA

*Enumerated\_Domain\_Value\_Definition:*

Management Area

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

MARINA

*Enumerated\_Domain\_Value\_Definition:*

Marina

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

MARINE SANCTUARY

*Enumerated\_Domain\_Value\_Definition:*

Marine Sanctuary

*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 MILITARY  
*Enumerated\_Domain\_Value\_Definition:*  
 Military  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 NATIONAL FOREST  
*Enumerated\_Domain\_Value\_Definition:*  
 National Forest  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 NATIONAL PARK  
*Enumerated\_Domain\_Value\_Definition:*  
 National Park  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 OIL FACILITY  
*Enumerated\_Domain\_Value\_Definition:*  
 Oil Facility  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 OIL SEEP  
*Enumerated\_Domain\_Value\_Definition:*  
 Oil Seep  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 PARK  
*Enumerated\_Domain\_Value\_Definition:*  
 Regional or State Park  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:**Enumerated\_Domain\_Value:*

PLATFORM

*Enumerated\_Domain\_Value\_Definition:*

Platform

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

RECREATIONAL FISHING

*Enumerated\_Domain\_Value\_Definition:*

Recreational Fishing

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

WATER INTAKE

*Enumerated\_Domain\_Value\_Definition:*

Water Intake

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

WILDLIFE REFUGE

*Enumerated\_Domain\_Value\_Definition:*

Wildlife Refuge

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

NAME

*Attribute\_Definition:*

The feature name.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

CONTACT

*Attribute\_Definition:*

Contact person or entity.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

PHONE

*Attribute\_Definition:*

Contact telephone number.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

Any character

*Enumerated\_Domain\_Value\_Definition:*

Free text

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

G\_SOURCE

*Attribute\_Definition:*

Geographic source identifier that links records in the SOC\_DAT data table to records in the SOURCES data table.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

A\_SOURCE

*Attribute\_Definition:*

Attribute source identifier that links records in the SOC\_DAT data table to records in the SOURCES data table.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

1

*Range\_Domain\_Maximum:*

N

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

SOURCES

*Entity\_Type\_Definition:*

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



attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

SOURCE\_ID

*Attribute\_Definition:*

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table; G\_SOURCE and S\_SOURCE in the BIORES table; and SOURCE\_ID and ESI\_SOURCE in the ESI and HYDRO data layers.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:*

*Attribute\_Label:*

ORIGINATOR

*Attribute\_Definition:*

Author or developer of source material or data set.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

DATE\_PUB

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

TITLE

*Attribute\_Definition:*

Title of source material or data.

*Attribute\_Definition\_Source:*

# NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

DATA\_FORMAT

*Attribute\_Definition:*

The format of the source material.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

PUB\_PLACE

*Attribute\_Definition:*

Publication place.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

PUBLISHER

*Attribute\_Definition:*

Publisher.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

PUBLICATION

*Attribute\_Definition:*

Additional citation information.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

ONLINE\_LINK

*Attribute\_Definition:*

Online computer resource URL.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

SCALE

*Attribute\_Definition:*

Description of the source scale.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

TIME\_PERIOD

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Overview\_Description:**Entity\_and\_Attribute\_Overview:*

Two relational attribute or data tables, SOC\_DAT, and SOURCES, are used to store the complex socioeconomic data in the ESI data structure. The geographic data layer containing socioeconomic data resource information (in this case, MGT) is linked to the Socioeconomic Resources table (SOC\_DAT) using the unique ID and the lookup table SOC\_LUT, or it can be linked directly using HUNUM. HUNUM is a unique reference number concatenated with the atlas number (for Southern California, the number is 209). ID is a unique combination of the atlas number (209), an element specific number (MGT = 11), and a unique record number. SOC\_DAT and the other relational data tables are described in detail in the Detailed\_Description sections. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

*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

([http://response.restoration.noaa.gov/esi\\_guidelines](http://response.restoration.noaa.gov/esi_guidelines)).

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*Distribution\_Information:**Distributor:**Contact\_Information:**Contact\_Person\_Primary:**Contact\_Person:*

John Kaperick

*Contact\_Organization:*

## NOAA, Office of Response and Restoration

*Contact\_Address:**Address\_Type:*

Physical Address

*Address:*

7600 Sand Point Way N.E.

*City:*

Seattle

*State\_or\_Province:*

Washington

*Postal\_Code:*

98115-6349

*Contact\_Voice\_Telephone:*

(206) 526-6400

*Contact\_Facsimile\_Telephone:*

(206) 526-6329

*Resource\_Description:*

Downloadable Data

*Distribution\_Liability:*

Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer input peripherals, or when the physical medium is delivered in damaged condition.

*Custom\_Order\_Process:*

Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to the widest community of GIS/mapping users. Distribution formats include Geodatabase; ARC export, MOSS, and Shape files; and MARPLOT map folders. An ArcMap .mxd file, an ArcView 3.x ESI project, and an ESI\_Viewer product for use with the MARPLOT data are also included on the distribution CDs/DVDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

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---

*Metadata\_Reference\_Information:**Metadata\_Date:*

20100927

*Metadata\_Review\_Date:*

20100927

*Metadata\_Contact:**Contact\_Information:**Contact\_Person\_Primary:**Contact\_Person:*

Jill Petersen

*Contact\_Organization:*

NOAA, Office of Response and Restoration

*Contact\_Position:*

GIS Manager

*Contact\_Address:*

*Address\_Type:*

Physical Address

*Address:*

7600 Sand Point Way, N.E.

*City:*

Seattle

*State\_or\_Province:*

Washington

*Postal\_Code:*

98115-6349

*Contact\_Voice\_Telephone:*

(206) 526-6944

*Contact\_Facsimile\_Telephone:*

(206) 526-6329

*Contact\_Electronic\_Mail\_Address:*

[Jill.Petersen@noaa.gov](mailto:Jill.Petersen@noaa.gov)

*Metadata\_Standard\_Name:*

Content Standards for Digital Geospatial Metadata

*Metadata\_Standard\_Version:*

FGDC-STD-001-1998

*Metadata\_Extensions:*

*Online\_Linkage:*

[http://www.ncddc.noaa.gov/metadatarsource/metadata-references/files/ncddcmdprofile\\_v2.pdf](http://www.ncddc.noaa.gov/metadatarsource/metadata-references/files/ncddcmdprofile_v2.pdf)

*Profile\_Name:*

Content Specification for Metadata in the National Coastal Data Development Center's Data Catalog Version 2.0

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# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Southern California: SOCECON (Socioeconomic Resource Points and Lines)

## Metadata:

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

### *Identification\_Information:*

#### *Citation:*

##### *Citation\_Information:*

##### *Originator:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington.

##### *Originator:*

Department of Homeland Security, United States Coast Guard, Office of Incident Management and Preparedness, Washington, D.C.

##### *Originator:*

Department of Fish and Game, Office of Spill Prevention and Response, Sacramento, California.

##### *Publication\_Date:*

201003

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Southern California: SOCECON (Socioeconomic Resource Points and Lines)

##### *Edition:*

Second

##### *Geospatial\_Data\_Presentation\_Form:*

vector digital data

##### *Series\_Information:*

##### *Series\_Name:*

None

##### *Issue\_Identification:*

Southern California

##### *Publication\_Information:*

##### *Publication\_Place:*

Seattle, Washington

##### *Publisher:*

NOAA's Ocean Service, Office of Response and Restoration (OR&R),  
Emergency Response Division (ERD).

*Other\_Citation\_Details:*

Prepared by Research Planning, Inc., Columbia, South Carolina for the  
National Oceanic and Atmospheric Administration (NOAA), National Ocean  
Service, Office of Response and Restoration, Emergency Response Division,  
Seattle, Washington.

*Online\_Linkage:*

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

*Description:*

*Abstract:*

This data set contains human-use resource point data for access sites, airports, aquaculture sites, beaches, boat ramps, marinas, coast guard facilities, oil facilities, oil seeps, platforms, recreational fishing sites and water intakes in Southern California. The data set also contains line data for county boundaries, international borders, bridges, shipping lanes, and state waters in Southern California. Vector points and lines in the data set represent human-use site locations. Location-specific type and source information is stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the ESI data for Southern California. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources. See also the MGT data layer, part of the larger Southern California ESI database, for additional human-use information.

*Purpose:*

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

*Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:*

1995

*Ending\_Date:*

2009

*Currentness\_Reference:*

The data were compiled during 2008-2010. The currentness dates for the data range from 1995 to 2009 and are documented in the Lineage section.

*Status:*

*Progress:*

Complete

*Maintenance\_and\_Update\_Frequency:*

None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:*

-120.60100

*East\_Bounding\_Coordinate:*

-117.00100

*North\_Bounding\_Coordinate:*

34.50000

*South\_Bounding\_Coordinate:*

32.44500

*Keywords:**Theme:**Theme\_Keyword\_Thesaurus:*

ISO 19115 Topic Category

*Theme\_Keyword:*

biota

*Theme\_Keyword:*

environment

*Theme:**Theme\_Keyword\_Thesaurus:*

None

*Theme\_Keyword:*

Environmental Monitoring

*Theme\_Keyword:*

ESI

*Theme\_Keyword:*

Sensitivity maps

*Theme\_Keyword:*

Coastal resources

*Theme\_Keyword:*

Oil spill planning

*Theme\_Keyword:*

Coastal Zone Management

*Theme\_Keyword:*

Wildlife

*Theme\_Keyword:*

Socioeconomic

*Theme:**Theme\_Keyword\_Thesaurus:*

NOS Data Explorer Topic Category

*Theme\_Keyword:*

Environmental Monitoring

*Place:**Place\_Keyword\_Thesaurus:*

None

*Place\_Keyword:*

Southern California

*Access\_Constraints:*

None

*Use\_Constraints:*

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or



resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:*

[datafig.jpg](#)

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and attribute data tables for the Southern California ESI data.

*Browse\_Graphic\_File\_Type:*

JPEG

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:*

[datafig2.jpg](#)

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and desktop data tables for the Southern California ESI data.

*Browse\_Graphic\_File\_Type:*

JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington; the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness Washington, D.C.; and the California Department of Fish and Game (CDF&G), Office of Spill Prevention and Response (OSPR), Sacramento, California.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 9.3) and SQL SERVER(R) (version 2000). The hardware configuration is PC's with Windows Operating System (2000/XP/2003). The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in the data set: acp.e00, birds.e00, esi.e00, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, and t\_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio\_lut.e00, biofile.e00, biores.e00, breed.e00, breed\_dt.e00, seasonal.e00, soc\_dat.e00, soc\_lut.e00, sources.e00, species.e00, and status.e00.

*Program\_Affiliation:*

*Program\_Name:*

National Ocean Service Data Explorer

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---

*Data\_Quality\_Information:*

*Attribute\_Accuracy:*

*Attribute\_Accuracy\_Report:*

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data

(such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

*Logical\_Consistency\_Report:*

A multi-stage error checking process, described in the above Attribute\_Accuracy\_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and SQL SERVER(R) to ARC/INFO(R) consistencies. A final review is made by the GIS manager, where the data are written to CD/DVD and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resource at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

*Completeness\_Report:*

These data represent a synthesis of expert knowledge and digital data on socioeconomic resources. See also the MGT data layer, part of the larger Southern California ESI database, for additional human-use information. These data do not necessarily represent all human-use sites in Southern California.

*Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy\_Report:*

Spatial components for the human-use data layers can come from expert interviews, hardcopy, or digital sources. Most of the spatial components of the human-use data layers are developed from pre-existing digital or hardcopy sources and reflect the positional accuracy of these original data. Some of the spatial components of the human-use data layers are compiled on hardcopy base maps with a scale of 1:24,000. See the Lineage and Process\_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

CALTRANS

*Publication\_Date:*

2008

*Title:*  
 CALIFORNIA AIRPORTS  
*Geospatial\_Data\_Presentation\_Form:*  
 vector digital data  
*Other\_Citation\_Details:*  
 CALTRANS HQ AERONAUTICS  
*Type\_of\_Source\_Media:*  
 online  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
 2008  
*Source\_Currentness\_Reference:*  
 DATE OF PUBLICATION  
*Source\_Citation\_Abbreviation:*  
 NONE  
*Source\_Contribution:*  
 SOCECON INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 CDF&G MARINE REGION  
*Publication\_Date:*  
 2009  
*Title:*  
 STATE-WIDE FISHING PIERS  
*Geospatial\_Data\_Presentation\_Form:*  
 vector digital data  
*Other\_Citation\_Details:*  
 UNPUBLISHED  
*Type\_of\_Source\_Media:*  
 CD-ROM  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
 2009  
*Source\_Currentness\_Reference:*  
 DATE OF PUBLICATION  
*Source\_Citation\_Abbreviation:*  
 NONE  
*Source\_Contribution:*  
 SOCECON INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 CDF&G MARINE REGION GIS  
*Publication\_Date:*

2009

*Title:*

POWER POINT INTAKES (PPINTAKES)

*Geospatial\_Data\_Presentation\_Form:*

vector digital data

*Other\_Citation\_Details:*

UNPUBLISHED

*Type\_of\_Source\_Media:*

online

*Source\_Time\_Period\_of\_Content:**Time\_Period\_Information:**Single\_Date/Time:**Calendar\_Date:*

2009

*Source\_Currentness\_Reference:*

DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

SOCECON INFORMATION

*Source\_Information:**Source\_Citation:**Citation\_Information:**Originator:*CDF&G OFFICE OF SPILL PREVENTION AND  
RESPONSE (OSPR)*Publication\_Date:*

2009

*Title:*ACP SENSITIVE SITES AND SHORELINE ACCESS  
POINTS*Geospatial\_Data\_Presentation\_Form:*

vector digital data

*Other\_Citation\_Details:*

UNPUBLISHED

*Online\_Linkage:*[http://www.dfg.ca.gov/ospr/response/acp/marine\\_acp.html](http://www.dfg.ca.gov/ospr/response/acp/marine_acp.html)*Type\_of\_Source\_Media:*

CD-ROM

*Source\_Time\_Period\_of\_Content:**Time\_Period\_Information:**Single\_Date/Time:**Calendar\_Date:*

2009

*Source\_Currentness\_Reference:*

DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

SOCECON INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

KONG, C. (CDF&G, OSPR)

*Publication\_Date:*

2009

*Title:*

SOCECON RESOURCES IN LA AND ORANGE  
COUNTIES

*Geospatial\_Data\_Presentation\_Form:*

EXPERT KNOWLEDGE

*Other\_Citation\_Details:*

UNPUBLISHED

*Type\_of\_Source\_Media:*

PERSONAL COMMUNICATION

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:*

2009

*Source\_Currentness\_Reference:*

DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

SOCECON INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

LERMA, D. (TIERRA DATA INC.)

*Publication\_Date:*

2009

*Title:*

SAN NIC WATER INTAKE

*Geospatial\_Data\_Presentation\_Form:*

vector digital data

*Other\_Citation\_Details:*

UNPUBLISHED

*Type\_of\_Source\_Media:*

EMAIL

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:*

2009

*Source\_Currentness\_Reference:*

DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

# SOCECON INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

LEWIS, R. (CDF&G OSPR)

*Publication\_Date:*

2009

*Title:*

DISTRIBUTION OF SOCECON AND BIOLOGICAL  
RESOURCES IN SOUTHERN CALIFORNIA

*Geospatial\_Data\_Presentation\_Form:*

EXPERT KNOWLEDGE

*Other\_Citation\_Details:*

UNPUBLISHED

*Type\_of\_Source\_Media:*

PERSONAL COMMUNICATION

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:*

2009

*Source\_Currentness\_Reference:*

DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

SOCECON INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

NATIONAL OCEANIC AND ATMOSPHERIC  
ADMINISTRATION (NOAA), NATIONAL OCEAN  
SERVICE (NOS), OFFICE OF RESPONSE AND  
RESTORATION (OR&R), EMERGENCY RESPONSE  
DIVISION (ERD)

*Publication\_Date:*

1995

*Title:*

SENSITIVITY OF COASTAL ENVIRONMENTS AND  
WILDLIFE TO SPILLED OIL: SOUTHERN  
CALIFORNIA: T\_MAMMAL: SOCECON

*Geospatial\_Data\_Presentation\_Form:*

vector digital data

*Publication\_Information:*

*Publication\_Place:*

SEATTLE, WA

*Publisher:*

NOAA

*Other\_Citation\_Details:*

7600 SAND POINT WAY, SEATTLE, WA 98115-6349

*Online\_Linkage:*

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

*Source\_Scale\_Denominator:*

24000

*Type\_of\_Source\_Media:*

CD-ROM

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:*

1995

*Source\_Currentness\_Reference:*

DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

SOCECON INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

OFFICE OF SPILL PREVENTION AND RESPONSE  
(OSPR) AND CDF&G (T. MOORE)

*Publication\_Date:*

2009

*Title:*

AQUACULTURE\_SOCAL

*Geospatial\_Data\_Presentation\_Form:*

vector digital data

*Other\_Citation\_Details:*

UNPUBLISHED

*Type\_of\_Source\_Media:*

CD-ROM

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:*

2009

*Source\_Currentness\_Reference:*

DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

SOCECON INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

OSPR, CSLC

*Publication\_Date:*

2004

*Title:*

CALIFORNIA COASTAL BOATING FACILITIES

*Geospatial\_Data\_Presentation\_Form:*

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*Other\_Citation\_Details:*

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*Type\_of\_Source\_Media:*

CD-ROM

*Source\_Time\_Period\_of\_Content:**Time\_Period\_Information:**Range\_of\_Dates/Times:**Beginning\_Date:*

2003

*Ending\_Date:*

2004

*Source\_Currentness\_Reference:*

DATE OF SURVEY

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

SOCECON INFORMATION

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

PEUGH, J. (SAN DIEGO AUDUBON)

*Publication\_Date:*

2009

*Title:*

SAN DIEGO COUNTY BIRDS

*Geospatial\_Data\_Presentation\_Form:*

EXPERT KNOWLEDGE

*Other\_Citation\_Details:*

UNPUBLISHED

*Type\_of\_Source\_Media:*

PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:**Time\_Period\_Information:**Single\_Date/Time:**Calendar\_Date:*

2009

*Source\_Currentness\_Reference:*

DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

SOCECON INFORMATION

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



*Originator:*  
 PRYOR, D.  
*Publication\_Date:*  
 2009  
*Title:*  
 SPECIES DISTRIBUTION, LOS ANGELES COUNTY  
*Geospatial\_Data\_Presentation\_Form:*  
 EXPERT KNOWLEDGE  
*Other\_Citation\_Details:*  
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*Type\_of\_Source\_Media:*  
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*Source\_Time\_Period\_of\_Content:*  
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*Single\_Date/Time:*  
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 2009  
*Source\_Currentness\_Reference:*  
 DATE OF PUBLICATION  
*Source\_Citation\_Abbreviation:*  
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*Citation\_Information:*  
*Originator:*  
 R. IMAI/ M. LAMPINEN CDF&G  
*Publication\_Date:*  
 2007  
*Title:*  
 OIL PLATFORMS  
*Geospatial\_Data\_Presentation\_Form:*  
 tabular digital data  
*Other\_Citation\_Details:*  
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*Type\_of\_Source\_Media:*  
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*Range\_of\_Dates/Times:*  
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*Ending\_Date:*  
 2007  
*Source\_Currentness\_Reference:*  
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*Source\_Citation\_Abbreviation:*  
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*Source\_Contribution:*  
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*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

UNIVERSITY OF CALIFORNIA SANTA BARBARA,  
MARINE LIFE PROTECTION ACT (UCSB MLPA)

*Publication\_Date:*

2009

*Title:*

CUL\_BOATLAUNCHSITES\_SRSC

*Geospatial\_Data\_Presentation\_Form:*

vector digital data

*Other\_Citation\_Details:*

UCSB MLPA

*Type\_of\_Source\_Media:*

online

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:*

2009

*Source\_Currentness\_Reference:*

DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

SOCECON INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

UNIVERSITY OF CALIFORNIA SANTA BARBARA,  
MARINE LIFE PROTECTION ACT (UCSB MLPA)

*Publication\_Date:*

2009

*Title:*

CUL\_DESAL\_PLANTS

*Geospatial\_Data\_Presentation\_Form:*

vector digital data

*Other\_Citation\_Details:*

UCSB MLPA

*Type\_of\_Source\_Media:*

online

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:*

2009

*Source\_Currentness\_Reference:*

DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*  
SOCECON INFORMATION

*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
UNIVERSITY OF CALIFORNIA SANTA BARBARA,  
MARINE LIFE PROTECTION ACT (UCSB MLPA)  
*Publication\_Date:*  
2009  
*Title:*  
OIL SEEPS  
*Geospatial\_Data\_Presentation\_Form:*  
vector digital data  
*Other\_Citation\_Details:*  
UCSB MLPA

*Type\_of\_Source\_Media:*  
online

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*Calendar\_Date:*  
2009

*Source\_Currentness\_Reference:*  
DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:*  
NONE

*Source\_Contribution:*  
SOCECON INFORMATION

*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
WIESE, K. (CDF&G OSPR)  
*Publication\_Date:*  
2009  
*Title:*  
SPECIES AND SOCECON INFO FOR SOUTHERN  
CALIFORNIA  
*Geospatial\_Data\_Presentation\_Form:*  
EXPERT KNOWLEDGE  
*Other\_Citation\_Details:*  
UNPUBLISHED

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

*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
2009

*Source\_Currentness\_Reference:*  
 DATE OF COMMUNICATION  
*Source\_Citation\_Abbreviation:*  
 NONE  
*Source\_Contribution:*  
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*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 WILSON, K. (CDF&G OSPR, RETIRED)  
*Publication\_Date:*  
 2009  
*Title:*  
 SOCECON AND MANAGEMENT INFO FOR  
 SOUTHERN CALIFORNIA  
*Geospatial\_Data\_Presentation\_Form:*  
 EXPERT KNOWLEDGE  
*Other\_Citation\_Details:*  
 UNPUBLISHED  
*Type\_of\_Source\_Media:*  
 online  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
 2009  
*Source\_Currentness\_Reference:*  
 DATE OF COMMUNICATION  
*Source\_Citation\_Abbreviation:*  
 NONE  
*Source\_Contribution:*  
 SOCECON INFORMATION  
*Process\_Step:*  
*Process\_Description:*  
 Two main sources of data were used to depict human-use resources for this data layer: 1) personal interviews with resource experts from California Department of Fish and Game (CDF&G) Office of Spill Prevention and Response (OSPR), California State Parks (CSP), San Diego Audubon, and 2) digital data provided by CDF&G, University of California Santa Barbara (UCSB) Marine Life Protection Act (MLPA), and California Department of Transportation (CALTRANS). The above digital and/or hardcopy sources were compiled by the project biologist to create the SOCECON data layer. Depending on the type of source data, three general approaches are used for compiling the data layer: 1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:24,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled

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

*Process\_Date:*

201003

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:*

NOAA, Office of Response and Restoration

*Contact\_Person:*

Jill Petersen

*Contact\_Address:*

*Address\_Type:*

Physical address

*Address:*

7600 Sand Point Way, N.E.

*City:*

Seattle

*State\_or\_Province:*

Washington

*Postal\_Code:*

98115-6349

*Contact\_Voice\_Telephone:*

(206) 526-6944

*Contact\_Facsimile\_Telephone:*

(206) 526-6329

*Contact\_Electronic\_Mail\_Address:*

[Jill.Petersen@noaa.gov](mailto:Jill.Petersen@noaa.gov)

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*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:*

Vector

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

*SDTS\_Terms\_Description:*

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

Entity point

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

672

*SDTS\_Terms\_Description:*

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

Complete chain

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

64

*SDTS\_Terms\_Description:*

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

Link

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

13496

*SDTS\_Terms\_Description:*

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

Node,planar graph

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

76

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*Spatial\_Reference\_Information:*

*Horizontal\_Coordinate\_System\_Definition:*

*Geographic:*

*Latitude\_Resolution:*

0.0000001

*Longitude\_Resolution:*

0.0000001

*Geographic\_Coordinate\_Units:*

Decimal degrees

*Geodetic\_Model:*

*Horizontal\_Datum\_Name:*

North American Datum of 1983

*Ellipsoid\_Name:*

Geodetic Reference System 80

*Semi-major\_Axis:*

6378137.000000

*Denominator\_of\_Flattening\_Ratio:*

298.257222

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---

*Entity\_and\_Attribute\_Information:*

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:*

SOCECON.AAT

*Entity\_Type\_Definition:*

The SOCECON.AAT table contains attribute information for the vector lines representing county boundaries, international borders, bridges, shipping lanes, and state waters.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

TYPE

*Attribute\_Definition:*

The human-use features depicted on the maps are those that could be impacted by an oil spill or could provide access for response operations. TYPE can be used as a quick identifier for the socioeconomic or human-use point features and is the attribute that is used to symbolize the layer.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:**Enumerated\_Domain\_Value:*

CB

*Enumerated\_Domain\_Value\_Definition:*

County Border

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

IB

*Enumerated\_Domain\_Value\_Definition:*

International Border

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

R

*Enumerated\_Domain\_Value\_Definition:*

Road, Transportation, or Bridge

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

SL

*Enumerated\_Domain\_Value\_Definition:*

Shipping Lane

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

SW

*Enumerated\_Domain\_Value\_Definition:*

State Waters

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

SOCECON.PAT

*Entity\_Type\_Definition:*

The SOCECON.PAT table contains attribute information for the vector points representing access sites, airports, aquaculture sites, beaches, boat ramps, marinas, coast guard facilities, oil facilities, oil seeps, platforms, recreational fishing sites, and water intakes. Note that all attribute information is stored in a series of relational files, described below and in the Overview\_Description section. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the relationships

between attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

TYPE

*Attribute\_Definition:*

The human-use features depicted on the maps are those that could be impacted by an oil spill or could provide access for response operations. TYPE can be used as a quick identifier for the socioeconomic or human-use point features and is the attribute that is used to symbolize the layer. Greater detail about the object is provided in the SOC\_DAT table.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

A

*Enumerated\_Domain\_Value\_Definition:*

Airport

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

A2

*Enumerated\_Domain\_Value\_Definition:*

Access

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

AQ

*Enumerated\_Domain\_Value\_Definition:*

Aquaculture

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

B

*Enumerated\_Domain\_Value\_Definition:*

Beach

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

BR

*Enumerated\_Domain\_Value\_Definition:*



Boat Ramp  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 CG  
*Enumerated\_Domain\_Value\_Definition:*  
 Coast Guard  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 M  
*Enumerated\_Domain\_Value\_Definition:*  
 Marina  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 OF  
*Enumerated\_Domain\_Value\_Definition:*  
 Oil Facility  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 OS  
*Enumerated\_Domain\_Value\_Definition:*  
 Oil Seep  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 PF  
*Enumerated\_Domain\_Value\_Definition:*  
 Platform  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 RF  
*Enumerated\_Domain\_Value\_Definition:*  
 Recreational Fishing  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

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

WI

*Enumerated\_Domain\_Value\_Definition:*

Water Intake

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

ID

*Attribute\_Definition:*

An identifier that links vector objects in the human-use data layers to records in the SOC\_LUT data table. ID is a concatenation of atlas number (209), element number (10), and record number.

*Attribute\_Definition\_Source:*

NOAA

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

2091000001

*Range\_Domain\_Maximum:*

2091000672

*Attribute:**Attribute\_Label:*

HUNUM

*Attribute\_Definition:*

An identifier that links directly to the SOC\_DAT table.

*Attribute\_Definition\_Source:*

NOAA

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

209000001

*Range\_Domain\_Maximum:*

209000893

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

SOC\_LUT

*Entity\_Type\_Definition:*

The data table SOC\_LUT is a lookup table that contains items necessary for linking vector objects in the human-use data layers with the SOC\_DAT data table. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

HUNUM

*Attribute\_Definition:*

An identifier that links records in the SOC\_LUT data table to records in the SOC\_DAT data table. HUNUM values of 0 are holes in the polygons and do not contain information.

*Attribute\_Definition\_Source:*

NOAA

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

209000001

*Range\_Domain\_Maximum:*

209001158

*Attribute:**Attribute\_Label:*

ID

*Attribute\_Definition:*

An identifier that links vector objects in the human-use data layers to records in the SOC\_LUT data table. ID is a concatenation of atlas number (209), element number (10=SOCECON, 11=MGT), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:*

NOAA

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

2091000001

*Range\_Domain\_Maximum:*

2091101855

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

SOC\_DAT

*Entity\_Type\_Definition:*

The data table SOC\_DAT contains both human-use attribute data and items necessary for linking the human-use spatial data layers to the SOURCES data table. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

HUNUM

*Attribute\_Definition:*

An identifier that links records in the SOC\_DAT data table to records in the SOC\_LUT data table. HUNUM values of 0 are holes in the polygons and do not contain information.

*Attribute\_Definition\_Source:*

NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:**Range\_Domain\_Minimum:*

209000001

*Range\_Domain\_Maximum:*

209001158

*Attribute:**Attribute\_Label:*

TYPE

*Attribute\_Definition:*

The human-use features depicted on the maps are those that could be impacted by an oil spill or could provide access for response operations.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

ACCESS

*Enumerated\_Domain\_Value\_Definition:*

Access

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

AIRPORT

*Enumerated\_Domain\_Value\_Definition:*

Airport

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

AQUACULTURE

*Enumerated\_Domain\_Value\_Definition:*

Aquaculture

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

BEACH

*Enumerated\_Domain\_Value\_Definition:*

Beach

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

BOAT RAMP

*Enumerated\_Domain\_Value\_Definition:*

Boat Ramp

*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 COAST GUARD  
*Enumerated\_Domain\_Value\_Definition:*  
 Coast Guard  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 CRITICAL HABITAT  
*Enumerated\_Domain\_Value\_Definition:*  
 Designated Critical Habitat  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 FISHERY AREA  
*Enumerated\_Domain\_Value\_Definition:*  
 Fishery Area  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
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*Enumerated\_Domain\_Value:*  
 MANAGEMENT AREA  
*Enumerated\_Domain\_Value\_Definition:*  
 Management Area  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 MARINA  
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 Marina  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
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*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 MARINE SANCTUARY  
*Enumerated\_Domain\_Value\_Definition:*  
 Marine Sanctuary  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:**Enumerated\_Domain\_Value:*

MILITARY

*Enumerated\_Domain\_Value\_Definition:*

Military

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

NATIONAL FOREST

*Enumerated\_Domain\_Value\_Definition:*

National Forest

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

NATIONAL PARK

*Enumerated\_Domain\_Value\_Definition:*

National Park

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

OIL FACILITY

*Enumerated\_Domain\_Value\_Definition:*

Oil Facility

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

OIL SEEP

*Enumerated\_Domain\_Value\_Definition:*

Oil Seep

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

PARK

*Enumerated\_Domain\_Value\_Definition:*

Regional or State Park

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

PLATFORM

*Enumerated\_Domain\_Value\_Definition:*

Platform

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

RECREATIONAL FISHING

*Enumerated\_Domain\_Value\_Definition:*

Recreational Fishing

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

WATER INTAKE

*Enumerated\_Domain\_Value\_Definition:*

Water Intake

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

WILDLIFE REFUGE

*Enumerated\_Domain\_Value\_Definition:*

Wildlife Refuge

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

NAME

*Attribute\_Definition:*

The feature name.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

CONTACT

*Attribute\_Definition:*

Contact person or entity.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

PHONE

*Attribute\_Definition:*

Contact telephone number.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

Any character

*Enumerated\_Domain\_Value\_Definition:*

Free text

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

G\_SOURCE

*Attribute\_Definition:*

Geographic source identifier that links records in the SOC\_DAT data table to records in the SOURCES data table.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

A\_SOURCE

*Attribute\_Definition:*

Attribute source identifier that links records in the SOC\_DAT data table to records in the SOURCES data table.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

1

*Range\_Domain\_Maximum:*

N

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

SOURCES

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines



*Attribute:**Attribute\_Label:*

SOURCE\_ID

*Attribute\_Definition:*

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table; G\_SOURCE and S\_SOURCE in the BIORES table; and SOURCE\_ID and ESI\_SOURCE in the ESI and HYDRO data layers.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

ORIGINATOR

*Attribute\_Definition:*

Author or developer of source material or data set.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

DATE\_PUB

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

TITLE

*Attribute\_Definition:*

Title of source material or data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

DATA\_FORMAT

*Attribute\_Definition:*

The format of the source material.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

PUB\_PLACE

*Attribute\_Definition:*

Publication place.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

PUBLISHER

*Attribute\_Definition:*

Publisher.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

PUBLICATION

*Attribute\_Definition:*

Additional citation information.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

ONLINE\_LINK

*Attribute\_Definition:*

Online computer resource URL.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

SCALE

*Attribute\_Definition:*

Description of the source scale.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

TIME\_PERIOD

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Overview\_Description:**Entity\_and\_Attribute\_Overview:*

Two relational attribute or data tables, SOC\_DAT, and SOURCES, are used to store the complex socioeconomic data in the ESI data structure. The geographic data layer containing socioeconomic data resource information (in this case, SOCECON) is linked to the Socioeconomic Resources table (SOC\_DAT) using the unique ID and the lookup table SOC\_LUT, or it can be linked directly using HUNUM. HUNUM is a unique reference number concatenated with the atlas number (for Southern California, the number is 209). ID is a unique combination of the atlas number (209), an element specific number (SOCECON = 10), and a unique record number. SOC\_DAT and the other relational data tables are described in detail in the Detailed\_Description sections. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure.

*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 ([http://response.restoration.noaa.gov/esi\\_guidelines](http://response.restoration.noaa.gov/esi_guidelines)).

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---

*Distribution\_Information:**Distributor:**Contact\_Information:**Contact\_Person\_Primary:**Contact\_Person:*

John Kaperick

*Contact\_Organization:*

NOAA, Office of Response and Restoration

*Contact\_Address:**Address\_Type:*

**Physical Address***Address:*

7600 Sand Point Way N.E.

*City:*

Seattle

*State\_or\_Province:*

Washington

*Postal\_Code:*

98115-6349

*Contact\_Voice\_Telephone:*

(206) 526-6400

*Contact\_Facsimile\_Telephone:*

(206) 526-6329

*Resource\_Description:***Downloadable Data***Distribution\_Liability:*

Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer input peripherals, or when the physical medium is delivered in damaged condition.

*Custom\_Order\_Process:*

Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to the widest community of GIS/mapping users. Distribution formats include Geodatabase; ARC export, MOSS, and Shape files; and MARPLOT map folders. An ArcMap .mxd file, an ArcView 3.x ESI project, and an ESI Viewer product for use with the MARPLOT data are also included on the distribution CDs/DVDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

[Back To Index](#)*Metadata\_Reference\_Information:**Metadata\_Date:*

20100927

*Metadata\_Review\_Date:*

20100927

*Metadata\_Contact:**Contact\_Information:**Contact\_Person\_Primary:**Contact\_Person:*

Jill Petersen

*Contact\_Organization:*

NOAA, Office of Response and Restoration

*Contact\_Position:*

GIS Manager

*Contact\_Address:*

*Address\_Type:*

Physical Address

*Address:*

7600 Sand Point Way, N.E.

*City:*

Seattle

*State\_or\_Province:*

Washington

*Postal\_Code:*

98115-6349

*Contact\_Voice\_Telephone:*

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*Contact\_Facsimile\_Telephone:*

(206) 526-6329

*Contact\_Electronic\_Mail\_Address:*

[Jill.Petersen@noaa.gov](mailto:Jill.Petersen@noaa.gov)

*Metadata\_Standard\_Name:*

Content Standards for Digital Geospatial Metadata

*Metadata\_Standard\_Version:*

FGDC-STD-001-1998

*Metadata\_Extensions:*

*Online\_Linkage:*

[http://www.ncddc.noaa.gov/metadataresource/metadata-references/files/ncddcmdprofile\\_v2.pdf](http://www.ncddc.noaa.gov/metadataresource/metadata-references/files/ncddcmdprofile_v2.pdf)

*Profile\_Name:*

Content Specification for Metadata in the National Coastal Data Development Center's Data Catalog Version 2.0

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# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Southern California: BIRDS (Bird Polygons)

## Metadata:

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

### *Identification\_Information:*

#### *Citation:*

#### *Citation\_Information:*

#### *Originator:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington.

#### *Originator:*

Department of Homeland Security, United States Coast Guard, Office of Incident Management and Preparedness, Washington, D.C.

#### *Originator:*

Department of Fish and Game, Office of Spill Prevention and Response, Sacramento, California.

#### *Publication\_Date:*

201003

#### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Southern California: BIRDS (Bird Polygons)

#### *Edition:*

Second

#### *Geospatial\_Data\_Presentation\_Form:*

vector digital data

#### *Series\_Information:*

#### *Series\_Name:*

None

#### *Issue\_Identification:*

Southern California

#### *Publication\_Information:*

#### *Publication\_Place:*

Seattle, Washington

#### *Publisher:*

NOAA's Ocean Service, Office of Response and Restoration (OR&R), Emergency Response Division (ERD).

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

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of

Response and Restoration, Emergency Response Division, Seattle, Washington.

*Online\_Linkage:*

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

*Description:*

*Abstract:*

This data set contains sensitive biological resource data for wading birds, shorebirds, waterfowl, raptors, diving birds, seabirds, passerine birds, and gulls and terns in Southern California. Vector polygons in this data set represent bird nesting, roosting, migratory staging, and wintering sites. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described in the Overview\_Description) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the ESI data for Southern California. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources. See also the NESTS data layer, part of the larger Southern California ESI database, for additional bird information.

*Purpose:*

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

*Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:*

1989

*Ending\_Date:*

2009

*Currentness\_Reference:*

The data were compiled during 2008-2010. The currentness dates for the data range from 1989 to 2009 and are documented in the Lineage section.

*Status:*

*Progress:*

Complete

*Maintenance\_and\_Update\_Frequency:*

None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:*

-120.60100

*East\_Bounding\_Coordinate:*

-117.00100

*North\_Bounding\_Coordinate:*

34.50000

*South\_Bounding\_Coordinate:*

32.44500

*Keywords:*

*Theme:*

*Theme\_Keyword\_Thesaurus:*

ISO 19115 Topic Category

*Theme\_Keyword:*

biota

*Theme\_Keyword:*

environment

*Theme:*

*Theme\_Keyword\_Thesaurus:*

None

*Theme\_Keyword:*

Environmental Monitoring

*Theme\_Keyword:*

ESI

*Theme\_Keyword:*

Sensitivity maps

*Theme\_Keyword:*

Coastal resources

*Theme\_Keyword:*

Oil spill planning

*Theme\_Keyword:*

Coastal Zone Management

*Theme\_Keyword:*

Wildlife

*Theme\_Keyword:*

Bird

*Theme:*

*Theme\_Keyword\_Thesaurus:*

NOS Data Explorer Topic Category

*Theme\_Keyword:*

Environmental Monitoring

*Place:*

*Place\_Keyword\_Thesaurus:*

None

*Place\_Keyword:*

Southern California

*Access\_Constraints:*

None

*Use\_Constraints:*

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

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

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:*

[datafig.jpg](#)

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and attribute data tables for the Southern California ESI data.

*Browse\_Graphic\_File\_Type:*

JPEG

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:*

[datafig2.jpg](#)

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and desktop data tables for the Southern California ESI data.



*Browse\_Graphic\_File\_Type:*

JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington; the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness Washington, D.C.; and the California Department of Fish and Game (CDF&G), Office of Spill Prevention and Response (OSPR), Sacramento, California.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 9.3) and SQL SERVER(R) (version 2000). The hardware configuration is PC's with Windows Operating System (2000/XP/2003). The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in the data set: acp.e00, birds.e00, esi.e00, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, and t\_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio\_lut.e00, biofile.e00, biores.e00, breed.e00, breed\_dt.e00, seasonal.e00, soc\_dat.e00, soc\_lut.e00, sources.e00, species.e00, and status.e00.

*Program\_Affiliation:**Program\_Name:*

National Ocean Service Data Explorer

[Back To Index](#)*Data\_Quality\_Information:**Attribute\_Accuracy:**Attribute\_Accuracy\_Report:*

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

*Logical\_Consistency\_Report:*

A multi-stage error checking process, described in the above Attribute\_Accuracy\_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and SQL SERVER(R) to ARC/INFO(R) consistencies. A final review is made by the GIS manager, where the data are written to CD/DVD and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resource at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

*Completeness\_Report:*

These data represent a synthesis of expert knowledge, available hardcopy documents, and digital data on bird nesting, wintering, migratory staging and other spatial/temporal concentration areas. See also the NESTS data layer, part of the larger Southern California ESI database, for additional bird information. These data do not necessarily represent all bird occurrences in Southern California. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name [n/a if not applicable]): 1, Common loon, *Gavia immer*; 3, Red-throated loon, *Gavia stellata*; 6, Eared grebe, *Podiceps nigricollis*; 7, Western grebe, *Aechmophorus occidentalis*; 8, Double-crested cormorant, *Phalacrocorax auritus*; 9, Brandt's cormorant, *Phalacrocorax penicillatus*; 10, Pelagic cormorant, *Phalacrocorax pelagicus*; 12, Canada goose, *Branta canadensis*; 13, Brant, *Branta bernicla*; 14, Greater white-fronted goose, *Anser albifrons*; 15, Snow goose, *Chen caerulescens*; 16, Mallard, *Anas platyrhynchos*; 17, Northern pintail, *Anas acuta*; 18, Green-winged teal, *Anas crecca*; 20, Northern shoveler, *Anas clypeata*; 21, Canvasback, *Aythya valisineria*; 22, Greater scaup, *Aythya marila*; 23, Lesser scaup, *Aythya affinis*; 24, Common goldeneye, *Bucephala clangula*; 26, Bufflehead, *Bucephala albeola*; 30, Surf scoter, *Melanitta perspicillata*; 31, Pacific loon, *Gavia pacifica*; 33, Red-breasted merganser, *Mergus serrator*; 34, American coot, *Fulica americana*; 36, Glaucous-winged gull, *Larus glaucescens*; 37, Western gull, *Larus occidentalis*; 39, California gull, *Larus californicus*; 40, Ring-billed gull, *Larus delawarensis*; 42, Bonaparte's gull, *Larus philadelphia*; 43, Heermann's gull, *Larus heermanni*; 45, Common tern, *Sterna hirundo*; 46, Common murre, *Uria aalge*; 47, Pigeon guillemot, *Cephus columba*; 49, Cassin's auklet, *Ptychoramphus aleuticus*; 50, Rhinoceros auklet, *Cerorhinca monocerata*; 52, Wilson's phalarope, *Phalaropus tricolor*; 53, Red-necked phalarope, *Phalaropus lobatus*; 54, Great blue heron, *Ardea herodias*; 55, Whimbrel, *Numenius phaeopus*; 57, Wandering tattler, *Heteroscelus incanus*; 58, Greater yellowlegs, *Tringa melanoleuca*; 60, Red knot, *Calidris canutus*; 62, Least sandpiper, *Calidris minutilla*; 63, Dunlin, *Calidris alpina*; 64, Short-billed dowitcher, *Limnodromus griseus*; 65, Long-billed dowitcher, *Limnodromus scolopaceus*; 66, Western sandpiper, *Calidris mauri*; 67, Sanderling, *Calidris alba*; 68, Black oystercatcher, *Haematopus bachmani*; 69, Semipalmated plover, *Charadrius semipalmatus*; 70, Killdeer, *Charadrius vociferus*; 71, Black-bellied plover, *Pluvialis squatarola*; 72, Surfbird, *Aphriza virgata*; 73, Ruddy turnstone, *Arenaria interpres*; 74, Black turnstone, *Arenaria melanocephala*; 76, Bald eagle, *Haliaeetus leucocephalus*; 77, Osprey, *Pandion haliaetus*; 85, California least tern, *Sternula antillarum browni*; 86, Least tern, *Sternula antillarum*; 87, Little blue heron, *Egretta caerulea*; 88, Great egret, *Ardea alba*; 89, Snowy egret, *Egretta thula*; 90, Black-crowned night-heron, *Nycticorax nycticorax*; 96, Leach's storm-petrel, *Oceanodroma leucorhoa*; 97, Green heron, *Butorides virescens*; 100, Black-legged kittiwake, *Rissa tridactyla*; 107, Peregrine falcon, *Falco peregrinus*; 118, Brown pelican, *Pelecanus occidentalis*; 124, Redhead, *Aythya americana*; 129, Northern fulmar, *Fulmarus glacialis*; 131, White-tailed kite, *Elanus leucurus*; 133, Black skimmer, *Rynchops niger*; 134, Gull-billed tern, *Gelochelidon nilotica*; 136, Caspian tern, *Hydroprogne caspia*; 137, Royal tern, *Thalasseus maximus*; 138, Forster's tern, *Sterna forsteri*; 141, American avocet, *Recurvirostra americana*; 142, Black-necked stilt, *Himantopus mexicanus*; 143, Xantus's murrelet, *Synthliboramphus hypoleucus*; 144, Ashy storm-petrel, *Oceanodroma homochroa*; 145, Elegant tern, *Thalasseus elegans*; 146, Black storm-petrel, *Oceanodroma melania*; 148, Ruddy duck, *Oxyura jamaicensis*; 152, American oystercatcher, *Haematopus palliatus*; 155, Willet, *Catoptrophorus semipalmatus*; 160, Red phalarope, *Phalaropus fulicaria*; 162, Gadwall, *Anas strepera*; 163, Reddish egret, *Egretta rufescens*; 169, American wigeon, *Anas americana*; 172, Sandhill crane, *Grus canadensis*; 176, Short-eared owl, *Asio flammeus*; 179, Pied-billed grebe, *Podilymbus podiceps*; 181, Northern harrier, *Circus cyaneus*; 182, American kestrel, *Falco sparverius*; 187, Virginia rail, *Rallus limicola*; 188, Sora, *Porzana carolina*; 200, Sooty shearwater, *Puffinus griseus*; 202, Pink-footed shearwater, *Puffinus creatopus*; 205, Light-footed clapper rail, *Rallus longirostris levipes*; 209, Long-billed curlew, *Numenius americanus*; 210, Marbled godwit, *Limosa fedoa*; 216, Belted kingfisher, *Ceryle alcyon*; 220, Merlin, *Falco columbarius*; 225, Marsh wren, *Cistothorus palustris*; 230, Red-tailed hawk, *Buteo jamaicensis*; 239, Clark's grebe, *Aechmophorus clarkii*; 261, Brown booby, *Sula leucogaster*; 270, Western snowy plover, *Charadrius alexandrinus nivosus*; 271, Rails, n/a; 272, Teals, *Anas* sp.; 273, Geese, n/a;

278, Saltmarsh sharp-tailed sparrow, *Ammodramus caudacutus*; 286, Dowitchers, *Limnodromus* spp.; 299, Scaup, *Aythya* spp.; 302, Scoters, *Melanitta* spp.; 326, Jaegers, *Stercorarius* spp.; 345, Storm-petrels, *Oceanodroma* spp.; 349, Burrowing owl, *Athene cunicularia hypugea*; 387, Buteo hawks, *Buteo* spp.; 396, Phalaropes, *Phalaropus* spp.; 406, Cinnamon teal, *Anas cyanoptera*; 455, Yellow-billed cuckoo, *Coccyzus americanus*; 462, Loons, *Gavia* spp.; 646, Black-vented shearwater, *Puffinus opisthomelas*; 722, Common yellowthroat, *Geothlypis trichas*; 811, Willow flycatcher, *Empidonax traillii*; 851, Belding's savannah sparrow, *Passerculus sandwichensis beldingi*; 852, Buller's shearwater, *Puffinus bulleri*; 853, California horned lark, *Eremophila alpestris actia*; 854, Coastal California gnatcatcher, *Polioptila californica californica*; 855, Large-billed savannah sparrow, *Passerculus sandwichensis rostratus*; 856, Least Bell's vireo, *Vireo bellii pusillus*; 857, Ross's goose, *Chen rossii*; 1001, Gulls, n/a; 1002, Shorebirds, n/a; 1003, Waterfowl, n/a; 1004, Wading birds, n/a; 1005, Raptors, n/a; 1006, Diving birds, n/a; 1008, Terns, n/a; 1009, Shearwaters, n/a; 1010, Pelagic birds, n/a; 1013, Dabbling ducks, n/a; 1014, Diving ducks, n/a; 1015, Egrets, n/a; 1016, Herons, n/a; 1019, Sea ducks, n/a; 1021, Ducks, n/a; 1022, Seabirds, n/a; 1024, Alcids, n/a; 1026, Grebes, n/a; 1035, Pelicans, *Pelecanus* spp.; 1037, Cormorants, *Phalacrocorax* spp.

*Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy\_Report:*

Spatial components for the biological data layers can come from expert interviews, hardcopy, or digital sources. Some of the spatial components of the biological data layers may have been developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy base maps with a scale of 1:24,000. Some of the spatial components of the biological data sets are developed from pre-existing digital or hardcopy sources and reflect the positional accuracy of these original data. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources. See the Lineage and Process\_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

AVERY, J. (USFWS)

*Publication\_Date:*

2009

*Title:*

USFWS RESOURCES IN SAN DIEGO AND ORANGE COUNTIES

*Geospatial\_Data\_Presentation\_Form:*

EXPERT KNOWLEDGE

*Other\_Citation\_Details:*

UNPUBLISHED

*Type\_of\_Source\_Media:*

PERSONAL COMMUNICATION

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:*

2009

*Source\_Currentness\_Reference:*  
 DATE OF COMMUNICATION  
*Source\_Citation\_Abbreviation:*  
 NONE  
*Source\_Contribution:*  
 BIRDS INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 BOLSA CHICA CONSERVANCY  
*Publication\_Date:*  
 2000  
*Title:*  
 BOLSA CHICA CONSERVANCY BIRDER'S GUIDE  
*Geospatial\_Data\_Presentation\_Form:*  
 HARDCOPY TEXT  
*Online\_Linkage:*  
<http://bolsachica.org/Birders/index.html>  
*Type\_of\_Source\_Media:*  
 paper  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
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*Source\_Currentness\_Reference:*  
 DATE OF PUBLICATION  
*Source\_Citation\_Abbreviation:*  
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*Source\_Contribution:*  
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*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 BOYCE, J. (NOAA)  
*Publication\_Date:*  
 2009  
*Title:*  
 PELAGIC BIRDS  
*Geospatial\_Data\_Presentation\_Form:*  
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*Other\_Citation\_Details:*  
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*Type\_of\_Source\_Media:*  
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*Publication\_Date:*  
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*Geospatial\_Data\_Presentation\_Form:*  
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*Publication\_Date:*  
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COOPER, D.S. (COOPER ECOLOGICAL MONITORING, INC.)

*Publication\_Date:*

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*Geospatial\_Data\_Presentation\_Form:*

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*Publication\_Date:*

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*Publication\_Date:*  
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*Publication\_Date:*  
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*Publication\_Date:*

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*Publication\_Date:*

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*Publication\_Date:*  
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*Originator:*

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*Publication\_Date:*

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NATIONAL OCEANIC AND ATMOSPHERIC  
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*Publication\_Date:*

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NATIONAL PARK SERVICE

Publication\_Date:

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PAGE, G. POINT REYES BIRD OBSERVATORY (PRBO)

*Publication\_Date:*

2005

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SNOWY PLOVER LOCATIONS AND SEASONALILTY IN  
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PAGEL, J. (USFWS)  
*Publication\_Date:*  
2009

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*Publication\_Date:*  
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MONTEREY PENINSULA AUDUBON SOCIETY, CARMEL, CA,  
536 PP.

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RYAN ECOLOGICAL CONSULTING, LA AUDUBON, AND  
SANTA MONICA BAY AUDUBON  
*Publication\_Date:*  
2008  
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WORKING DRAFT: THE WESTERN SNOWY PLOVER IN LOS  
ANGELES COUNTY, CALIFORNIA: 2008 ANNUAL REPORT  
(JANUARY-SEPTEMBER)

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*Publication\_Date:*

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2009

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SCHALLMAN, B. (U.S. NAVY)

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2009

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SPECIES DISTRIBUTION ON U.S. NAVY PROPERTY

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SHUFORD, W.D. AND GARDALI, T. EDITORS

*Publication\_Date:*

2008

*Title:*

CALIFORNIA BIRD SPECIES OF SPECIAL CONCERN: A  
RANKED ASSESSMENT OF SPECIES, SUBSPECIES, AND

DISTINCT POPULATIONS OF BIRDS OF IMMEDIATE  
CONSERVATION CONCERN IN CALIFORNIA.

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STUDIES OF WESTERN BIRDS 1. WESTERN FIELD  
ORNITHOLOGISTS, CAMARILLO, CALIFORNIA, AND  
CDF&G, SACRAMENTO.

*Type\_of\_Source\_Media:*

online

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SMITH, R.

*Publication\_Date:*

2009

*Title:*

SNOWY PLOVER, LEAST TERN, AND OTHER SPECIES SITES  
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 RECOVERY PLAN FOR THE PACIFIC COAST POPULATION  
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RECOVERY PLAN FOR THE PACIFIC COAST POPULATION  
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U.S. FISH AND WILDLIFE SERVICE

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ATLAS OF CALIFORNIA BROWN PELICAN ROOST SITES ON  
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TECHNICAL REPORT CFWO-EC 2009-1. U.S. FISH AND  
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 CHECKLIST OF BIRDS OF NAVAL WEAPONS STATION SEAL  
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 CALIFORNIA LEAST TERN PRODUCTIVITY IN 2008  
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 SAN DIEGO COUNTY FEDERALLY LISTED SPECIES  
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 WHITWORTH, D.L., H.R. CARTER, J.S. KOEPKE, AND F.  
 GRESS.  
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 2008  
*Title:*  
 NEST MONITORING OF XANTUS'S MURRELETS AT  
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CALIFORNIA INSTITUTE OF ENVIRONMENTAL  
STUDIES

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WOLF, S. (BIOLOGICAL CONSULTANT FOR BATIQUITOS  
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*Publication\_Date:*

2009

*Title:*

SAN DIEGO COUNTY BIRDS

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*Originator:*

ZEINER, D.C., W.F. LAUDENSLAYER, JR., K.E. MAYER, AND  
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*Publication\_Date:*

1990

*Title:*

LIFE HISTORY ACCOUNTS FOR SPECIES IN THE

CALIFORNIA WILDLIFE HABITAT RELATIONSHIPS (CWHR)  
SYSTEM. CAL'S WILDLIFE. VOL. I-III.

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CALIFORNIA DEPT. OF FISH AND GAME

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Three main sources of data were used to depict nest distribution and seasonality for this data layer: 1) personal interviews with resource experts from U.S. Fish and Wildlife Service (USFWS), U.S. Navy, the Audubon Society, Ryan Ecological Consulting, California State Parks (CSP), Avian Research Associates, National Park Service (NPS), California Department of Fish and Game (CDF&G), and NOAA; 2) hardcopy documents provided/published by: Carter Biological Consulting, University of California Press, USFWS, U.S. Geological Survey (USGS), CDF&G, Ryan Ecological Consulting, NOAA, CSP; and 3) digital data provided by: U.S. Navy, CDF&G, and NOAA. The above digital and/or hardcopy sources were compiled by the project biologist to create the BIRDS data layer. Depending on the type of source data, three general approaches are used for compiling the data layer: 1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:24,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the BIRDS data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

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NOAA, Office of Response and Restoration

*Contact\_Person:*

Jill Petersen

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

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*Point\_and\_Vector\_Object\_Count:*  
 2846  
*SDTS\_Terms\_Description:*  
*SDTS\_Point\_and\_Vector\_Object\_Type:*  
 Complete chain  
*Point\_and\_Vector\_Object\_Count:*  
 6544  
*SDTS\_Terms\_Description:*  
*SDTS\_Point\_and\_Vector\_Object\_Type:*  
 Link  
*Point\_and\_Vector\_Object\_Count:*  
 403033  
*SDTS\_Terms\_Description:*  
*SDTS\_Point\_and\_Vector\_Object\_Type:*  
 Node,planar graph  
*Point\_and\_Vector\_Object\_Count:*  
 4329

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*Spatial\_Reference\_Information:*  
*Horizontal\_Coordinate\_System\_Definition:*  
*Geographic:*  
*Latitude\_Resolution:*  
 0.0000001  
*Longitude\_Resolution:*

0.0000001  
*Geographic\_Coordinate\_Units:*  
 Decimal degrees  
*Geodetic\_Model:*  
*Horizontal\_Datum\_Name:*  
 North American Datum of 1983  
*Ellipsoid\_Name:*  
 Geodetic Reference System 80  
*Semi-major\_Axis:*  
 6378137.000000  
*Denominator\_of\_Flattening\_Ratio:*  
 298.257222

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*Entity\_and\_Attribute\_Information:*

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:*

BIRDS.PAT

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (209), element number (1), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:*

NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

2090100002

*Range\_Domain\_Maximum:*

2090103227

*Attribute:*

*Attribute\_Label:*

RARNUM

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

209000001

*Range\_Domain\_Maximum:*

209000956

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

BIO\_LUT

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

RARNUM

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA

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

209000001

*Range\_Domain\_Maximum:*

209001289

*Attribute:**Attribute\_Label:*

ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (209), element number (1), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:*

NOAA

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

2090100002

*Range\_Domain\_Maximum:*

2092200052

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

BIORES

*Entity\_Type\_Definition:*

The data table BIORES contains both biological attribute data and items necessary for linking vector objects in the biological data layers via the BIO\_LUT data table to other associated data tables. See the Browse\_Graphic section for a link to the

entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

RARNUM

*Attribute\_Definition:*

An identifier that links records in the BIORES data table to records in the BIO\_LUT data table or the flat format BIOFILE data table.

*Attribute\_Definition\_Source:*

NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

209000001

*Range\_Domain\_Maximum:*

209001289

*Attribute:*

*Attribute\_Label:*

SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:*

*Attribute\_Label:*

CONC

*Attribute\_Definition:*

The field CONC refers to concentration, abundance, or density values, and may contain counts of individuals for each species present at a particular site, or a term that describes relative abundance of birds at a particular site. The field may contain counts or a range of counts of individuals, pairs, or nests (XX-XX BIRDS or PAIRS or NESTS). In cases where no quantitative count information was available, the field may contain descriptive terms such as "COMMON" or "HIGH" or "RARE", or a concentration approximation, such as "100s". If no concentration information was available from any source, the field was populated with "-". Counts were derived from a variety of surveys, and may range in date (see Lineage).

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

SEASON\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:*

*Attribute\_Label:*

G\_SOURCE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:*

*Attribute\_Label:*

S\_SOURCE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:*

*Attribute\_Label:*

ELEMENT

*Attribute\_Definition:*

Major categories of biological data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

BIRD

*Enumerated\_Domain\_Value\_Definition:*

Birds

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*  
 FISH  
*Enumerated\_Domain\_Value\_Definition:*  
 Fish  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 HABITAT  
*Enumerated\_Domain\_Value\_Definition:*  
 Habitats and plants  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 INVERT  
*Enumerated\_Domain\_Value\_Definition:*  
 Invertebrates  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 M\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:*  
 Marine mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 REPTILE  
*Enumerated\_Domain\_Value\_Definition:*  
 Reptiles and Amphibians  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 T\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:*  
 Terrestrial mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute:*  
*Attribute\_Label:*  
 EL\_SPE  
*Attribute\_Definition:*  
 Concatenation of ELEMENT and SPECIES\_ID. This item links records in the BIORES data table to records in the SPECIES and STATUS data tables.  
*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*



*Enumerated\_Domain:**Enumerated\_Domain\_Value:*

E#####

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

EL\_SPE\_SEA

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

E#####

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

SPECIES

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

1

*Range\_Domain\_Maximum:*

N

*Attribute:*

*Attribute\_Label:*

NAME

*Attribute\_Definition:*

Species common name for the entire ESI data set.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

GEN\_SPEC

*Attribute\_Definition:*

Species scientific name for the entire ESI data set.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

ELEMENT

*Attribute\_Definition:*

Major categories of biological data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

BIRD

*Enumerated\_Domain\_Value\_Definition:*

Birds

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

FISH

*Enumerated\_Domain\_Value\_Definition:*

Fish

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

HABITAT

*Enumerated\_Domain\_Value\_Definition:*

Habitats and plants

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

INVERT

*Enumerated\_Domain\_Value\_Definition:*

Invertebrates  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 M\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:*  
 Marine Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 REPTILE  
*Enumerated\_Domain\_Value\_Definition:*  
 Reptiles and Amphibians  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
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 Terrestrial Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute:*  
*Attribute\_Label:*  
 SUBELEMENT  
*Attribute\_Definition:*  
 Element subgroup delineating a logical grouping of species.  
*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
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 alcid  
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 Alcid  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
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*Enumerated\_Domain\_Value\_Definition:*  
 Amphibian  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
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Bivalve  
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 NOAA ESI Guidelines  
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 NOAA ESI Guidelines  
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 Diving bird  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
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 Dolphin  
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 e\_nursery  
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 Estuarine nursery fish  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
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 fish  
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 Fish  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
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*Enumerated\_Domain\_Value:*  
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*Enumerated\_Domain\_Value\_Definition:*  
 Freshwater fish  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
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 Gastropod  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
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 gull\_tern  
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 Gull or tern  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
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 Insect  
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 Invertebrate  
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 Lizard  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
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*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*

m\_benthic  
*Enumerated\_Domain\_Value\_Definition:*  
 Marine benthic fish  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
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*Enumerated\_Domain\_Value:*  
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*Enumerated\_Domain\_Value\_Definition:*  
 Passerine bird  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
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*Enumerated\_Domain\_Value:*  
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*Enumerated\_Domain\_Value\_Definition:*  
 Pelagic bird  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
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 pinniped  
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 Pinniped  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
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*Enumerated\_Domain\_Value:*  
 plant  
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 Plant  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 raptor  
*Enumerated\_Domain\_Value\_Definition:*  
 Raptor  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 sav  
*Enumerated\_Domain\_Value\_Definition:*  
 Submerged aquatic vegetation  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*  
 sea\_otter  
*Enumerated\_Domain\_Value\_Definition:*  
 Sea otter  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
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 Shorebird  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
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*Enumerated\_Domain\_Value:*  
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 Shrimp  
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 NOAA ESI Guidelines  
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 sm\_mammal  
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 Small mammal  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
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 Snake  
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 NOAA ESI Guidelines  
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*Enumerated\_Domain\_Value:*  
 turtle  
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 Turtle  
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 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 upland  
*Enumerated\_Domain\_Value\_Definition:*  
 Upland vegetation  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 wading  
*Enumerated\_Domain\_Value\_Definition:*  
 Wading bird  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 waterfowl  
*Enumerated\_Domain\_Value\_Definition:*  
 Waterfowl  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 wetland  
*Enumerated\_Domain\_Value\_Definition:*  
 Wetland  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 whale  
*Enumerated\_Domain\_Value\_Definition:*  
 Whale  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute:*  
*Attribute\_Label:*  
 NHP  
*Attribute\_Definition:*  
 Natural Heritage Program global ranking.  
*Attribute\_Definition\_Source:*  
 Network of Natural Heritage Program  
*Attribute\_Domain\_Values:*  
*Codeset\_Domain:*  
*Codeset\_Name:*  
 NHP Global Conservation Status Rank  
*Codeset\_Source:*  
 Natural Heritage Program  
*Attribute:*  
*Attribute\_Label:*  
 DATE\_PUB  
*Attribute\_Definition:*  
 Date of NHP listing.  
*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 YYYYMM



*Enumerated\_Domain\_Value\_Definition:*  
 YYYY for year and optionally MM for month  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 0  
*Enumerated\_Domain\_Value\_Definition:*  
 Date unspecified  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute:*  
*Attribute\_Label:*  
 EL\_SPE  
*Attribute\_Definition:*  
 Concatenation of ELEMENT and SPECIES\_ID. This item links records in the SPECIES data table to records in the BIORRES and STATUS data tables.  
*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 E#####  
*Enumerated\_Domain\_Value\_Definition:*  
 Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Detailed\_Description:*

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

*Attribute:*  
*Attribute\_Label:*  
 ELEMENT  
*Attribute\_Definition:*  
 Major categories of biological data.  
*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 BIRD  
*Enumerated\_Domain\_Value\_Definition:*  
 Birds  
*Enumerated\_Domain\_Value\_Definition\_Source:*

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

FISH

*Enumerated\_Domain\_Value\_Definition:*

Fish

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

HABITAT

*Enumerated\_Domain\_Value\_Definition:*

Habitats and plants

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

INVERT

*Enumerated\_Domain\_Value\_Definition:*

Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

REPTILE

*Enumerated\_Domain\_Value\_Definition:*

Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:*

*Attribute\_Label:*

SEASON\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:*

*Attribute\_Label:*

JAN

*Attribute\_Definition:*

January

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in January

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

FEB

*Attribute\_Definition:*

February

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in February

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

MAR

*Attribute\_Definition:*

March

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in March

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

APR

*Attribute\_Definition:*

April

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in April

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

MAY

*Attribute\_Definition:*

May

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in May

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

JUN

*Attribute\_Definition:*

June

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in June

*Enumerated\_Domain\_Value\_Definition\_Source:*  
NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

JUL

*Attribute\_Definition:*

July

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in July

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

AUG

*Attribute\_Definition:*

August

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in August

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

SEP

*Attribute\_Definition:*

September

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in September

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

OCT

*Attribute\_Definition:*

October

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:**Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in October

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

NOV

*Attribute\_Definition:*

November

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

X

*Enumerated\_Domain\_Value\_Definition:*

Present in November

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

DEC

*Attribute\_Definition:*

December

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

X

*Enumerated\_Domain\_Value\_Definition:*

Present in December

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

EL\_SPE\_SEA

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

E#####

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*  
NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:*

BREED

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

EL\_SPE\_SEA

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

E#####

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

MONTH

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

12

*Attribute:*

*Attribute\_Label:*

BREED1

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

## NOAA ESI Guidelines

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

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

N

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

-

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

BREED2

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

N

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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



*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

BREED3

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

N

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

-

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

BREED4

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

N

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

-

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

BREED5

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

N

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

-

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:**Entity\_Type\_Label:*

STATUS

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

ELEMENT

*Attribute\_Definition:*

Major categories of biological data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

BIRD

*Enumerated\_Domain\_Value\_Definition:*

Birds

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

FISH

*Enumerated\_Domain\_Value\_Definition:*

Fish

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

HABITAT

*Enumerated\_Domain\_Value\_Definition:*

Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

INVERT

*Enumerated\_Domain\_Value\_Definition:*

Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 REPTILE  
*Enumerated\_Domain\_Value\_Definition:*  
 Reptiles and Amphibians  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 T\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:*  
 Terrestrial Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute:*  
*Attribute\_Label:*  
 SPECIES\_ID  
*Attribute\_Definition:*  
 Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.  
*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Range\_Domain:*  
*Range\_Domain\_Minimum:*  
 1  
*Range\_Domain\_Maximum:*  
 N  
*Attribute:*  
*Attribute\_Label:*  
 STATE  
*Attribute\_Definition:*  
 Two-letter state abbreviation.  
*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Unrepresentable\_Domain:*  
 Acceptable values change from atlas to atlas.  
*Attribute:*  
*Attribute\_Label:*  
 COUNTRY  
*Attribute\_Definition:*  
 Three-letter country abbreviation.  
*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Unrepresentable\_Domain:*  
 Acceptable values change from atlas to atlas.  
*Attribute:*  
*Attribute\_Label:*  
 S

*Attribute\_Definition:*

State threatened or endangered status.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

E

*Enumerated\_Domain\_Value\_Definition:*

Endangered on state list

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

T

*Enumerated\_Domain\_Value\_Definition:*

Threatened on state list

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

C

*Enumerated\_Domain\_Value\_Definition:*

Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

F

*Attribute\_Definition:*

Federal threatened or endangered status.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

E

*Enumerated\_Domain\_Value\_Definition:*

Endangered on federal list

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

T

*Enumerated\_Domain\_Value\_Definition:*

Threatened on federal list

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

C

*Enumerated\_Domain\_Value\_Definition:*

Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

I

*Attribute\_Definition:*

International threatened or endangered status.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

E

*Enumerated\_Domain\_Value\_Definition:*

Endangered on international list

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

T

*Enumerated\_Domain\_Value\_Definition:*

Threatened on international list

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

C

*Enumerated\_Domain\_Value\_Definition:*

Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

S\_DATE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

F\_DATE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

I\_DATE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

EL\_SPE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

E#####

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:*

SOURCES

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

SOURCE\_ID

*Attribute\_Definition:*

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table; G\_SOURCE and S\_SOURCE in the BIORES table; and SOURCE\_ID and ESI\_SOURCE in the ESI and HYDRO data layers.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

ORIGINATOR

*Attribute\_Definition:*

Author or developer of source material or data set.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

DATE\_PUB

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

TITLE

*Attribute\_Definition:*

Title of source material or data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*



*Attribute\_Label:*

DATA\_FORMAT

*Attribute\_Definition:*

The format of the source material.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

PUB\_PLACE

*Attribute\_Definition:*

Publication place.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

PUBLISHER

*Attribute\_Definition:*

Publisher.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

PUBLICATION

*Attribute\_Definition:*

Additional citation information.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

ONLINE\_LINK

*Attribute\_Definition:*

Online computer resource URL.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

SCALE

*Attribute\_Definition:*

Description of the source scale.

*Attribute\_Definition\_Source:*

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*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

TIME\_PERIOD

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Overview\_Description:**Entity\_and\_Attribute\_Overview:*

In addition to the geographic data layers, six relational attribute or data tables (BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS) are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, BIRDS) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO\_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (for the Southern California atlas, the number is 209), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described in detail in the Detailed\_Description sections. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure. Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN\_SPEC, S, F, NHP, DATE\_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G\_SOURCE, S\_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables (described in the Detailed\_Description sections), except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED\_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed\_Description of the BREED data table. The link to the BIOFILE may be made through the BIO\_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED\_DT is an auxiliary support data table to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to BREED\_DT is the BREED item. A second supporting data table is SOURCES. This is the same as the source file described above, and the link from the flat file is both G\_SOURCE and S\_SOURCE. It should be noted that although the flat file eases data query, it is not a normalized database structure, and actual updates performed by the states and other responsible agencies should be done using the relational data tables. The entity-relationship diagram, describing relationships between attribute tables in the ESI data structure, does NOT include the BIOFILE data table, and this data table is NOT

described in a Detailed\_Description section.

*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 ([http://response.restoration.noaa.gov/esi\\_guidelines](http://response.restoration.noaa.gov/esi_guidelines)).

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*Distribution\_Information:*

*Distributor:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:*

John Kaperick

*Contact\_Organization:*

NOAA, Office of Response and Restoration

*Contact\_Address:*

*Address\_Type:*

Physical Address

*Address:*

7600 Sand Point Way N.E.

*City:*

Seattle

*State\_or\_Province:*

Washington

*Postal\_Code:*

98115-6349

*Contact\_Voice\_Telephone:*

(206) 526-6400

*Contact\_Facsimile\_Telephone:*

(206) 526-6329

*Resource\_Description:*

Downloadable Data

*Distribution\_Liability:*

Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer input peripherals, or when the physical medium is delivered in damaged condition.

*Custom\_Order\_Process:*

Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to a wider community of GIS/mapping users. Distribution formats include ARC export, MOSS and Shape files, and MARPLOT map folders. An ArcView ESI project and ESI\_Viewer product are also included on the distribution CDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

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*Metadata\_Reference\_Information:*

*Metadata\_Date:*

20100927

*Metadata\_Review\_Date:*

20100927

*Metadata\_Contact:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:*

Jill Petersen

*Contact\_Organization:*

NOAA, Office of Response and Restoration

*Contact\_Position:*

GIS Manager

*Contact\_Address:*

*Address\_Type:*

Physical Address

*Address:*

7600 Sand Point Way, N.E.

*City:*

Seattle

*State\_or\_Province:*

Washington

*Postal\_Code:*

98115-6349

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(206) 526-6944

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(206) 526-6329

*Contact\_Electronic\_Mail\_Address:*

[Jill.Petersen@noaa.gov](mailto:Jill.Petersen@noaa.gov)

*Metadata\_Standard\_Name:*

Content Standards for Digital Geospatial Metadata

*Metadata\_Standard\_Version:*

FGDC-STD-001-1998

*Metadata\_Extensions:*

*Online\_Linkage:*

[http://www.ncddc.noaa.gov/metadatarresource/metadatarreferences/files/ncddcmdprofile\\_v2.pdf](http://www.ncddc.noaa.gov/metadatarresource/metadatarreferences/files/ncddcmdprofile_v2.pdf)

*Profile\_Name:*

Content Specification for Metadata in the National Coastal Data Development Center's Data Catalog Version 2.0

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# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Southern California: NESTS (Nest Points)

## Metadata:

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

### *Identification\_Information:*

#### *Citation:*

##### *Citation\_Information:*

##### *Originator:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington.

##### *Originator:*

Department of Homeland Security, United States Coast Guard, Office of Incident Management and Preparedness, Washington, D.C.

##### *Originator:*

Department of Fish and Game, Office of Spill Prevention and Response, Sacramento, California.

##### *Publication\_Date:*

201003

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Southern California: NESTS (Nest Points)

##### *Edition:*

Second

##### *Geospatial\_Data\_Presentation\_Form:*

vector digital data

##### *Series\_Information:*

##### *Series\_Name:*

None

##### *Issue\_Identification:*

Southern California

##### *Publication\_Information:*

##### *Publication\_Place:*

Seattle, Washington

##### *Publisher:*

NOAA's Ocean Service, Office of Response and Restoration (OR&R),  
Emergency Response Division (ERD).

*Other\_Citation\_Details:*

Prepared by Research Planning, Inc., Columbia, South Carolina for the  
National Oceanic and Atmospheric Administration (NOAA), National Ocean  
Service, Office of Response and Restoration, Emergency Response Division,  
Seattle, Washington.

*Online\_Linkage:*

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

*Description:*

*Abstract:*

This data set contains sensitive biological resource data for nesting and roosting gulls, terns, seabirds, shorebirds, and T/E species in Southern California. Vector points in this data set represent bird nesting and roosting sites. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the ESI data for Southern California. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources. See also the BIRDS data layer, part of the larger Southern California ESI database, for additional bird information.

*Purpose:*

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

*Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:*

1989

*Ending\_Date:*

2009

*Currentness\_Reference:*

The data were compiled during 2008-2010. The currentness dates for the data range from 1989 to 2009 and are documented in the Lineage section.

*Status:*

*Progress:*

Complete

*Maintenance\_and\_Update\_Frequency:*

None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:*

-120.60100

*East\_Bounding\_Coordinate:*

-117.00100

*North\_Bounding\_Coordinate:*

34.50000

*South\_Bounding\_Coordinate:*

32.44500

*Keywords:**Theme:**Theme\_Keyword\_Thesaurus:*

ISO 19115 Topic Category

*Theme\_Keyword:*

biota

*Theme\_Keyword:*

environment

*Theme:**Theme\_Keyword\_Thesaurus:*

None

*Theme\_Keyword:*

Environmental Monitoring

*Theme\_Keyword:*

ESI

*Theme\_Keyword:*

Sensitivity maps

*Theme\_Keyword:*

Coastal resources

*Theme\_Keyword:*

Oil spill planning

*Theme\_Keyword:*

Coastal Zone Management

*Theme\_Keyword:*

Wildlife

*Theme\_Keyword:*

Nest

*Theme\_Keyword:*

Bird

*Theme:**Theme\_Keyword\_Thesaurus:*

NOS Data Explorer Topic Category

*Theme\_Keyword:*

Environmental Monitoring

*Place:**Place\_Keyword\_Thesaurus:*

None

*Place\_Keyword:*

Southern California

*Access\_Constraints:*

None

*Use\_Constraints:*

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or

resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products derived from these data.

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:*

[datafig.jpg](#)

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and attribute data tables for the Southern California ESI data.

*Browse\_Graphic\_File\_Type:*

JPEG

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:*

[datafig2.jpg](#)

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and desktop data tables for the Southern California ESI data.

*Browse\_Graphic\_File\_Type:*

JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington; the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness Washington, D.C.; and the California Department of Fish and Game (CDF&G), Office of Spill Prevention and Response (OSPR), Sacramento, California.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 9.3) and SQL SERVER(R) (version 2000). The hardware configuration is PC's with Windows Operating System (2000/XP/2003). The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in the data set: acp.e00, birds.e00, esi.e00, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, and t\_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio\_lut.e00, biofile.e00, biores.e00, breed.e00, breed\_dt.e00, seasonal.e00, soc\_dat.e00, soc\_lut.e00, sources.e00, species.e00, and status.e00.

*Program\_Affiliation:*

*Program\_Name:*

National Ocean Service Data Explorer

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*Data\_Quality\_Information:*

*Attribute\_Accuracy:*

*Attribute\_Accuracy\_Report:*

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data



(such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

*Logical\_Consistency\_Report:*

A multi-stage error checking process, described in the above Attribute\_Accuracy\_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and SQL SERVER(R) to ARC/INFO(R) consistencies. A final review is made by the GIS manager, where the data are written to CD/DVD and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resource at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

*Completeness\_Report:*

These data represent a synthesis of expert knowledge and hardcopy documents on nesting and roosting sites. See also the BIRDS data layer, part of the larger Southern California ESI database, for additional bird information. These data do not necessarily represent all nest occurrences in Southern California. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name [n/a if not applicable]): 9, Brandt's cormorant, *Phalacrocorax penicillatus*; 37, Western gull, *Larus occidentalis*; 47, Pigeon guillemot, *Cephus columba*; 68, Black oystercatcher, *Haematopus bachmani*; 77, Osprey, *Pandion haliaetus*; 270, Western snowy plover, *Charadrius alexandrinus nivosus*.

*Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy\_Report:*

Spatial components for the biological data layers can come from expert interviews, hardcopy, or digital sources. Some of the spatial components of the biological data layers may have been developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy base maps with a scale of 1:24,000. Some of the spatial components of the biological data sets are developed from pre-existing digital or hardcopy sources and reflect the positional accuracy of these original data. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources. See the Lineage and Process\_Description sections for more information

on the original source data and how these data were integrated or manipulated to create the final data set.

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

CARTER, H.R., G.J. MCCHESENEY, D.L. JAQUES, C.S.  
STRONG, M.W. PARKER, J.E. TAKEKAWA, D.L. JORY,  
AND D.L. WHITWORTH

*Publication\_Date:*

1992

*Title:*

BREEDING POPULATIONS OF SEABIRDS IN  
CALIFORNIA, 1989-1991. VOLUME I - POPULATION  
ESTIMATES, VOLUME II - COLONY MAPS AND  
APPENDICES

*Geospatial\_Data\_Presentation\_Form:*

HARDCOPY TEXT

*Other\_Citation\_Details:*

PACIFIC OUTER CONTINENTAL SHELF REGION OF  
MMS, U.S. DOI; WASHINGTON, D.C., UNDER  
INTERAGENCY AGREEMENT NO. 14-12-001-30456  
WITH THE USFWS

*Type\_of\_Source\_Media:*

paper

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

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:*

1989

*Ending\_Date:*

1991

*Source\_Currentness\_Reference:*

DATE OF SURVEY

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

NESTS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

LENTZ (J.E.)

*Publication\_Date:*

2006

*Title:*

INTRODUCTION TO BIRDS OF THE CALIFORNIA  
COAST

*Geospatial\_Data\_Presentation\_Form:*

HARDCOPY TEXT

*Publication\_Information:*  
*Publication\_Place:*  
 BERKELEY AND LOS ANGELES, CA  
*Publisher:*  
 UNIVERSITY OF CALIFORNIA PRESS  
*Other\_Citation\_Details:*  
 UNIVERSITY OF CALIFORNIA PRESS, BERKELEY  
 AND LOS ANGELES, CA, 316 PP.  
*Type\_of\_Source\_Media:*  
 paper  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
 2006  
*Source\_Currentness\_Reference:*  
 DATE OF PUBLICATION  
*Source\_Citation\_Abbreviation:*  
 NONE  
*Source\_Contribution:*  
 NESTS INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 MAREK, J. (USFWS)  
*Publication\_Date:*  
 2009  
*Title:*  
 THREATENED AND ENDANGERED SPECIES IN  
 SANTA BARBARA AND VENTURA COUNTIES  
*Geospatial\_Data\_Presentation\_Form:*  
 EXPERT KNOWLEDGE  
*Other\_Citation\_Details:*  
 UNPUBLISHED  
*Type\_of\_Source\_Media:*  
 PERSONAL COMMUNICATION  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
 2009  
*Source\_Currentness\_Reference:*  
 DATE OF COMMUNICATION  
*Source\_Citation\_Abbreviation:*  
 NONE  
*Source\_Contribution:*  
 NESTS INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*

*Originator:*  
 RYAN, T.  
*Publication\_Date:*  
 2009  
*Title:*  
 SNOWY PLOVER AND OTHER SPECIES  
 DISTRIBUTION AND SEASONALITY IN SOUTHERN  
 CALIFORNIA  
*Geospatial\_Data\_Presentation\_Form:*  
 EXPERT KNOWLEDGE  
*Other\_Citation\_Details:*  
 UNPUBLISHED  
*Type\_of\_Source\_Media:*  
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*Source\_Time\_Period\_of\_Content:*  
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 2009  
*Source\_Currentness\_Reference:*  
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*Source\_Citation\_Abbreviation:*  
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*Source\_Contribution:*  
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*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 SMITH, R.  
*Publication\_Date:*  
 2009  
*Title:*  
 SNOWY PLOVER, LEAST TERN, AND OTHER  
 SPECIES SITES IN SANTA BARBARA AND VENTURA  
 COUNTIES  
*Geospatial\_Data\_Presentation\_Form:*  
 EXPERT KNOWLEDGE  
*Other\_Citation\_Details:*  
 UNPUBLISHED  
*Type\_of\_Source\_Media:*  
 PERSONAL COMMUNICATION  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
 2009  
*Source\_Currentness\_Reference:*  
 DATE OF COMMUNICATION  
*Source\_Citation\_Abbreviation:*  
 NONE

*Source\_Contribution:*

NESTS INFORMATION

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

Two main sources of data were used to depict nest distribution and seasonality for this data layer: 1) personal interviews with USFWS and private consultants, and 2) published and unpublished reports provided by consultants. The above digital and/or hardcopy sources were compiled by the project biologist to create the NESTS data layer. Depending on the type of source data, three general approaches are used for compiling the data layer: 1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:24,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the NESTS data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:*

201003

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

NOAA, Office of Response and Restoration

*Contact\_Person:*

Jill Petersen

*Contact\_Address:**Address\_Type:*

Physical address

*Address:*

7600 Sand Point Way, N.E.

*City:*

Seattle

*State\_or\_Province:*

Washington

*Postal\_Code:*

98115-6349

*Contact\_Voice\_Telephone:*

(206) 526-6944

*Contact\_Facsimile\_Telephone:*

(206) 526-6329

*Contact\_Electronic\_Mail\_Address:*[Jill.Petersen@noaa.gov](mailto:Jill.Petersen@noaa.gov)[Back To Index](#)*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:*

Vector

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

Entity point

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

12

[Back To Index](#)*Spatial\_Reference\_Information:**Horizontal\_Coordinate\_System\_Definition:**Geographic:**Latitude\_Resolution:*

0.0000001

*Longitude\_Resolution:*

0.0000001

*Geographic\_Coordinate\_Units:*

Decimal degrees

*Geodetic\_Model:**Horizontal\_Datum\_Name:*

North American Datum of 1983

*Ellipsoid\_Name:*

Geodetic Reference System 80

*Semi-major\_Axis:*

6378137.000000

*Denominator\_of\_Flattening\_Ratio:*

298.257222

[Back To Index](#)*Entity\_and\_Attribute\_Information:**Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:*

NESTS.PAT

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (209),

element number (5), and record number.

*Attribute\_Definition\_Source:*

NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

2090500001

*Range\_Domain\_Maximum:*

2090500012

*Attribute:*

*Attribute\_Label:*

RARNUM

*Attribute\_Definition:*

An identifier that links directly to the BIORES table or the flat format BIOFILE table.

*Attribute\_Definition\_Source:*

NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

209000019

*Range\_Domain\_Maximum:*

209000214

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:*

BIO\_LUT

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

RARNUM

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

209000001

*Range\_Domain\_Maximum:*

209001289

*Attribute:**Attribute\_Label:*

ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (209), element number (5), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:*

NOAA

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

2090100002

*Range\_Domain\_Maximum:*

2092200052

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

BIORES

*Entity\_Type\_Definition:*

The data table BIORES contains both biological attribute data and items necessary for linking vector objects in the biological data layers via the BIO\_LUT data table to other associated data tables. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

RARNUM

*Attribute\_Definition:*

An identifier that links records in the BIORES data table to records in the BIO\_LUT data table or the flat format BIOFILE data table.

*Attribute\_Definition\_Source:*

NOAA

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

209000001

*Range\_Domain\_Maximum:*

209001289

*Attribute:**Attribute\_Label:*

SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*



## NOAA ESI Guidelines

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

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

CONC

*Attribute\_Definition:*

The field CONC refers to concentration, abundance, or density values, and may contain counts of individuals for each species present at a particular nesting or roosting site. If no concentration information was available from any source, the field is populated with "-". Counts were derived from a variety of surveys, and may range in date (see Lineage).

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

SEASON\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

G\_SOURCE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

**S\_SOURCE***Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

ELEMENT

*Attribute\_Definition:*

Major categories of biological data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

BIRD

*Enumerated\_Domain\_Value\_Definition:*

Birds

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

FISH

*Enumerated\_Domain\_Value\_Definition:*

Fish

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

HABITAT

*Enumerated\_Domain\_Value\_Definition:*

Habitats and plants

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

INVERT

*Enumerated\_Domain\_Value\_Definition:*

Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Marine mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

REPTILE

*Enumerated\_Domain\_Value\_Definition:*

Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Terrestrial mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

EL\_SPE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

E#####

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

EL\_SPE\_SEA

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

## NOAA ESI Guidelines

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

E#####

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

SPECIES

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

NAME

*Attribute\_Definition:*

Species common name for the entire ESI data set.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

GEN\_SPEC

*Attribute\_Definition:*

Species scientific name for the entire ESI data set.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

ELEMENT

*Attribute\_Definition:*

Major categories of biological data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

BIRD

*Enumerated\_Domain\_Value\_Definition:*

Birds

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

FISH

*Enumerated\_Domain\_Value\_Definition:*

Fish

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

HABITAT

*Enumerated\_Domain\_Value\_Definition:*

Habitats and plants

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

INVERT

*Enumerated\_Domain\_Value\_Definition:*

Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Marine Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 REPTILE  
*Enumerated\_Domain\_Value\_Definition:*  
 Reptiles and Amphibians  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 T\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:*  
 Terrestrial Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute:*  
*Attribute\_Label:*  
 SUBELEMENT  
*Attribute\_Definition:*  
 Element subgroup delineating a logical grouping of species.  
*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 alcid  
*Enumerated\_Domain\_Value\_Definition:*  
 Alcid  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 amphibian  
*Enumerated\_Domain\_Value\_Definition:*  
 Amphibian  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 bivalve  
*Enumerated\_Domain\_Value\_Definition:*  
 Bivalve  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:**Enumerated\_Domain\_Value:*

canine

*Enumerated\_Domain\_Value\_Definition:*

Canine

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

diadromous

*Enumerated\_Domain\_Value\_Definition:*

Diadromous fish

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

diving

*Enumerated\_Domain\_Value\_Definition:*

Diving bird

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

dolphin

*Enumerated\_Domain\_Value\_Definition:*

Dolphin

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

e\_nursery

*Enumerated\_Domain\_Value\_Definition:*

Estuarine nursery fish

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

fish

*Enumerated\_Domain\_Value\_Definition:*

Fish

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

freshwater

*Enumerated\_Domain\_Value\_Definition:*

Freshwater fish

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

gastropod

*Enumerated\_Domain\_Value\_Definition:*

Gastropod

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

gull\_tern

*Enumerated\_Domain\_Value\_Definition:*

Gull or tern

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

insect

*Enumerated\_Domain\_Value\_Definition:*

Insect

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

invert

*Enumerated\_Domain\_Value\_Definition:*

Invertebrate

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

kelp

*Enumerated\_Domain\_Value\_Definition:*

Kelp

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

lizard

*Enumerated\_Domain\_Value\_Definition:*

Lizard

*Enumerated\_Domain\_Value\_Definition\_Source:*



## NOAA ESI Guidelines

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

m\_benthic

*Enumerated\_Domain\_Value\_Definition:*

Marine benthic fish

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

passerine

*Enumerated\_Domain\_Value\_Definition:*

Passerine bird

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

pelagic

*Enumerated\_Domain\_Value\_Definition:*

Pelagic bird

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

pinniped

*Enumerated\_Domain\_Value\_Definition:*

Pinniped

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

plant

*Enumerated\_Domain\_Value\_Definition:*

Plant

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

raptor

*Enumerated\_Domain\_Value\_Definition:*

Raptor

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

*Enumerated\_Domain\_Value:*  
 sav  
*Enumerated\_Domain\_Value\_Definition:*  
 Submerged aquatic vegetation  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 sea\_otter  
*Enumerated\_Domain\_Value\_Definition:*  
 Sea otter  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 shorebird  
*Enumerated\_Domain\_Value\_Definition:*  
 Shorebird  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 shrimp  
*Enumerated\_Domain\_Value\_Definition:*  
 Shrimp  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 sm\_mammal  
*Enumerated\_Domain\_Value\_Definition:*  
 Small mammal  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 snake  
*Enumerated\_Domain\_Value\_Definition:*  
 Snake  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 turtle  
*Enumerated\_Domain\_Value\_Definition:*

Turtle  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 upland  
*Enumerated\_Domain\_Value\_Definition:*  
 Upland vegetation  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 wading  
*Enumerated\_Domain\_Value\_Definition:*  
 Wading bird  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 waterfowl  
*Enumerated\_Domain\_Value\_Definition:*  
 Waterfowl  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 wetland  
*Enumerated\_Domain\_Value\_Definition:*  
 Wetland  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 whale  
*Enumerated\_Domain\_Value\_Definition:*  
 Whale  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute:*  
*Attribute\_Label:*  
 NHP  
*Attribute\_Definition:*  
 Natural Heritage Program global ranking.  
*Attribute\_Definition\_Source:*  
 Network of Natural Heritage Program  
*Attribute\_Domain\_Values:*

*Codeset\_Domain:**Codeset\_Name:*

NHP Global Conservation Status Rank

*Codeset\_Source:*

Natural Heritage Program

*Attribute:**Attribute\_Label:*

DATE\_PUB

*Attribute\_Definition:*

Date of NHP listing.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

0

*Enumerated\_Domain\_Value\_Definition:*

Date unspecified

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

EL\_SPE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

E#####

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

SEASONAL

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

ELEMENT

*Attribute\_Definition:*

Major categories of biological data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

BIRD

*Enumerated\_Domain\_Value\_Definition:*

Birds

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

FISH

*Enumerated\_Domain\_Value\_Definition:*

Fish

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

HABITAT

*Enumerated\_Domain\_Value\_Definition:*

Habitats and plants

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

INVERT

*Enumerated\_Domain\_Value\_Definition:*

Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

REPTILE

*Enumerated\_Domain\_Value\_Definition:*

Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:*

*Attribute\_Label:*

SEASON\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:*

*Attribute\_Label:*

JAN

*Attribute\_Definition:*

January

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

X

*Enumerated\_Domain\_Value\_Definition:*

Present in January

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

FEB

*Attribute\_Definition:*

February

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

X

*Enumerated\_Domain\_Value\_Definition:*

Present in February

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

MAR

*Attribute\_Definition:*

March

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

X

*Enumerated\_Domain\_Value\_Definition:*

Present in March

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

APR

*Attribute\_Definition:*

April

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in April

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

MAY

*Attribute\_Definition:*

May

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in May

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

JUN

*Attribute\_Definition:*

June

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in June

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

JUL

*Attribute\_Definition:*

July

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in July

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines



*Attribute:**Attribute\_Label:*

AUG

*Attribute\_Definition:*

August

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

X

*Enumerated\_Domain\_Value\_Definition:*

Present in August

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

SEP

*Attribute\_Definition:*

September

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

X

*Enumerated\_Domain\_Value\_Definition:*

Present in September

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

OCT

*Attribute\_Definition:*

October

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

X

*Enumerated\_Domain\_Value\_Definition:*

Present in October

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

NOV

*Attribute\_Definition:*

November

*Attribute\_Definition\_Source:*

## NOAA ESI Guidelines

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

X

*Enumerated\_Domain\_Value\_Definition:*

Present in November

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

DEC

*Attribute\_Definition:*

December

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

X

*Enumerated\_Domain\_Value\_Definition:*

Present in December

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

EL\_SPE\_SEA

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

E#####

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

BREED

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

EL\_SPE\_SEA

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

E#####

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

MONTH

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

1

*Range\_Domain\_Maximum:*

12

*Attribute:**Attribute\_Label:*

BREED1

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

*Enumerated\_Domain\_Value:*

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

N

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

-

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

BREED2

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

N

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

-

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

BREED3

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

N

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

-

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

BREED4

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "FISH" then

BREED4 = juveniles; if ELEMENT is "INVERT" then BREED4 = juveniles; if ELEMENT is "REPTILE" then BREED4 = juveniles; if ELEMENT is "M\_MAMMAL" then BREED4 = molting. This attribute is not used for BIRD, HABITAT, or T\_MAMMAL elements.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

N

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

-

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

BREED5

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

N

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

-

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:*

STATUS

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

ELEMENT

*Attribute\_Definition:*

Major categories of biological data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

BIRD

*Enumerated\_Domain\_Value\_Definition:*

Birds

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

FISH

*Enumerated\_Domain\_Value\_Definition:*

Fish

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:**Enumerated\_Domain\_Value:*

HABITAT

*Enumerated\_Domain\_Value\_Definition:*

Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

INVERT

*Enumerated\_Domain\_Value\_Definition:*

Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

REPTILE

*Enumerated\_Domain\_Value\_Definition:*

Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

1



*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

STATE

*Attribute\_Definition:*

Two-letter state abbreviation.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

COUNTRY

*Attribute\_Definition:*

Three-letter country abbreviation.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

S

*Attribute\_Definition:*

State threatened or endangered status.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

E

*Enumerated\_Domain\_Value\_Definition:*

Endangered on state list

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

T

*Enumerated\_Domain\_Value\_Definition:*

Threatened on state list

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

C

*Enumerated\_Domain\_Value\_Definition:*

Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:*  
NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

F

*Attribute\_Definition:*

Federal threatened or endangered status.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

E

*Enumerated\_Domain\_Value\_Definition:*

Endangered on federal list

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

T

*Enumerated\_Domain\_Value\_Definition:*

Threatened on federal list

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

C

*Enumerated\_Domain\_Value\_Definition:*

Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

I

*Attribute\_Definition:*

International threatened or endangered status.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

E

*Enumerated\_Domain\_Value\_Definition:*

Endangered on international list

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

T

*Enumerated\_Domain\_Value\_Definition:*

Threatened on international list

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

C

*Enumerated\_Domain\_Value\_Definition:*

Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

S\_DATE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

F\_DATE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

I\_DATE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

EL\_SPE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

E#####

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

SOURCES

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

SOURCE\_ID

*Attribute\_Definition:*

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table; G\_SOURCE and S\_SOURCE in the BIORES table; and SOURCE\_ID and ESI\_SOURCE in the ESI and HYDRO data layers.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

*Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:*

*Attribute\_Label:*

ORIGINATOR

*Attribute\_Definition:*

Author or developer of source material or data set.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

DATE\_PUB

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

TITLE

*Attribute\_Definition:*

Title of source material or data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

DATA\_FORMAT

*Attribute\_Definition:*

The format of the source material.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

PUB\_PLACE

*Attribute\_Definition:*

Publication place.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

PUBLISHER

*Attribute\_Definition:*

Publisher.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

PUBLICATION

*Attribute\_Definition:*

Additional citation information.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

ONLINE\_LINK

*Attribute\_Definition:*

Online computer resource URL.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

SCALE

*Attribute\_Definition:*

Description of the source scale.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

**TIME\_PERIOD***Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Overview\_Description:**Entity\_and\_Attribute\_Overview:*

In addition to the geographic data layers, six relational attribute or data tables (BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS) are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, NESTS) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO\_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (for the Southern California atlas, the number is 209), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described in detail in the Detailed\_Description sections. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure. Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN\_SPEC, S, F, NHP, DATE\_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G\_SOURCE, S\_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables (described in the Detailed\_Description sections), except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED\_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed\_Description of the BREED data table. The link to the BIOFILE may be made through the BIO\_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED\_DT is an auxiliary support data table to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to BREED\_DT is the BREED item. A second supporting data table is SOURCES. This is the same as the source file described above, and the link from the flat file is both G\_SOURCE and S\_SOURCE. It should be noted that although the flat file eases data query, it is not a normalized database structure, and actual updates performed by the states and other responsible agencies

should be done using the relational data tables. The entity-relationship diagram, describing relationships between attribute tables in the ESI data structure, does NOT include the BIOFILE data table, and this data table is NOT described in a Detailed\_Description section.

*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

([http://response.restoration.noaa.gov/esi\\_guidelines](http://response.restoration.noaa.gov/esi_guidelines)).

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*Distribution\_Information:*

*Distributor:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:*

John Kaperick

*Contact\_Organization:*

NOAA, Office of Response and Restoration

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*Address\_Type:*

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*City:*

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*State\_or\_Province:*

Washington

*Postal\_Code:*

98115-6349

*Contact\_Voice\_Telephone:*

(206) 526-6400

*Contact\_Facsimile\_Telephone:*

(206) 526-6329

*Resource\_Description:*

Downloadable Data

*Distribution\_Liability:*

Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer input peripherals, or when the physical medium is delivered in damaged condition.

*Custom\_Order\_Process:*

Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to the widest community of GIS/mapping users. Distribution formats include Geodatabase; ARC export, MOSS, and Shape files; and MARPLOT map folders. An ArcMap .mxd file, an ArcView 3.x ESI project, and an ESI\_Viewer product for use with the MARPLOT data are also included on the distribution CDs/DVDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA



Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

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*Metadata\_Reference\_Information:*

*Metadata\_Date:*

20100927

*Metadata\_Review\_Date:*

20100927

*Metadata\_Contact:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:*

Jill Petersen

*Contact\_Organization:*

NOAA, Office of Response and Restoration

*Contact\_Position:*

GIS Manager

*Contact\_Address:*

*Address\_Type:*

Physical Address

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Seattle

*State\_or\_Province:*

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(206) 526-6329

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[Jill.Petersen@noaa.gov](mailto:Jill.Petersen@noaa.gov)

*Metadata\_Standard\_Name:*

Content Standards for Digital Geospatial Metadata

*Metadata\_Standard\_Version:*

FGDC-STD-001-1998

*Metadata\_Extensions:*

*Online\_Linkage:*

[http://www.ncddc.noaa.gov/metadatarresource/metadatarreferences/files/ncddcmdprofile\\_v2.pdf](http://www.ncddc.noaa.gov/metadatarresource/metadatarreferences/files/ncddcmdprofile_v2.pdf)

*Profile\_Name:*

Content Specification for Metadata in the National Coastal Data Development Center's Data Catalog Version 2.0

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# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Southern California: FISH (Fish Polygons)

## Metadata:

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

### *Identification\_Information:*

#### *Citation:*

##### *Citation\_Information:*

##### *Originator:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington.

##### *Originator:*

Department of Homeland Security, United States Coast Guard, Office of Incident Management and Preparedness, Washington, D.C.

##### *Originator:*

Department of Fish and Game, Office of Spill Prevention and Response, Sacramento, California.

##### *Publication\_Date:*

201003

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Southern California: FISH (Fish Polygons)

##### *Edition:*

Second

##### *Geospatial\_Data\_Presentation\_Form:*

vector digital data

##### *Series\_Information:*

##### *Series\_Name:*

None

##### *Issue\_Identification:*

Southern California

##### *Publication\_Information:*

##### *Publication\_Place:*

Seattle, Washington

##### *Publisher:*

NOAA's Ocean Service, Office of Response and Restoration (OR&R), Emergency Response Division (ERD).

*Other\_Citation\_Details:*

Prepared by Research Planning, Inc., Columbia, South Carolina for the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service, Office of Response and Restoration, Emergency Response Division, Seattle, Washington.

*Online\_Linkage:*

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

*Description:**Abstract:*

This data set contains sensitive biological resource data for beach spawners and sensitive marine, estuarine, and anadromous species in Southern California. Vector polygons in this data set represent concentration areas, spawning areas, and sensitive species locations. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the ESI data for Southern California. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources. See also the FISHL data layer, part of the larger Southern California ESI database, for additional fish information.

*Purpose:*

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

*Time\_Period\_of\_Content:**Time\_Period\_Information:**Range\_of\_Dates/Times:**Beginning\_Date:*

2000

*Ending\_Date:*

2009

*Currentness\_Reference:*

The data were compiled during 2008-2010. The currentness dates for the data range from 2000 to 2009 and are documented in the Lineage section.

*Status:**Progress:*

Complete

*Maintenance\_and\_Update\_Frequency:*

None Scheduled

*Spatial\_Domain:**Bounding\_Coordinates:**West\_Bounding\_Coordinate:*

-120.60100

*East\_Bounding\_Coordinate:*

-117.00100

*North\_Bounding\_Coordinate:*

34.50000

*South\_Bounding\_Coordinate:*

32.44500

*Keywords:**Theme:**Theme\_Keyword\_Thesaurus:*

ISO 19115 Topic Category

*Theme\_Keyword:*

biota

*Theme\_Keyword:*

environment

*Theme:*

*Theme\_Keyword\_Thesaurus:*

None

*Theme\_Keyword:*

Environmental Monitoring

*Theme\_Keyword:*

ESI

*Theme\_Keyword:*

Sensitivity maps

*Theme\_Keyword:*

Coastal resources

*Theme\_Keyword:*

Oil spill planning

*Theme\_Keyword:*

Coastal Zone Management

*Theme\_Keyword:*

Wildlife

*Theme\_Keyword:*

Fish

*Theme:*

*Theme\_Keyword\_Thesaurus:*

NOS Data Explorer Topic Category

*Theme\_Keyword:*

Environmental Monitoring

*Place:*

*Place\_Keyword\_Thesaurus:*

None

*Place\_Keyword:*

Southern California

*Access\_Constraints:*

None

*Use\_Constraints:*

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

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:*

[datafig.jpg](#)

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and attribute data tables for the Southern California ESI data.

*Browse\_Graphic\_File\_Type:*

JPEG

*Browse\_Graphic:**Browse\_Graphic\_File\_Name:*[datafig2.jpg](#)*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and desktop data tables for the Southern California ESI data.

*Browse\_Graphic\_File\_Type:*

JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington; the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness Washington, D.C.; and the California Department of Fish and Game (CDF&G), Office of Spill Prevention and Response (OSPR), Sacramento, California.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 9.3) and SQL SERVER(R) (version 2000). The hardware configuration is PC's with Windows Operating System (2000/XP/2003). The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in the data set: acp.e00, birds.e00, esi.e00, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, and t\_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio\_lut.e00, biofile.e00, biores.e00, breed.e00, breed\_dt.e00, seasonal.e00, soc\_dat.e00, soc\_lut.e00, sources.e00, species.e00, and status.e00.

*Program\_Affiliation:**Program\_Name:*

National Ocean Service Data Explorer

[Back To Index](#)*Data\_Quality\_Information:**Attribute\_Accuracy:**Attribute\_Accuracy\_Report:*

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

*Logical\_Consistency\_Report:*

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

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

*Completeness\_Report:*

These data represent a synthesis of expert knowledge, available hardcopy documents, and digital data on concentration areas, spawning areas, and sensitive species locations for fish. See also the FISHL data layer, part of the larger Southern California ESI database, for additional fish information. These data do not necessarily represent all fish occurrences in Southern California. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name [n/a if not applicable]): 74, Rainbow trout, *Oncorhynchus mykiss*; 106, California grunion, *Leuresthes tenuis*; 226, Tidewater goby, *Eucyclogobius newberryi*; 513, Pacific seahorse, *Hippocampus ingens*; 1142, Arroyo chub, *Gila orcuttii*; 1143, Intertidal fish, n/a.

*Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy\_Report:*

Spatial components for the biological data layers can come from expert interviews, hardcopy, or digital sources. Some of the spatial components of the biological data layers may have been developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy base maps with a scale of 1:24,000. Some of the spatial components of the biological data sets are developed from pre-existing digital or hardcopy sources and reflect the positional accuracy of these original data. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources. See the Lineage and Process\_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

CDF&G, OFFICE OF SPILL PREVENTION AND RESPONSE (OSPR), DEPARTMENT OF HOMELAND SECURITY (DHS), UNITED STATES COAST GUARD (USCG)

*Publication\_Date:*

2008

*Title:*

AREA CONTINGENCY PLAN (ACP) SECTOR LOS ANGELES/LONG BEACH; 2008 USCG SECTOR SAN DIEGO AREA CONTINGENCY PLAN (ACP)

*Geospatial\_Data\_Presentation\_Form:*

HARDCOPY TEXT

*Other\_Citation\_Details:*  
 USCG  
*Type\_of\_Source\_Media:*  
 online  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
 2008  
*Source\_Currentness\_Reference:*  
 DATE OF PUBLICATION  
*Source\_Citation\_Abbreviation:*  
 NONE  
*Source\_Contribution:*  
 FISH INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 DAME, N. (SFSU)  
*Publication\_Date:*  
 2000  
*Title:*  
 BIOGEOGRAPHY OF THE PACIFIC SEAHORSE  
 (HIPPOCAMPUS INGENS)  
*Geospatial\_Data\_Presentation\_Form:*  
 document  
*Online\_Linkage:*  
<http://bss.sfsu.edu/holzman/courses/Fall100Projects/seahorse.html>  
*Type\_of\_Source\_Media:*  
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*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
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*Source\_Currentness\_Reference:*  
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*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 DELITH, C. (USFWS)  
*Publication\_Date:*  
 2009  
*Title:*  
 THREATENED/ENDANGERED (T/E) SPECIES IN  
 VENTURA COUNTY  
*Geospatial\_Data\_Presentation\_Form:*

EXPERT KNOWLEDGE

*Other\_Citation\_Details:*

UNPUBLISHED

*Type\_of\_Source\_Media:*

PERSONAL COMMUNICATION

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:*

2009

*Source\_Currentness\_Reference:*

DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

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*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

DRILL, S. (UC COOPERATIVE EXTENSION NATURAL  
RESOURCE PROGRAM LA AND VENTURA COUNTIES)

*Publication\_Date:*

2009

*Title:*

SOUTHERN CALIFORNIA SPECIES PROFILE: ARROYO  
CHUB

*Geospatial\_Data\_Presentation\_Form:*

HARDCOPY TEXT

*Online\_Linkage:*

[http://celosangeles.ucdavis.edu/natural\\_resources/](http://celosangeles.ucdavis.edu/natural_resources/)

*Type\_of\_Source\_Media:*

online

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

*Time\_Period\_Information:*

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*Calendar\_Date:*

2009

*Source\_Currentness\_Reference:*

DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

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*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

ENGLE, J. UNIVERSITY OF CALIFORNIA SANTA  
BARBARA (UCSB)

*Publication\_Date:*

2009

*Title:*



INTERTIDAL HABITATS AND SPECIES  
*Geospatial\_Data\_Presentation\_Form:*  
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*Other\_Citation\_Details:*  
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 FOSTER, B. (AVIAN RESEARCH ASSOCIATES)  
*Publication\_Date:*  
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*Title:*  
 SAN DIEGO COUNTY SPECIES  
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*Originator:*  
 KIRSCHNER, E. (USFWS)  
*Publication\_Date:*  
 2009  
*Title:*  
 USFWS RESOURCES IN SAN DIEGO AND ORANGE

COUNTIES  
*Geospatial\_Data\_Presentation\_Form:*  
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*Other\_Citation\_Details:*  
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*Source\_Currentness\_Reference:*  
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*Source\_Contribution:*  
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*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 KRONINGER, M. (CDF&G, OSPR)  
*Publication\_Date:*  
 2009  
*Title:*  
 DISTRIBUTION OF BIOLOGICAL AND SOCECON  
 RESOURCES IN LA AND ORANGE COUNTIES  
*Geospatial\_Data\_Presentation\_Form:*  
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*Other\_Citation\_Details:*  
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*Source\_Contribution:*  
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*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 MARTIN, K. (PEPPERDINE UNIVERSITY)  
*Publication\_Date:*  
 2009  
*Title:*

EDITS AND ADDITIONS TO CALIFORNIA GRUNION  
DISTRIBUTION AND SEASONALITY IN SOUTHERN  
CALIFORNIA

*Geospatial\_Data\_Presentation\_Form:*  
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*Other\_Citation\_Details:*  
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*Type\_of\_Source\_Media:*  
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*Source\_Time\_Period\_of\_Content:*  
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*Single\_Date/Time:*  
*Calendar\_Date:*  
2009

*Source\_Currentness\_Reference:*  
DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:*  
NONE

*Source\_Contribution:*  
FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*  
MARTIN, K. (PEPPERDINE)

*Publication\_Date:*  
2006

*Title:*  
INTRODUCTION TO GRUNION BIOLOGY

*Geospatial\_Data\_Presentation\_Form:*  
document

*Other\_Citation\_Details:*  
K. MARTIN, 2006, P. 5

*Type\_of\_Source\_Media:*  
online

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

*Single\_Date/Time:*  
*Calendar\_Date:*  
2006

*Source\_Currentness\_Reference:*  
DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:*  
NONE

*Source\_Contribution:*  
FISH INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*  
MARTIN, K. (PEPPERDINE) AND GRUNION.ORG

*Publication\_Date:*  
2009

*Title:*  
 SOUTHERN CALIFORNIA GRUNION RUNS  
*Geospatial\_Data\_Presentation\_Form:*  
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*Other\_Citation\_Details:*  
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*Type\_of\_Source\_Media:*  
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*Source\_Time\_Period\_of\_Content:*  
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*Single\_Date/Time:*  
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*Source\_Citation\_Abbreviation:*  
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*Source\_Contribution:*  
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*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 PRYOR, D.  
*Publication\_Date:*  
 2009  
*Title:*  
 SPECIES DISTRIBUTION, LOS ANGELES COUNTY  
*Geospatial\_Data\_Presentation\_Form:*  
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*Other\_Citation\_Details:*  
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*Type\_of\_Source\_Media:*  
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*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
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*Source\_Currentness\_Reference:*  
 DATE OF PUBLICATION  
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*Source\_Contribution:*  
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*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 U.S. FISH AND WILDLIFE SERVICE  
*Publication\_Date:*  
 2005  
*Title:*

RECOVERY PLAN FOR THE TIDEWATER GOBY  
(EUCYCLOGOBIUS NEWBERRYI).

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

*Publication\_Information:*  
*Publication\_Place:*  
PORTLAND, OREGON

*Publisher:*  
U.S. FISH AND WILDLIFE SERVICE

*Other\_Citation\_Details:*  
U.S. FISH AND WILDLIFE SERVICE, PORTLAND,  
OREGON. VI + 199 PP.

*Type\_of\_Source\_Media:*  
paper

*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
2005

*Source\_Currentness\_Reference:*  
DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:*  
NONE

*Source\_Contribution:*  
FISH INFORMATION

*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
UNIVERSITY OF CALIFORNIA SANTA BARBARA,  
MARINE LIFE PROTECTION ACT (UCSB MLPA)

*Publication\_Date:*  
2009

*Title:*  
GRUNION SPAWN

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

*Other\_Citation\_Details:*  
UNPUBLISHED

*Type\_of\_Source\_Media:*  
online

*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
2009

*Source\_Currentness\_Reference:*  
DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:*  
NONE

*Source\_Contribution:*  
FISH INFORMATION

*Process\_Step:*

*Process\_Description:*

Three main sources of data were used to depict fish distribution and seasonality for this data layer: 1) personal interviews with resource experts from the U.S. Fish and Wildlife Service (USFWS), California State Parks (CSP), University of California Santa Barbara (UCSB), Avian Research Associates, Pepperdine University, California Department of Fish and Game (CDF&G) Office of Spill Prevention and Response (OSPR); 2) published reports provided by USFWS, CDF&G; and 3) digital data provided by: UCSB Marine Life Protection Act Initiative (MLPA/MarineMap). The above digital and/or hardcopy sources were compiled by the project biologist to create the FISH data layer. Depending on the type of source data, three general approaches are used for compiling the data layer: 1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:24,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the FISH data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:*

201003

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

NOAA, Office of Response and Restoration

*Contact\_Person:*

Jill Petersen

*Contact\_Address:**Address\_Type:*

Physical address

*Address:*

7600 Sand Point Way, N.E.

*City:*

Seattle

*State\_or\_Province:*

Washington

*Postal\_Code:*

98115-6349

*Contact\_Voice\_Telephone:*

(206) 526-6944

*Contact\_Facsimile\_Telephone:*

(206) 526-6329

*Contact\_Electronic\_Mail\_Address:*[Jill.Petersen@noaa.gov](mailto:Jill.Petersen@noaa.gov)[Back To Index](#)*Spatial\_Data\_Organization\_Information:**Direct\_Spatial\_Reference\_Method:*

**Vector***Point\_and\_Vector\_Object\_Information:**SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

GT-polygon composed of chains

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

1283

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Area point

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

1284

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Complete chain

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

2759

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Link

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

143875

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Node,planar graph

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

1872

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---

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

0.0000001

*Longitude\_Resolution:*

0.0000001

*Geographic\_Coordinate\_Units:*

Decimal degrees

*Geodetic\_Model:**Horizontal\_Datum\_Name:*

North American Datum of 1983

*Ellipsoid\_Name:*

Geodetic Reference System 80

*Semi-major\_Axis:*

6378137.000000

*Denominator\_of\_Flattening\_Ratio:*

298.257222

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---

*Entity\_and\_Attribute\_Information:**Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:*

## FISH.PAT

*Entity\_Type\_Definition:*

The FISH.PAT table contains attribute information for the vector polygons in this data set representing concentration areas, spawning areas, and sensitive species locations. Note that all attribute information is stored in a series of relational files, described below and in the Overview\_Description section. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (209), element number (2), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:*

NOAA

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

2090200002

*Range\_Domain\_Maximum:*

2090201296

*Attribute:**Attribute\_Label:*

RARNUM

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA

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

209000957

*Range\_Domain\_Maximum:*

209001024

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

BIO\_LUT

*Entity\_Type\_Definition:*

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



structure.

*Entity\_Type\_Definition\_Source:*  
NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

RARNUM

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

209000001

*Range\_Domain\_Maximum:*

209001289

*Attribute:*

*Attribute\_Label:*

ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (209), element number (2), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:*

NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

2090100002

*Range\_Domain\_Maximum:*

2092200052

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:*

BIORES

*Entity\_Type\_Definition:*

The data table BIORES contains both biological attribute data and items necessary for linking vector objects in the biological data layers via the BIO\_LUT data table to other associated data tables. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

RARNUM

*Attribute\_Definition:*

An identifier that links records in the BIORES data table to records in the BIO\_LUT data table or the flat format BIOFILE data table.

*Attribute\_Definition\_Source:*

NOAA

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

209000001

*Range\_Domain\_Maximum:*

209001289

*Attribute:**Attribute\_Label:*

SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

CONC

*Attribute\_Definition:*

The field CONC refers to "concentration," abundance, or density values of a species at a particular location. No quantitative concentration information was available for fish, so the CONC field may contain descriptive terms for the presence of a species, such as "LIKELY", or descriptive terms for the possibility of fish runs, such as "FREQUENT-LARGE-RUNS" or "OCCASIONAL-RUNS". If no concentration information was available from any source, the field was populated with "-".

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

SEASON\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

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

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

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*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:***S\_SOURCE***Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

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*Range\_Domain\_Maximum:*

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*Attribute:**Attribute\_Label:***ELEMENT***Attribute\_Definition:*

Major categories of biological data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

BIRD

*Enumerated\_Domain\_Value\_Definition:*

Birds

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

FISH

*Enumerated\_Domain\_Value\_Definition:*

Fish

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

HABITAT

*Enumerated\_Domain\_Value\_Definition:*  
 Habitats and plants  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
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*Enumerated\_Domain\_Value:*  
 INVERT  
*Enumerated\_Domain\_Value\_Definition:*  
 Invertebrates  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 M\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:*  
 Marine mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 REPTILE  
*Enumerated\_Domain\_Value\_Definition:*  
 Reptiles and Amphibians  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 T\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:*  
 Terrestrial mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute:*  
*Attribute\_Label:*  
 EL\_SPE  
*Attribute\_Definition:*  
 Concatenation of ELEMENT and SPECIES\_ID. This item links records in the BIORES data table to records in the SPECIES and STATUS data tables.  
*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 E#####  
*Enumerated\_Domain\_Value\_Definition:*  
 Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').  
*Enumerated\_Domain\_Value\_Definition\_Source:*

## NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

EL\_SPE\_SEA

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

E#####

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

SPECIES

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

NAME

*Attribute\_Definition:*

Species common name for the entire ESI data set.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Unrepresentable\_Domain:*  
 Acceptable values change from atlas to atlas.  
*Attribute:*  
*Attribute\_Label:*  
 GEN\_SPEC  
*Attribute\_Definition:*  
 Species scientific name for the entire ESI data set.  
*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Unrepresentable\_Domain:*  
 Acceptable values change from atlas to atlas.  
*Attribute:*  
*Attribute\_Label:*  
 ELEMENT  
*Attribute\_Definition:*  
 Major categories of biological data.  
*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 BIRD  
*Enumerated\_Domain\_Value\_Definition:*  
 Birds  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 FISH  
*Enumerated\_Domain\_Value\_Definition:*  
 Fish  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 HABITAT  
*Enumerated\_Domain\_Value\_Definition:*  
 Habitats and plants  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 INVERT  
*Enumerated\_Domain\_Value\_Definition:*  
 Invertebrates  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

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

M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

REPTILE

*Enumerated\_Domain\_Value\_Definition:*

Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

SUBELEMENT

*Attribute\_Definition:*

Element subgroup delineating a logical grouping of species.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

alcid

*Enumerated\_Domain\_Value\_Definition:*

Alcid

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

amphibian

*Enumerated\_Domain\_Value\_Definition:*

Amphibian

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

bivalve

*Enumerated\_Domain\_Value\_Definition:*

Bivalve

*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 canine  
*Enumerated\_Domain\_Value\_Definition:*  
 Canine  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 diadromous  
*Enumerated\_Domain\_Value\_Definition:*  
 Diadromous fish  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 diving  
*Enumerated\_Domain\_Value\_Definition:*  
 Diving bird  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 dolphin  
*Enumerated\_Domain\_Value\_Definition:*  
 Dolphin  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 e\_nursery  
*Enumerated\_Domain\_Value\_Definition:*  
 Estuarine nursery fish  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 fish  
*Enumerated\_Domain\_Value\_Definition:*  
 Fish  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*



freshwater  
*Enumerated\_Domain\_Value\_Definition:*  
 Freshwater fish  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 gastropod  
*Enumerated\_Domain\_Value\_Definition:*  
 Gastropod  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 gull\_tern  
*Enumerated\_Domain\_Value\_Definition:*  
 Gull or tern  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 insect  
*Enumerated\_Domain\_Value\_Definition:*  
 Insect  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 invert  
*Enumerated\_Domain\_Value\_Definition:*  
 Invertebrate  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 kelp  
*Enumerated\_Domain\_Value\_Definition:*  
 Kelp  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 lizard  
*Enumerated\_Domain\_Value\_Definition:*  
 Lizard  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

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

m\_benthic

*Enumerated\_Domain\_Value\_Definition:*

Marine benthic fish

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

passerine

*Enumerated\_Domain\_Value\_Definition:*

Passerine bird

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

pelagic

*Enumerated\_Domain\_Value\_Definition:*

Pelagic bird

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

pinniped

*Enumerated\_Domain\_Value\_Definition:*

Pinniped

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

plant

*Enumerated\_Domain\_Value\_Definition:*

Plant

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

raptor

*Enumerated\_Domain\_Value\_Definition:*

Raptor

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

sav

*Enumerated\_Domain\_Value\_Definition:*

Submerged aquatic vegetation  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 sea\_otter  
*Enumerated\_Domain\_Value\_Definition:*  
 Sea otter  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 shorebird  
*Enumerated\_Domain\_Value\_Definition:*  
 Shorebird  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 shrimp  
*Enumerated\_Domain\_Value\_Definition:*  
 Shrimp  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 sm\_mammal  
*Enumerated\_Domain\_Value\_Definition:*  
 Small mammal  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 snake  
*Enumerated\_Domain\_Value\_Definition:*  
 Snake  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 turtle  
*Enumerated\_Domain\_Value\_Definition:*  
 Turtle  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*  
 upland  
*Enumerated\_Domain\_Value\_Definition:*  
 Upland vegetation  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 wading  
*Enumerated\_Domain\_Value\_Definition:*  
 Wading bird  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 waterfowl  
*Enumerated\_Domain\_Value\_Definition:*  
 Waterfowl  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 wetland  
*Enumerated\_Domain\_Value\_Definition:*  
 Wetland  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 whale  
*Enumerated\_Domain\_Value\_Definition:*  
 Whale  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute:*  
*Attribute\_Label:*  
 NHP  
*Attribute\_Definition:*  
 Natural Heritage Program global ranking.  
*Attribute\_Definition\_Source:*  
 Network of Natural Heritage Program  
*Attribute\_Domain\_Values:*  
*Codeset\_Domain:*  
*Codeset\_Name:*  
 NHP Global Conservation Status Rank  
*Codeset\_Source:*  
 Natural Heritage Program  
*Attribute:*  
*Attribute\_Label:*

**DATE\_PUB***Attribute\_Definition:*

Date of NHP listing.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

0

*Enumerated\_Domain\_Value\_Definition:*

Date unspecified

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

EL\_SPE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

E#####

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

SEASONAL

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

## ELEMENT

*Attribute\_Definition:*

Major categories of biological data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

BIRD

*Enumerated\_Domain\_Value\_Definition:*

Birds

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

FISH

*Enumerated\_Domain\_Value\_Definition:*

Fish

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

HABITAT

*Enumerated\_Domain\_Value\_Definition:*

Habitats and plants

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

INVERT

*Enumerated\_Domain\_Value\_Definition:*

Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

REPTILE

*Enumerated\_Domain\_Value\_Definition:*

Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:*

*Attribute\_Label:*

SEASON\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:*

*Attribute\_Label:*

JAN

*Attribute\_Definition:*

January

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in January

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

FEB

*Attribute\_Definition:*

February

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in February

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

MAR

*Attribute\_Definition:*

March

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in March

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

APR

*Attribute\_Definition:*

April

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in April

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

MAY

*Attribute\_Definition:*

May

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*



X

*Enumerated\_Domain\_Value\_Definition:*

Present in May

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

JUN

*Attribute\_Definition:*

June

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

X

*Enumerated\_Domain\_Value\_Definition:*

Present in June

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

JUL

*Attribute\_Definition:*

July

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

X

*Enumerated\_Domain\_Value\_Definition:*

Present in July

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

AUG

*Attribute\_Definition:*

August

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

X

*Enumerated\_Domain\_Value\_Definition:*

Present in August

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

SEP

*Attribute\_Definition:*

September

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

X

*Enumerated\_Domain\_Value\_Definition:*

Present in September

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

OCT

*Attribute\_Definition:*

October

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

X

*Enumerated\_Domain\_Value\_Definition:*

Present in October

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

NOV

*Attribute\_Definition:*

November

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

X

*Enumerated\_Domain\_Value\_Definition:*

Present in November

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

DEC

*Attribute\_Definition:*

December

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

X

*Enumerated\_Domain\_Value\_Definition:*

Present in December

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

EL\_SPE\_SEA

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

E#####

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

BREED

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

EL\_SPE\_SEA

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

E#####

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

MONTH

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

1

*Range\_Domain\_Maximum:*

12

*Attribute:**Attribute\_Label:*

BREED1

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

N

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

-

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

BREED2

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

N

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

-

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

BREED3

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 N  
*Enumerated\_Domain\_Value\_Definition:*  
 Life-history stage or activity not present or not reported  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 -  
*Enumerated\_Domain\_Value\_Definition:*  
 Breed category not used or not appropriate for record(s) in question  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

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

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 Y  
*Enumerated\_Domain\_Value\_Definition:*  
 Life-history stage or activity present  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 N  
*Enumerated\_Domain\_Value\_Definition:*  
 Life-history stage or activity not present or not reported  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 -  
*Enumerated\_Domain\_Value\_Definition:*  
 Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:*  
NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*  
BREED5

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

*Attribute\_Definition\_Source:*  
NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*  
Y

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

*Enumerated\_Domain\_Value\_Definition\_Source:*  
NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*  
N

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

*Enumerated\_Domain\_Value\_Definition\_Source:*  
NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*  
-

*Enumerated\_Domain\_Value\_Definition:*  
Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:*  
NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:*  
STATUS

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

*Entity\_Type\_Definition\_Source:*  
NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*  
ELEMENT

*Attribute\_Definition:*

Major categories of biological data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

BIRD

*Enumerated\_Domain\_Value\_Definition:*

Birds

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

FISH

*Enumerated\_Domain\_Value\_Definition:*

Fish

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

HABITAT

*Enumerated\_Domain\_Value\_Definition:*

Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

INVERT

*Enumerated\_Domain\_Value\_Definition:*

Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

REPTILE

*Enumerated\_Domain\_Value\_Definition:*

Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*



*Enumerated\_Domain\_Value:*  
T\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:*  
Terrestrial Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*  
SPECIES\_ID  
*Attribute\_Definition:*  
Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.  
*Attribute\_Definition\_Source:*  
NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Range\_Domain:*  
*Range\_Domain\_Minimum:*  
1  
*Range\_Domain\_Maximum:*  
N

*Attribute:*

*Attribute\_Label:*  
STATE  
*Attribute\_Definition:*  
Two-letter state abbreviation.  
*Attribute\_Definition\_Source:*  
NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Unrepresentable\_Domain:*  
Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*  
COUNTRY  
*Attribute\_Definition:*  
Three-letter country abbreviation.  
*Attribute\_Definition\_Source:*  
NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Unrepresentable\_Domain:*  
Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*  
S  
*Attribute\_Definition:*  
State threatened or endangered status.  
*Attribute\_Definition\_Source:*  
NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
E  
*Enumerated\_Domain\_Value\_Definition:*  
Endangered on state list

*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 T  
*Enumerated\_Domain\_Value\_Definition:*  
 Threatened on state list  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 C  
*Enumerated\_Domain\_Value\_Definition:*  
 Species of Special Concern  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute:*  
*Attribute\_Label:*  
 F  
*Attribute\_Definition:*  
 Federal threatened or endangered status.  
*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 E  
*Enumerated\_Domain\_Value\_Definition:*  
 Endangered on federal list  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 T  
*Enumerated\_Domain\_Value\_Definition:*  
 Threatened on federal list  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 C  
*Enumerated\_Domain\_Value\_Definition:*  
 Species of Special Concern  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute:*  
*Attribute\_Label:*  
 I  
*Attribute\_Definition:*

International threatened or endangered status.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

E

*Enumerated\_Domain\_Value\_Definition:*

Endangered on international list

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

T

*Enumerated\_Domain\_Value\_Definition:*

Threatened on international list

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

C

*Enumerated\_Domain\_Value\_Definition:*

Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

S\_DATE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

F\_DATE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

I\_DATE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

EL\_SPE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

E#####

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:*

SOURCES

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

**SOURCE\_ID***Attribute\_Definition:*

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table; G\_SOURCE and S\_SOURCE in the BIORES table; and SOURCE\_ID and ESI\_SOURCE in the ESI and HYDRO data layers.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

ORIGINATOR

*Attribute\_Definition:*

Author or developer of source material or data set.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

DATE\_PUB

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

TITLE

*Attribute\_Definition:*

Title of source material or data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

DATA\_FORMAT

*Attribute\_Definition:*

The format of the source material.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

PUB\_PLACE

*Attribute\_Definition:*

Publication place.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

PUBLISHER

*Attribute\_Definition:*

Publisher.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

PUBLICATION

*Attribute\_Definition:*

Additional citation information.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

ONLINE\_LINK

*Attribute\_Definition:*

Online computer resource URL.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

SCALE

*Attribute\_Definition:*

Description of the source scale.

*Attribute\_Definition\_Source:*

## NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

TIME\_PERIOD

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Overview\_Description:**Entity\_and\_Attribute\_Overview:*

In addition to the geographic data layers, six relational attribute or data tables (BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS) are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, FISH) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO\_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (for the Southern California atlas, the number is 209), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described in detail in the Detailed\_Description sections. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure. Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN\_SPEC, S, F, NHP, DATE\_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G\_SOURCE, S\_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables (described in the Detailed\_Description sections), except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED\_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed\_Description of the BREED data table. The link to the BIOFILE may be made through the BIO\_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED\_DT is an auxiliary support data table to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to BREED\_DT is the BREED item. A second supporting data table is SOURCES. This is the same as the source file described above, and the link from the flat file is both G\_SOURCE and S\_SOURCE. It should be noted that although the flat file

eases data query, it is not a normalized database structure, and actual updates performed by the states and other responsible agencies should be done using the relational data tables. The entity-relationship diagram, describing relationships between attribute tables in the ESI data structure, does NOT include the BIOFILE data table, and this data table is NOT described in a Detailed\_Description section.

*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 ([http://response.restoration.noaa.gov/esi\\_guidelines](http://response.restoration.noaa.gov/esi_guidelines)).

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*Distribution\_Information:*

*Distributor:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:*

John Kaperick

*Contact\_Organization:*

NOAA, Office of Response and Restoration

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*City:*

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*State\_or\_Province:*

Washington

*Postal\_Code:*

98115-6349

*Contact\_Voice\_Telephone:*

(206) 526-6400

*Contact\_Facsimile\_Telephone:*

(206) 526-6329

*Resource\_Description:*

Downloadable Data

*Distribution\_Liability:*

Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer input peripherals, or when the physical medium is delivered in damaged condition.

*Custom\_Order\_Process:*

Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to the widest community of GIS/mapping users. Distribution formats include Geodatabase; ARC export, MOSS, and Shape files; and MARPLOT map folders. An ArcMap .mxd file, an ArcView 3.x ESI project, and an ESI\_Viewer product for use with the MARPLOT data are also included on the distribution CDs/DVDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This



metadata document includes information on both of these database formats.

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*Metadata\_Reference\_Information:*

*Metadata\_Date:*

20100927

*Metadata\_Review\_Date:*

20100927

*Metadata\_Contact:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:*

Jill Petersen

*Contact\_Organization:*

NOAA, Office of Response and Restoration

*Contact\_Position:*

GIS Manager

*Contact\_Address:*

*Address\_Type:*

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*State\_or\_Province:*

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(206) 526-6329

*Contact\_Electronic\_Mail\_Address:*

[Jill.Petersen@noaa.gov](mailto:Jill.Petersen@noaa.gov)

*Metadata\_Standard\_Name:*

Content Standards for Digital Geospatial Metadata

*Metadata\_Standard\_Version:*

FGDC-STD-001-1998

*Metadata\_Extensions:*

*Online\_Linkage:*

[http://www.ncddc.noaa.gov/metadataresource/metadata-references/files/ncddcmdprofile\\_v2.pdf](http://www.ncddc.noaa.gov/metadataresource/metadata-references/files/ncddcmdprofile_v2.pdf)

*Profile\_Name:*

Content Specification for Metadata in the National Coastal Data Development Center's Data Catalog Version 2.0

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# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Southern California: FISHL (Fish Lines)

## Metadata:

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

### *Identification\_Information:*

#### *Citation:*

##### *Citation\_Information:*

##### *Originator:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington.

##### *Originator:*

Department of Homeland Security, United States Coast Guard, Office of Incident Management and Preparedness, Washington, D.C.

##### *Originator:*

Department of Fish and Game, Office of Spill Prevention and Response, Sacramento, California.

##### *Publication\_Date:*

201003

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Southern California: FISHL (Fish Lines)

##### *Edition:*

Second

##### *Geospatial\_Data\_Presentation\_Form:*

vector digital data

##### *Series\_Information:*

##### *Series\_Name:*

None

##### *Issue\_Identification:*

Southern California

##### *Publication\_Information:*

##### *Publication\_Place:*

Seattle, Washington

##### *Publisher:*

NOAA's Ocean Service, Office of Response and Restoration (OR&R),  
Emergency Response Division (ERD).

*Other\_Citation\_Details:*

Prepared by Research Planning, Inc., Columbia, South Carolina for the  
National Oceanic and Atmospheric Administration (NOAA), National Ocean  
Service, Office of Response and Restoration, Emergency Response Division,  
Seattle, Washington.

*Online\_Linkage:*

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

*Description:*

*Abstract:*

This data set contains sensitive biological resource data for  
threatened/endangered/rare and/or anadromous fish species in Southern California.  
Vector lines in this data set represent threatened/endangered/rare and/or anadromous  
fish species in streams and rivers. Species-specific abundance, seasonality, status, life  
history, and source information are stored in relational data tables (described below)  
designed to be used in conjunction with this spatial data layer. This data set comprises  
a portion of the ESI data for Southern California. ESI data characterize the marine  
and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data  
include information for three main components: shoreline habitats, sensitive  
biological resources, and human-use resources. See also the FISH data layer, part of  
the larger Southern California ESI database, for additional fish information.

*Purpose:*

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

*Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:*

2005

*Ending\_Date:*

2009

*Currentness\_Reference:*

The data were compiled during 2008-2010. The currentness dates for the data range  
from 2005 to 2009 and are documented in the Lineage section.

*Status:*

*Progress:*

Complete

*Maintenance\_and\_Update\_Frequency:*

None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:*

-120.60100

*East\_Bounding\_Coordinate:*

-117.00100

*North\_Bounding\_Coordinate:*

34.50000

*South\_Bounding\_Coordinate:*

32.44500

*Keywords:**Theme:**Theme\_Keyword\_Thesaurus:*

ISO 19115 Topic Category

*Theme\_Keyword:*

biota

*Theme\_Keyword:*

environment

*Theme:**Theme\_Keyword\_Thesaurus:*

None

*Theme\_Keyword:*

Environmental Monitoring

*Theme\_Keyword:*

ESI

*Theme\_Keyword:*

Sensitivity maps

*Theme\_Keyword:*

Coastal resources

*Theme\_Keyword:*

Oil spill planning

*Theme\_Keyword:*

Coastal Zone Management

*Theme\_Keyword:*

Wildlife

*Theme\_Keyword:*

Fish

*Theme:**Theme\_Keyword\_Thesaurus:*

NOS Data Explorer Topic Category

*Theme\_Keyword:*

Environmental Monitoring

*Place:**Place\_Keyword\_Thesaurus:*

None

*Place\_Keyword:*

Southern California

*Access\_Constraints:*

None

*Use\_Constraints:*

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

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

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:*

[datafig.jpg](#)

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and attribute data tables for the Southern California ESI data.

*Browse\_Graphic\_File\_Type:*

JPEG

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:*

[datafig2.jpg](#)

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and desktop data tables for the Southern California ESI data.

*Browse\_Graphic\_File\_Type:*

JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington; the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness Washington, D.C.; and the California Department of Fish and Game (CDF&G), Office of Spill Prevention and Response (OSPR), Sacramento, California.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 9.3) and SQL SERVER(R) (version 2000). The hardware configuration is PC's with Windows Operating System (2000/XP/2003). The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in the data set: acp.e00, birds.e00, esi.e00, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, and t\_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio\_lut.e00, biofile.e00, biores.e00, breed.e00, breed\_dt.e00, seasonal.e00, soc\_dat.e00, soc\_lut.e00, sources.e00, species.e00, and status.e00.

*Program\_Affiliation:*

*Program\_Name:*

National Ocean Service Data Explorer

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*Data\_Quality\_Information:*

*Attribute\_Accuracy:*

*Attribute\_Accuracy\_Report:*

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

depending upon the methodology used to collect and compile such data. For a more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

*Logical\_Consistency\_Report:*

A multi-stage error checking process, described in the above Attribute\_Accuracy\_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and SQL SERVER(R) to ARC/INFO(R) consistencies. A final review is made by the GIS manager, where the data are written to CD/DVD and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resource at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

*Completeness\_Report:*

These data represent a synthesis of expert knowledge and available hardcopy documents on threatened/endangered/rare and/or anadromous fish species in streams and rivers. See also the FISH data layer, part of the larger Southern California ESI database, for additional fish information. These data do not necessarily represent all fish occurrences in Southern California. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name [n/a if not applicable]): 74, Rainbow trout, *Oncorhynchus mykiss*; 226, Tidewater goby, *Eucyclogobius newberryi*; 1142, Arroyo chub, *Gila orcuttii*.

*Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy\_Report:*

Spatial components for the biological data layers can come from expert interviews, hardcopy, or digital sources. Some of the spatial components of the biological data layers may have been developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy base maps with a scale of 1:24,000. Some of the spatial components of the biological data sets are developed from pre-existing digital or hardcopy sources and reflect the positional accuracy of these original data. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources. See the Lineage and Process\_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

AVERY, J. (USFWS)

*Publication\_Date:*

2009

*Title:*

USFWS RESOURCES IN SAN DIEGO AND ORANGE COUNTIES

*Geospatial\_Data\_Presentation\_Form:*

EXPERT KNOWLEDGE

*Other\_Citation\_Details:*

UNPUBLISHED

*Type\_of\_Source\_Media:*

PERSONAL COMMUNICATION

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:*

2009

*Source\_Currentness\_Reference:*

DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

FISHL INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

CDF&G, OFFICE OF SPILL PREVENTION AND RESPONSE (OSPR), DEPARTMENT OF HOMELAND SECURITY (DHS), UNITED STATES COAST GUARD (USCG)

*Publication\_Date:*

2008

*Title:*

AREA CONTINGENCY PLAN (ACP) SECTOR LOS ANGELES/LONG BEACH; 2008 USCG SECTOR SAN DIEGO AREA CONTINGENCY PLAN (ACP)

*Geospatial\_Data\_Presentation\_Form:*

HARDCOPY TEXT

*Other\_Citation\_Details:*

USCG

*Type\_of\_Source\_Media:*

online

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:*

2008

*Source\_Currentness\_Reference:*  
DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:*  
NONE

*Source\_Contribution:*  
FISHL INFORMATION

*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
DELITH, C. (USFWS)  
*Publication\_Date:*  
2009  
*Title:*  
THREATENED/ENDANGERED (T/E) SPECIES IN  
VENTURA COUNTY  
*Geospatial\_Data\_Presentation\_Form:*  
EXPERT KNOWLEDGE  
*Other\_Citation\_Details:*  
UNPUBLISHED

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

*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
2009

*Source\_Currentness\_Reference:*  
DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:*  
NONE

*Source\_Contribution:*  
FISHL INFORMATION

*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
DRILL, S. (UC COOPERATIVE EXTENSION NATURAL  
RESOURCE PROGRAM LA AND VENTURA  
COUNTIES)  
*Publication\_Date:*  
2009  
*Title:*  
SOUTHERN CALIFORNIA SPECIES PROFILE:  
ARROYO CHUB  
*Geospatial\_Data\_Presentation\_Form:*  
HARDCOPY TEXT  
*Online\_Linkage:*  
[http://celosangeles.ucdavis.edu/natural\\_resources/](http://celosangeles.ucdavis.edu/natural_resources/)

*Type\_of\_Source\_Media:*



online  
*Source\_Time\_Period\_of\_Content:*  
     *Time\_Period\_Information:*  
         *Single\_Date/Time:*  
             *Calendar\_Date:*  
                 2009  
     *Source\_Currentness\_Reference:*  
         DATE OF PUBLICATION  
*Source\_Citation\_Abbreviation:*  
     NONE  
*Source\_Contribution:*  
     FISHL INFORMATION  
*Source\_Information:*  
     *Source\_Citation:*  
         *Citation\_Information:*  
             *Originator:*  
                 PRYOR, D.  
             *Publication\_Date:*  
                 2009  
             *Title:*  
                 SPECIES DISTRIBUTION, LOS ANGELES COUNTY  
             *Geospatial\_Data\_Presentation\_Form:*  
                 EXPERT KNOWLEDGE  
             *Other\_Citation\_Details:*  
                 UNPUBLISHED  
     *Type\_of\_Source\_Media:*  
         PERSONAL COMMUNICATION  
     *Source\_Time\_Period\_of\_Content:*  
         *Time\_Period\_Information:*  
             *Single\_Date/Time:*  
                 *Calendar\_Date:*  
                     2009  
         *Source\_Currentness\_Reference:*  
             DATE OF PUBLICATION  
     *Source\_Citation\_Abbreviation:*  
         NONE  
     *Source\_Contribution:*  
         FISHL INFORMATION  
*Source\_Information:*  
     *Source\_Citation:*  
         *Citation\_Information:*  
             *Originator:*  
                 U.S. FISH AND WILDLIFE SERVICE  
             *Publication\_Date:*  
                 2005  
             *Title:*  
                 RECOVERY PLAN FOR THE TIDEWATER GOBY  
                     (EUCYCLOGOBIUS NEWBERRYI)  
             *Geospatial\_Data\_Presentation\_Form:*  
                 HARDCOPY TEXT  
             *Publication\_Information:*

*Publication\_Place:*

PORTLAND, OREGON

*Publisher:*

U.S. FISH AND WILDLIFE SERVICE

*Other\_Citation\_Details:*

U.S. FISH AND WILDLIFE SERVICE, PORTLAND,  
OREGON. VI + 199 PP.

*Type\_of\_Source\_Media:*

paper

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:*

2005

*Source\_Currentness\_Reference:*

DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

FISHL INFORMATION

*Process\_Step:*

*Process\_Description:*

Two main sources of data were used to depict fish distribution and seasonality for this data layer: 1) personal interviews with resource experts from the U.S. Fish and Wildlife Service (USFWS) and California State Parks (CSP), and 2) published reports provided by USFWS and California Department of Fish and Game (CDF&G). The above digital and/or hardcopy sources were compiled by the project biologist to create the FISHL data layer. Depending on the type of source data, three general approaches are used for compiling the data layer: 1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:24,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the FISHL data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:*

201003

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:*

NOAA, Office of Response and Restoration

*Contact\_Person:*

Jill Petersen

*Contact\_Address:*

*Address\_Type:*

Physical address

*Address:*

7600 Sand Point Way, N.E.

*City:*

Seattle

*State\_or\_Province:*

Washington

*Postal\_Code:*

98115-6349

*Contact\_Voice\_Telephone:*

(206) 526-6944

*Contact\_Facsimile\_Telephone:*

(206) 526-6329

*Contact\_Electronic\_Mail\_Address:*[Jill.Petersen@noaa.gov](mailto:Jill.Petersen@noaa.gov)[Back To Index](#)

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*Spatial\_Data\_Organization\_Information:**Direct\_Spatial\_Reference\_Method:*

Vector

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

Complete chain

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

52

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Link

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

246

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Node, planar graph

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

89

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

0.0000001

*Longitude\_Resolution:*

0.0000001

*Geographic\_Coordinate\_Units:*

Decimal degrees

*Geodetic\_Model:**Horizontal\_Datum\_Name:*

North American Datum of 1983

*Ellipsoid\_Name:*  
Geodetic Reference System 80  
*Semi-major\_Axis:*  
6378137.000000  
*Denominator\_of\_Flattening\_Ratio:*  
298.257222

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*Entity\_and\_Attribute\_Information:*

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:*

FISHL.AAT

*Entity\_Type\_Definition:*

The FISHL.AAT table contains attribute information for the vector lines in this data set representing threatened/endangered/rare and/or anadromous fish species in streams and rivers. Note that all attribute information is stored in a series of relational files, described below and in the Overview\_Description section. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (209), element number (22), and record number.

*Attribute\_Definition\_Source:*

NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

2092200002

*Range\_Domain\_Maximum:*

2092200052

*Attribute:*

*Attribute\_Label:*

RARNUM

*Attribute\_Definition:*

An identifier that links directly to the BIORES table or the flat format BIOFILE table.

*Attribute\_Definition\_Source:*

NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

209000957

*Range\_Domain\_Maximum:*

209001002

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

BIO\_LUT

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

RARNUM

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA

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

209000001

*Range\_Domain\_Maximum:*

209001289

*Attribute:**Attribute\_Label:*

ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (209), element number (22), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:*

NOAA

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

2090100002

*Range\_Domain\_Maximum:*

2092200052

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

BIORES

*Entity\_Type\_Definition:*

The data table BIORES contains both biological attribute data and items necessary for linking vector objects in the biological data layers via the BIO\_LUT data table to other associated data tables. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

RARNUM

*Attribute\_Definition:*

An identifier that links records in the BIORES data table to records in the BIO\_LUT data table or the flat format BIOFILE data table.

*Attribute\_Definition\_Source:*

NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

209000001

*Range\_Domain\_Maximum:*

209001289

*Attribute:*

*Attribute\_Label:*

SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:*

*Attribute\_Label:*

CONC

*Attribute\_Definition:*

The field CONC refers to "concentration," abundance, or density values of a species at a particular location. No quantitative concentration information was available for fish, so the CONC field may contain descriptive terms for the presence of a species, such as "LIKELY", or descriptive terms for the possibility of fish runs, such as "FREQUENT-LARGE-RUNS" or "OCCASIONAL-RUNS". If no concentration information was available from any source, the field was populated with "-".

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

SEASON\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

G\_SOURCE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

S\_SOURCE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

ELEMENT

*Attribute\_Definition:*

Major categories of biological data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             BIRD  
         *Enumerated\_Domain\_Value\_Definition:*  
             Birds  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             FISH  
         *Enumerated\_Domain\_Value\_Definition:*  
             Fish  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             HABITAT  
         *Enumerated\_Domain\_Value\_Definition:*  
             Habitats and plants  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             INVERT  
         *Enumerated\_Domain\_Value\_Definition:*  
             Invertebrates  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             M\_MAMMAL  
         *Enumerated\_Domain\_Value\_Definition:*  
             Marine mammals  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             REPTILE  
         *Enumerated\_Domain\_Value\_Definition:*  
             Reptiles and Amphibians  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*



## T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Terrestrial mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

EL\_SPE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

E#####

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

EL\_SPE\_SEA

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

E#####

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

SPECIES

*Entity\_Type\_Definition:*

The data table SPECIES identifies all species in the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram,

which describes the way this table relates to other attribute tables in the ESI data structure. Refer to the Completeness\_Report for a list of layer-specific species.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:*

*Attribute\_Label:*

NAME

*Attribute\_Definition:*

Species common name for the entire ESI data set.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

GEN\_SPEC

*Attribute\_Definition:*

Species scientific name for the entire ESI data set.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

ELEMENT

*Attribute\_Definition:*

Major categories of biological data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

BIRD

*Enumerated\_Domain\_Value\_Definition:*

## Birds

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

FISH

*Enumerated\_Domain\_Value\_Definition:*

Fish

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

HABITAT

*Enumerated\_Domain\_Value\_Definition:*

Habitats and plants

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

INVERT

*Enumerated\_Domain\_Value\_Definition:*

Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

REPTILE

*Enumerated\_Domain\_Value\_Definition:*

Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

SUBELEMENT

*Attribute\_Definition:*

Element subgroup delineating a logical grouping of species.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

alcid

*Enumerated\_Domain\_Value\_Definition:*

Alcid

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

amphibian

*Enumerated\_Domain\_Value\_Definition:*

Amphibian

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

bivalve

*Enumerated\_Domain\_Value\_Definition:*

Bivalve

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

canine

*Enumerated\_Domain\_Value\_Definition:*

Canine

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

diadromous

*Enumerated\_Domain\_Value\_Definition:*

Diadromous fish

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

diving

*Enumerated\_Domain\_Value\_Definition:*  
 Diving bird  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 dolphin  
*Enumerated\_Domain\_Value\_Definition:*  
 Dolphin  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 e\_nursery  
*Enumerated\_Domain\_Value\_Definition:*  
 Estuarine nursery fish  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 fish  
*Enumerated\_Domain\_Value\_Definition:*  
 Fish  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 freshwater  
*Enumerated\_Domain\_Value\_Definition:*  
 Freshwater fish  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 gastropod  
*Enumerated\_Domain\_Value\_Definition:*  
 Gastropod  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 gull\_tern  
*Enumerated\_Domain\_Value\_Definition:*  
 Gull or tern  
*Enumerated\_Domain\_Value\_Definition\_Source:*

## NOAA ESI Guidelines

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

insect

*Enumerated\_Domain\_Value\_Definition:*

Insect

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

invert

*Enumerated\_Domain\_Value\_Definition:*

Invertebrate

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

kelp

*Enumerated\_Domain\_Value\_Definition:*

Kelp

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

lizard

*Enumerated\_Domain\_Value\_Definition:*

Lizard

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

m\_benthic

*Enumerated\_Domain\_Value\_Definition:*

Marine benthic fish

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

passerine

*Enumerated\_Domain\_Value\_Definition:*

Passerine bird

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

*Enumerated\_Domain\_Value:*  
 pelagic  
*Enumerated\_Domain\_Value\_Definition:*  
 Pelagic bird  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 pinniped  
*Enumerated\_Domain\_Value\_Definition:*  
 Pinniped  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 plant  
*Enumerated\_Domain\_Value\_Definition:*  
 Plant  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 raptor  
*Enumerated\_Domain\_Value\_Definition:*  
 Raptor  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 sav  
*Enumerated\_Domain\_Value\_Definition:*  
 Submerged aquatic vegetation  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 sea\_otter  
*Enumerated\_Domain\_Value\_Definition:*  
 Sea otter  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 shorebird  
*Enumerated\_Domain\_Value\_Definition:*

## Shorebird

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

shrimp

*Enumerated\_Domain\_Value\_Definition:*

Shrimp

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

sm\_mammal

*Enumerated\_Domain\_Value\_Definition:*

Small mammal

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

snake

*Enumerated\_Domain\_Value\_Definition:*

Snake

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

turtle

*Enumerated\_Domain\_Value\_Definition:*

Turtle

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

upland

*Enumerated\_Domain\_Value\_Definition:*

Upland vegetation

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

wading

*Enumerated\_Domain\_Value\_Definition:*

Wading bird

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines



*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 waterfowl  
*Enumerated\_Domain\_Value\_Definition:*  
 Waterfowl  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 wetland  
*Enumerated\_Domain\_Value\_Definition:*  
 Wetland  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 whale  
*Enumerated\_Domain\_Value\_Definition:*  
 Whale  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute:*  
*Attribute\_Label:*  
 NHP  
*Attribute\_Definition:*  
 Natural Heritage Program global ranking.  
*Attribute\_Definition\_Source:*  
 Network of Natural Heritage Program  
*Attribute\_Domain\_Values:*  
*Codeset\_Domain:*  
*Codeset\_Name:*  
 NHP Global Conservation Status Rank  
*Codeset\_Source:*  
 Natural Heritage Program

*Attribute:*  
*Attribute\_Label:*  
 DATE\_PUB  
*Attribute\_Definition:*  
 Date of NHP listing.  
*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 YYYYMM  
*Enumerated\_Domain\_Value\_Definition:*  
 YYYY for year and optionally MM for month  
*Enumerated\_Domain\_Value\_Definition\_Source:*

## NOAA ESI Guidelines

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

0

*Enumerated\_Domain\_Value\_Definition:*

Date unspecified

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

EL\_SPE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

E#####

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

SEASONAL

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

ELEMENT

*Attribute\_Definition:*

Major categories of biological data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

BIRD

*Enumerated\_Domain\_Value\_Definition:*  
 Birds  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 FISH  
*Enumerated\_Domain\_Value\_Definition:*  
 Fish  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 HABITAT  
*Enumerated\_Domain\_Value\_Definition:*  
 Habitats and plants  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 INVERT  
*Enumerated\_Domain\_Value\_Definition:*  
 Invertebrates  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 M\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:*  
 Marine Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 REPTILE  
*Enumerated\_Domain\_Value\_Definition:*  
 Reptiles and Amphibians  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 T\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:*  
 Terrestrial Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:*

## NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

SEASON\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

JAN

*Attribute\_Definition:*

January

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

X

*Enumerated\_Domain\_Value\_Definition:*

Present in January

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

FEB

*Attribute\_Definition:*

February

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 X  
*Enumerated\_Domain\_Value\_Definition:*  
 Present in February  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*  
 MAR  
*Attribute\_Definition:*  
 March  
*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 X  
*Enumerated\_Domain\_Value\_Definition:*  
 Present in March  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*  
 APR  
*Attribute\_Definition:*  
 April  
*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 X  
*Enumerated\_Domain\_Value\_Definition:*  
 Present in April  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*  
 MAY  
*Attribute\_Definition:*  
 May  
*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 X  
*Enumerated\_Domain\_Value\_Definition:*  
 Present in May

*Enumerated\_Domain\_Value\_Definition\_Source:*  
NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

JUN

*Attribute\_Definition:*

June

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in June

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

JUL

*Attribute\_Definition:*

July

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in July

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

AUG

*Attribute\_Definition:*

August

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in August

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

SEP

*Attribute\_Definition:*

September

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in September

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

OCT

*Attribute\_Definition:*

October

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in October

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

NOV

*Attribute\_Definition:*

November

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in November

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

DEC

*Attribute\_Definition:*

December

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in December

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

EL\_SPE\_SEA

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

E#####

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

BREED

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

EL\_SPE\_SEA

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

E#####

*Enumerated\_Domain\_Value\_Definition:*

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



and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*  
 MONTH

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

*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

12

*Attribute:*

*Attribute\_Label:*  
 BREED1

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

*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

N

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

-

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*  
NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*  
BREED2

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

*Attribute\_Definition\_Source:*  
NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

N

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

-

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*  
BREED3

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

N

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

-

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

BREED4

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

N

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

-

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

BREED5

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

N

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

-

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:*

STATUS

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

ELEMENT

*Attribute\_Definition:*

Major categories of biological data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

BIRD

*Enumerated\_Domain\_Value\_Definition:*

Birds

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

FISH

*Enumerated\_Domain\_Value\_Definition:*

Fish

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

HABITAT

*Enumerated\_Domain\_Value\_Definition:*

Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

INVERT

*Enumerated\_Domain\_Value\_Definition:*

Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

REPTILE

*Enumerated\_Domain\_Value\_Definition:*

Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

STATE

*Attribute\_Definition:*

Two-letter state abbreviation.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

COUNTRY

*Attribute\_Definition:*

Three-letter country abbreviation.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

*Attribute:*

*Attribute\_Label:*  
 S

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

*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines

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

*Enumerated\_Domain\_Value:*  
 E

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

*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

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

*Enumerated\_Domain\_Value:*  
 T

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

*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

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

*Enumerated\_Domain\_Value:*  
 C

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

*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*  
 F

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

*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines

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

*Enumerated\_Domain\_Value:*  
 E

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

*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

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

*Enumerated\_Domain\_Value:*

T

*Enumerated\_Domain\_Value\_Definition:*

Threatened on federal list

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

C

*Enumerated\_Domain\_Value\_Definition:*

Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

I

*Attribute\_Definition:*

International threatened or endangered status.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

E

*Enumerated\_Domain\_Value\_Definition:*

Endangered on international list

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

T

*Enumerated\_Domain\_Value\_Definition:*

Threatened on international list

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

C

*Enumerated\_Domain\_Value\_Definition:*

Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

S\_DATE

*Attribute\_Definition:*

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



*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

F\_DATE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

I\_DATE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

EL\_SPE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:**Enumerated\_Domain\_Value:*

E#####

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

SOURCES

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

SOURCE\_ID

*Attribute\_Definition:*

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table; G\_SOURCE and S\_SOURCE in the BIORES table; and SOURCE\_ID and ESI\_SOURCE in the ESI and HYDRO data layers.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

ORIGINATOR

*Attribute\_Definition:*

Author or developer of source material or data set.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

DATE\_PUB

*Attribute\_Definition:*

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

with expert source.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

TITLE

*Attribute\_Definition:*

Title of source material or data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

DATA\_FORMAT

*Attribute\_Definition:*

The format of the source material.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

PUB\_PLACE

*Attribute\_Definition:*

Publication place.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

PUBLISHER

*Attribute\_Definition:*

Publisher.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

PUBLICATION

*Attribute\_Definition:*

Additional citation information.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

ONLINE\_LINK

*Attribute\_Definition:*

Online computer resource URL.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

SCALE

*Attribute\_Definition:*

Description of the source scale.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

TIME\_PERIOD

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Overview\_Description:**Entity\_and\_Attribute\_Overview:*

In addition to the geographic data layers, six relational attribute or data tables (BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS) are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, FISHL) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO\_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (for the Southern California atlas, the number is 209), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The

RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described in detail in the Detailed\_Description sections. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure. Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN\_SPEC, S, F, NHP, DATE\_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G\_SOURCE, S\_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables (described in the Detailed\_Description sections), except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED\_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed\_Description of the BREED data table. The link to the BIOFILE may be made through the BIO\_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED\_DT is an auxiliary support data table to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to BREED\_DT is the BREED item. A second supporting data table is SOURCES. This is the same as the source file described above, and the link from the flat file is both G\_SOURCE and S\_SOURCE. It should be noted that although the flat file eases data query, it is not a normalized database structure, and actual updates performed by the states and other responsible agencies should be done using the relational data tables. The entity-relationship diagram, describing relationships between attribute tables in the ESI data structure, does NOT include the BIOFILE data table, and this data table is NOT described in a Detailed\_Description section.

*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 ([http://response.restoration.noaa.gov/esi\\_guidelines](http://response.restoration.noaa.gov/esi_guidelines)).

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*Distribution\_Information:*

*Distributor:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:*

John Kaperick

*Contact\_Organization:*

NOAA, Office of Response and Restoration

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*Address\_Type:*

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*State\_or\_Province:*

Washington

*Postal\_Code:*

98115-6349

*Contact\_Voice\_Telephone:*

(206) 526-6400

*Contact\_Facsimile\_Telephone:*

(206) 526-6329

*Resource\_Description:*

Downloadable Data

*Distribution\_Liability:*

Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer input peripherals, or when the physical medium is delivered in damaged condition.

*Custom\_Order\_Process:*

Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to the widest community of GIS/mapping users. Distribution formats include Geodatabase; ARC export, MOSS, and Shape files; and MARPLOT map folders. An ArcMap .mxd file, an ArcView 3.x ESI project, and an ESI\_Viewer product for use with the MARPLOT data are also included on the distribution CDs/DVDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

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*Metadata\_Reference\_Information:**Metadata\_Date:*

20100927

*Metadata\_Review\_Date:*

20100927

*Metadata\_Contact:**Contact\_Information:**Contact\_Person\_Primary:**Contact\_Person:*

Jill Petersen

*Contact\_Organization:*

NOAA, Office of Response and Restoration

*Contact\_Position:*

GIS Manager

*Contact\_Address:*

*Address\_Type:*

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*State\_or\_Province:*

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[Jill.Petersen@noaa.gov](mailto:Jill.Petersen@noaa.gov)

*Metadata\_Standard\_Name:*

Content Standards for Digital Geospatial Metadata

*Metadata\_Standard\_Version:*

FGDC-STD-001-1998

*Metadata\_Extensions:*

*Online\_Linkage:*

[http://www.ncddc.noaa.gov/metadatarresource/metadatarreferences/files/ncddcmdprofile\\_v2.pdf](http://www.ncddc.noaa.gov/metadatarresource/metadatarreferences/files/ncddcmdprofile_v2.pdf)

*Profile\_Name:*

Content Specification for Metadata in the National Coastal Data Development Center's Data Catalog Version 2.0

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# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Southern California: INVERT (Invertebrate Polygons)

## Metadata:

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

### *Identification\_Information:*

#### *Citation:*

##### *Citation\_Information:*

##### *Originator:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington.

##### *Originator:*

Department of Homeland Security, United States Coast Guard, Office of Incident Management and Preparedness, Washington, D.C.

##### *Originator:*

Department of Fish and Game, Office of Spill Prevention and Response, Sacramento, California.

##### *Publication\_Date:*

201003

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Southern California: INVERT (Invertebrate Polygons)

##### *Edition:*

Second

##### *Geospatial\_Data\_Presentation\_Form:*

vector digital data

##### *Series\_Information:*

##### *Series\_Name:*

None

##### *Issue\_Identification:*

Southern California

##### *Publication\_Information:*

##### *Publication\_Place:*

Seattle, Washington

##### *Publisher:*



NOAA's Ocean Service, Office of Response and Restoration (OR&R),  
Emergency Response Division (ERD).

*Other\_Citation\_Details:*

Prepared by Research Planning, Inc., Columbia, South Carolina for the  
National Oceanic and Atmospheric Administration (NOAA), National Ocean  
Service, Office of Response and Restoration, Emergency Response Division,  
Seattle, Washington.

*Online\_Linkage:*

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

*Description:*

*Abstract:*

This data set contains sensitive biological resource data for sensitive bivalves, gastropods, insects, crustaceans, and other invertebrate species in Southern California. Vector polygons in this data set represent sensitive species and some commercial/recreational species distributions. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the ESI data for Southern California. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources.

*Purpose:*

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

*Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:*

1977

*Ending\_Date:*

2009

*Currentness\_Reference:*

The data were compiled during 2008-2010. The currentness dates for the data range from 1977 to 2009 and are documented in the Lineage section.

*Status:*

*Progress:*

Complete

*Maintenance\_and\_Update\_Frequency:*

None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:*

-120.60100

*East\_Bounding\_Coordinate:*

-117.00100

*North\_Bounding\_Coordinate:*

34.50000

*South\_Bounding\_Coordinate:*

32.44500

*Keywords:**Theme:**Theme\_Keyword\_Thesaurus:*

ISO 19115 Topic Category

*Theme\_Keyword:*

biota

*Theme\_Keyword:*

environment

*Theme:**Theme\_Keyword\_Thesaurus:*

None

*Theme\_Keyword:*

Environmental Monitoring

*Theme\_Keyword:*

ESI

*Theme\_Keyword:*

Sensitivity maps

*Theme\_Keyword:*

Coastal resources

*Theme\_Keyword:*

Oil spill planning

*Theme\_Keyword:*

Coastal Zone Management

*Theme\_Keyword:*

Wildlife

*Theme\_Keyword:*

Invertebrate

*Theme:**Theme\_Keyword\_Thesaurus:*

NOS Data Explorer Topic Category

*Theme\_Keyword:*

Environmental Monitoring

*Place:**Place\_Keyword\_Thesaurus:*

None

*Place\_Keyword:*

Southern California

*Access\_Constraints:*

None

*Use\_Constraints:*

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

derived from these data.

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:*

[datafig.jpg](#)

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and attribute data tables for the Southern California ESI data.

*Browse\_Graphic\_File\_Type:*

JPEG

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:*

[datafig2.jpg](#)

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and desktop data tables for the Southern California ESI data.

*Browse\_Graphic\_File\_Type:*

JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington; the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness Washington, D.C.; and the California Department of Fish and Game (CDF&G), Office of Spill Prevention and Response (OSPR), Sacramento, California.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 9.3) and SQL SERVER(R) (version 2000). The hardware configuration is PC's with Windows Operating System (2000/XP/2003). The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in the data set: acp.e00, birds.e00, esi.e00, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, and t\_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio\_lut.e00, biofile.e00, biores.e00, breed.e00, breed\_dt.e00, seasonal.e00, soc\_dat.e00, soc\_lut.e00, sources.e00, species.e00, and status.e00.

*Program\_Affiliation:*

*Program\_Name:*

National Ocean Service Data Explorer

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*Data\_Quality\_Information:*

*Attribute\_Accuracy:*

*Attribute\_Accuracy\_Report:*

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

more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

*Logical\_Consistency\_Report:*

A multi-stage error checking process, described in the above Attribute\_Accuracy\_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and SQL SERVER(R) to ARC/INFO(R) consistencies. A final review is made by the GIS manager, where the data are written to CD/DVD and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resource at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

*Completeness\_Report:*

These data represent a synthesis of expert knowledge, available hardcopy documents, and digital data on sensitive species and some commercial/recreational species distributions. These data do not necessarily represent all invertebrate occurrences in Southern California. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name [n/a if not applicable]): 18, Pismo clam, Tivela stultorum; 20, California mussel, Mytilus californianus; 29, Pacific littleneck, Protothaca staminea; 60, Abalone, Haliotis spp.; 61, Red abalone, Haliotis rufescens; 62, Black abalone, Haliotis cracherodii; 64, White abalone, Haliotis sorenseni; 65, Pink abalone, Haliotis corrugata; 76, Nuttall cockle, Clinocardium nuttallii; 505, Monarch butterfly, Danaus plexippus; 555, Globose dune beetle, Coelus globosus; 592, Riverside fairy shrimp, Streptocephalus woottoni; 593, San Diego fairy shrimp, Branchinecta sandiegonensis; 596, Chione spp., Chione spp.; 597, Point Mugu dune weevil, Trigonoscuta muguensis; 598, Wandering skipper, Panoquina errans; 599, Western beach tiger beetle, Cicindela latesignata; 1039, Intertidal invertebrates, n/a.

*Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy\_Report:*

Spatial components for the biological data layers can come from expert interviews, hardcopy, or digital sources. Some of the spatial components of the biological data layers may have been developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy base maps with a scale of 1:24,000. Some of the spatial components of the biological data sets are developed from pre-existing digital or hardcopy sources and reflect the positional accuracy of these original data. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the

positional accuracy of vector digital objects representing these resources. See the Lineage and Process\_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

BUCK, T. (CDF&G)

*Publication\_Date:*

2009

*Title:*

PISMO BEACH DISTRIBUTION IN SAN DIEGO  
COUNTY

*Geospatial\_Data\_Presentation\_Form:*

EXPERT KNOWLEDGE

*Other\_Citation\_Details:*

UNPUBLISHED

*Type\_of\_Source\_Media:*

online

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:*

2009

*Source\_Currentness\_Reference:*

DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

INVERT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

CDF&G

*Publication\_Date:*

2001

*Title:*

CALIFORNIA'S LIVING MARINE RESOURCES: A  
STATUS REPORT (PISMO CLAM)

*Geospatial\_Data\_Presentation\_Form:*

HARDCOPY TEXT

*Other\_Citation\_Details:*

CDF&G, DECEMBER 2001

*Type\_of\_Source\_Media:*

online

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*Citation\_Information:*  
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 CDF&G  
*Publication\_Date:*  
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*Title:*  
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*Geospatial\_Data\_Presentation\_Form:*  
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*Online\_Linkage:*  
<http://www.dfg.ca.gov/>  
*Type\_of\_Source\_Media:*  
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*Source\_Time\_Period\_of\_Content:*  
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*Publication\_Date:*  
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 CALIFORNIA'S LIVING MARINE RESOURCES: A  
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*Geospatial\_Data\_Presentation\_Form:*  
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 CDF&G, DECEMBER 2001. PP. 451-452.  
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             *Originator:*  
                 CDF&G BIOGEOGRAPHIC DATA BRANCH  
             *Publication\_Date:*  
                 2009  
             *Title:*  
                 CALIFORNIA NATURAL DIVERSITY DATABASE  
                 (CNDDB)  
             *Geospatial\_Data\_Presentation\_Form:*  
                 vector digital data  
             *Publication\_Information:*  
                 *Publication\_Place:*  
                     SACRAMENTO, CA  
                 *Publisher:*  
                     CDF&G BIOGEOGRAPHIC DATA BRANCH  
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             *Citation\_Information:*  
                 *Originator:*  
                     CDF&G, OFFICE OF SPILL PREVENTION AND  
                     RESPONSE (OSPR), DEPARTMENT OF HOMELAND  
                     SECURITY (DHS), UNITED STATES COAST GUARD  
                     (USCG)  
                 *Publication\_Date:*  
                     2008  
                 *Title:*

AREA CONTINGENCY PLAN (ACP) SECTOR LOS  
ANGELES/LONG BEACH; 2008 USCG SECTOR SAN  
DIEGO AREA CONTINGENCY PLAN (ACP)

*Geospatial\_Data\_Presentation\_Form:*

HARDCOPY TEXT

*Other\_Citation\_Details:*

USCG

*Type\_of\_Source\_Media:*

online

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*Calendar\_Date:*

2008

*Source\_Currentness\_Reference:*

DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

INVERT INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

DELITH, C. (USFWS)

*Publication\_Date:*

2009

*Title:*

THREATENED/ENDANGERED (T/E) SPECIES IN  
VENTURA COUNTY

*Geospatial\_Data\_Presentation\_Form:*

EXPERT KNOWLEDGE

*Other\_Citation\_Details:*

UNPUBLISHED

*Type\_of\_Source\_Media:*

PERSONAL COMMUNICATION

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

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*Single\_Date/Time:*

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2009

*Source\_Currentness\_Reference:*

DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:*

NONE

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*Originator:*



ENGLE, J. UNIVERSITY OF CALIFORNIA SANTA  
BARBARA (UCSB)  
*Publication\_Date:*  
2009  
*Title:*  
INTERTIDAL HABITATS AND SPECIES  
*Geospatial\_Data\_Presentation\_Form:*  
EXPERT KNOWLEDGE  
*Other\_Citation\_Details:*  
UNPUBLISHED  
*Type\_of\_Source\_Media:*  
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KRONINGER, M. (CDF&G, OSPR)  
*Publication\_Date:*  
2009  
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DISTRIBUTION OF BIOLOGICAL AND SOCECON  
RESOURCES IN LA AND ORANGE COUNTIES  
*Geospatial\_Data\_Presentation\_Form:*  
EXPERT KNOWLEDGE  
*Other\_Citation\_Details:*  
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*Source\_Citation:*

*Citation\_Information:*

*Originator:*

LERMA, D. (TIERRA DATA INC.)

*Publication\_Date:*

2009

*Title:*

SAN NIC AND SAN CLEMENTE RESOURCES

*Geospatial\_Data\_Presentation\_Form:*

EXPERT KNOWLEDGE

*Other\_Citation\_Details:*

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*Type\_of\_Source\_Media:*

PERSONAL COMMUNICATION

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

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2009

*Source\_Currentness\_Reference:*

DATE OF COMMUNICATION

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*Citation\_Information:*

*Originator:*

LEWIS, R. (CDF&G OSPR)

*Publication\_Date:*

2009

*Title:*

DISTRIBUTION OF SOCECON AND BIOLOGICAL  
RESOURCES IN SOUTHERN CALIFORNIA

*Geospatial\_Data\_Presentation\_Form:*

EXPERT KNOWLEDGE

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*Source\_Contribution:*

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NATIONAL OCEANIC AND ATMOSPHERIC  
ADMINISTRATION (NOAA), NATIONAL OCEAN  
SERVICE (NOS), OFFICE OF RESPONSE AND  
RESTORATION (OR&R), EMERGENCY RESPONSE  
DIVISION (ERD)

*Publication\_Date:*

2006

*Title:*

SENSITIVITY OF COASTAL ENVIRONMENTS TO  
SPILLED OIL: CENTRAL CALIFORNIA ATLAS

*Geospatial\_Data\_Presentation\_Form:*

atlas

*Publication\_Information:*

*Publication\_Place:*

SEATTLE, WA

*Publisher:*

NOAA

*Other\_Citation\_Details:*

MONTEREY BAY NATIONAL MARINE SANCTUARY  
(MBNMS), CDF&G OSPR, AND MONTEREY BAY  
SANCTUARY FOUNDATION, NOAA 7600 SAND  
POINT WAY, SEATTLE, WA 98115-6349

*Online\_Linkage:*

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

*Type\_of\_Source\_Media:*

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

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2006

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NOAA NATIONAL MARINE FISHERIES SERVICE

*Publication\_Date:*

2007

*Title:*

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*Geospatial\_Data\_Presentation\_Form:*

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*Publication\_Information:*

*Publication\_Place:*

LONG BEACH, CALIFORNIA

*Publisher:*

NOAA NATIONAL MARINE FISHERIES  
SERVICE

*Other\_Citation\_Details:*

NOAA FISHERIES, SOUTHWEST REGION,  
PROTECTED RESOURCES DIVISION, 501 W. OCEAN  
BLVD. SUITE 4200, LONG BEACH, CALIFORNIA,  
90802-4213

*Type\_of\_Source\_Media:*

online

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

*Time\_Period\_Information:*

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2007

*Source\_Currentness\_Reference:*

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NONE

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*Source\_Citation:*

*Citation\_Information:*

*Originator:*

NOAA NATIONAL MARINE FISHERIES SERVICE

*Publication\_Date:*

2008

*Title:*

WHITE ABALONE RECOVERY PLAN (HALIOTIS  
SORENSEN)

*Geospatial\_Data\_Presentation\_Form:*

HARDCOPY TEXT

*Publication\_Information:*

*Publication\_Place:*

LONG BEACH, CA

*Publisher:*

NOAA NATIONAL MARINE FISHERIES  
SERVICE

*Type\_of\_Source\_Media:*

paper

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

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*Calendar\_Date:*

2008

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*Originator:*  
 ONO, D. (CDF&G, MARINE REGION)  
*Publication\_Date:*  
 2009  
*Title:*  
 SANTA BARBARA/VENTURA/NORTHERN LA  
 COUNTY PISMO AND LITTLENECK CLAM SITES  
*Geospatial\_Data\_Presentation\_Form:*  
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*Originator:*  
 ORSAK, L.J.  
*Publication\_Date:*  
 1977  
*Title:*  
 THE BUTTERFLIES OF ORANGE COUNTY,  
 CALIFORNIA  
*Geospatial\_Data\_Presentation\_Form:*  
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*Publication\_Information:*  
*Publication\_Place:*  
 NEW YORK  
*Publisher:*  
 UNIVERSITY OF CALIFORNIA PRESS  
*Other\_Citation\_Details:*

CENTER FOR PATHOBIOLOGY MISCELLANEOUS  
PUBLICATION #3. UNIVERSITY OF CALIFORNIA  
PRESS, NEW YORK. 349 PP.

*Type\_of\_Source\_Media:*

online

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

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:*

1977

*Source\_Currentness\_Reference:*

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*Source\_Citation\_Abbreviation:*

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*Originator:*

UC DAVIS SEA GRANT EXTENSION PROGRAM

*Publication\_Date:*

1997

*Title:*

ABALONE

*Geospatial\_Data\_Presentation\_Form:*

HARDCOPY TEXT

*Online\_Linkage:*

<http://seafood.ucdavis.edu/pubs/abalone.htm>

*Type\_of\_Source\_Media:*

online

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*Time\_Period\_Information:*

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*Citation\_Information:*

*Originator:*

UNIVERSITY OF CALIFORNIA SANTA BARBARA,  
MARINE LIFE PROTECTION ACT (UCSB MLPA)

*Publication\_Date:*

2004

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*Type\_of\_Source\_Media:*  
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Originator:  
US NAVY  
Publication\_Date:  
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Originator:  
US NAVY  
Publication\_Date:  
2009

*Title:*  
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*Citation\_Information:*  
*Originator:*  
 USFWS  
*Publication\_Date:*  
 2002  
*Title:*  
 SAN DIEGO FAIRY SHRIMP  
*Geospatial\_Data\_Presentation\_Form:*  
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*Online\_Linkage:*  
[http://ecos.fws.gov/docs/life\\_histories/K049.html](http://ecos.fws.gov/docs/life_histories/K049.html)  
*Type\_of\_Source\_Media:*  
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*Source\_Citation\_Abbreviation:*  
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*Source\_Contribution:*  
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*Process\_Step:*  
*Process\_Description:*  
 Three main sources of data were used to depict invertebrate distribution and seasonality for this data layer: 1) personal interviews with resource experts from the U.S. Fish and Wildlife Service (USFWS), University of California Santa Barbara (UCSB), and California Department of Fish and



Game (CDF&G); 2) published reports provided by CDF&G and NOAA National Marine Fisheries Service; and 3) digital data provided by UCSB Marine Life Protection Act (MLPA), U.S. Navy, and CDF&G. The above digital and/or hardcopy sources were compiled by the project biologist to create the INVERT data layer. Depending on the type of source data, three general approaches are used for compiling the data layer: 1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:24,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the INVERT data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:*

201003

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:*

NOAA, Office of Response and Restoration

*Contact\_Person:*

Jill Petersen

*Contact\_Address:*

*Address\_Type:*

Physical address

*Address:*

7600 Sand Point Way, N.E.

*City:*

Seattle

*State\_or\_Province:*

Washington

*Postal\_Code:*

98115-6349

*Contact\_Voice\_Telephone:*

(206) 526-6944

*Contact\_Facsimile\_Telephone:*

(206) 526-6329

*Contact\_Electronic\_Mail\_Address:*

[Jill.Petersen@noaa.gov](mailto:Jill.Petersen@noaa.gov)

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*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:*

Vector

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

*SDTS\_Terms\_Description:*

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

GT-polygon composed of chains

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

554

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Area point

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

555

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Complete chain

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

761

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Link

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

105168

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Node,planar graph

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

669

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

0.0000001

*Longitude\_Resolution:*

0.0000001

*Geographic\_Coordinate\_Units:*

Decimal degrees

*Geodetic\_Model:**Horizontal\_Datum\_Name:*

North American Datum of 1983

*Ellipsoid\_Name:*

Geodetic Reference System 80

*Semi-major\_Axis:*

6378137.000000

*Denominator\_of\_Flattening\_Ratio:*

298.257222

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*Entity\_and\_Attribute\_Information:**Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:*

INVERT.PAT

*Entity\_Type\_Definition:*

The INVERT.PAT table contains attribute information for the vector polygons in this data set representing sensitive species and some commercial/recreational species distributions. Note that all attribute information is stored in a series of relational files, described below and in the Overview\_Description section. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (209), element number (7), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:*

NOAA

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

2090700002

*Range\_Domain\_Maximum:*

2090700565

*Attribute:**Attribute\_Label:*

RARNUM

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA

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

209001059

*Range\_Domain\_Maximum:*

209001096

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

BIO\_LUT

*Entity\_Type\_Definition:*

The data table BIO\_LUT is a lookup table that contains items necessary for linking vector objects in the biological data layers with the BIORES data table. Note that all attribute information is stored in a series of relational files, described below and in the Overview\_Description section. See the Browse\_Graphic section for a link to the entity-

relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*  
NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*  
RARNUM

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

*Attribute\_Definition\_Source:*  
NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*  
209000001

*Range\_Domain\_Maximum:*  
209001289

*Attribute:*

*Attribute\_Label:*  
ID

*Attribute\_Definition:*  
An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (209), element number (7), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:*  
NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*  
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*Range\_Domain\_Maximum:*  
2092200052

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:*  
BIORES

*Entity\_Type\_Definition:*

The data table BIORES contains both biological attribute data and items necessary for linking vector objects in the biological data layers via the BIO\_LUT data table to other associated data tables. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*  
NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*  
RARNUM

*Attribute\_Definition:*

An identifier that links records in the BIORES data table to records in the BIO\_LUT data table or the flat format BIOFILE data table.

*Attribute\_Definition\_Source:*

NOAA

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

209000001

*Range\_Domain\_Maximum:*

209001289

*Attribute:**Attribute\_Label:*

SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

CONC

*Attribute\_Definition:*

The field CONC refers to concentration, abundance, or density values, and may contain counts of a species at a particular location. No quantitative concentration information was available for invertebrates, therefore qualitative terms (such as "VERY HIGH", "HIGH PROBABILITY" and "POTENTIAL") were used to describe the relative abundance of particular invertebrate species at specific locations. If no concentration information was available from any source, the field was populated with "-".

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

SEASON\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:**Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

G\_SOURCE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

S\_SOURCE

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

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*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

ELEMENT

*Attribute\_Definition:*

Major categories of biological data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

BIRD

*Enumerated\_Domain\_Value\_Definition:*

Birds

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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## FISH

*Enumerated\_Domain\_Value\_Definition:*

Fish

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

HABITAT

*Enumerated\_Domain\_Value\_Definition:*

Habitats and plants

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

INVERT

*Enumerated\_Domain\_Value\_Definition:*

Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Marine mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

REPTILE

*Enumerated\_Domain\_Value\_Definition:*

Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Terrestrial mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

EL\_SPE

*Attribute\_Definition:*

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

tables.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

E#####

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

EL\_SPE\_SEA

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

E#####

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:*

SPECIES

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

SPECIES\_ID

*Attribute\_Definition:*

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



*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:*

*Attribute\_Label:*

NAME

*Attribute\_Definition:*

Species common name for the entire ESI data set.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

GEN\_SPEC

*Attribute\_Definition:*

Species scientific name for the entire ESI data set.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

ELEMENT

*Attribute\_Definition:*

Major categories of biological data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

BIRD

*Enumerated\_Domain\_Value\_Definition:*

Birds

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

FISH

*Enumerated\_Domain\_Value\_Definition:*

Fish

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

HABITAT

*Enumerated\_Domain\_Value\_Definition:*

Habitats and plants

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

INVERT

*Enumerated\_Domain\_Value\_Definition:*

Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

REPTILE

*Enumerated\_Domain\_Value\_Definition:*

Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

SUBELEMENT

*Attribute\_Definition:*

Element subgroup delineating a logical grouping of species.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

alcid

*Enumerated\_Domain\_Value\_Definition:*  
 Alcid  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 amphibian  
*Enumerated\_Domain\_Value\_Definition:*  
 Amphibian  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 bivalve  
*Enumerated\_Domain\_Value\_Definition:*  
 Bivalve  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 canine  
*Enumerated\_Domain\_Value\_Definition:*  
 Canine  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 diadromous  
*Enumerated\_Domain\_Value\_Definition:*  
 Diadromous fish  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 diving  
*Enumerated\_Domain\_Value\_Definition:*  
 Diving bird  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 dolphin  
*Enumerated\_Domain\_Value\_Definition:*  
 Dolphin  
*Enumerated\_Domain\_Value\_Definition\_Source:*

## NOAA ESI Guidelines

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

e\_nursery

*Enumerated\_Domain\_Value\_Definition:*

Estuarine nursery fish

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

fish

*Enumerated\_Domain\_Value\_Definition:*

Fish

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

freshwater

*Enumerated\_Domain\_Value\_Definition:*

Freshwater fish

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

gastropod

*Enumerated\_Domain\_Value\_Definition:*

Gastropod

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

gull\_tern

*Enumerated\_Domain\_Value\_Definition:*

Gull or tern

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

insect

*Enumerated\_Domain\_Value\_Definition:*

Insect

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

*Enumerated\_Domain\_Value:*  
 invert  
*Enumerated\_Domain\_Value\_Definition:*  
 Invertebrate  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
   *Enumerated\_Domain:*  
     *Enumerated\_Domain\_Value:*  
     kelp  
     *Enumerated\_Domain\_Value\_Definition:*  
     Kelp  
     *Enumerated\_Domain\_Value\_Definition\_Source:*  
     NOAA ESI Guidelines  
   *Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
       *Enumerated\_Domain\_Value:*  
       lizard  
       *Enumerated\_Domain\_Value\_Definition:*  
       Lizard  
       *Enumerated\_Domain\_Value\_Definition\_Source:*  
       NOAA ESI Guidelines  
   *Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
       *Enumerated\_Domain\_Value:*  
       m\_benthic  
       *Enumerated\_Domain\_Value\_Definition:*  
       Marine benthic fish  
       *Enumerated\_Domain\_Value\_Definition\_Source:*  
       NOAA ESI Guidelines  
   *Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
       *Enumerated\_Domain\_Value:*  
       passerine  
       *Enumerated\_Domain\_Value\_Definition:*  
       Passerine bird  
       *Enumerated\_Domain\_Value\_Definition\_Source:*  
       NOAA ESI Guidelines  
   *Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
       *Enumerated\_Domain\_Value:*  
       pelagic  
       *Enumerated\_Domain\_Value\_Definition:*  
       Pelagic bird  
       *Enumerated\_Domain\_Value\_Definition\_Source:*  
       NOAA ESI Guidelines  
   *Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
       *Enumerated\_Domain\_Value:*  
       pinniped  
       *Enumerated\_Domain\_Value\_Definition:*

Pinniped  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 plant  
*Enumerated\_Domain\_Value\_Definition:*  
 Plant  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 raptor  
*Enumerated\_Domain\_Value\_Definition:*  
 Raptor  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 sav  
*Enumerated\_Domain\_Value\_Definition:*  
 Submerged aquatic vegetation  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 sea\_otter  
*Enumerated\_Domain\_Value\_Definition:*  
 Sea otter  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 shorebird  
*Enumerated\_Domain\_Value\_Definition:*  
 Shorebird  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 shrimp  
*Enumerated\_Domain\_Value\_Definition:*  
 Shrimp  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             sm\_mammal  
         *Enumerated\_Domain\_Value\_Definition:*  
             Small mammal  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             snake  
         *Enumerated\_Domain\_Value\_Definition:*  
             Snake  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             turtle  
         *Enumerated\_Domain\_Value\_Definition:*  
             Turtle  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             upland  
         *Enumerated\_Domain\_Value\_Definition:*  
             Upland vegetation  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             wading  
         *Enumerated\_Domain\_Value\_Definition:*  
             Wading bird  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             waterfowl  
         *Enumerated\_Domain\_Value\_Definition:*  
             Waterfowl  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*

wetland  
*Enumerated\_Domain\_Value\_Definition:*  
 Wetland  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 whale  
*Enumerated\_Domain\_Value\_Definition:*  
 Whale  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute:*  
*Attribute\_Label:*  
 NHP  
*Attribute\_Definition:*  
 Natural Heritage Program global ranking.  
*Attribute\_Definition\_Source:*  
 Network of Natural Heritage Program  
*Attribute\_Domain\_Values:*  
*Codeset\_Domain:*  
*Codeset\_Name:*  
 NHP Global Conservation Status Rank  
*Codeset\_Source:*  
 Natural Heritage Program  
*Attribute:*  
*Attribute\_Label:*  
 DATE\_PUB  
*Attribute\_Definition:*  
 Date of NHP listing.  
*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 YYYYMM  
*Enumerated\_Domain\_Value\_Definition:*  
 YYYY for year and optionally MM for month  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 0  
*Enumerated\_Domain\_Value\_Definition:*  
 Date unspecified  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute:*  
*Attribute\_Label:*



**EL\_SPE***Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

E#####

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

SEASONAL

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

ELEMENT

*Attribute\_Definition:*

Major categories of biological data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

BIRD

*Enumerated\_Domain\_Value\_Definition:*

Birds

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

FISH

*Enumerated\_Domain\_Value\_Definition:*

Fish

*Enumerated\_Domain\_Value\_Definition\_Source:*

## NOAA ESI Guidelines

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

HABITAT

*Enumerated\_Domain\_Value\_Definition:*

Habitats and plants

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

INVERT

*Enumerated\_Domain\_Value\_Definition:*

Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

REPTILE

*Enumerated\_Domain\_Value\_Definition:*

Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

SPECIES\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

*Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:*

*Attribute\_Label:*

SEASON\_ID

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:*

*Attribute\_Label:*

JAN

*Attribute\_Definition:*

January

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in January

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

FEB

*Attribute\_Definition:*

February

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in February

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

MAR

*Attribute\_Definition:*

March

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

X

*Enumerated\_Domain\_Value\_Definition:*

Present in March

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

APR

*Attribute\_Definition:*

April

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

X

*Enumerated\_Domain\_Value\_Definition:*

Present in April

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

MAY

*Attribute\_Definition:*

May

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

X

*Enumerated\_Domain\_Value\_Definition:*

Present in May

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

JUN

*Attribute\_Definition:*

June

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in June

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

JUL

*Attribute\_Definition:*

July

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in July

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

AUG

*Attribute\_Definition:*

August

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in August

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

SEP

*Attribute\_Definition:*

September

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in September

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

OCT

*Attribute\_Definition:*

October

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

X

*Enumerated\_Domain\_Value\_Definition:*

Present in October

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

NOV

*Attribute\_Definition:*

November

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

X

*Enumerated\_Domain\_Value\_Definition:*

Present in November

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

DEC

*Attribute\_Definition:*

December

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

X

*Enumerated\_Domain\_Value\_Definition:*

Present in December

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

EL\_SPE\_SEA

*Attribute\_Definition:*

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

BIORES and BREED data tables.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

E#####

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:*

BREED

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

EL\_SPE\_SEA

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

E#####

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

MONTH

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

## NOAA ESI Guidelines

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

1

*Range\_Domain\_Maximum:*

12

*Attribute:**Attribute\_Label:*

BREED1

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

N

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

-

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

BREED2

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = migrating; if ELEMENT is "FISH" then BREED2 = eggs; if ELEMENT is "INVERT" then BREED2 = eggs; if ELEMENT is



"REPTILE" then BREED2 = hatching; if ELEMENT is "M\_MAMMAL" then BREED2 = calving. This attribute is not used for HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

N

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

-

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

BREED3

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:**Enumerated\_Domain\_Value:*

N

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

-

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

BREED4

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

N

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

-

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

## NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

BREED5

*Attribute\_Definition:*

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

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

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

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

N

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

-

*Enumerated\_Domain\_Value\_Definition:*

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

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

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

STATUS

*Entity\_Type\_Definition:*

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

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

ELEMENT

*Attribute\_Definition:*

Major categories of biological data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

BIRD

*Enumerated\_Domain\_Value\_Definition:*

Birds

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

FISH

*Enumerated\_Domain\_Value\_Definition:*

Fish

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

HABITAT

*Enumerated\_Domain\_Value\_Definition:*

Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

INVERT

*Enumerated\_Domain\_Value\_Definition:*

Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

REPTILE

*Enumerated\_Domain\_Value\_Definition:*

Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:*

## NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

SPECIES\_ID

*Attribute\_Definition:*

Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

STATE

*Attribute\_Definition:*

Two-letter state abbreviation.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

COUNTRY

*Attribute\_Definition:*

Three-letter country abbreviation.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

S

*Attribute\_Definition:*

State threatened or endangered status.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 E  
*Enumerated\_Domain\_Value\_Definition:*  
 Endangered on state list  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 T  
*Enumerated\_Domain\_Value\_Definition:*  
 Threatened on state list  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 C  
*Enumerated\_Domain\_Value\_Definition:*  
 Species of Special Concern  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute:*  
*Attribute\_Label:*  
 F  
*Attribute\_Definition:*  
 Federal threatened or endangered status.  
*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 E  
*Enumerated\_Domain\_Value\_Definition:*  
 Endangered on federal list  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 T  
*Enumerated\_Domain\_Value\_Definition:*  
 Threatened on federal list  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 C  
*Enumerated\_Domain\_Value\_Definition:*

## Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

I

*Attribute\_Definition:*

International threatened or endangered status.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

E

*Enumerated\_Domain\_Value\_Definition:*

Endangered on international list

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

T

*Enumerated\_Domain\_Value\_Definition:*

Threatened on international list

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

C

*Enumerated\_Domain\_Value\_Definition:*

Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

S\_DATE

*Attribute\_Definition:*

Publication date of source material used to assign state status values for each species, if used.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

F\_DATE

*Attribute\_Definition:*

Publication date of source material used to assign federal status values for each species, if used.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

I\_DATE

*Attribute\_Definition:*

Publication date of source material used to assign international status values for each species, if used.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links the STATUS data table to the BIORES and SPECIES data tables.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Detailed\_Description:**Entity\_Type:*



*Entity\_Type\_Label:*

SOURCES

*Entity\_Type\_Definition:*

The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

SOURCE\_ID

*Attribute\_Definition:*

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table; G\_SOURCE and S\_SOURCE in the BIORES table; and SOURCE\_ID and ESI\_SOURCE in the ESI and HYDRO data layers.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

ORIGINATOR

*Attribute\_Definition:*

Author or developer of source material or data set.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

DATE\_PUB

*Attribute\_Definition:*

Date of source material, publication, or date of personal communication with expert source.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

TITLE

*Attribute\_Definition:*

Title of source material or data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

DATA\_FORMAT

*Attribute\_Definition:*

The format of the source material.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

PUB\_PLACE

*Attribute\_Definition:*

Publication place.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

PUBLISHER

*Attribute\_Definition:*

Publisher.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

PUBLICATION

*Attribute\_Definition:*

Additional citation information.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

ONLINE\_LINK

*Attribute\_Definition:*

Online computer resource URL.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

SCALE

*Attribute\_Definition:*

Description of the source scale.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

TIME\_PERIOD

*Attribute\_Definition:*

Date(s) of data collection that the source material is based upon.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Overview\_Description:**Entity\_and\_Attribute\_Overview:*

In addition to the geographic data layers, six relational attribute or data tables (BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS) are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, INVERT) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO\_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (for the Southern California atlas, the number is 209), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described in detail in the Detailed\_Description sections. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure. Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the

flat file are ELEMENT, SUBELEMENT, NAME, GEN\_SPEC, S, F, NHP, DATE\_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G\_SOURCE, S\_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables (described in the Detailed\_Description sections), except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED\_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed\_Description of the BREED data table. The link to the BIOFILE may be made through the BIO\_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED\_DT is an auxiliary support data table to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to BREED\_DT is the BREED item. A second supporting data table is SOURCES. This is the same as the source file described above, and the link from the flat file is both G\_SOURCE and S\_SOURCE. It should be noted that although the flat file eases data query, it is not a normalized database structure, and actual updates performed by the states and other responsible agencies should be done using the relational data tables. The entity-relationship diagram, describing relationships between attribute tables in the ESI data structure, does NOT include the BIOFILE data table, and this data table is NOT described in a Detailed\_Description section.

*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 ([http://response.restoration.noaa.gov/esi\\_guidelines](http://response.restoration.noaa.gov/esi_guidelines)).

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*Distribution\_Information:*

*Distributor:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:*

John Kaperick

*Contact\_Organization:*

NOAA, Office of Response and Restoration

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*State\_or\_Province:*

Washington

*Postal\_Code:*

98115-6349

*Contact\_Voice\_Telephone:*

(206) 526-6400

*Contact\_Facsimile\_Telephone:*

(206) 526-6329

*Resource\_Description:*

Downloadable Data

*Distribution\_Liability:*

Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer input peripherals, or when the physical medium is delivered in damaged condition.

*Custom\_Order\_Process:*

Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to the widest community of GIS/mapping users. Distribution formats include Geodatabase; ARC export, MOSS, and Shape files; and MARPLOT map folders. An ArcMap .mxd file, an ArcView 3.x ESI project, and an ESI\_Viewer product for use with the MARPLOT data are also included on the distribution CDs/DVDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

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*Metadata\_Reference\_Information:**Metadata\_Date:*

20100927

*Metadata\_Review\_Date:*

20100927

*Metadata\_Contact:**Contact\_Information:**Contact\_Person\_Primary:**Contact\_Person:*

Jill Petersen

*Contact\_Organization:*

NOAA, Office of Response and Restoration

*Contact\_Position:*

GIS Manager

*Contact\_Address:**Address\_Type:*

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*State\_or\_Province:*

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*Postal\_Code:*

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(206) 526-6329

*Contact\_Electronic\_Mail\_Address:*

[Jill.Petersen@noaa.gov](mailto:Jill.Petersen@noaa.gov)

*Metadata\_Standard\_Name:*

Content Standards for Digital Geospatial Metadata

*Metadata\_Standard\_Version:*

FGDC-STD-001-1998

*Metadata\_Extensions:*

*Online\_Linkage:*

[http://www.ncddc.noaa.gov/metadataresource/metadata-references/files/ncddcmdprofile\\_v2.pdf](http://www.ncddc.noaa.gov/metadataresource/metadata-references/files/ncddcmdprofile_v2.pdf)

*Profile\_Name:*

Content Specification for Metadata in the National Coastal Data Development Center's Data Catalog Version 2.0

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# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Southern California: REPTILES (Reptile Polygons)

## Metadata:

- [Identification Information](#)
  - [Data Quality Information](#)
  - [Spatial Data Organization Information](#)
  - [Spatial Reference Information](#)
  - [Entity and Attribute Information](#)
  - [Distribution Information](#)
  - [Metadata Reference Information](#)
- 

### *Identification\_Information:*

#### *Citation:*

##### *Citation\_Information:*

##### *Originator:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington.

##### *Originator:*

Department of Homeland Security, United States Coast Guard, Office of Incident Management and Preparedness, Washington, D.C.

##### *Originator:*

Department of Fish and Game, Office of Spill Prevention and Response, Sacramento, California.

##### *Publication\_Date:*

201003

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Southern California: REPTILES (Reptile Polygons)

##### *Edition:*

Second

##### *Geospatial\_Data\_Presentation\_Form:*

vector digital data

##### *Series\_Information:*

##### *Series\_Name:*

None

##### *Issue\_Identification:*

Southern California

##### *Publication\_Information:*

##### *Publication\_Place:*

Seattle, Washington

##### *Publisher:*

NOAA's Ocean Service, Office of Response and Restoration (OR&R),  
Emergency Response Division (ERD).

*Other\_Citation\_Details:*

Prepared by Research Planning, Inc., Columbia, South Carolina for the  
National Oceanic and Atmospheric Administration (NOAA), National Ocean  
Service, Office of Response and Restoration, Emergency Response Division,  
Seattle, Washington.

*Online\_Linkage:*

<http://response.restoration.noaa.gov/esi>

*Description:*

*Abstract:*

This data set contains sensitive biological resource data for rare amphibians, rare reptiles, and sea turtles in Southern California. Vector polygons in this data set represent rare and threatened/endangered reptile and amphibian distribution. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the ESI data for Southern California. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources.

*Purpose:*

The ESI data were collected, mapped, and digitized to provide environmental data for oil spill planning and response. The Clean Water Act with amendments by the Oil Pollution Act of 1990 requires response plans for immediate and effective protection of sensitive resources.

*Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:*

2001

*Ending\_Date:*

2009

*Currentness\_Reference:*

The data were compiled during 2008-2010. The currentness dates for the data range from 2001 to 2009 and are documented in the Lineage section.

*Status:*

*Progress:*

Complete

*Maintenance\_and\_Update\_Frequency:*

None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:*

-120.60100

*East\_Bounding\_Coordinate:*

-117.00100

*North\_Bounding\_Coordinate:*

34.50000

*South\_Bounding\_Coordinate:*

32.44500



*Keywords:**Theme:**Theme\_Keyword\_Thesaurus:*

ISO 19115 Topic Category

*Theme\_Keyword:*

biota

*Theme\_Keyword:*

environment

*Theme:**Theme\_Keyword\_Thesaurus:*

None

*Theme\_Keyword:*

Environmental Monitoring

*Theme\_Keyword:*

ESI

*Theme\_Keyword:*

Sensitivity maps

*Theme\_Keyword:*

Coastal resources

*Theme\_Keyword:*

Oil spill planning

*Theme\_Keyword:*

Coastal Zone Management

*Theme\_Keyword:*

Wildlife

*Theme\_Keyword:*

Reptile

*Theme:**Theme\_Keyword\_Thesaurus:*

NOS Data Explorer Topic Category

*Theme\_Keyword:*

Environmental Monitoring

*Place:**Place\_Keyword\_Thesaurus:*

None

*Place\_Keyword:*

Southern California

*Access\_Constraints:*

None

*Use\_Constraints:*

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products

derived from these data.

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:*

[datafig.jpg](#)

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and attribute data tables for the Southern California ESI data.

*Browse\_Graphic\_File\_Type:*

JPEG

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:*

[datafig2.jpg](#)

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and desktop data tables for the Southern California ESI data.

*Browse\_Graphic\_File\_Type:*

JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington; the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness Washington, D.C.; and the California Department of Fish and Game (CDF&G), Office of Spill Prevention and Response (OSPR), Sacramento, California.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 9.3) and SQL SERVER(R) (version 2000). The hardware configuration is PC's with Windows Operating System (2000/XP/2003). The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in the data set: acp.e00, birds.e00, esi.e00, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, and t\_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio\_lut.e00, biofile.e00, biores.e00, breed.e00, breed\_dt.e00, seasonal.e00, soc\_dat.e00, soc\_lut.e00, sources.e00, species.e00, and status.e00.

*Program\_Affiliation:*

*Program\_Name:*

National Ocean Service Data Explorer

[Back To Index](#)

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*Data\_Quality\_Information:*

*Attribute\_Accuracy:*

*Attribute\_Accuracy\_Report:*

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a

more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

*Logical\_Consistency\_Report:*

A multi-stage error checking process, described in the above Attribute\_Accuracy\_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and SQL SERVER(R) to ARC/INFO(R) consistencies. A final review is made by the GIS manager, where the data are written to CD/DVD and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resource at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

*Completeness\_Report:*

These data represent a synthesis of expert knowledge, available hardcopy documents, and digital data on rare and threatened/endangered reptile and amphibian distribution. These data do not necessarily represent all reptile occurrences in Southern California. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name [n/a if not applicable]): 2, Green sea turtle, *Chelonia mydas*; 5, Leatherback sea turtle, *Dermochelys coriacea*; 6, Loggerhead sea turtle, *Caretta caretta*; 54, California red-legged frog, *Rana draytonii*; 187, Arroyo toad, *Anaxyrus californicus*; 188, California Newt, *Taricha torosa*; 190, Southwestern pond turtle, *Actinemys marmorata pallida*; 191, Two-striped garter snake, *Thamnophis hammondi*; 195, Island night lizard, *Xantusia riversiana*.

*Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy\_Report:*

Spatial components for the biological data layers can come from expert interviews, hardcopy, or digital sources. Some of the spatial components of the biological data layers may have been developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy base maps with a scale of 1:24,000. Some of the spatial components of the biological data sets are developed from pre-existing digital or hardcopy sources and reflect the positional accuracy of these original data. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources. See the Lineage and Process\_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

*Lineage:**Source\_Information:**Source\_Citation:**Citation\_Information:**Originator:*

AVERY, J. (USFWS)

*Publication\_Date:*

2009

*Title:*USFWS RESOURCES IN SAN DIEGO AND ORANGE  
COUNTIES*Geospatial\_Data\_Presentation\_Form:*

EXPERT KNOWLEDGE

*Other\_Citation\_Details:*

UNPUBLISHED

*Type\_of\_Source\_Media:*

PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:**Time\_Period\_Information:**Single\_Date/Time:**Calendar\_Date:*

2009

*Source\_Currentness\_Reference:*

DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

REPTILES INFORMATION

*Source\_Information:**Source\_Citation:**Citation\_Information:**Originator:*

BENSON, S. (NOAA)

*Publication\_Date:*

2009

*Title:*LEATHERBACK SEA TURTLE DISTRIBUTION AND  
SEASONALITY IN SOUTHERN CALIFORNIA*Geospatial\_Data\_Presentation\_Form:*

EXPERT KNOWLEDGE

*Other\_Citation\_Details:*

UNPUBLISHED

*Type\_of\_Source\_Media:*

EMAIL

*Source\_Time\_Period\_of\_Content:**Time\_Period\_Information:**Single\_Date/Time:**Calendar\_Date:*

2009

*Source\_Currentness\_Reference:*

DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:*  
 NONE  
*Source\_Contribution:*  
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*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 CALIFORNIAHERPS.COM  
*Publication\_Date:*  
 2009  
*Title:*  
 CALIFORNIA REPTILES AND AMPHIBIANS  
*Geospatial\_Data\_Presentation\_Form:*  
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*Online\_Linkage:*  
<http://www.californiaherps.com/>  
*Type\_of\_Source\_Media:*  
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*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
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*Source\_Contribution:*  
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*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 CDF&G BIOGEOGRAPHIC DATA BRANCH  
*Publication\_Date:*  
 2009  
*Title:*  
 CALIFORNIA NATURAL DIVERSITY DATABASE  
 (CNDDB)  
*Geospatial\_Data\_Presentation\_Form:*  
 vector digital data  
*Publication\_Information:*  
*Publication\_Place:*  
 SACRAMENTO, CA  
*Publisher:*  
 CDF&G BIOGEOGRAPHIC DATA BRANCH  
*Type\_of\_Source\_Media:*  
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*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*

*Single\_Date/Time:*  
*Calendar\_Date:*  
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*Source\_Currentness\_Reference:*  
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*Source\_Citation\_Abbreviation:*  
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*Source\_Contribution:*  
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*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 CDF&G, OFFICE OF SPILL PREVENTION AND  
 RESPONSE (OSPR), DEPARTMENT OF HOMELAND  
 SECURITY (DHS), UNITED STATES COAST GUARD  
 (USCG)  
*Publication\_Date:*  
 2008  
*Title:*  
 AREA CONTINGENCY PLAN (ACP) SECTOR LOS  
 ANGELES/LONG BEACH; 2008 USCG SECTOR SAN  
 DIEGO AREA CONTINGENCY PLAN (ACP)  
*Geospatial\_Data\_Presentation\_Form:*  
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*Other\_Citation\_Details:*  
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*Source\_Time\_Period\_of\_Content:*  
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*Single\_Date/Time:*  
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*Source\_Currentness\_Reference:*  
 DATE OF PUBLICATION  
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*Source\_Contribution:*  
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*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 DELITH, C. (USFWS)  
*Publication\_Date:*  
 2009  
*Title:*  
 THREATENED/ENDANGERED (T/E) SPECIES IN  
 VENTURA COUNTY  
*Geospatial\_Data\_Presentation\_Form:*

EXPERT KNOWLEDGE  
*Other\_Citation\_Details:*  
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*Type\_of\_Source\_Media:*  
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*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
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*Citation\_Information:*  
*Originator:*  
 DUTTON, P. (NOAA)  
*Publication\_Date:*  
 2009  
*Title:*  
 GREEN SEA TURTLE DISTRIBUTION AND  
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*Geospatial\_Data\_Presentation\_Form:*  
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*Other\_Citation\_Details:*  
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*Type\_of\_Source\_Media:*  
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*Source\_Currentness\_Reference:*  
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*Source\_Information:*  
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*Citation\_Information:*  
*Originator:*  
 GOLD, J. (CDF&G OSPR)  
*Publication\_Date:*  
 2009  
*Title:*

SOCECON AND BIOLOGICAL RESOURCE  
DISTRIBUTION FOR SANTA BARBARA AND  
VENTURA COUNTIES

*Geospatial\_Data\_Presentation\_Form:*  
EXPERT KNOWLEDGE

*Other\_Citation\_Details:*  
UNPUBLISHED

*Type\_of\_Source\_Media:*  
PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:*

2009

*Source\_Currentness\_Reference:*

DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

REPTILES INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

NATIONAL OCEANIC AND ATMOSPHERIC  
ADMINISTRATION (NOAA), NATIONAL OCEAN  
SERVICE (NOS), OFFICE OF RESPONSE AND  
RESTORATION (OR&R), EMERGENCY RESPONSE  
DIVISION (ERD)

*Publication\_Date:*

2006

*Title:*

SENSITIVITY OF COASTAL ENVIRONMENTS TO  
SPILLED OIL: CENTRAL CALIFORNIA ATLAS

*Geospatial\_Data\_Presentation\_Form:*

atlas

*Publication\_Information:*

*Publication\_Place:*

SEATTLE, WA

*Publisher:*

NOAA

*Other\_Citation\_Details:*

MONTEREY BAY NATIONAL MARINE SANCTUARY  
(MBNMS), CDF&G OSPR, AND MONTEREY BAY  
SANCTUARY FOUNDATION, NOAA 7600 SAND  
POINT WAY, SEATTLE, WA 98115-6349

*Online\_Linkage:*

<http://response.restoration.noaa.gov/esi>

*Type\_of\_Source\_Media:*

paper

*Source\_Time\_Period\_of\_Content:*



*Time\_Period\_Information:*  
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         *Calendar\_Date:*  
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     *Source\_Currentness\_Reference:*  
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     *Source\_Citation\_Abbreviation:*  
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         REPTILES INFORMATION  
*Source\_Information:*  
     *Source\_Citation:*  
         *Citation\_Information:*  
             *Originator:*  
                 NOAA NATIONAL MARINE FISHERIES SERVICE  
                 (NMFS)  
             *Publication\_Date:*  
                 2001  
             *Title:*  
                 ENVIRONMENTAL ASSESSMENT: FIGURE 10  
                 (LOGGERHEAD SEA TURTLE MAP)  
             *Geospatial\_Data\_Presentation\_Form:*  
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                 NOAA NMFS PROTECTED RESOURCES DIVISION,  
                 2001  
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             *Source\_Currentness\_Reference:*  
                 DATE OF PUBLICATION  
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         *Source\_Citation:*  
             *Citation\_Information:*  
                 *Originator:*  
                     SAN DIEGO NATURAL HISTORY MUSEUM  
                 *Publication\_Date:*  
                     2009  
                 *Title:*  
                     BUFO CALIFORNICUS ARROYO TOAD  
                 *Geospatial\_Data\_Presentation\_Form:*  
                     HARDCOPY TEXT  
                 *Online\_Linkage:*

<http://www.sdnhm.org/fieldguide/herps/bufo-cal.html>

*Type\_of\_Source\_Media:*

online

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:*

2009

*Source\_Currentness\_Reference:*

DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:*

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*Source\_Contribution:*

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*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

SCHALLMAN, B. (U.S. NAVY)

*Publication\_Date:*

2009

*Title:*

SPECIES DISTRIBUTION ON U.S. NAVY PROPERTY

*Geospatial\_Data\_Presentation\_Form:*

EXPERT KNOWLEDGE

*Other\_Citation\_Details:*

UNPUBLISHED

*Type\_of\_Source\_Media:*

PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:*

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*Calendar\_Date:*

2009

*Source\_Currentness\_Reference:*

DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

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*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

SMITH, R.

*Publication\_Date:*

2009

*Title:*

SNOWY PLOVER, LEAST TERN, AND OTHER  
SPECIES SITES IN SANTA BARBARA AND VENTURA  
COUNTIES

*Geospatial\_Data\_Presentation\_Form:*  
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*Other\_Citation\_Details:*  
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*Type\_of\_Source\_Media:*  
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*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 US NAVY  
*Publication\_Date:*  
 2009  
*Title:*  
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*Geospatial\_Data\_Presentation\_Form:*  
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*Other\_Citation\_Details:*  
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*Calendar\_Date:*  
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 DATE OF PUBLICATION  
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*Citation\_Information:*  
*Originator:*  
 USFWS CARLSBAD OFFICE  
*Publication\_Date:*  
 2009  
*Title:*

SAN DIEGO COUNTY FEDERALLY LISTED SPECIES  
DISTRIBUTION AND SEASONALITY INFORMATION

*Geospatial\_Data\_Presentation\_Form:*

EXPERT KNOWLEDGE

*Other\_Citation\_Details:*

UNPUBLISHED

*Type\_of\_Source\_Media:*

PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:*

2009

*Source\_Currentness\_Reference:*

DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

REPTILES INFORMATION

*Process\_Step:*

*Process\_Description:*

Three main sources of data were used to depict reptile distribution and seasonality for this data layer: 1) personal interviews with resource experts from U.S. Fish and Wildlife Service (USFWS), NOAA National Marine Fisheries Service (NMFS), U.S. Navy, CDF&G and the Audubon Society; 2) published and unpublished reports and maps; and 3) digital data provided by CDF&G and U.S. Navy. The above digital and/or hardcopy sources were compiled by the project biologist to create the REPTILES data layer. Depending on the type of source data, three general approaches are used for compiling the data layer: 1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:24,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the REPTILES data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:*

201003

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:*

NOAA, Office of Response and Restoration

*Contact\_Person:*

Jill Petersen

*Contact\_Address:*

*Address\_Type:*

Physical address

*Address:*

7600 Sand Point Way, N.E.

*City:*

Seattle

*State\_or\_Province:*

Washington

*Postal\_Code:*

98115-6349

*Contact\_Voice\_Telephone:*

(206) 526-6944

*Contact\_Facsimile\_Telephone:*

(206) 526-6329

*Contact\_Electronic\_Mail\_Address:*[Jill.Petersen@noaa.gov](mailto:Jill.Petersen@noaa.gov)[Back To Index](#)

---

*Spatial\_Data\_Organization\_Information:**Direct\_Spatial\_Reference\_Method:*

Vector

*Point\_and\_Vector\_Object\_Information:**SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

GT-polygon composed of chains

*Point\_and\_Vector\_Object\_Count:*

172

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Area point

*Point\_and\_Vector\_Object\_Count:*

173

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Complete chain

*Point\_and\_Vector\_Object\_Count:*

433

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Link

*Point\_and\_Vector\_Object\_Count:*

122816

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Node, planar graph

*Point\_and\_Vector\_Object\_Count:*

412

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---

*Spatial\_Reference\_Information:**Horizontal\_Coordinate\_System\_Definition:*

*Geographic:**Latitude\_Resolution:*

0.0000001

*Longitude\_Resolution:*

0.0000001

*Geographic\_Coordinate\_Units:*

Decimal degrees

*Geodetic\_Model:**Horizontal\_Datum\_Name:*

North American Datum of 1983

*Ellipsoid\_Name:*

Geodetic Reference System 80

*Semi-major\_Axis:*

6378137.000000

*Denominator\_of\_Flattening\_Ratio:*

298.257222

[Back To Index](#)*Entity\_and\_Attribute\_Information:**Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:*

REPTILES.PAT

*Entity\_Type\_Definition:*

The REPTILES.PAT table contains attribute information for the vector polygons in this data set representing rare and threatened/endangered reptile and amphibian distribution. Note that all attribute information is stored in a series of relational files, described below and in the Overview\_Description section. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (209), element number (6), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:*

NOAA

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

2090600002

*Range\_Domain\_Maximum:*

2090600175

*Attribute:**Attribute\_Label:*

**RARNUM***Attribute\_Definition:*

An identifier that links directly to the BIORES table or the flat format BIOFILE table. RARNUM values of 0 are holes in the polygons and do not contain information.

*Attribute\_Definition\_Source:*

NOAA

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

209001248

*Range\_Domain\_Maximum:*

209001279

*Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:*

BIO\_LUT

*Entity\_Type\_Definition:*

The data table BIO\_LUT is a lookup table that contains items necessary for linking vector objects in the biological data layers with the BIORES data table. Note that all attribute information is stored in a series of relational files, described below and in the Overview\_Description section. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

RARNUM

*Attribute\_Definition:*

An identifier that links records in the BIO\_LUT data table to records in the BIORES data table or the flat format BIOFILE data table. RARNUM values of 0 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:*

NOAA

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

209000001

*Range\_Domain\_Maximum:*

209001289

*Attribute:**Attribute\_Label:*

ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (209), element number (6), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:*

NOAA

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

2090100002

*Range\_Domain\_Maximum:*

2092200052

*Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:*

BIORES

*Entity\_Type\_Definition:*

The data table BIORES contains both biological attribute data and items necessary for linking vector objects in the biological data layers via the BIO\_LUT data table to other associated data tables. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

RARNUM

*Attribute\_Definition:*

An identifier that links records in the BIORES data table to records in the BIO\_LUT data table or the flat format BIOFILE data table.

*Attribute\_Definition\_Source:*

NOAA

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

209000001

*Range\_Domain\_Maximum:*

209001289

*Attribute:**Attribute\_Label:*

SPECIES\_ID

*Attribute\_Definition:*

Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

CONC



*Attribute\_Definition:*

The field CONC refers to concentration, abundance, or density values of a species at a particular location. In cases where no quantitative count information was available, the field may contain descriptive terms such as "ABUNDANT", "PRIMARY", "SECONDARY", "POSSIBLE", "RARE", etc. If no concentration information was available from any source, the field was populated with "-".

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

SEASON\_ID

*Attribute\_Definition:*

Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

G\_SOURCE

*Attribute\_Definition:*

Geographic source identifier that links records in the BIORES data table to records in the SOURCES data table.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

S\_SOURCE

*Attribute\_Definition:*

Seasonality source identifier that links records in the BIORES data table to records in the SOURCES data table.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

ELEMENT

*Attribute\_Definition:*

Major categories of biological data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

BIRD

*Enumerated\_Domain\_Value\_Definition:*

Birds

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

FISH

*Enumerated\_Domain\_Value\_Definition:*

Fish

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

HABITAT

*Enumerated\_Domain\_Value\_Definition:*

Habitats and plants

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

INVERT

*Enumerated\_Domain\_Value\_Definition:*

Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Marine mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:**Enumerated\_Domain\_Value:*

REPTILE

*Enumerated\_Domain\_Value\_Definition:*

Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Terrestrial mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links records in the BIORES data table to records in the SPECIES and STATUS data tables.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BIORES data table to records in the SEASONAL and BREED data tables.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1

and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:*  
 SPECIES

*Entity\_Type\_Definition:*

The data table SPECIES identifies all species in the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure. Refer to the Completeness\_Report for a list of layer-specific species.

*Entity\_Type\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*  
 SPECIES\_ID

*Attribute\_Definition:*

Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.

*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:*

*Attribute\_Label:*  
 NAME

*Attribute\_Definition:*

Species common name for the entire ESI data set.

*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*  
 GEN\_SPEC

*Attribute\_Definition:*

Species scientific name for the entire ESI data set.

*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

## ELEMENT

*Attribute\_Definition:*

Major categories of biological data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

BIRD

*Enumerated\_Domain\_Value\_Definition:*

Birds

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

FISH

*Enumerated\_Domain\_Value\_Definition:*

Fish

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

HABITAT

*Enumerated\_Domain\_Value\_Definition:*

Habitats and plants

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

INVERT

*Enumerated\_Domain\_Value\_Definition:*

Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

REPTILE

*Enumerated\_Domain\_Value\_Definition:*

Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 T\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:*  
 Terrestrial Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute:*  
*Attribute\_Label:*  
 SUBELEMENT  
*Attribute\_Definition:*  
 Element subgroup delineating a logical grouping of species.  
*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 alcid  
*Enumerated\_Domain\_Value\_Definition:*  
 Alcid  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 amphibian  
*Enumerated\_Domain\_Value\_Definition:*  
 Amphibian  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 bivalve  
*Enumerated\_Domain\_Value\_Definition:*  
 Bivalve  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 canine  
*Enumerated\_Domain\_Value\_Definition:*  
 Canine  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*  
 diadromous  
*Enumerated\_Domain\_Value\_Definition:*  
 Diadromous fish  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 diving  
*Enumerated\_Domain\_Value\_Definition:*  
 Diving bird  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 dolphin  
*Enumerated\_Domain\_Value\_Definition:*  
 Dolphin  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 e\_nursery  
*Enumerated\_Domain\_Value\_Definition:*  
 Estuarine nursery fish  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 fish  
*Enumerated\_Domain\_Value\_Definition:*  
 Fish  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 freshwater  
*Enumerated\_Domain\_Value\_Definition:*  
 Freshwater fish  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 gastropod  
*Enumerated\_Domain\_Value\_Definition:*

## Gastropod

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

gull\_tern

*Enumerated\_Domain\_Value\_Definition:*

Gull or tern

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

insect

*Enumerated\_Domain\_Value\_Definition:*

Insect

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

invert

*Enumerated\_Domain\_Value\_Definition:*

Invertebrate

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

kelp

*Enumerated\_Domain\_Value\_Definition:*

Kelp

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

lizard

*Enumerated\_Domain\_Value\_Definition:*

Lizard

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

m\_benthic

*Enumerated\_Domain\_Value\_Definition:*

Marine benthic fish

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines



*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             passerine  
         *Enumerated\_Domain\_Value\_Definition:*  
             Passerine bird  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             pelagic  
         *Enumerated\_Domain\_Value\_Definition:*  
             Pelagic bird  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             pinniped  
         *Enumerated\_Domain\_Value\_Definition:*  
             Pinniped  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             plant  
         *Enumerated\_Domain\_Value\_Definition:*  
             Plant  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             raptor  
         *Enumerated\_Domain\_Value\_Definition:*  
             Raptor  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             sav  
         *Enumerated\_Domain\_Value\_Definition:*  
             Submerged aquatic vegetation  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*

sea\_otter  
*Enumerated\_Domain\_Value\_Definition:*  
 Sea otter  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 shorebird  
*Enumerated\_Domain\_Value\_Definition:*  
 Shorebird  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 shrimp  
*Enumerated\_Domain\_Value\_Definition:*  
 Shrimp  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 sm\_mammal  
*Enumerated\_Domain\_Value\_Definition:*  
 Small mammal  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 snake  
*Enumerated\_Domain\_Value\_Definition:*  
 Snake  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 turtle  
*Enumerated\_Domain\_Value\_Definition:*  
 Turtle  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 upland  
*Enumerated\_Domain\_Value\_Definition:*  
 Upland vegetation

*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 wading  
*Enumerated\_Domain\_Value\_Definition:*  
 Wading bird  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 waterfowl  
*Enumerated\_Domain\_Value\_Definition:*  
 Waterfowl  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 wetland  
*Enumerated\_Domain\_Value\_Definition:*  
 Wetland  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 whale  
*Enumerated\_Domain\_Value\_Definition:*  
 Whale  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute:*  
*Attribute\_Label:*  
 NHP  
*Attribute\_Definition:*  
 Natural Heritage Program global ranking.  
*Attribute\_Definition\_Source:*  
 Network of Natural Heritage Program  
*Attribute\_Domain\_Values:*  
*Codeset\_Domain:*  
*Codeset\_Name:*  
 NHP Global Conservation Status Rank  
*Codeset\_Source:*  
 Natural Heritage Program  
*Attribute:*  
*Attribute\_Label:*  
 DATE\_PUB  
*Attribute\_Definition:*

Date of NHP listing.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

0

*Enumerated\_Domain\_Value\_Definition:*

Date unspecified

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links records in the SPECIES data table to records in the BIORES and STATUS data tables.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:*

SEASONAL

*Entity\_Type\_Definition:*

The data table SEASONAL contains information on the seasonal presence of each species associated with each spatial vector object. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

ELEMENT

*Attribute\_Definition:*

Major categories of biological data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

BIRD

*Enumerated\_Domain\_Value\_Definition:*

Birds

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

FISH

*Enumerated\_Domain\_Value\_Definition:*

Fish

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

HABITAT

*Enumerated\_Domain\_Value\_Definition:*

Habitats and plants

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

INVERT

*Enumerated\_Domain\_Value\_Definition:*

Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

REPTILE

*Enumerated\_Domain\_Value\_Definition:*

## Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

SPECIES\_ID

*Attribute\_Definition:*

Numeric identifier for each species that is unique within each element and refers to a nationwide ESI species list maintained at NOAA.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

SEASON\_ID

*Attribute\_Definition:*

Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

JAN

*Attribute\_Definition:*

January

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in January

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

FEB

*Attribute\_Definition:*

February

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in February

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

MAR

*Attribute\_Definition:*

March

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in March

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

APR

*Attribute\_Definition:*

April

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in April

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

MAY

*Attribute\_Definition:*

May

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in May

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

JUN

*Attribute\_Definition:*

June

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in June

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

JUL

*Attribute\_Definition:*

July

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in July

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

AUG

*Attribute\_Definition:*

August

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:*



*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in August

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

SEP

*Attribute\_Definition:*

September

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in September

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

OCT

*Attribute\_Definition:*

October

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in October

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

NOV

*Attribute\_Definition:*

November

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in November

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

DEC

*Attribute\_Definition:*

December

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in December

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the SEASONAL data table to records in the BIORES and BREED data tables.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:*

BREED

*Entity\_Type\_Definition:*

The data table BREED identifies the monthly presence of certain life-history stages or activities for each species at a given location.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BREED data table to records in the BIORES and SEASONAL data tables.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

MONTH

*Attribute\_Definition:*

Two-digit calendar month. Each life history stage or activity type for a particular species can have up to 12 records to account for each month of the year.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

12

*Attribute:**Attribute\_Label:*

BREED1

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED1 = nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning; if ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M\_MAMMAL" then BREED1 = mating. This attribute is not used for HABITAT or T\_MAMMAL.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

N

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

-

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

BREED2

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = migrating; if ELEMENT is "FISH" then BREED2 = eggs; if ELEMENT is "INVERT" then BREED2 = eggs; if ELEMENT is "REPTILE" then BREED2 = hatching; if ELEMENT is "M\_MAMMAL" then BREED2 = calving. This attribute is not used for HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

N

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

-

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

BREED3

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED3 = molting; if ELEMENT is "FISH" then BREED3 = larvae; if ELEMENT is "INVERT" then BREED3 = larvae; if ELEMENT is "REPTILE" then BREED3 = interesting; if ELEMENT is "M\_MAMMAL" then BREED3 = pupping. This attribute is not used for HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

N

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

-

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

BREED4

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "FISH" then BREED4 = juveniles; if ELEMENT is "INVERT" then BREED4 = juveniles; if ELEMENT is "REPTILE" then BREED4 = juveniles; if ELEMENT is "M\_MAMMAL" then BREED4 = molting. This attribute is not used for BIRD, HABITAT, or T\_MAMMAL elements.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

N

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

-

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

BREED5

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 = adults; if ELEMENT is "INVERT" then BREED5 = adults; if ELEMENT is "REPTILE" then BREED5 = adults. This attribute is not used for BIRD, M\_MAMMAL, HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

N

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

-

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:*

STATUS

*Entity\_Type\_Definition:*

The data table STATUS identifies the species that are listed as either threatened or endangered by a state, federal, or international authority. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

ELEMENT

*Attribute\_Definition:*

Major categories of biological data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

BIRD

*Enumerated\_Domain\_Value\_Definition:*

Birds

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

FISH

*Enumerated\_Domain\_Value\_Definition:*

Fish

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

HABITAT

*Enumerated\_Domain\_Value\_Definition:*

Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

INVERT

*Enumerated\_Domain\_Value\_Definition:*

Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

REPTILE

*Enumerated\_Domain\_Value\_Definition:*

Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

SPECIES\_ID

*Attribute\_Definition:*

Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:*

*Attribute\_Label:*

STATE

*Attribute\_Definition:*

Two-letter state abbreviation.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines



*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

COUNTRY

*Attribute\_Definition:*

Three-letter country abbreviation.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

S

*Attribute\_Definition:*

State threatened or endangered status.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

E

*Enumerated\_Domain\_Value\_Definition:*

Endangered on state list

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

T

*Enumerated\_Domain\_Value\_Definition:*

Threatened on state list

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

C

*Enumerated\_Domain\_Value\_Definition:*

Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

F

*Attribute\_Definition:*

Federal threatened or endangered status.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             E  
         *Enumerated\_Domain\_Value\_Definition:*  
             Endangered on federal list  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             T  
         *Enumerated\_Domain\_Value\_Definition:*  
             Threatened on federal list  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             C  
         *Enumerated\_Domain\_Value\_Definition:*  
             Species of Special Concern  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute:*  
     *Attribute\_Label:*  
         I  
     *Attribute\_Definition:*  
         International threatened or endangered status.  
     *Attribute\_Definition\_Source:*  
         NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             E  
         *Enumerated\_Domain\_Value\_Definition:*  
             Endangered on international list  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             T  
         *Enumerated\_Domain\_Value\_Definition:*  
             Threatened on international list  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             C

*Enumerated\_Domain\_Value\_Definition:*

Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

S\_DATE

*Attribute\_Definition:*

Publication date of source material used to assign state status values for each species, if used.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

F\_DATE

*Attribute\_Definition:*

Publication date of source material used to assign federal status values for each species, if used.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

I\_DATE

*Attribute\_Definition:*

Publication date of source material used to assign international status values for each species, if used.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

## NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links the STATUS data table to the BIORES and SPECIES data tables.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:*

SOURCES

*Entity\_Type\_Definition:*

The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

SOURCE\_ID

*Attribute\_Definition:*

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table; G\_SOURCE and S\_SOURCE in the BIORES table; and SOURCE\_ID and ESI\_SOURCE in the ESI and HYDRO data layers.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

ORIGINATOR

*Attribute\_Definition:*

Author or developer of source material or data set.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

DATE\_PUB

*Attribute\_Definition:*

Date of source material, publication, or date of personal communication with expert source.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

TITLE

*Attribute\_Definition:*

Title of source material or data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

DATA\_FORMAT

*Attribute\_Definition:*

The format of the source material.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

PUB\_PLACE

*Attribute\_Definition:*

Publication place.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

PUBLISHER

*Attribute\_Definition:*

Publisher.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

PUBLICATION

*Attribute\_Definition:*

Additional citation information.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

ONLINE\_LINK

*Attribute\_Definition:*

Online computer resource URL.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

SCALE

*Attribute\_Definition:*

Description of the source scale.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

TIME\_PERIOD

*Attribute\_Definition:*

Date(s) of data collection that the source material is based upon.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Overview\_Description:*

*Entity\_and\_Attribute\_Overview:*

In addition to the geographic data layers, six relational attribute or data tables (BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS) are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, REPTILES) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO\_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (for the Southern California atlas, the number is 209), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described in detail in the Detailed\_Description sections. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure. Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN\_SPEC, S, F, NHP, DATE\_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G\_SOURCE, S\_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables (described in the Detailed\_Description sections), except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED\_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed\_Description of the BREED data table. The link to the BIOFILE may be made through the BIO\_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED\_DT is an auxiliary support data table to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to BREED\_DT is the BREED item. A second supporting data table is SOURCES. This is the same as the source file described above, and the link from the flat file is both G\_SOURCE and S\_SOURCE. It should be noted that although the flat file eases data query, it is not a normalized database structure, and actual updates performed by the states and other responsible agencies should be done using the relational data tables. The entity-relationship diagram, describing relationships between attribute tables in the ESI data structure, does NOT include the BIOFILE data table, and this data table is NOT described in a Detailed\_Description section.

*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 ([http://response.restoration.noaa.gov/esi\\_guidelines](http://response.restoration.noaa.gov/esi_guidelines)).

---

*Distribution\_Information:**Distributor:**Contact\_Information:**Contact\_Person\_Primary:**Contact\_Person:*

John Kaperick

*Contact\_Organization:*

NOAA, Office of Response and Restoration

*Contact\_Address:**Address\_Type:*

Physical Address

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7600 Sand Point Way N.E.

*City:*

Seattle

*State\_or\_Province:*

Washington

*Postal\_Code:*

98115-6349

*Contact\_Voice\_Telephone:*

(206) 526-6400

*Contact\_Facsimile\_Telephone:*

(206) 526-6329

*Resource\_Description:*

Downloadable Data

*Distribution\_Liability:*

Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer input peripherals, or when the physical medium is delivered in damaged condition.

*Custom\_Order\_Process:*

Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to the widest community of GIS/mapping users. Distribution formats include Geodatabase; ARC export, MOSS, and Shape files; and MARPLOT map folders. An ArcMap .mxd file, an ArcView 3.x ESI project, and an ESI\_Viewer product for use with the MARPLOT data are also included on the distribution CDs/DVDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

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*Metadata\_Reference\_Information:**Metadata\_Date:*

20100927

*Metadata\_Review\_Date:*



20100927

*Metadata\_Contact:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:*

Jill Petersen

*Contact\_Organization:*

NOAA, Office of Response and Restoration

*Contact\_Position:*

GIS Manager

*Contact\_Address:*

*Address\_Type:*

Physical Address

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*State\_or\_Province:*

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*Postal\_Code:*

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*Contact\_Facsimile\_Telephone:*

(206) 526-6329

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[Jill.Petersen@noaa.gov](mailto:Jill.Petersen@noaa.gov)

*Metadata\_Standard\_Name:*

Content Standards for Digital Geospatial Metadata

*Metadata\_Standard\_Version:*

FGDC-STD-001-1998

*Metadata\_Extensions:*

*Online\_Linkage:*

[http://www.ncddc.noaa.gov/metadatarresource/metadatarreferences/files/ncddcmdprofile\\_v2.pdf](http://www.ncddc.noaa.gov/metadatarresource/metadatarreferences/files/ncddcmdprofile_v2.pdf)

*Profile\_Name:*

Content Specification for Metadata in the National Coastal Data Development Center's Data Catalog Version 2.0

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# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Southern California: M\_MAMMAL (Marine Mammal Polygons)

## Metadata:

- [Identification Information](#)
  - [Data Quality Information](#)
  - [Spatial Data Organization Information](#)
  - [Spatial Reference Information](#)
  - [Entity and Attribute Information](#)
  - [Distribution Information](#)
  - [Metadata Reference Information](#)
- 

### *Identification\_Information:*

#### *Citation:*

##### *Citation\_Information:*

##### *Originator:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington.

##### *Originator:*

Department of Homeland Security, United States Coast Guard, Office of Incident Management and Preparedness, Washington, D.C.

##### *Originator:*

Department of Fish and Game, Office of Spill Prevention and Response, Sacramento, California.

##### *Publication\_Date:*

201003

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Southern California: M\_MAMMAL (Marine Mammal Polygons)

##### *Edition:*

Second

##### *Geospatial\_Data\_Presentation\_Form:*

vector digital data

##### *Series\_Information:*

##### *Series\_Name:*

None

##### *Issue\_Identification:*

Southern California

##### *Publication\_Information:*

##### *Publication\_Place:*

Seattle, Washington

##### *Publisher:*

NOAA's Ocean Service, Office of Response and Restoration (OR&R),  
Emergency Response Division (ERD).

*Other\_Citation\_Details:*

Prepared by Research Planning, Inc., Columbia, South Carolina for the  
National Oceanic and Atmospheric Administration (NOAA), National Ocean  
Service, Office of Response and Restoration, Emergency Response Division,  
Seattle, Washington.

*Online\_Linkage:*

<http://response.restoration.noaa.gov/esi>

*Description:*

*Abstract:*

This data set contains sensitive biological resource data for seals, sea lions, whales, dolphins, porpoises, and sea otters in Southern California. Vector polygons in this data set represent marine mammal distribution, haul-out sites, and rookeries. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the ESI data for Southern California. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources.

*Purpose:*

The ESI data were collected, mapped, and digitized to provide environmental data for oil spill planning and response. The Clean Water Act with amendments by the Oil Pollution Act of 1990 requires response plans for immediate and effective protection of sensitive resources.

*Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:*

1998

*Ending\_Date:*

2010

*Currentness\_Reference:*

The data were compiled during 2008-2010. The currentness dates for the data range from 1998 to 2010 and are documented in the Lineage section.

*Status:*

*Progress:*

Complete

*Maintenance\_and\_Update\_Frequency:*

None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

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-120.60100

*East\_Bounding\_Coordinate:*

-117.00100

*North\_Bounding\_Coordinate:*

34.50000

*South\_Bounding\_Coordinate:*

32.44500

*Keywords:**Theme:**Theme\_Keyword\_Thesaurus:*

ISO 19115 Topic Category

*Theme\_Keyword:*

biota

*Theme\_Keyword:*

environment

*Theme:**Theme\_Keyword\_Thesaurus:*

None

*Theme\_Keyword:*

Environmental Monitoring

*Theme\_Keyword:*

ESI

*Theme\_Keyword:*

Sensitivity maps

*Theme\_Keyword:*

Coastal resources

*Theme\_Keyword:*

Oil spill planning

*Theme\_Keyword:*

Coastal Zone Management

*Theme\_Keyword:*

Wildlife

*Theme\_Keyword:*

Marine Mammal

*Theme:**Theme\_Keyword\_Thesaurus:*

NOS Data Explorer Topic Category

*Theme\_Keyword:*

Environmental Monitoring

*Place:**Place\_Keyword\_Thesaurus:*

None

*Place\_Keyword:*

Southern California

*Access\_Constraints:*

None

*Use\_Constraints:*

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products

derived from these data.

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:*

[datafig.jpg](#)

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and attribute data tables for the Southern California ESI data.

*Browse\_Graphic\_File\_Type:*

JPEG

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:*

[datafig2.jpg](#)

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and desktop data tables for the Southern California ESI data.

*Browse\_Graphic\_File\_Type:*

JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington; the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness Washington, D.C.; and the California Department of Fish and Game (CDF&G), Office of Spill Prevention and Response (OSPR), Sacramento, California.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 9.3) and SQL SERVER(R) (version 2000). The hardware configuration is PC's with Windows Operating System (2000/XP/2003). The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in the data set: acp.e00, birds.e00, esi.e00, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, and t\_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio\_lut.e00, biofile.e00, biores.e00, breed.e00, breed\_dt.e00, seasonal.e00, soc\_dat.e00, soc\_lut.e00, sources.e00, species.e00, and status.e00.

*Program\_Affiliation:*

*Program\_Name:*

National Ocean Service Data Explorer

[Back To Index](#)

*Data\_Quality\_Information:*

*Attribute\_Accuracy:*

*Attribute\_Accuracy\_Report:*

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a

more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

*Logical\_Consistency\_Report:*

A multi-stage error checking process, described in the above Attribute\_Accuracy\_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and SQL SERVER(R) to ARC/INFO(R) consistencies. A final review is made by the GIS manager, where the data are written to CD/DVD and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resource at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

*Completeness\_Report:*

These data represent a synthesis of expert knowledge, available hardcopy documents, survey data, maps, and digital data on marine mammal distribution, haul-out sites, and rookeries. These data do not necessarily represent all marine mammal occurrences in Southern California. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name [n/a if not applicable]): 3, Northern fur seal, *Callorhinus ursinus*; 4, Killer whale, *Orcinus orca*; 7, Sea otter, *Enhydra lutris*; 11, Fin whale, *Balaenoptera physalus*; 12, Minke whale, *Balaenoptera acutorostrata*; 13, Humpback whale, *Megaptera novaeangliae*; 17, Bottlenose dolphin, *Tursiops truncatus*; 19, Short-finned pilot whale, *Globicephala macrorhynchus*; 20, Northern right-whale dolphin, *Lissodelphis borealis*; 22, California sea lion, *Zalophus californianus*; 23, Guadalupe fur seal, *Arctocephalus townsendi*; 24, Northern elephant seal, *Mirounga angustirostris*; 26, Gray whale, *Eschrichtius robustus*; 29, Blue whale, *Balaenoptera musculus*; 45, Pacific white-sided dolphin, *Lagenorhynchus obliquidens*; 46, Risso's dolphin, *Grampus griseus*; 47, Dall's porpoise, *Phocoenoides dalli dalli*; 48, Sperm whale, *Physeter macrocephalus*; 60, Short-beaked saddleback dolphin, *Delphinus delphis*; 88, Bryde's whale, *Balaenoptera edeni*; 96, Cuvier's beaked whale, *Ziphius cavirostris*; 98, Baird's beaked whale, *Berardius bairdii*; 99, Pacific harbor seal, *Phoca vitulina richardii*; 100, Striped dolphin, *Stenella coerulescens*; 106, Long-beaked saddleback dolphin, *Delphinus capensis*; 107, North Pacific right whale, *Eubalaena japonica*; 1000, Whales, n/a; 1005, Mesoplodont beaked whales, *Mesoplodon* spp.

*Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy\_Report:*

Spatial components for the biological data layers can come from expert interviews, hardcopy, or digital sources. Some of the spatial components of the biological data layers may have been developed using regional

experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy base maps with a scale of 1:24,000. Some of the spatial components of the biological data sets are developed from pre-existing digital or hardcopy sources and reflect the positional accuracy of these original data. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources. See the Lineage and Process\_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

CDF&G, OFFICE OF SPILL PREVENTION AND  
RESPONSE (OSPR), DEPARTMENT OF HOMELAND  
SECURITY (DHS), UNITED STATES COAST GUARD  
(USCG)

*Publication\_Date:*

2008

*Title:*

AREA CONTINGENCY PLAN (ACP) SECTOR LOS  
ANGELES/LONG BEACH; 2008 USCG SECTOR SAN  
DIEGO AREA CONTINGENCY PLAN (ACP)

*Geospatial\_Data\_Presentation\_Form:*

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*Other\_Citation\_Details:*

USCG

*Type\_of\_Source\_Media:*

online

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:*

2008

*Source\_Currentness\_Reference:*

DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

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*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

FAULKNER, K. (National Park Service)

*Publication\_Date:*

2010

*Title:*

CHANNEL ISLANDS NATIONAL PARK RESOURCES

*Geospatial\_Data\_Presentation\_Form:*

EXPERT KNOWLEDGE

*Other\_Citation\_Details:*

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*Source\_Time\_Period\_of\_Content:*

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2010

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NONE

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*Originator:*

FAULKNER, K., CHANNEL ISLANDS NATIONAL  
PARK (CINP)

*Publication\_Date:*

2009

*Title:*

CHANNEL ISLANDS SPECIES DISTRIBUTION

*Geospatial\_Data\_Presentation\_Form:*

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*Other\_Citation\_Details:*

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*Originator:*

GOLD, J. (CDF&G OSPR)

*Publication\_Date:*



2009

*Title:*SOCECON AND BIOLOGICAL RESOURCE  
DISTRIBUTION FOR SANTA BARBARA AND  
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*Source\_Information:**Source\_Citation:**Citation\_Information:**Originator:*KOSKI, W.R., J.W. LAWSON, D.H. THOMSON, AND  
W.J. RICHARDSON*Publication\_Date:*

1998

*Title:*POINT MUGU SEA RANGE MARINE MAMMAL  
TECHNICAL REPORT*Geospatial\_Data\_Presentation\_Form:*

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*Other\_Citation\_Details:*LGL LIMITED, OGDEN ENVIRONMENTAL, NAVAL  
AIR WARFARE CENTER WEAPONS DIVISON, AND  
SOUTHWEST DIVISION NAVAL FACILITIES  
ENGINEERING COMMAND. 281 PP. + APPENDICES.*Type\_of\_Source\_Media:*

paper

*Source\_Time\_Period\_of\_Content:**Time\_Period\_Information:**Single\_Date/Time:**Calendar\_Date:*

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*Source\_Currentness\_Reference:*

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2009

*Title:*

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 CENTER (SWFSC)  
*Publication\_Date:*  
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*Title:*  
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PRYOR, D.

*Publication\_Date:*

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*Title:*

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*Source\_Information:**Source\_Citation:**Citation\_Information:**Originator:*

RYAN, T.

*Publication\_Date:*

2009

*Title:*SNOWY PLOVER AND OTHER SPECIES  
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*Originator:*

SCHALLMAN, B. (U.S. NAVY)

*Publication\_Date:*

2009

*Title:*

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SENYK, N. (CHANNEL ISLANDS NATIONAL MARINE  
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*Publication\_Date:*

2009

*Title:*

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*Publication\_Date:*  
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*Publication\_Date:*  
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*Process\_Step:*  
*Process\_Description:*  
 Three main sources of data were used to depict marine mammal distribution and seasonality for this data layer: 1) personal interviews with resource experts from NOAA National Marine Fisheries Service (NMFS) Southwest Fisheries Science Center (SWFSC), California State Parks (CSP), Ryan Ecological Consulting, U.S. Navy, Audubon Society, Channel Island National Marine Sanctuary (CINMS), University of California Santa Cruz (UCSC), National Park Service (NPS) Channel Islands National Park (CINP), and CDF&G; 2) published reports provided by CDF&G and NOAA; and 3) digital survey data, digital maps, and shapefiles provided by U.S. Geological Survey (USGS), NOAA NMFS SWFSC, and the U.S. Navy. The above digital and/or hardcopy sources were compiled by the project biologist to create the

M\_MAMMAL data layer. Depending on the type of source data, three general approaches are used for compiling the data layer: 1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:24,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the M\_MAMMAL data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:*

201003

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:*

NOAA, Office of Response and Restoration

*Contact\_Person:*

Jill Petersen

*Contact\_Address:*

*Address\_Type:*

Physical address

*Address:*

7600 Sand Point Way, N.E.

*City:*

Seattle

*State\_or\_Province:*

Washington

*Postal\_Code:*

98115-6349

*Contact\_Voice\_Telephone:*

(206) 526-6944

*Contact\_Facsimile\_Telephone:*

(206) 526-6329

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*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:*

Vector

*Point\_and\_Vector\_Object\_Information:*

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:*

GT-polygon composed of chains

*Point\_and\_Vector\_Object\_Count:*

308

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:*

Area point

*Point\_and\_Vector\_Object\_Count:*

309

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Complete chain

*Point\_and\_Vector\_Object\_Count:*

1084

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Link

*Point\_and\_Vector\_Object\_Count:*

266794

*SDTS\_Terms\_Description:**SDTS\_Point\_and\_Vector\_Object\_Type:*

Node, planar graph

*Point\_and\_Vector\_Object\_Count:*

885

[Back To Index](#)*Spatial\_Reference\_Information:**Horizontal\_Coordinate\_System\_Definition:**Geographic:**Latitude\_Resolution:*

0.0000001

*Longitude\_Resolution:*

0.0000001

*Geographic\_Coordinate\_Units:*

Decimal degrees

*Geodetic\_Model:**Horizontal\_Datum\_Name:*

North American Datum of 1983

*Ellipsoid\_Name:*

Geodetic Reference System 80

*Semi-major\_Axis:*

6378137.000000

*Denominator\_of\_Flattening\_Ratio:*

298.257222

[Back To Index](#)*Entity\_and\_Attribute\_Information:**Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:*

M\_MAMMAL.PAT

*Entity\_Type\_Definition:*

The M\_MAMMAL.PAT table contains attribute information for the vector polygons in this data set representing marine mammal distribution, haul-out sites, and rookeries. Note that all attribute information is stored in a series of relational files, described below and in the

Overview\_Description section. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (209), element number (4), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:*

NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

2090400002

*Range\_Domain\_Maximum:*

2090400315

*Attribute:*

*Attribute\_Label:*

RARNUM

*Attribute\_Definition:*

An identifier that links directly to the BIORES table or the flat format BIOFILE table. RARNUM values of 0 are holes in the polygons and do not contain information.

*Attribute\_Definition\_Source:*

NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

109001097

*Range\_Domain\_Maximum:*

109001247

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:*

BIO\_LUT

*Entity\_Type\_Definition:*

The data table BIO\_LUT is a lookup table that contains items necessary for linking vector objects in the biological data layers with the BIORES data table. Note that all attribute information is stored in a series of relational files, described below and in the Overview\_Description section. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

RARNUM

*Attribute\_Definition:*

An identifier that links records in the BIO\_LUT data table to records in the BIORES data table or the flat format BIOFILE data table. RARNUM values of 0 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:*

NOAA

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

209000001

*Range\_Domain\_Maximum:*

209001289

*Attribute:**Attribute\_Label:*

ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (209), element number (4), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:*

NOAA

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

2090100002

*Range\_Domain\_Maximum:*

2092200052

*Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:*

BIORES

*Entity\_Type\_Definition:*

The data table BIORES contains both biological attribute data and items necessary for linking vector objects in the biological data layers via the BIO\_LUT data table to other associated data tables. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

RARNUM

*Attribute\_Definition:*

An identifier that links records in the BIORES data table to records in the BIO\_LUT data table or the flat format BIOFILE data table.

*Attribute\_Definition\_Source:*

NOAA

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

209000001

*Range\_Domain\_Maximum:*

209001289

*Attribute:**Attribute\_Label:*

SPECIES\_ID

*Attribute\_Definition:*

Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

CONC

*Attribute\_Definition:*

The field CONC refers to concentration, abundance, or density values. The field may contain counts of individuals (XX INDIV.) or a range of counts of individuals (XX-XX INDIV.). Counts were primarily used for pinnipeds. When no quantitative count information was available, the field may contain descriptive terms such as "VERY HIGH" or "PRIMARY", "SECONDARY", "RARE" (used for cetaceans, mostly). If no concentration information was available from any source, the field was populated with "-". Counts were derived from a variety of surveys, and may range in date (see Lineage).

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

SEASON\_ID

*Attribute\_Definition:*

Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

G\_SOURCE

*Attribute\_Definition:*

Geographic source identifier that links records in the BIORES data table to records in the SOURCES data table.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

S\_SOURCE

*Attribute\_Definition:*

Seasonality source identifier that links records in the BIORES data table to records in the SOURCES data table.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

ELEMENT

*Attribute\_Definition:*

Major categories of biological data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

BIRD

*Enumerated\_Domain\_Value\_Definition:*

Birds

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

FISH

*Enumerated\_Domain\_Value\_Definition:*

Fish

*Enumerated\_Domain\_Value\_Definition\_Source:*



## NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

HABITAT

*Enumerated\_Domain\_Value\_Definition:*

Habitats and plants

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

INVERT

*Enumerated\_Domain\_Value\_Definition:*

Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Marine mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

REPTILE

*Enumerated\_Domain\_Value\_Definition:*

Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Terrestrial mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links records in the BIORES data table to records in the SPECIES and STATUS data tables.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:**Enumerated\_Domain\_Value:*

E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BIORES data table to records in the SEASONAL and BREED data tables.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:*

SPECIES

*Entity\_Type\_Definition:*

The data table SPECIES identifies all species in the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure. Refer to the Completeness\_Report for a list of layer-specific species.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

SPECIES\_ID

*Attribute\_Definition:*

Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Range\_Domain:*

*Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:*

*Attribute\_Label:*

NAME

*Attribute\_Definition:*

Species common name for the entire ESI data set.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

GEN\_SPEC

*Attribute\_Definition:*

Species scientific name for the entire ESI data set.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

ELEMENT

*Attribute\_Definition:*

Major categories of biological data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

BIRD

*Enumerated\_Domain\_Value\_Definition:*

Birds

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

FISH

*Enumerated\_Domain\_Value\_Definition:*

Fish

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

HABITAT

*Enumerated\_Domain\_Value\_Definition:*  
 Habitats and plants  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
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 INVERT  
*Enumerated\_Domain\_Value\_Definition:*  
 Invertebrates  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
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*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 M\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:*  
 Marine Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
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*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
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 Reptiles and Amphibians  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
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*Enumerated\_Domain\_Value:*  
 T\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:*  
 Terrestrial Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute:*  
*Attribute\_Label:*  
 SUBELEMENT  
*Attribute\_Definition:*  
 Element subgroup delineating a logical grouping of species.  
*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 alcid  
*Enumerated\_Domain\_Value\_Definition:*  
 Alcid  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

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         *Enumerated\_Domain\_Value:*  
             amphibian  
         *Enumerated\_Domain\_Value\_Definition:*  
             Amphibian  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
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     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             bivalve  
         *Enumerated\_Domain\_Value\_Definition:*  
             Bivalve  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
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     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             canine  
         *Enumerated\_Domain\_Value\_Definition:*  
             Canine  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
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     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             diadromous  
         *Enumerated\_Domain\_Value\_Definition:*  
             Diadromous fish  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
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     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             diving  
         *Enumerated\_Domain\_Value\_Definition:*  
             Diving bird  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
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     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             dolphin  
         *Enumerated\_Domain\_Value\_Definition:*  
             Dolphin  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
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     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*

e\_nursery  
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 Estuarine nursery fish  
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 Freshwater fish  
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 Gull or tern  
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 NOAA ESI Guidelines  
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*Enumerated\_Domain\_Value:*  
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 Insect  
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*Enumerated\_Domain\_Value:*  
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*Enumerated\_Domain\_Value\_Definition:*  
 Invertebrate

*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
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*Enumerated\_Domain:*  
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 kelp  
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*Enumerated\_Domain\_Value\_Definition\_Source:*  
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 Lizard  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
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*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 m\_benthic  
*Enumerated\_Domain\_Value\_Definition:*  
 Marine benthic fish  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
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*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 passerine  
*Enumerated\_Domain\_Value\_Definition:*  
 Passerine bird  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 pelagic  
*Enumerated\_Domain\_Value\_Definition:*  
 Pelagic bird  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
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*Enumerated\_Domain\_Value:*  
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 Pinniped  
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 NOAA ESI Guidelines  
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*Enumerated\_Domain:**Enumerated\_Domain\_Value:*

plant

*Enumerated\_Domain\_Value\_Definition:*

Plant

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

raptor

*Enumerated\_Domain\_Value\_Definition:*

Raptor

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

sav

*Enumerated\_Domain\_Value\_Definition:*

Submerged aquatic vegetation

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

sea\_otter

*Enumerated\_Domain\_Value\_Definition:*

Sea otter

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

shorebird

*Enumerated\_Domain\_Value\_Definition:*

Shorebird

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

shrimp

*Enumerated\_Domain\_Value\_Definition:*

Shrimp

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

sm\_mammal



*Enumerated\_Domain\_Value\_Definition:*  
 Small mammal  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 snake  
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 Snake  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
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*Enumerated\_Domain\_Value:*  
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 Turtle  
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 NOAA ESI Guidelines  
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*Enumerated\_Domain\_Value:*  
 upland  
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 Upland vegetation  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
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*Enumerated\_Domain\_Value:*  
 wading  
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 Wading bird  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
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*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 waterfowl  
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 Waterfowl  
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 NOAA ESI Guidelines  
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*Enumerated\_Domain\_Value:*  
 wetland  
*Enumerated\_Domain\_Value\_Definition:*  
 Wetland  
*Enumerated\_Domain\_Value\_Definition\_Source:*

## NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

whale

*Enumerated\_Domain\_Value\_Definition:*

Whale

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

NHP

*Attribute\_Definition:*

Natural Heritage Program global ranking.

*Attribute\_Definition\_Source:*

Network of Natural Heritage Program

*Attribute\_Domain\_Values:**Codeset\_Domain:**Codeset\_Name:*

NHP Global Conservation Status Rank

*Codeset\_Source:*

Natural Heritage Program

*Attribute:**Attribute\_Label:*

DATE\_PUB

*Attribute\_Definition:*

Date of NHP listing.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

0

*Enumerated\_Domain\_Value\_Definition:*

Date unspecified

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links records in the SPECIES data table to records in the BIORES and STATUS data

tables.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:*

SEASONAL

*Entity\_Type\_Definition:*

The data table SEASONAL contains information on the seasonal presence of each species associated with each spatial vector object. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

ELEMENT

*Attribute\_Definition:*

Major categories of biological data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

BIRD

*Enumerated\_Domain\_Value\_Definition:*

Birds

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

FISH

*Enumerated\_Domain\_Value\_Definition:*

Fish

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

**HABITAT***Enumerated\_Domain\_Value\_Definition:*

Habitats and plants

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

INVERT

*Enumerated\_Domain\_Value\_Definition:*

Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

REPTILE

*Enumerated\_Domain\_Value\_Definition:*

Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

SPECIES\_ID

*Attribute\_Definition:*

Numeric identifier for each species that is unique within each element and refers to a nationwide ESI species list maintained at NOAA.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

SEASON\_ID

*Attribute\_Definition:*

Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

JAN

*Attribute\_Definition:*

January

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in January

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

FEB

*Attribute\_Definition:*

February

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in February

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

MAR

*Attribute\_Definition:*

March

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 X  
*Enumerated\_Domain\_Value\_Definition:*  
 Present in March  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute:*  
*Attribute\_Label:*  
 APR  
*Attribute\_Definition:*  
 April  
*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 X  
*Enumerated\_Domain\_Value\_Definition:*  
 Present in April  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute:*  
*Attribute\_Label:*  
 MAY  
*Attribute\_Definition:*  
 May  
*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 X  
*Enumerated\_Domain\_Value\_Definition:*  
 Present in May  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute:*  
*Attribute\_Label:*  
 JUN  
*Attribute\_Definition:*  
 June  
*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 X  
*Enumerated\_Domain\_Value\_Definition:*  
 Present in June

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

JUL

*Attribute\_Definition:*

July

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in July

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

AUG

*Attribute\_Definition:*

August

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in August

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

SEP

*Attribute\_Definition:*

September

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in September

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

OCT

*Attribute\_Definition:*

October

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in October

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

NOV

*Attribute\_Definition:*

November

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in November

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

DEC

*Attribute\_Definition:*

December

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in December

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the SEASONAL data table to records in the BIORES and BREED data tables.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*



*Enumerated\_Domain:**Enumerated\_Domain\_Value:*

E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:*

BREED

*Entity\_Type\_Definition:*

The data table BREED identifies the monthly presence of certain life-history stages or activities for each species at a given location.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BREED data table to records in the BIORES and SEASONAL data tables.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

MONTH

*Attribute\_Definition:*

Two-digit calendar month. Each life history stage or activity type for a particular species can have up to 12 records to account for each month of the year.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

12

*Attribute:**Attribute\_Label:*

BREED1

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED1 = nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning; if ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M\_MAMMAL" then BREED1 = mating. This attribute is not used for HABITAT or T\_MAMMAL.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

N

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

-

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

BREED2

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = migrating; if ELEMENT is "FISH" then BREED2 = eggs; if ELEMENT is "INVERT" then BREED2 = eggs; if ELEMENT is "REPTILE" then BREED2 = hatching; if ELEMENT is "M\_MAMMAL" then BREED2 = calving. This attribute is not used for HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:*

## NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

N

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

-

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

BREED3

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED3 = molting; if ELEMENT is "FISH" then BREED3 = larvae; if ELEMENT is "INVERT" then BREED3 = larvae; if ELEMENT is "REPTILE" then BREED3 = internesting; if ELEMENT is "M\_MAMMAL" then BREED3 = pupping. This attribute is not used for HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

N

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity not present or not reported  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 -  
*Enumerated\_Domain\_Value\_Definition:*  
 Breed category not used or not appropriate for record(s) in question  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute:*  
*Attribute\_Label:*  
 BREED4  
*Attribute\_Definition:*  
 Life history stage or activity type, where: if ELEMENT is "FISH" then BREED4 = juveniles; if ELEMENT is "INVERT" then BREED4 = juveniles; if ELEMENT is "REPTILE" then BREED4 = juveniles; if ELEMENT is "M\_MAMMAL" then BREED4 = molting. This attribute is not used for BIRD, HABITAT, or T\_MAMMAL elements.  
*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 Y  
*Enumerated\_Domain\_Value\_Definition:*  
 Life-history stage or activity present  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 N  
*Enumerated\_Domain\_Value\_Definition:*  
 Life-history stage or activity not present or not reported  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 -  
*Enumerated\_Domain\_Value\_Definition:*  
 Breed category not used or not appropriate for record(s) in question  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute:*  
*Attribute\_Label:*  
 BREED5

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 = adults; if ELEMENT is "INVERT" then BREED5 = adults; if ELEMENT is "REPTILE" then BREED5 = adults. This attribute is not used for BIRD, M\_MAMMAL, HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

N

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

-

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:*

STATUS

*Entity\_Type\_Definition:*

The data table STATUS identifies the species that are listed as either threatened or endangered by a state, federal, or international authority. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

ELEMENT

*Attribute\_Definition:*

Major categories of biological data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 BIRD  
*Enumerated\_Domain\_Value\_Definition:*  
 Birds  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 FISH  
*Enumerated\_Domain\_Value\_Definition:*  
 Fish  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 HABITAT  
*Enumerated\_Domain\_Value\_Definition:*  
 Habitats and Plants  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 INVERT  
*Enumerated\_Domain\_Value\_Definition:*  
 Invertebrates  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 M\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:*  
 Marine Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 REPTILE  
*Enumerated\_Domain\_Value\_Definition:*  
 Reptiles and Amphibians  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*

## T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

SPECIES\_ID

*Attribute\_Definition:*

Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

STATE

*Attribute\_Definition:*

Two-letter state abbreviation.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

COUNTRY

*Attribute\_Definition:*

Three-letter country abbreviation.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

S

*Attribute\_Definition:*

State threatened or endangered status.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

E

*Enumerated\_Domain\_Value\_Definition:*

Endangered on state list  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 T  
*Enumerated\_Domain\_Value\_Definition:*  
 Threatened on state list  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 C  
*Enumerated\_Domain\_Value\_Definition:*  
 Species of Special Concern  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute:*  
*Attribute\_Label:*  
 F  
*Attribute\_Definition:*  
 Federal threatened or endangered status.  
*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 E  
*Enumerated\_Domain\_Value\_Definition:*  
 Endangered on federal list  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 T  
*Enumerated\_Domain\_Value\_Definition:*  
 Threatened on federal list  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 C  
*Enumerated\_Domain\_Value\_Definition:*  
 Species of Special Concern  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute:*



*Attribute\_Label:*

I

*Attribute\_Definition:*

International threatened or endangered status.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

E

*Enumerated\_Domain\_Value\_Definition:*

Endangered on international list

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

T

*Enumerated\_Domain\_Value\_Definition:*

Threatened on international list

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

C

*Enumerated\_Domain\_Value\_Definition:*

Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

S\_DATE

*Attribute\_Definition:*

Publication date of source material used to assign state status values for each species, if used.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

F\_DATE

*Attribute\_Definition:*

Publication date of source material used to assign federal status values

for each species, if used.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

I\_DATE

*Attribute\_Definition:*

Publication date of source material used to assign international status values for each species, if used.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links the STATUS data table to the BIORES and SPECIES data tables.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:*

SOURCES

*Entity\_Type\_Definition:*

The data table SOURCES contains the primary sources used to create the

ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

SOURCE\_ID

*Attribute\_Definition:*

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table; G\_SOURCE and S\_SOURCE in the BIORES table; and SOURCE\_ID and ESI\_SOURCE in the ESI and HYDRO data layers.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:*

*Attribute\_Label:*

ORIGINATOR

*Attribute\_Definition:*

Author or developer of source material or data set.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

DATE\_PUB

*Attribute\_Definition:*

Date of source material, publication, or date of personal communication with expert source.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

TITLE

*Attribute\_Definition:*

Title of source material or data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

DATA\_FORMAT

*Attribute\_Definition:*

The format of the source material.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

PUB\_PLACE

*Attribute\_Definition:*

Publication place.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

PUBLISHER

*Attribute\_Definition:*

Publisher.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

PUBLICATION

*Attribute\_Definition:*

Additional citation information.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*

ONLINE\_LINK

*Attribute\_Definition:*

Online computer resource URL.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

SCALE

*Attribute\_Definition:*

Description of the source scale.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

TIME\_PERIOD

*Attribute\_Definition:*

Date(s) of data collection that the source material is based upon.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Overview\_Description:**Entity\_and\_Attribute\_Overview:*

In addition to the geographic data layers, six relational attribute or data tables (BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS) are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, M\_MAMMAL) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO\_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (for the Southern California atlas, the number is 209), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described in detail in the Detailed\_Description sections. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure. Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN\_SPEC, S, F, NHP, DATE\_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G\_SOURCE, S\_SOURCE, and BREED. All of these items are the

same as their counterparts in the individual data tables (described in the Detailed\_Description sections), except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED\_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed\_Description of the BREED data table. The link to the BIOFILE may be made through the BIO\_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED\_DT is an auxiliary support data table to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to BREED\_DT is the BREED item. A second supporting data table is SOURCES. This is the same as the source file described above, and the link from the flat file is both G\_SOURCE and S\_SOURCE. It should be noted that although the flat file eases data query, it is not a normalized database structure, and actual updates performed by the states and other responsible agencies should be done using the relational data tables. The entity-relationship diagram, describing relationships between attribute tables in the ESI data structure, does NOT include the BIOFILE data table, and this data table is NOT described in a Detailed\_Description section.

*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 ([http://response.restoration.noaa.gov/esi\\_guidelines](http://response.restoration.noaa.gov/esi_guidelines)).

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---

*Distribution\_Information:*

*Distributor:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:*

John Kaperick

*Contact\_Organization:*

NOAA, Office of Response and Restoration

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*Address\_Type:*

Physical Address

*Address:*

7600 Sand Point Way N.E.

*City:*

Seattle

*State\_or\_Province:*

Washington

*Postal\_Code:*

98115-6349

*Contact\_Voice\_Telephone:*

(206) 526-6400

*Contact\_Facsimile\_Telephone:*

(206) 526-6329

*Resource\_Description:*

## Downloadable Data

*Distribution\_Liability:*

Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer input peripherals, or when the physical medium is delivered in damaged condition.

*Custom\_Order\_Process:*

Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to the widest community of GIS/mapping users. Distribution formats include Geodatabase; ARC export, MOSS, and Shape files; and MARPLOT map folders. An ArcMap .mxd file, an ArcView 3.x ESI project, and an ESI Viewer product for use with the MARPLOT data are also included on the distribution CDs/DVDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

[Back To Index](#)*Metadata\_Reference\_Information:**Metadata\_Date:*

20100927

*Metadata\_Review\_Date:*

20100927

*Metadata\_Contact:**Contact\_Information:**Contact\_Person\_Primary:**Contact\_Person:*

Jill Petersen

*Contact\_Organization:*

NOAA, Office of Response and Restoration

*Contact\_Position:*

GIS Manager

*Contact\_Address:**Address\_Type:*

Physical Address

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*City:*

Seattle

*State\_or\_Province:*

Washington

*Postal\_Code:*

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(206) 526-6329

*Contact\_Electronic\_Mail\_Address:*

[Jill.Petersen@noaa.gov](mailto:Jill.Petersen@noaa.gov)

*Metadata\_Standard\_Name:*

Content Standards for Digital Geospatial Metadata

*Metadata\_Standard\_Version:*

FGDC-STD-001-1998

*Metadata\_Extensions:*

*Online\_Linkage:*

[http://www.ncddc.noaa.gov/metadataresource/metadata-references/files/ncddcmdprofile\\_v2.pdf](http://www.ncddc.noaa.gov/metadataresource/metadata-references/files/ncddcmdprofile_v2.pdf)

*Profile\_Name:*

Content Specification for Metadata in the National Coastal Data Development Center's Data Catalog Version 2.0

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# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Southern California: T\_MAMMAL (Terrestrial Mammal Polygons)

## Metadata:

- [Identification Information](#)
  - [Data Quality Information](#)
  - [Spatial Data Organization Information](#)
  - [Spatial Reference Information](#)
  - [Entity and Attribute Information](#)
  - [Distribution Information](#)
  - [Metadata Reference Information](#)
- 

### *Identification\_Information:*

#### *Citation:*

##### *Citation\_Information:*

##### *Originator:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington.

##### *Originator:*

Department of Homeland Security, United States Coast Guard, Office of Incident Management and Preparedness, Washington, D.C.

##### *Originator:*

Department of Fish and Game, Office of Spill Prevention and Response, Sacramento, California.

##### *Publication\_Date:*

201003

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Southern California: T\_MAMMAL (Terrestrial Mammal Polygons)

##### *Edition:*

Second

##### *Geospatial\_Data\_Presentation\_Form:*

vector digital data

##### *Series\_Information:*

##### *Series\_Name:*

None

##### *Issue\_Identification:*

Southern California

##### *Publication\_Information:*

##### *Publication\_Place:*

Seattle, Washington

##### *Publisher:*

NOAA's Ocean Service, Office of Response and Restoration (OR&R),  
Emergency Response Division (ERD).

*Other\_Citation\_Details:*

Prepared by Research Planning, Inc., Columbia, South Carolina for the  
National Oceanic and Atmospheric Administration (NOAA), National Ocean  
Service, Office of Response and Restoration, Emergency Response Division,  
Seattle, Washington.

*Online\_Linkage:*

<http://response.restoration.noaa.gov/esi>

*Description:*

*Abstract:*

This data set contains sensitive biological resource data for rare and threatened/endangered terrestrial mammals in Southern California. Vector polygons in this data set represent distribution of rare terrestrial mammals. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below), designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the ESI data for Southern California. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources.

*Purpose:*

The ESI data were collected, mapped, and digitized to provide environmental data for oil spill planning and response. The Clean Water Act with amendments by the Oil Pollution Act of 1990 requires response plans for immediate and effective protection of sensitive resources.

*Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:*

1990

*Ending\_Date:*

2009

*Currentness\_Reference:*

The data were compiled during 2008-2010. The currentness dates for the data range from 1990 to 2009 and are documented in the Lineage section.

*Status:*

*Progress:*

Complete

*Maintenance\_and\_Update\_Frequency:*

None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:*

-120.60100

*East\_Bounding\_Coordinate:*

-117.00100

*North\_Bounding\_Coordinate:*

34.50000

*South\_Bounding\_Coordinate:*

32.44500

*Keywords:**Theme:**Theme\_Keyword\_Thesaurus:*

ISO 19115 Topic Category

*Theme\_Keyword:*

biota

*Theme\_Keyword:*

environment

*Theme:**Theme\_Keyword\_Thesaurus:*

None

*Theme\_Keyword:*

Environmental Monitoring

*Theme\_Keyword:*

ESI

*Theme\_Keyword:*

Sensitivity maps

*Theme\_Keyword:*

Coastal resources

*Theme\_Keyword:*

Oil spill planning

*Theme\_Keyword:*

Coastal Zone Management

*Theme\_Keyword:*

Wildlife

*Theme\_Keyword:*

Terrestrial Mammal

*Theme:**Theme\_Keyword\_Thesaurus:*

NOS Data Explorer Topic Category

*Theme\_Keyword:*

Environmental Monitoring

*Place:**Place\_Keyword\_Thesaurus:*

None

*Place\_Keyword:*

Southern California

*Access\_Constraints:*

None

*Use\_Constraints:*

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products

derived from these data.

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:*

[datafig.jpg](#)

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and attribute data tables for the Southern California ESI data.

*Browse\_Graphic\_File\_Type:*

JPEG

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:*

[datafig2.jpg](#)

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and desktop data tables for the Southern California ESI data.

*Browse\_Graphic\_File\_Type:*

JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington; the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness Washington, D.C.; and the California Department of Fish and Game (CDF&G), Office of Spill Prevention and Response (OSPR), Sacramento, California.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 9.3) and SQL SERVER(R) (version 2000). The hardware configuration is PC's with Windows Operating System (2000/XP/2003). The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in the data set: acp.e00, birds.e00, esi.e00, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, and t\_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio\_lut.e00, biofile.e00, biores.e00, breed.e00, breed\_dt.e00, seasonal.e00, soc\_dat.e00, soc\_lut.e00, sources.e00, species.e00, and status.e00.

*Program\_Affiliation:*

*Program\_Name:*

National Ocean Service Data Explorer

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*Data\_Quality\_Information:*

*Attribute\_Accuracy:*

*Attribute\_Accuracy\_Report:*

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a

more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

*Logical\_Consistency\_Report:*

A multi-stage error checking process, described in the above Attribute\_Accuracy\_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and SQL SERVER(R) to ARC/INFO(R) consistencies. A final review is made by the GIS manager, where the data are written to CD/DVD and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resource at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

*Completeness\_Report:*

These data represent a synthesis of expert knowledge, available hardcopy documents, and digital data on distribution of rare terrestrial mammals. These data do not necessarily represent all terrestrial mammal occurrences in Southern California. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name [n/a if not applicable]): 263, Pacific pocket mouse, *Perognathus longimembris pacificus*; 264, San Diego black-tailed jackrabbit, *Lepus californicus bennettii*; 265, Western harvest mouse, *Reithrodontomys megalotis*; 268, San Miguel island fox, *Urocyon littoralis littoralis*; 269, Santa Rosa island fox, *Urocyon littoralis santarosae*; 270, Santa Cruz island fox, *Urocyon littoralis santacruzae*; 271, Santa Catalina island fox, *Urocyon littoralis catalinae*; 272, Anacapa deer mouse, *Peromyscus maniculatus anacapae*; 273, Channel Islands spotted skunk, *Spilogale gracilis amphialus*.

*Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy\_Report:*

Spatial components for the biological data layers can come from expert interviews, hardcopy, or digital sources. Some of the spatial components of the biological data layers may have been developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy base maps with a scale of 1:24,000. Some of the spatial components of the biological data sets are developed from pre-existing digital or hardcopy sources and reflect the positional accuracy of these original data. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources. See the Lineage and Process\_Description sections for more information

on the original source data and how these data were integrated or manipulated to create the final data set.

*Lineage:*

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

BRUBAKER, D. (USFWS)

*Publication\_Date:*

2009

*Title:*

NATIONAL WILDLIFE REFUGE RESOURCES IN  
SOUTHERN CALIFORNIA

*Geospatial\_Data\_Presentation\_Form:*

EXPERT KNOWLEDGE

*Other\_Citation\_Details:*

UNPUBLISHED

*Type\_of\_Source\_Media:*

PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:*

2009

*Source\_Currentness\_Reference:*

DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

T\_MAMMAL INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

CDF&G BIOGEOGRAPHIC DATA BRANCH

*Publication\_Date:*

2009

*Title:*

CALIFORNIA NATURAL DIVERSITY DATABASE  
(CNDDDB)

*Geospatial\_Data\_Presentation\_Form:*

vector digital data

*Publication\_Information:*

*Publication\_Place:*

SACRAMENTO, CA

*Publisher:*

CDF&G BIOGEOGRAPHIC DATA BRANCH

*Type\_of\_Source\_Media:*

online

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*  
*Calendar\_Date:*  
 2009  
*Source\_Currentness\_Reference:*  
 DATE OF PUBLICATION  
*Source\_Citation\_Abbreviation:*  
 NONE  
*Source\_Contribution:*  
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*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 CDF&G, OFFICE OF SPILL PREVENTION AND  
 RESPONSE (OSPR),DEPARTMENT OF HOMELAND  
 SECURITY (DHS), UNITED STATES COAST GUARD  
 (USCG)  
*Publication\_Date:*  
 2008  
*Title:*  
 AREA CONTINGENCY PLAN (ACP) SECTOR LOS  
 ANGELES/LONG BEACH; 2008 USCG SECTOR SAN  
 DIEGO AREA CONTINGENCY PLAN (ACP)  
*Geospatial\_Data\_Presentation\_Form:*  
 HARDCOPY TEXT  
*Other\_Citation\_Details:*  
 USCG  
*Type\_of\_Source\_Media:*  
 online  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
 2008  
*Source\_Currentness\_Reference:*  
 DATE OF PUBLICATION  
*Source\_Citation\_Abbreviation:*  
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*Source\_Contribution:*  
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*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 FOSTER, B. (AVIAN RESEARCH ASSOCIATES)  
*Publication\_Date:*  
 2009  
*Title:*  
 SAN DIEGO COUNTY SPECIES  
*Geospatial\_Data\_Presentation\_Form:*  
 EXPERT KNOWLEDGE

*Other\_Citation\_Details:*  
 UNPUBLISHED  
*Type\_of\_Source\_Media:*  
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*Source\_Currentness\_Reference:*  
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*Source\_Contribution:*  
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*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 USFWS  
*Publication\_Date:*  
 1998  
*Title:*  
 RECOVERY PLAN FOR THE PACIFIC POCKET  
 MOUSE  
*Geospatial\_Data\_Presentation\_Form:*  
 HARDCOPY TEXT  
*Publication\_Information:*  
*Publication\_Place:*  
 PORTLAND, OR.  
*Publisher:*  
 USFWS  
*Other\_Citation\_Details:*  
 PORTLAND, OR. 112 PP.  
*Type\_of\_Source\_Media:*  
 online  
*Source\_Time\_Period\_of\_Content:*  
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*Single\_Date/Time:*  
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 1998  
*Source\_Currentness\_Reference:*  
 DATE OF PUBLICATION  
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*Source\_Contribution:*  
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*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*



VERMEER, L. (THE NATURE CONSERVANCY)  
*Publication\_Date:*  
 2009  
*Title:*  
 THE NATURE CONSERVANCY RESOURCES IN THE  
 CHANNEL ISLANDS  
*Geospatial\_Data\_Presentation\_Form:*  
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*Other\_Citation\_Details:*  
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*Source\_Currentness\_Reference:*  
 DATE OF COMMUNICATION  
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*Source\_Contribution:*  
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*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 ZEINER, D.C., W.F. LAUDENSLAYER, JR., K.E.  
 MAYER, AND M. WHITE.  
*Publication\_Date:*  
 1990  
*Title:*  
 LIFE HISTORY ACCOUNTS FOR SPECIES IN THE  
 CALIFORNIA WILDLIFE HABITAT RELATIONSHIPS  
 (CWHR) SYSTEM. CAL'S WILDLIFE. VOL. I-III.  
*Geospatial\_Data\_Presentation\_Form:*  
 HARDCOPY TEXT  
*Publication\_Information:*  
*Publication\_Place:*  
 SACRAMENTO, CA.  
*Publisher:*  
 CALIFORNIA DEPT. OF FISH AND GAME  
*Type\_of\_Source\_Media:*  
 online  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
 1990  
*Source\_Currentness\_Reference:*  
 DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

T\_MAMMAL INFORMATION

*Process\_Step:**Process\_Description:*

Three main sources of data were used to depict terrestrial mammal distribution and seasonality for this data layer: 1) personal interviews with resource experts from U.S. Fish and Wildlife Service (USFWS), Avian Research Associates, and The Nature Conservancy; 2) published reports provided by CDF&G; and 3) digital data provided by CDF&G. The above digital and/or hardcopy sources were compiled by the project biologist to create the T\_MAMMAL data layer. Depending on the type of source data, three general approaches are used for compiling the data layer: 1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:24,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the T\_MAMMAL data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:*

201003

*Process\_Contact:**Contact\_Information:**Contact\_Organization\_Primary:**Contact\_Organization:*

NOAA, Office of Response and Restoration

*Contact\_Person:*

Jill Petersen

*Contact\_Address:**Address\_Type:*

Physical address

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*City:*

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*State\_or\_Province:*

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*Postal\_Code:*

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*Contact\_Voice\_Telephone:*

(206) 526-6944

*Contact\_Facsimile\_Telephone:*

(206) 526-6329

*Contact\_Electronic\_Mail\_Address:*

[Jill.Petersen@noaa.gov](mailto:Jill.Petersen@noaa.gov)

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*Spatial\_Data\_Organization\_Information:*

*Direct\_Spatial\_Reference\_Method:*

Vector

*Point\_and\_Vector\_Object\_Information:*

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:*

GT-polygon composed of chains

*Point\_and\_Vector\_Object\_Count:*

83

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:*

Area point

*Point\_and\_Vector\_Object\_Count:*

84

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:*

Complete chain

*Point\_and\_Vector\_Object\_Count:*

142

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:*

Link

*Point\_and\_Vector\_Object\_Count:*

31768

*SDTS\_Terms\_Description:*

*SDTS\_Point\_and\_Vector\_Object\_Type:*

Node, planar graph

*Point\_and\_Vector\_Object\_Count:*

139

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*Spatial\_Reference\_Information:*

*Horizontal\_Coordinate\_System\_Definition:*

*Geographic:*

*Latitude\_Resolution:*

0.0000001

*Longitude\_Resolution:*

0.0000001

*Geographic\_Coordinate\_Units:*

Decimal degrees

*Geodetic\_Model:*

*Horizontal\_Datum\_Name:*

North American Datum of 1983

*Ellipsoid\_Name:*

Geodetic Reference System 80

*Semi-major\_Axis:*

6378137.000000

*Denominator\_of\_Flattening\_Ratio:*

298.257222

[Back To Index](#)*Entity\_and\_Attribute\_Information:**Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:*

T\_MAMMAL.PAT

*Entity\_Type\_Definition:*

The T\_MAMMAL.PAT table contains attribute information for the vector polygons in this data set representing distribution of rare terrestrial mammals. Note that all attribute information is stored in a series of relational files, described below and in the Overview\_Description section. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (209), element number (9), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:*

NOAA

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

2090900002

*Range\_Domain\_Maximum:*

2090900084

*Attribute:**Attribute\_Label:*

RARNUM

*Attribute\_Definition:*

An identifier that links directly to the BIORES table or the flat format BIOFILE table. RARNUM values of 0 are holes in the polygons and do not contain information.

*Attribute\_Definition\_Source:*

NOAA

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

209001280

*Range\_Domain\_Maximum:*

209001289

*Detailed\_Description:**Entity\_Type:*

*Entity\_Type\_Label:*

BIO\_LUT

*Entity\_Type\_Definition:*

The data table BIO\_LUT is a lookup table that contains items necessary for linking vector objects in the biological data layers with the BIORES data table. Note that all attribute information is stored in a series of relational files, described below and in the Overview\_Description section. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

RARNUM

*Attribute\_Definition:*

An identifier that links records in the BIO\_LUT data table to records in the BIORES data table or the flat format BIOFILE data table. RARNUM values of 0 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:*

NOAA

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

209000001

*Range\_Domain\_Maximum:*

209001289

*Attribute:**Attribute\_Label:*

ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (209), element number (9), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:*

NOAA

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

2090100002

*Range\_Domain\_Maximum:*

2092200052

*Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:*

BIORES

*Entity\_Type\_Definition:*

The data table BIORES contains both biological attribute data and items necessary for linking vector objects in the biological data layers via the BIO\_LUT data table to other associated data tables. See the

Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*  
NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*  
RARNUM

*Attribute\_Definition:*  
An identifier that links records in the BIORES data table to records in the BIO\_LUT data table or the flat format BIOFILE data table.

*Attribute\_Definition\_Source:*  
NOAA

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*  
209000001

*Range\_Domain\_Maximum:*  
209001289

*Attribute:*

*Attribute\_Label:*  
SPECIES\_ID

*Attribute\_Definition:*  
Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.

*Attribute\_Definition\_Source:*  
NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*  
1

*Range\_Domain\_Maximum:*  
N

*Attribute:*

*Attribute\_Label:*  
CONC

*Attribute\_Definition:*  
The field CONC refers to "concentration," abundance, or density values, and may contain counts of a species at a particular location. No quantitative or qualitative information was available on concentrations of terrestrial mammals; therefore this field was populated with "-".

*Attribute\_Definition\_Source:*  
NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*  
SEASON\_ID

*Attribute\_Definition:*  
Numeric identifier for the unique monthly presence and life history

characteristics of each species at a given location.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:*

*Attribute\_Label:*

G\_SOURCE

*Attribute\_Definition:*

Geographic source identifier that links records in the BIORES data table to records in the SOURCES data table.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:*

*Attribute\_Label:*

S\_SOURCE

*Attribute\_Definition:*

Seasonality source identifier that links records in the BIORES data table to records in the SOURCES data table.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:*

*Attribute\_Label:*

ELEMENT

*Attribute\_Definition:*

Major categories of biological data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

BIRD

*Enumerated\_Domain\_Value\_Definition:*

Birds

*Enumerated\_Domain\_Value\_Definition\_Source:*

## NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

FISH

*Enumerated\_Domain\_Value\_Definition:*

Fish

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

HABITAT

*Enumerated\_Domain\_Value\_Definition:*

Habitats and plants

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

INVERT

*Enumerated\_Domain\_Value\_Definition:*

Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Marine mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

REPTILE

*Enumerated\_Domain\_Value\_Definition:*

Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Terrestrial mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*



**EL\_SPE***Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links records in the BIORES data table to records in the SPECIES and STATUS data tables.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BIORES data table to records in the SEASONAL and BREED data tables.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:*

SPECIES

*Entity\_Type\_Definition:*

The data table SPECIES identifies all species in the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure. Refer to the Completeness\_Report for a list of layer-specific species.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

**SPECIES\_ID***Attribute\_Definition:*

Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

NAME

*Attribute\_Definition:*

Species common name for the entire ESI data set.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

GEN\_SPEC

*Attribute\_Definition:*

Species scientific name for the entire ESI data set.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

ELEMENT

*Attribute\_Definition:*

Major categories of biological data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

BIRD

*Enumerated\_Domain\_Value\_Definition:*

Birds

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

FISH

*Enumerated\_Domain\_Value\_Definition:*

Fish

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

HABITAT

*Enumerated\_Domain\_Value\_Definition:*

Habitats and plants

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

INVERT

*Enumerated\_Domain\_Value\_Definition:*

Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

REPTILE

*Enumerated\_Domain\_Value\_Definition:*

Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

SUBELEMENT

*Attribute\_Definition:*

Element subgroup delineating a logical grouping of species.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             alcid  
         *Enumerated\_Domain\_Value\_Definition:*  
             Alcid  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             amphibian  
         *Enumerated\_Domain\_Value\_Definition:*  
             Amphibian  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             bivalve  
         *Enumerated\_Domain\_Value\_Definition:*  
             Bivalve  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             canine  
         *Enumerated\_Domain\_Value\_Definition:*  
             Canine  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             diadromous  
         *Enumerated\_Domain\_Value\_Definition:*  
             Diadromous fish  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             diving  
         *Enumerated\_Domain\_Value\_Definition:*  
             Diving bird  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*

dolphin  
*Enumerated\_Domain\_Value\_Definition:*  
 Dolphin  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
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*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 e\_nursery  
*Enumerated\_Domain\_Value\_Definition:*  
 Estuarine nursery fish  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 fish  
*Enumerated\_Domain\_Value\_Definition:*  
 Fish  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
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*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 freshwater  
*Enumerated\_Domain\_Value\_Definition:*  
 Freshwater fish  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
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*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 gastropod  
*Enumerated\_Domain\_Value\_Definition:*  
 Gastropod  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 gull\_tern  
*Enumerated\_Domain\_Value\_Definition:*  
 Gull or tern  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 insect  
*Enumerated\_Domain\_Value\_Definition:*  
 Insect

*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 invert  
*Enumerated\_Domain\_Value\_Definition:*  
 Invertebrate  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 kelp  
*Enumerated\_Domain\_Value\_Definition:*  
 Kelp  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 lizard  
*Enumerated\_Domain\_Value\_Definition:*  
 Lizard  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 m\_benthic  
*Enumerated\_Domain\_Value\_Definition:*  
 Marine benthic fish  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 passerine  
*Enumerated\_Domain\_Value\_Definition:*  
 Passerine bird  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 pelagic  
*Enumerated\_Domain\_Value\_Definition:*  
 Pelagic bird  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:**Enumerated\_Domain\_Value:*

pinniped

*Enumerated\_Domain\_Value\_Definition:*

Pinniped

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

plant

*Enumerated\_Domain\_Value\_Definition:*

Plant

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

raptor

*Enumerated\_Domain\_Value\_Definition:*

Raptor

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

sav

*Enumerated\_Domain\_Value\_Definition:*

Submerged aquatic vegetation

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

sea\_otter

*Enumerated\_Domain\_Value\_Definition:*

Sea otter

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

shorebird

*Enumerated\_Domain\_Value\_Definition:*

Shorebird

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

shrimp

*Enumerated\_Domain\_Value\_Definition:*  
 Shrimp  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 sm\_mammal  
*Enumerated\_Domain\_Value\_Definition:*  
 Small mammal  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 snake  
*Enumerated\_Domain\_Value\_Definition:*  
 Snake  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 turtle  
*Enumerated\_Domain\_Value\_Definition:*  
 Turtle  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 upland  
*Enumerated\_Domain\_Value\_Definition:*  
 Upland vegetation  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 wading  
*Enumerated\_Domain\_Value\_Definition:*  
 Wading bird  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 waterfowl  
*Enumerated\_Domain\_Value\_Definition:*  
 Waterfowl  
*Enumerated\_Domain\_Value\_Definition\_Source:*



## NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

wetland

*Enumerated\_Domain\_Value\_Definition:*

Wetland

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

whale

*Enumerated\_Domain\_Value\_Definition:*

Whale

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

NHP

*Attribute\_Definition:*

Natural Heritage Program global ranking.

*Attribute\_Definition\_Source:*

Network of Natural Heritage Program

*Attribute\_Domain\_Values:**Codeset\_Domain:**Codeset\_Name:*

NHP Global Conservation Status Rank

*Codeset\_Source:*

Natural Heritage Program

*Attribute:**Attribute\_Label:*

DATE\_PUB

*Attribute\_Definition:*

Date of NHP listing.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

0

*Enumerated\_Domain\_Value\_Definition:*

Date unspecified

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links records in the SPECIES data table to records in the BIORES and STATUS data tables.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:*

SEASONAL

*Entity\_Type\_Definition:*

The data table SEASONAL contains information on the seasonal presence of each species associated with each spatial vector object. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

ELEMENT

*Attribute\_Definition:*

Major categories of biological data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

BIRD

*Enumerated\_Domain\_Value\_Definition:*

Birds

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

**FISH***Enumerated\_Domain\_Value\_Definition:***Fish***Enumerated\_Domain\_Value\_Definition\_Source:***NOAA ESI Guidelines***Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:***HABITAT***Enumerated\_Domain\_Value\_Definition:***Habitats and plants***Enumerated\_Domain\_Value\_Definition\_Source:***NOAA ESI Guidelines***Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:***INVERT***Enumerated\_Domain\_Value\_Definition:***Invertebrates***Enumerated\_Domain\_Value\_Definition\_Source:***NOAA ESI Guidelines***Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:***M\_MAMMAL***Enumerated\_Domain\_Value\_Definition:***Marine Mammals***Enumerated\_Domain\_Value\_Definition\_Source:***NOAA ESI Guidelines***Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:***REPTILE***Enumerated\_Domain\_Value\_Definition:***Reptiles and Amphibians***Enumerated\_Domain\_Value\_Definition\_Source:***NOAA ESI Guidelines***Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:***T\_MAMMAL***Enumerated\_Domain\_Value\_Definition:***Terrestrial Mammals***Enumerated\_Domain\_Value\_Definition\_Source:***NOAA ESI Guidelines***Attribute:**Attribute\_Label:***SPECIES\_ID***Attribute\_Definition:*

Numeric identifier for each species that is unique within each element and refers to a nationwide ESI species list maintained at NOAA.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:*

*Attribute\_Label:*

SEASON\_ID

*Attribute\_Definition:*

Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:*

*Attribute\_Label:*

JAN

*Attribute\_Definition:*

January

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in January

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

FEB

*Attribute\_Definition:*

February

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in February

*Enumerated\_Domain\_Value\_Definition\_Source:*

## NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

MAR

*Attribute\_Definition:*

March

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in March

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

APR

*Attribute\_Definition:*

April

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in April

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

MAY

*Attribute\_Definition:*

May

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in May

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

JUN

*Attribute\_Definition:*

June

*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 X  
*Enumerated\_Domain\_Value\_Definition:*  
 Present in June  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*  
 JUL  
*Attribute\_Definition:*  
 July  
*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 X  
*Enumerated\_Domain\_Value\_Definition:*  
 Present in July  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*  
 AUG  
*Attribute\_Definition:*  
 August  
*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 X  
*Enumerated\_Domain\_Value\_Definition:*  
 Present in August  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*  
 SEP  
*Attribute\_Definition:*  
 September  
*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 X

*Enumerated\_Domain\_Value\_Definition:*

Present in September

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

OCT

*Attribute\_Definition:*

October

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in October

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

NOV

*Attribute\_Definition:*

November

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in November

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

DEC

*Attribute\_Definition:*

December

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in December

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

**EL\_SPE\_SEA***Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the SEASONAL data table to records in the BIORES and BREED data tables.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:*

BREED

*Entity\_Type\_Definition:*

The data table BREED identifies the monthly presence of certain life-history stages or activities for each species at a given location.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BREED data table to records in the BIORES and SEASONAL data tables.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

MONTH

*Attribute\_Definition:*



Two-digit calendar month. Each life history stage or activity type for a particular species can have up to 12 records to account for each month of the year.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

12

*Attribute:*

*Attribute\_Label:*

BREED1

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED1 = nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning; if ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M\_MAMMAL" then BREED1 = mating. This attribute is not used for HABITAT or T\_MAMMAL.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

N

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

-

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

BREED2

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = migrating; if ELEMENT is "FISH" then BREED2 = eggs; if ELEMENT is "INVERT" then BREED2 = eggs; if ELEMENT is "REPTILE" then BREED2 = hatching; if ELEMENT is "M\_MAMMAL" then BREED2 = calving. This attribute is not used for HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

N

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

-

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

BREED3

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED3 = molting; if ELEMENT is "FISH" then BREED3 = larvae; if ELEMENT is "INVERT" then BREED3 = larvae; if ELEMENT is "REPTILE" then BREED3 = internesting; if ELEMENT is "M\_MAMMAL" then BREED3 = pupping. This attribute is not used for HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 N  
*Enumerated\_Domain\_Value\_Definition:*  
 Life-history stage or activity not present or not reported  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 -  
*Enumerated\_Domain\_Value\_Definition:*  
 Breed category not used or not appropriate for record(s) in question  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute:*  
*Attribute\_Label:*  
 BREED4  
*Attribute\_Definition:*  
 Life history stage or activity type, where: if ELEMENT is "FISH" then BREED4 = juveniles; if ELEMENT is "INVERT" then BREED4 = juveniles; if ELEMENT is "REPTILE" then BREED4 = juveniles; if ELEMENT is "M\_MAMMAL" then BREED4 = molting. This attribute is not used for BIRD, HABITAT, or T\_MAMMAL elements.  
*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 Y  
*Enumerated\_Domain\_Value\_Definition:*  
 Life-history stage or activity present  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 N  
*Enumerated\_Domain\_Value\_Definition:*  
 Life-history stage or activity not present or not reported  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 -

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

BREED5

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 = adults; if ELEMENT is "INVERT" then BREED5 = adults; if ELEMENT is "REPTILE" then BREED5 = adults. This attribute is not used for BIRD, M\_MAMMAL, HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

N

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

-

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:*

STATUS

*Entity\_Type\_Definition:*

The data table STATUS identifies the species that are listed as either threatened or endangered by a state, federal, or international authority. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*

## NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

ELEMENT

*Attribute\_Definition:*

Major categories of biological data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

BIRD

*Enumerated\_Domain\_Value\_Definition:*

Birds

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

FISH

*Enumerated\_Domain\_Value\_Definition:*

Fish

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

HABITAT

*Enumerated\_Domain\_Value\_Definition:*

Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

INVERT

*Enumerated\_Domain\_Value\_Definition:*

Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

M\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Marine Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

## REPTILE

*Enumerated\_Domain\_Value\_Definition:*

Reptiles and Amphibians

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

SPECIES\_ID

*Attribute\_Definition:*

Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

STATE

*Attribute\_Definition:*

Two-letter state abbreviation.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

COUNTRY

*Attribute\_Definition:*

Three-letter country abbreviation.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

S

*Attribute\_Definition:*

State threatened or endangered status.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

E

*Enumerated\_Domain\_Value\_Definition:*

Endangered on state list

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

T

*Enumerated\_Domain\_Value\_Definition:*

Threatened on state list

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

C

*Enumerated\_Domain\_Value\_Definition:*

Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

F

*Attribute\_Definition:*

Federal threatened or endangered status.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

E

*Enumerated\_Domain\_Value\_Definition:*

Endangered on federal list

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

T

*Enumerated\_Domain\_Value\_Definition:*

Threatened on federal list

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:**Enumerated\_Domain\_Value:*

C

*Enumerated\_Domain\_Value\_Definition:*

Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

I

*Attribute\_Definition:*

International threatened or endangered status.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

E

*Enumerated\_Domain\_Value\_Definition:*

Endangered on international list

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

T

*Enumerated\_Domain\_Value\_Definition:*

Threatened on international list

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

C

*Enumerated\_Domain\_Value\_Definition:*

Species of Special Concern

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

S\_DATE

*Attribute\_Definition:*

Publication date of source material used to assign state status values for each species, if used.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*



YYYY for year and optionally MM for month  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

F\_DATE

*Attribute\_Definition:*

Publication date of source material used to assign federal status values for each species, if used.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

I\_DATE

*Attribute\_Definition:*

Publication date of source material used to assign international status values for each species, if used.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links the STATUS data table to the BIORIS and SPECIES data tables.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:*

SOURCES

*Entity\_Type\_Definition:*

The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

SOURCE\_ID

*Attribute\_Definition:*

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table; G\_SOURCE and S\_SOURCE in the BIORES table; and SOURCE\_ID and ESI\_SOURCE in the ESI and HYDRO data layers.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

ORIGINATOR

*Attribute\_Definition:*

Author or developer of source material or data set.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

DATE\_PUB

*Attribute\_Definition:*

Date of source material, publication, or date of personal communication with expert source.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

TITLE

*Attribute\_Definition:*

Title of source material or data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

DATA\_FORMAT

*Attribute\_Definition:*

The format of the source material.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

PUB\_PLACE

*Attribute\_Definition:*

Publication place.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

PUBLISHER

*Attribute\_Definition:*

Publisher.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

PUBLICATION

*Attribute\_Definition:*

Additional citation information.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

ONLINE\_LINK

*Attribute\_Definition:*

Online computer resource URL.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

SCALE

*Attribute\_Definition:*

Description of the source scale.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

TIME\_PERIOD

*Attribute\_Definition:*

Date(s) of data collection that the source material is based upon.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Overview\_Description:**Entity\_and\_Attribute\_Overview:*

In addition to the geographic data layers, six relational attribute or data tables (BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS) are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, T\_MAMMAL) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO\_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (for the Southern California atlas, the number is 209), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described below in detail in the Detailed\_Description sections. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data

layers and other attribute tables in the ESI data structure. Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN\_SPEC, S, F, NHP, DATE\_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G\_SOURCE, S\_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables (described in the Detailed\_Description sections), except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED\_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed\_Description of the BREED data table. The link to the BIOFILE may be made through the BIO\_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED\_DT is an auxiliary support data table to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to BREED\_DT is the BREED item. A second supporting data table is SOURCES. This is the same as the source file described above, and the link from the flat file is both G\_SOURCE and S\_SOURCE. It should be noted that although the flat file eases data query, it is not a normalized database structure, and actual updates performed by the states and other responsible agencies should be done using the relational data tables. The entity-relationship diagram, describing relationships between attribute tables in the ESI data structure, does NOT include the BIOFILE data table, and this data table is NOT described in a Detailed\_Description section.

*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 ([http://response.restoration.noaa.gov/esi\\_guidelines](http://response.restoration.noaa.gov/esi_guidelines)).

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*Distribution\_Information:*

*Distributor:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:*

John Kaperick

*Contact\_Organization:*

NOAA, Office of Response and Restoration

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*Address\_Type:*

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*City:*

Seattle

*State\_or\_Province:*

Washington

*Postal\_Code:*

98115-6349

*Contact\_Voice\_Telephone:*

(206) 526-6400

*Contact\_Facsimile\_Telephone:*

(206) 526-6329

*Resource\_Description:*

Downloadable Data

*Distribution\_Liability:*

Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer input peripherals, or when the physical medium is delivered in damaged condition.

*Custom\_Order\_Process:*

Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to the widest community of GIS/mapping users. Distribution formats include Geodatabase; ARC export, MOSS, and Shape files; and MARPLOT map folders. An ArcMap .mxd file, an ArcView 3.x ESI project, and an ESI\_Viewer product for use with the MARPLOT data are also included on the distribution CDs/DVDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

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*Metadata\_Reference\_Information:*

*Metadata\_Date:*

20100927

*Metadata\_Review\_Date:*

20100927

*Metadata\_Contact:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:*

Jill Petersen

*Contact\_Organization:*

NOAA, Office of Response and Restoration

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*Postal\_Code:*

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(206) 526-6329

*Contact\_Electronic\_Mail\_Address:*

[Jill.Petersen@noaa.gov](mailto:Jill.Petersen@noaa.gov)

*Metadata\_Standard\_Name:*

Content Standards for Digital Geospatial Metadata

*Metadata\_Standard\_Version:*

FGDC-STD-001-1998

*Metadata\_Extensions:*

*Online\_Linkage:*

[http://www.ncddc.noaa.gov/metadataresource/metadata-references/files/ncddcmdprofile\\_v2.pdf](http://www.ncddc.noaa.gov/metadataresource/metadata-references/files/ncddcmdprofile_v2.pdf)

*Profile\_Name:*

Content Specification for Metadata in the National Coastal Data Development Center's Data Catalog Version 2.0

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# Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Southern California: HABITATS (Habitat Polygons)

## Metadata:

- [Identification Information](#)
  - [Data Quality Information](#)
  - [Spatial Data Organization Information](#)
  - [Spatial Reference Information](#)
  - [Entity and Attribute Information](#)
  - [Distribution Information](#)
  - [Metadata Reference Information](#)
- 

### *Identification\_Information:*

#### *Citation:*

##### *Citation\_Information:*

##### *Originator:*

National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington.

##### *Originator:*

Department of Homeland Security, United States Coast Guard, Office of Incident Management and Preparedness, Washington, D.C.

##### *Originator:*

Department of Fish and Game, Office of Spill Prevention and Response, Sacramento, California.

##### *Publication\_Date:*

201003

##### *Title:*

Sensitivity of Coastal Environments and Wildlife to Spilled Oil: Southern California: HABITATS (Habitat Polygons)

##### *Edition:*

Second

##### *Geospatial\_Data\_Presentation\_Form:*

vector digital data

##### *Series\_Information:*

##### *Series\_Name:*

None

##### *Issue\_Identification:*

Southern California

##### *Publication\_Information:*

##### *Publication\_Place:*

Seattle, Washington

##### *Publisher:*



NOAA's Ocean Service, Office of Response and Restoration (OR&R),  
Emergency Response Division (ERD).

*Other\_Citation\_Details:*

Prepared by Research Planning, Inc., Columbia, South Carolina for the  
National Oceanic and Atmospheric Administration (NOAA), National Ocean  
Service, Office of Response and Restoration, Emergency Response Division,  
Seattle, Washington.

*Online\_Linkage:*

<http://response.restoration.noaa.gov/esi>

*Description:*

*Abstract:*

This data set contains sensitive biological resource data for kelp, submerged aquatic vegetation (SAV), and select sensitive plants in [for] Southern California. Vector polygons in this data set represent distribution of kelp, SAV, and select sensitive plants. Species-specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the ESI data for Southern California. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources.

*Purpose:*

The ESI data were collected, mapped, and digitized to provide environmental data for oil spill planning and response. The Clean Water Act with amendments by the Oil Pollution Act of 1990 requires response plans for immediate and effective protection of sensitive resources.

*Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:*

1982

*Ending\_Date:*

2009

*Currentness\_Reference:*

The data were compiled during 2008-2010. The currentness dates for the data range from 1982 to 2009 and are documented in the Lineage section.

*Status:*

*Progress:*

Complete

*Maintenance\_and\_Update\_Frequency:*

None Scheduled

*Spatial\_Domain:*

*Bounding\_Coordinates:*

*West\_Bounding\_Coordinate:*

-120.60100

*East\_Bounding\_Coordinate:*

-117.00100

*North\_Bounding\_Coordinate:*

34.50000

*South\_Bounding\_Coordinate:*

32.44500

*Keywords:**Theme:**Theme\_Keyword\_Thesaurus:*

ISO 19115 Topic Category

*Theme\_Keyword:*

biota

*Theme\_Keyword:*

environment

*Theme:**Theme\_Keyword\_Thesaurus:*

None

*Theme\_Keyword:*

Environmental Monitoring

*Theme\_Keyword:*

ESI

*Theme\_Keyword:*

Sensitivity maps

*Theme\_Keyword:*

Coastal resources

*Theme\_Keyword:*

Oil spill planning

*Theme\_Keyword:*

Coastal Zone Management

*Theme\_Keyword:*

Wildlife

*Theme\_Keyword:*

Habitat

*Theme:**Theme\_Keyword\_Thesaurus:*

NOS Data Explorer Topic Category

*Theme\_Keyword:*

Environmental Monitoring

*Place:**Place\_Keyword\_Thesaurus:*

None

*Place\_Keyword:*

Southern California

*Access\_Constraints:*

None

*Use\_Constraints:*

DO NOT USE MAPS FOR NAVIGATIONAL PURPOSES. Besides the above warning, there are no use constraints on these data. Note that the ESI database should not be used to the exclusion of other pertinent data or information held by state or federal agencies or other organizations. Likewise, information contained in the database cannot be used in place of consultations with environmental, natural resource, and cultural resource agencies, or in place of field surveys. Recognize that the information contained in the ESI database represents known concentration areas or occurrences of natural, cultural, and human-use resources, but does not necessarily represent the full distribution or range of each species or resource. This is particularly important to recognize when considering potential impacts to protected resources, such as endangered species, wetlands, etc. Acknowledgment of the originators, publishers, contributors, and sources listed would be appreciated in products

derived from these data.

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:*

[datafig.jpg](#)

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and attribute data tables for the Southern California ESI data.

*Browse\_Graphic\_File\_Type:*

JPEG

*Browse\_Graphic:*

*Browse\_Graphic\_File\_Name:*

[datafig2.jpg](#)

*Browse\_Graphic\_File\_Description:*

Depicts the relationships between spatial data layers and desktop data tables for the Southern California ESI data.

*Browse\_Graphic\_File\_Type:*

JPEG

*Data\_Set\_Credit:*

This project was supported by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Office of Response and Restoration (OR&R), Emergency Response Division (ERD), Seattle, Washington; the Department of Homeland Security (DHS), United States Coast Guard (USCG), Office of Incident Management and Preparedness Washington, D.C.; and the California Department of Fish and Game (CDF&G), Office of Spill Prevention and Response (OSPR), Sacramento, California.

*Native\_Data\_Set\_Environment:*

The software packages used to develop the atlas are Environmental Systems Research Institute's ARC/INFO(R) (version 9.3) and SQL SERVER(R) (version 2000). The hardware configuration is PC's with Windows Operating System (2000/XP/2003). The Spatial\_Data\_Organization Information section refers only to the source files in the ARC export format. The following files are included in the data set: acp.e00, birds.e00, esi.e00, fish.e00, fishl.e00, habitats.e00, hydro.e00, index.e00, invert.e00, m\_mammal.e00, mgt.e00, nests.e00, reptiles.e00, socecon.e00, and t\_mammal.e00. Associated relational and desktop data tables provided in Arc export and text format are bio\_lut.e00, biofile.e00, biores.e00, breed.e00, breed\_dt.e00, seasonal.e00, soc\_dat.e00, soc\_lut.e00, sources.e00, species.e00, and status.e00.

*Program\_Affiliation:*

*Program\_Name:*

National Ocean Service Data Explorer

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*Data\_Quality\_Information:*

*Attribute\_Accuracy:*

*Attribute\_Accuracy\_Report:*

A multi-stage error checking process is used to verify both attribute accuracy and logical consistency throughout data production. The process includes a standardized data entry methodology, hardcopy data review by in-house and external resource experts, a final Quality Assurance/Quality Control (QA/QC) process, and multiple automated logical consistency checks. Quantitative data (such as densities, counts, abundances, or concentrations) provided by resource experts for inclusion in the data set may vary widely in attribute accuracy, depending upon the methodology used to collect and compile such data. For a

more detailed evaluation of source data attribute accuracy, contact the sources listed in the Lineage section.

*Logical\_Consistency\_Report:*

A multi-stage error checking process, described in the above Attribute\_Accuracy\_Report, is used to verify both attribute accuracy and logical consistency throughout data production. This process includes multiple automated logical consistency checks that test the files for missing or duplicate data, rules for proper coding, GIS topological consistencies (such as dangles, unnecessary nodes, etc.), and SQL SERVER(R) to ARC/INFO(R) consistencies. A final review is made by the GIS manager, where the data are written to CD/DVD and the metadata are written. After the data are delivered to NOAA, they are again subjected to a number of quality and consistency checks. In the process of checking for topological and database consistencies, new ID's and RARNUM's or HUNUM's are also generated. The new ID's are a combination of atlas number, element number, and record number. In addition, the value used to represent the element is modified to reflect the type of feature being mapped. In the case of an element that is normally represented by a point or polygon, a value of 20 is added to the standard element value for mapping of linear features. In the case where an element usually mapped as a polygon is represented by a point, a value of 30 is added to the regular element value. The RARNUM's are also modified to include the atlas number, so multiple atlases can be combined and RARNUM's remain unique. RARNUM's are redefined on an element basis, so "resource at risk" groupings will contain only a single element. HUNUM's are also modified to include the atlas number.

*Completeness\_Report:*

These data represent a synthesis of expert knowledge, available hardcopy documents, survey data, maps, and digital data on kelp, SAV, and sensitive plant distribution. These data do not necessarily represent all habitat occurrences in Southern California. The following species are included in this data set: (Species\_ID, Common Name, Scientific Name [n/a if not applicable]): 1, Eelgrass, *Zostera marina*; 5, Salt marsh bird's-beak, *Cordylanthus maritimus maritimus*; 7, Surfgrass, *Phyllospadix* sp.; 9, Giant kelp, *Macrocystis pyrifera*; 309, Beach morning glory, *Ipomoea pescaprea*; 930, Gaviota tarplant, *Deinandra increscens* ssp. *Villosa*; 931, Wire bird's-foot trefoil, *Lotus nuttallianus*; 933, Ventura marsh milkvetch, *Astragalus pycnostachyus* var. *lanosissimus*; 934, Star phacelia, *Phacelia stellaris*; 1058, Intertidal plants, n/a.

*Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy:*

*Horizontal\_Positional\_Accuracy\_Report:*

Spatial components for the biological data layers can come from expert interviews, hardcopy, or digital sources. Some of the spatial components of the biological data layers may have been developed using regional experts who estimate concentration areas. It is difficult to estimate the positional accuracy of such data, except to state that they are compiled on hardcopy base maps with a scale of 1:24,000. Some of the spatial components of the biological data sets are developed from pre-existing digital or hardcopy sources and reflect the positional accuracy of these original data. Note that biological resource data by their very nature are considered "fuzzy", and this should be understood when considering the positional accuracy of vector digital objects representing these resources. See the Lineage and Process\_Description sections for more information on the original source data and how these data were integrated or manipulated to create the final data set.

*Lineage:**Source\_Information:**Source\_Citation:**Citation\_Information:**Originator:*

BRUBAKER, D. (USFWS)

*Publication\_Date:*

2009

*Title:*NATIONAL WILDLIFE REFUGE RESOURCES IN  
SOUTHERN CALIFORNIA*Geospatial\_Data\_Presentation\_Form:*

EXPERT KNOWLEDGE

*Other\_Citation\_Details:*

UNPUBLISHED

*Type\_of\_Source\_Media:*

PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:**Time\_Period\_Information:**Single\_Date/Time:**Calendar\_Date:*

2009

*Source\_Currentness\_Reference:*

DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

HABITATS INFORMATION

*Source\_Information:**Source\_Citation:**Citation\_Information:**Originator:*

CDF&amp;G

*Publication\_Date:*

2007

*Title:*SCKELP2006, SCKELP2005, SCKELP2004,  
SCKELP2003, SCKELP2002, SCKELP1999*Geospatial\_Data\_Presentation\_Form:*

vector digital data

*Other\_Citation\_Details:*

CDF&amp;G, LOS ALAMITOS

*Type\_of\_Source\_Media:*

CD-ROM

*Source\_Time\_Period\_of\_Content:**Time\_Period\_Information:**Range\_of\_Dates/Times:**Beginning\_Date:*

1999

*Ending\_Date:*

2006

*Source\_Currentness\_Reference:*  
 DATE OF SURVEY  
*Source\_Citation\_Abbreviation:*  
 NONE  
*Source\_Contribution:*  
 HABITATS INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 CDF&G BIOGEOGRAPHIC DATA BRANCH  
*Publication\_Date:*  
 2009  
*Title:*  
 CALIFORNIA NATURAL DIVERSITY DATABASE  
 (CNDDDB)  
*Geospatial\_Data\_Presentation\_Form:*  
 vector digital data  
*Publication\_Information:*  
*Publication\_Place:*  
 SACRAMENTO, CA  
*Publisher:*  
 CDF&G BIOGEOGRAPHIC DATA BRANCH  
*Type\_of\_Source\_Media:*  
 online  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
 2009  
*Source\_Currentness\_Reference:*  
 DATE OF PUBLICATION  
*Source\_Citation\_Abbreviation:*  
 NONE  
*Source\_Contribution:*  
 HABITATS INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 CDF&G, OFFICE OF SPILL PREVENTION AND  
 RESPONSE (OSPR), DEPARTMENT OF HOMELAND  
 SECURITY (DHS), UNITED STATES COAST GUARD  
 (USCG)  
*Publication\_Date:*  
 2008  
*Title:*  
 AREA CONTINGENCY PLAN (ACP) SECTOR LOS  
 ANGELES/LONG BEACH; 2008 USCG SECTOR SAN  
 DIEGO AREA CONTINGENCY PLAN (ACP)  
*Geospatial\_Data\_Presentation\_Form:*

HARDCOPY TEXT  
*Other\_Citation\_Details:*  
 USCG  
*Type\_of\_Source\_Media:*  
 online  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
 2008  
*Source\_Currentness\_Reference:*  
 DATE OF PUBLICATION  
*Source\_Citation\_Abbreviation:*  
 NONE  
*Source\_Contribution:*  
 HABITATS INFORMATION  
*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 DELITH, C. (USFWS)  
*Publication\_Date:*  
 2009  
*Title:*  
 THREATENED/ENDANGERED (T/E) SPECIES IN  
 VENTURA COUNTY  
*Geospatial\_Data\_Presentation\_Form:*  
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*Other\_Citation\_Details:*  
 UNPUBLISHED  
*Type\_of\_Source\_Media:*  
 PERSONAL COMMUNICATION  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
 2009  
*Source\_Currentness\_Reference:*  
 DATE OF COMMUNICATION  
*Source\_Citation\_Abbreviation:*  
 NONE  
*Source\_Contribution:*  
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*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 ENGLE, J. UNIVERSITY OF CALIFORNIA SANTA  
 BARBARA (UCSB)  
*Publication\_Date:*  
 2009

*Title:*  
 INTERTIDAL HABITATS AND SPECIES  
*Geospatial\_Data\_Presentation\_Form:*  
 EXPERT KNOWLEDGE  
*Other\_Citation\_Details:*  
 UNPUBLISHED  
*Type\_of\_Source\_Media:*  
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*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
 2009  
*Source\_Currentness\_Reference:*  
 DATE OF COMMUNICATION  
*Source\_Citation\_Abbreviation:*  
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*Source\_Contribution:*  
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*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 HAZARD, G. (USFWS)  
*Publication\_Date:*  
 2009  
*Title:*  
 FEDERALLY PROTECTED RESOURCES IN  
 SOUTHERN CALIFORNIA  
*Geospatial\_Data\_Presentation\_Form:*  
 EXPERT KNOWLEDGE  
*Other\_Citation\_Details:*  
 UNPUBLISHED  
*Type\_of\_Source\_Media:*  
 PERSONAL COMMUNICATION  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
 2009  
*Source\_Currentness\_Reference:*  
 DATE OF COMMUNICATION  
*Source\_Citation\_Abbreviation:*  
 NONE  
*Source\_Contribution:*  
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*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 KIRSCHNER, E. (USFWS)



*Publication\_Date:*  
 2009  
*Title:*  
 USFWS RESOURCES IN SAN DIEGO AND ORANGE  
 COUNTIES  
*Geospatial\_Data\_Presentation\_Form:*  
 EXPERT KNOWLEDGE  
*Other\_Citation\_Details:*  
 UNPUBLISHED  
*Type\_of\_Source\_Media:*  
 PERSONAL COMMUNICATION  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
 2009  
*Source\_Currentness\_Reference:*  
 DATE OF COMMUNICATION  
*Source\_Citation\_Abbreviation:*  
 NONE  
*Source\_Contribution:*  
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*Source\_Information:*  
*Source\_Citation:*  
*Citation\_Information:*  
*Originator:*  
 KRONINGER, M. (CDF&G, OSPR)  
*Publication\_Date:*  
 2009  
*Title:*  
 DISTRIBUTION OF BIOLOGICAL AND SOCECON  
 RESOURCES IN LA AND ORANGE COUNTIES  
*Geospatial\_Data\_Presentation\_Form:*  
 EXPERT KNOWLEDGE  
*Other\_Citation\_Details:*  
 UNPUBLISHED  
*Type\_of\_Source\_Media:*  
 PERSONAL COMMUNICATION  
*Source\_Time\_Period\_of\_Content:*  
*Time\_Period\_Information:*  
*Single\_Date/Time:*  
*Calendar\_Date:*  
 2009  
*Source\_Currentness\_Reference:*  
 DATE OF COMMUNICATION  
*Source\_Citation\_Abbreviation:*  
 NONE  
*Source\_Contribution:*  
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*Source\_Information:*  
*Source\_Citation:*

*Citation\_Information:*

*Originator:*

PRYOR, D.

*Publication\_Date:*

2009

*Title:*

SPECIES DISTRIBUTION, LOS ANGELES COUNTY

*Geospatial\_Data\_Presentation\_Form:*

EXPERT KNOWLEDGE

*Other\_Citation\_Details:*

UNPUBLISHED

*Type\_of\_Source\_Media:*

PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:*

2009

*Source\_Currentness\_Reference:*

DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

HABITATS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

RYAN, T.

*Publication\_Date:*

2009

*Title:*

SNOWY PLOVER AND OTHER SPECIES  
DISTRIBUTION AND SEASONALITY IN SOUTHERN  
CALIFORNIA

*Geospatial\_Data\_Presentation\_Form:*

EXPERT KNOWLEDGE

*Other\_Citation\_Details:*

UNPUBLISHED

*Type\_of\_Source\_Media:*

PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:*

2009

*Source\_Currentness\_Reference:*

DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

## HABITATS INFORMATION

*Source\_Information:**Source\_Citation:**Citation\_Information:**Originator:*

SANTA BARBARA CHANNELKEEPER

*Publication\_Date:*

2009

*Title:*EELGRASS NORTHERN CHANNEL ISLANDS  
NOVEMBER 2009*Geospatial\_Data\_Presentation\_Form:*

vector digital data

*Other\_Citation\_Details:*

UNPUBLISHED

*Type\_of\_Source\_Media:*

EMAIL

*Source\_Time\_Period\_of\_Content:**Time\_Period\_Information:**Single\_Date/Time:**Calendar\_Date:*

2009

*Source\_Currentness\_Reference:*

DATE OF PUBLICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

HABITATS INFORMATION

*Source\_Information:**Source\_Citation:**Citation\_Information:**Originator:*

SCHALLMAN, B. (U.S. NAVY)

*Publication\_Date:*

2009

*Title:*

SPECIES DISTRIBUTION ON U.S. NAVY PROPERTY

*Geospatial\_Data\_Presentation\_Form:*

EXPERT KNOWLEDGE

*Other\_Citation\_Details:*

UNPUBLISHED

*Type\_of\_Source\_Media:*

PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:**Time\_Period\_Information:**Single\_Date/Time:**Calendar\_Date:*

2009

*Source\_Currentness\_Reference:*

DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

HABITATS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

THE NATURE CONSERVANCY, NOAA, LITTLER AND  
LITTLER

*Publication\_Date:*

2006

*Title:*

CALIFORNIA EELGRASS, HAB\_SEAGRASS\_SOCAL,  
HAB\_SURFGRASS

*Geospatial\_Data\_Presentation\_Form:*

vector digital data

*Other\_Citation\_Details:*

OSPR GRASS

*Type\_of\_Source\_Media:*

CD-ROM

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Range\_of\_Dates/Times:*

*Beginning\_Date:*

1982

*Ending\_Date:*

2006

*Source\_Currentness\_Reference:*

DATE OF SURVEY

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

HABITATS INFORMATION

*Source\_Information:*

*Source\_Citation:*

*Citation\_Information:*

*Originator:*

USFWS

*Publication\_Date:*

2009

*Title:*

FEDERALLY THREATENED AND ENDANGERED  
PLANTS IN SAN DIEGO COUNTY

*Geospatial\_Data\_Presentation\_Form:*

EXPERT KNOWLEDGE

*Other\_Citation\_Details:*

UNPUBLISHED

*Type\_of\_Source\_Media:*

PERSONAL COMMUNICATION

*Source\_Time\_Period\_of\_Content:*

*Time\_Period\_Information:*

*Single\_Date/Time:*

*Calendar\_Date:*

2009

*Source\_Currentness\_Reference:*

DATE OF COMMUNICATION

*Source\_Citation\_Abbreviation:*

NONE

*Source\_Contribution:*

HABITATS INFORMATION

*Process\_Step:*

*Process\_Description:*

Three main sources of data were used to depict habitat distribution and seasonality for this data layer: 1) personal interviews with resource experts from the U.S. Fish and Wildlife Service (USFWS), California State Parks (CSP), Ryan Ecological Consulting, U.S. Navy, California Department of Fish and Game (CDF&G) Office of Spill Prevention and Response (OSPR), and University of California Santa Barbara (UCSB); 2) digital data provided by CDF&G, The Nature Conservancy, and the Santa Barbara Channelkeeper; and 3) published reports provided by CDF&G. The above digital and/or hardcopy sources were compiled by the project biologist to create the HABITATS data layer. Depending on the type of source data, three general approaches are used for compiling the data layer: 1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:24,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The compiled ESI, biology, and human-use data are plotted onto hardcopy draft maps. Following the delivery of draft maps to the participating resource experts, a second set of interviews are conducted to review the maps. If necessary, edits to the HABITATS data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

*Process\_Date:*

201003

*Process\_Contact:*

*Contact\_Information:*

*Contact\_Organization\_Primary:*

*Contact\_Organization:*

NOAA, Office of Response and Restoration

*Contact\_Person:*

Jill Petersen

*Contact\_Address:*

*Address\_Type:*

Physical address

*Address:*

7600 Sand Point Way, N.E.

*City:*

Seattle

*State\_or\_Province:*

Washington  
*Postal\_Code:*  
 98115-6349  
*Contact\_Voice\_Telephone:*  
 (206) 526-6944  
*Contact\_Facsimile\_Telephone:*  
 (206) 526-6329  
*Contact\_Electronic\_Mail\_Address:*  
[Jill.Petersen@noaa.gov](mailto:Jill.Petersen@noaa.gov)

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*Spatial\_Data\_Organization\_Information:*  
*Direct\_Spatial\_Reference\_Method:*  
 Vector  
*Point\_and\_Vector\_Object\_Information:*  
*SDTS\_Terms\_Description:*  
*SDTS\_Point\_and\_Vector\_Object\_Type:*  
 GT-polygon composed of chains  
*Point\_and\_Vector\_Object\_Count:*  
 8510  
*SDTS\_Terms\_Description:*  
*SDTS\_Point\_and\_Vector\_Object\_Type:*  
 Area point  
*Point\_and\_Vector\_Object\_Count:*  
 8511  
*SDTS\_Terms\_Description:*  
*SDTS\_Point\_and\_Vector\_Object\_Type:*  
 Complete chain  
*Point\_and\_Vector\_Object\_Count:*  
 13152  
*SDTS\_Terms\_Description:*  
*SDTS\_Point\_and\_Vector\_Object\_Type:*  
 Link  
*Point\_and\_Vector\_Object\_Count:*  
 1665720  
*SDTS\_Terms\_Description:*  
*SDTS\_Point\_and\_Vector\_Object\_Type:*  
 Node,planar graph  
*Point\_and\_Vector\_Object\_Count:*  
 11218

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*Spatial\_Reference\_Information:*  
*Horizontal\_Coordinate\_System\_Definition:*  
*Geographic:*  
*Latitude\_Resolution:*  
 0.0000001  
*Longitude\_Resolution:*  
 0.0000001  
*Geographic\_Coordinate\_Units:*  
 Decimal degrees

*Geodetic\_Model:**Horizontal\_Datum\_Name:*

North American Datum of 1983

*Ellipsoid\_Name:*

Geodetic Reference System 80

*Semi-major\_Axis:*

6378137.000000

*Denominator\_of\_Flattening\_Ratio:*

298.257222

[Back To Index](#)*Entity\_and\_Attribute\_Information:**Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:*

HABITATS.PAT

*Entity\_Type\_Definition:*

The HABITATS.PAT table contains attribute information for the vector polygons in this data set representing distribution of kelp, submerged aquatic vegetation (SAV), and select sensitive plants. Note that all attribute information is stored in a series of relational files, described below and in the Overview\_Description section. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the relationships between attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (209), element number (3), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:*

NOAA

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

2090300002

*Range\_Domain\_Maximum:*

2090309225

*Attribute:**Attribute\_Label:*

RARNUM

*Attribute\_Definition:*

An identifier that links directly to the BIORES table or the flat format BIOFILE table. RARNUM values of 0 are holes in the polygons and do not contain information.

*Attribute\_Definition\_Source:*

NOAA

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

209001025

*Range\_Domain\_Maximum:*

209001058

*Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:*

BIO\_LUT

*Entity\_Type\_Definition:*

The data table BIO\_LUT is a lookup table that contains items necessary for linking vector objects in the biological data layers with the BIORES data table. Note that all attribute information is stored in a series of relational files, described below and in the Overview\_Description section. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

RARNUM

*Attribute\_Definition:*

An identifier that links records in the BIO\_LUT data table to records in the BIORES data table or the flat format BIOFILE data table. RARNUM values of 0 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:*

NOAA

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

209000001

*Range\_Domain\_Maximum:*

209001289

*Attribute:**Attribute\_Label:*

ID

*Attribute\_Definition:*

An identifier that links vector objects in the biology data layers to records in the BIO\_LUT data table. ID is a concatenation of atlas number (209), element number (3), and record number. ID values of 9999 are holes in polygons and do not contain information.

*Attribute\_Definition\_Source:*

NOAA

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

2090100002

*Range\_Domain\_Maximum:*



2092200052

*Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:*

BIORES

*Entity\_Type\_Definition:*

The data table BIORES contains both biological attribute data and items necessary for linking vector objects in the biological data layers via the BIO\_LUT data table to other associated data tables. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

RARNUM

*Attribute\_Definition:*

An identifier that links records in the BIORES data table to records in the BIO\_LUT data table or the flat format BIOFILE data table.

*Attribute\_Definition\_Source:*

NOAA

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

209000001

*Range\_Domain\_Maximum:*

209001289

*Attribute:**Attribute\_Label:*

SPECIES\_ID

*Attribute\_Definition:*

Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

CONC

*Attribute\_Definition:*

The field CONC refers to concentration, abundance, or density value of a habitat at a particular location. No quantitative or qualitative information was available on concentrations of submerged aquatic vegetation, kelp, or plants; therefore this field was populated with "-".

*Attribute\_Definition\_Source:*

## NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

SEASON\_ID

*Attribute\_Definition:*

Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

G\_SOURCE

*Attribute\_Definition:*

Geographic source identifier that links records in the BIORES data table to records in the SOURCES data table.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

S\_SOURCE

*Attribute\_Definition:*

Seasonality source identifier that links records in the BIORES data table to records in the SOURCES data table.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

ELEMENT

*Attribute\_Definition:*

Major categories of biological data.

*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             BIRD  
         *Enumerated\_Domain\_Value\_Definition:*  
             Birds  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             FISH  
         *Enumerated\_Domain\_Value\_Definition:*  
             Fish  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             HABITAT  
         *Enumerated\_Domain\_Value\_Definition:*  
             Habitats and plants  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             INVERT  
         *Enumerated\_Domain\_Value\_Definition:*  
             Invertebrates  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             M\_MAMMAL  
         *Enumerated\_Domain\_Value\_Definition:*  
             Marine mammals  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             REPTILE  
         *Enumerated\_Domain\_Value\_Definition:*  
             Reptiles and Amphibians  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*

*Enumerated\_Domain:**Enumerated\_Domain\_Value:*

T\_MAMMAL

*Enumerated\_Domain\_Value\_Definition:*

Terrestrial mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links records in the BIORES data table to records in the SPECIES and STATUS data tables.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BIORES data table to records in the SEASONAL and BREED data tables.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:*

SPECIES

*Entity\_Type\_Definition:*

The data table SPECIES identifies all species in the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure. Refer to the Completeness\_Report for a list of layer-specific species.

*Entity\_Type\_Definition\_Source:*  
NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*  
SPECIES\_ID

*Attribute\_Definition:*  
Numeric identifier for each species that is unique within each element and refers to a nationwide master ESI species list maintained at NOAA.

*Attribute\_Definition\_Source:*  
NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:*

*Attribute\_Label:*  
NAME

*Attribute\_Definition:*  
Species common name for the entire ESI data set.

*Attribute\_Definition\_Source:*  
NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*  
GEN\_SPEC

*Attribute\_Definition:*  
Species scientific name for the entire ESI data set.

*Attribute\_Definition\_Source:*  
NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*  
ELEMENT

*Attribute\_Definition:*  
Major categories of biological data.

*Attribute\_Definition\_Source:*  
NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

**BIRD***Enumerated\_Domain\_Value\_Definition:***Birds***Enumerated\_Domain\_Value\_Definition\_Source:***NOAA ESI Guidelines***Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:***FISH***Enumerated\_Domain\_Value\_Definition:***Fish***Enumerated\_Domain\_Value\_Definition\_Source:***NOAA ESI Guidelines***Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:***HABITAT***Enumerated\_Domain\_Value\_Definition:***Habitats and plants***Enumerated\_Domain\_Value\_Definition\_Source:***NOAA ESI Guidelines***Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:***INVERT***Enumerated\_Domain\_Value\_Definition:***Invertebrates***Enumerated\_Domain\_Value\_Definition\_Source:***NOAA ESI Guidelines***Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:***M\_MAMMAL***Enumerated\_Domain\_Value\_Definition:***Marine Mammals***Enumerated\_Domain\_Value\_Definition\_Source:***NOAA ESI Guidelines***Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:***REPTILE***Enumerated\_Domain\_Value\_Definition:***Reptiles and Amphibians***Enumerated\_Domain\_Value\_Definition\_Source:***NOAA ESI Guidelines***Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:***T\_MAMMAL***Enumerated\_Domain\_Value\_Definition:***Terrestrial Mammals**

*Enumerated\_Domain\_Value\_Definition\_Source:*  
NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*  
SUBELEMENT

*Attribute\_Definition:*  
Element subgroup delineating a logical grouping of species.

*Attribute\_Definition\_Source:*  
NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*  
alcid

*Enumerated\_Domain\_Value\_Definition:*  
Alcid

*Enumerated\_Domain\_Value\_Definition\_Source:*  
NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*  
amphibian

*Enumerated\_Domain\_Value\_Definition:*  
Amphibian

*Enumerated\_Domain\_Value\_Definition\_Source:*  
NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*  
bivalve

*Enumerated\_Domain\_Value\_Definition:*  
Bivalve

*Enumerated\_Domain\_Value\_Definition\_Source:*  
NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*  
canine

*Enumerated\_Domain\_Value\_Definition:*  
Canine

*Enumerated\_Domain\_Value\_Definition\_Source:*  
NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*  
diadromous

*Enumerated\_Domain\_Value\_Definition:*  
Diadromous fish

*Enumerated\_Domain\_Value\_Definition\_Source:*  
NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*  
 diving  
*Enumerated\_Domain\_Value\_Definition:*  
 Diving bird  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 dolphin  
*Enumerated\_Domain\_Value\_Definition:*  
 Dolphin  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 e\_nursery  
*Enumerated\_Domain\_Value\_Definition:*  
 Estuarine nursery fish  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 fish  
*Enumerated\_Domain\_Value\_Definition:*  
 Fish  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 freshwater  
*Enumerated\_Domain\_Value\_Definition:*  
 Freshwater fish  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 gastropod  
*Enumerated\_Domain\_Value\_Definition:*  
 Gastropod  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 gull\_tern  
*Enumerated\_Domain\_Value\_Definition:*



Gull or tern

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

insect

*Enumerated\_Domain\_Value\_Definition:*

Insect

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

invert

*Enumerated\_Domain\_Value\_Definition:*

Invertebrate

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

kelp

*Enumerated\_Domain\_Value\_Definition:*

Kelp

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

lizard

*Enumerated\_Domain\_Value\_Definition:*

Lizard

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

m\_benthic

*Enumerated\_Domain\_Value\_Definition:*

Marine benthic fish

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

passerine

*Enumerated\_Domain\_Value\_Definition:*

Passerine bird

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             pelagic  
         *Enumerated\_Domain\_Value\_Definition:*  
             Pelagic bird  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             pinniped  
         *Enumerated\_Domain\_Value\_Definition:*  
             Pinniped  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             plant  
         *Enumerated\_Domain\_Value\_Definition:*  
             Plant  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             raptor  
         *Enumerated\_Domain\_Value\_Definition:*  
             Raptor  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             sav  
         *Enumerated\_Domain\_Value\_Definition:*  
             Submerged aquatic vegetation  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             sea\_otter  
         *Enumerated\_Domain\_Value\_Definition:*  
             Sea otter  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*

shorebird  
*Enumerated\_Domain\_Value\_Definition:*  
 Shorebird  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 shrimp  
*Enumerated\_Domain\_Value\_Definition:*  
 Shrimp  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 sm\_mammal  
*Enumerated\_Domain\_Value\_Definition:*  
 Small mammal  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 snake  
*Enumerated\_Domain\_Value\_Definition:*  
 Snake  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 turtle  
*Enumerated\_Domain\_Value\_Definition:*  
 Turtle  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 upland  
*Enumerated\_Domain\_Value\_Definition:*  
 Upland vegetation  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 wading  
*Enumerated\_Domain\_Value\_Definition:*  
 Wading bird

*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 waterfowl  
*Enumerated\_Domain\_Value\_Definition:*  
 Waterfowl  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 wetland  
*Enumerated\_Domain\_Value\_Definition:*  
 Wetland  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 whale  
*Enumerated\_Domain\_Value\_Definition:*  
 Whale  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute:*  
*Attribute\_Label:*  
 NHP  
*Attribute\_Definition:*  
 Natural Heritage Program global ranking.  
*Attribute\_Definition\_Source:*  
 Network of Natural Heritage Program  
*Attribute\_Domain\_Values:*  
*Codeset\_Domain:*  
*Codeset\_Name:*  
 NHP Global Conservation Status Rank  
*Codeset\_Source:*  
 Natural Heritage Program  
*Attribute:*  
*Attribute\_Label:*  
 DATE\_PUB  
*Attribute\_Definition:*  
 Date of NHP listing.  
*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 YYYYMM  
*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

0

*Enumerated\_Domain\_Value\_Definition:*

Date unspecified

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links records in the SPECIES data table to records in the BIORES and STATUS data tables.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Detailed\_Description:*

*Entity\_Type:*

*Entity\_Type\_Label:*

SEASONAL

*Entity\_Type\_Definition:*

The data table SEASONAL contains information on the seasonal presence of each species associated with each spatial vector object. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

ELEMENT

*Attribute\_Definition:*

Major categories of biological data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*  
 BIRD  
*Enumerated\_Domain\_Value\_Definition:*  
 Birds  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 FISH  
*Enumerated\_Domain\_Value\_Definition:*  
 Fish  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 HABITAT  
*Enumerated\_Domain\_Value\_Definition:*  
 Habitats and plants  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 INVERT  
*Enumerated\_Domain\_Value\_Definition:*  
 Invertebrates  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 M\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:*  
 Marine Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 REPTILE  
*Enumerated\_Domain\_Value\_Definition:*  
 Reptiles and Amphibians  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 T\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:*

## Terrestrial Mammals

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

SPECIES\_ID

*Attribute\_Definition:*

Numeric identifier for each species that is unique within each element and refers to a nationwide ESI species list maintained at NOAA.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

SEASON\_ID

*Attribute\_Definition:*

Numeric identifier for the unique monthly presence and life history characteristics of each species at a given location.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

JAN

*Attribute\_Definition:*

January

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in January

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

FEB

*Attribute\_Definition:*

February

*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 X  
*Enumerated\_Domain\_Value\_Definition:*  
 Present in February  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*  
 MAR  
*Attribute\_Definition:*  
 March  
*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 X  
*Enumerated\_Domain\_Value\_Definition:*  
 Present in March  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*  
 APR  
*Attribute\_Definition:*  
 April  
*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 X  
*Enumerated\_Domain\_Value\_Definition:*  
 Present in April  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*  
 MAY  
*Attribute\_Definition:*  
 May  
*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 X



*Enumerated\_Domain\_Value\_Definition:*

Present in May

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

JUN

*Attribute\_Definition:*

June

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in June

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

JUL

*Attribute\_Definition:*

July

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in July

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

AUG

*Attribute\_Definition:*

August

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in August

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

SEP

*Attribute\_Definition:*

September

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in September

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

OCT

*Attribute\_Definition:*

October

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in October

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

NOV

*Attribute\_Definition:*

November

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in November

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

DEC

*Attribute\_Definition:*

December

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:**Enumerated\_Domain\_Value:*

X

*Enumerated\_Domain\_Value\_Definition:*

Present in December

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the SEASONAL data table to records in the BIORES and BREED data tables.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:*

BREED

*Entity\_Type\_Definition:*

The data table BREED identifies the monthly presence of certain life-history stages or activities for each species at a given location.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

EL\_SPE\_SEA

*Attribute\_Definition:*

Concatenation of ELEMENT, SPECIES\_ID, and SEASON\_ID. This item links records in the BREED data table to records in the BIORES and SEASONAL data tables.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT, the next five

characters are SPECIES\_ID, and the last two characters are SEASON\_ID (e.g. ELEMENT = 'BIRD', SPECIES\_ID = 1 and SEASON\_ID = 1; EL\_SPE\_SEA = 'B0000101').

*Enumerated\_Domain\_Value\_Definition\_Source:*  
NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

MONTH

*Attribute\_Definition:*

Two-digit calendar month. Each life history stage or activity type for a particular species can have up to 12 records to account for each month of the year.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Range\_Domain:*

*Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

12

*Attribute:*

*Attribute\_Label:*

BREED1

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED1 = nesting; if ELEMENT is "FISH" then BREED1 = spawning; if ELEMENT is "INVERT" then BREED1 = spawning; if ELEMENT is "REPTILE" then BREED1 = nesting; if ELEMENT is "M\_MAMMAL" then BREED1 = mating. This attribute is not used for HABITAT or T\_MAMMAL.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

N

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

BREED2

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED2 = migrating; if ELEMENT is "FISH" then BREED2 = eggs; if ELEMENT is "INVERT" then BREED2 = eggs; if ELEMENT is "REPTILE" then BREED2 = hatching; if ELEMENT is "M\_MAMMAL" then BREED2 = calving. This attribute is not used for HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

N

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

-

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

BREED3

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "BIRD" then BREED3 = molting; if ELEMENT is "FISH" then BREED3 = larvae; if ELEMENT is "INVERT" then BREED3 = larvae; if ELEMENT is "REPTILE" then BREED3 = interbreeding; if ELEMENT is

"M\_MAMMAL" then BREED3 = pupping. This attribute is not used for HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

N

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

-

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

BREED4

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "FISH" then BREED4 = juveniles; if ELEMENT is "INVERT" then BREED4 = juveniles; if ELEMENT is "REPTILE" then BREED4 = juveniles; if ELEMENT is "M\_MAMMAL" then BREED4 = molting. This attribute is not used for BIRD, HABITAT, or T\_MAMMAL elements.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

N

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

-

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

BREED5

*Attribute\_Definition:*

Life history stage or activity type, where: if ELEMENT is "FISH" then BREED5 = adults; if ELEMENT is "INVERT" then BREED5 = adults; if ELEMENT is "REPTILE" then BREED5 = adults. This attribute is not used for BIRD, M\_MAMMAL, HABITAT or T\_MAMMAL elements.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

Y

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity present

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

N

*Enumerated\_Domain\_Value\_Definition:*

Life-history stage or activity not present or not reported

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

-

*Enumerated\_Domain\_Value\_Definition:*

Breed category not used or not appropriate for record(s) in question

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Detailed\_Description:**Entity\_Type:*

*Entity\_Type\_Label:*

STATUS

*Entity\_Type\_Definition:*

The data table STATUS identifies the species that are listed as either threatened or endangered by a state, federal, or international authority. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

ELEMENT

*Attribute\_Definition:*

Major categories of biological data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

BIRD

*Enumerated\_Domain\_Value\_Definition:*

Birds

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

FISH

*Enumerated\_Domain\_Value\_Definition:*

Fish

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

HABITAT

*Enumerated\_Domain\_Value\_Definition:*

Habitats and Plants

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

INVERT

*Enumerated\_Domain\_Value\_Definition:*

Invertebrates

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*



*Enumerated\_Domain\_Value:*  
 M\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:*  
 Marine Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 REPTILE  
*Enumerated\_Domain\_Value\_Definition:*  
 Reptiles and Amphibians  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 T\_MAMMAL  
*Enumerated\_Domain\_Value\_Definition:*  
 Terrestrial Mammals  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute:*  
*Attribute\_Label:*  
 SPECIES\_ID  
*Attribute\_Definition:*  
 Numeric identifier for each species that is unique within each element  
 and refers to a nationwide master ESI species list maintained at NOAA.  
*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Range\_Domain:*  
*Range\_Domain\_Minimum:*  
 1  
*Range\_Domain\_Maximum:*  
 N  
*Attribute:*  
*Attribute\_Label:*  
 STATE  
*Attribute\_Definition:*  
 Two-letter state abbreviation.  
*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Unrepresentable\_Domain:*  
 Acceptable values change from atlas to atlas.  
*Attribute:*  
*Attribute\_Label:*  
 COUNTRY  
*Attribute\_Definition:*  
 Three-letter country abbreviation.

*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Unrepresentable\_Domain:*  
 Acceptable values change from atlas to atlas.

*Attribute:*

*Attribute\_Label:*  
 S  
*Attribute\_Definition:*  
 State threatened or endangered status.  
*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 E  
*Enumerated\_Domain\_Value\_Definition:*  
 Endangered on state list  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 T  
*Enumerated\_Domain\_Value\_Definition:*  
 Threatened on state list  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 C  
*Enumerated\_Domain\_Value\_Definition:*  
 Species of Special Concern  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*  
 F  
*Attribute\_Definition:*  
 Federal threatened or endangered status.  
*Attribute\_Definition\_Source:*  
 NOAA ESI Guidelines  
*Attribute\_Domain\_Values:*  
*Enumerated\_Domain:*  
*Enumerated\_Domain\_Value:*  
 E  
*Enumerated\_Domain\_Value\_Definition:*  
 Endangered on federal list  
*Enumerated\_Domain\_Value\_Definition\_Source:*  
 NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             T  
         *Enumerated\_Domain\_Value\_Definition:*  
             Threatened on federal list  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             C  
         *Enumerated\_Domain\_Value\_Definition:*  
             Species of Special Concern  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines

*Attribute:*  
     *Attribute\_Label:*  
         I  
     *Attribute\_Definition:*  
         International threatened or endangered status.  
     *Attribute\_Definition\_Source:*  
         NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             E  
         *Enumerated\_Domain\_Value\_Definition:*  
             Endangered on international list  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             T  
         *Enumerated\_Domain\_Value\_Definition:*  
             Threatened on international list  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines

*Attribute\_Domain\_Values:*  
     *Enumerated\_Domain:*  
         *Enumerated\_Domain\_Value:*  
             C  
         *Enumerated\_Domain\_Value\_Definition:*  
             Species of Special Concern  
         *Enumerated\_Domain\_Value\_Definition\_Source:*  
             NOAA ESI Guidelines

*Attribute:*  
     *Attribute\_Label:*  
         S\_DATE  
     *Attribute\_Definition:*

Publication date of source material used to assign state status values for each species, if used.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

F\_DATE

*Attribute\_Definition:*

Publication date of source material used to assign federal status values for each species, if used.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

I\_DATE

*Attribute\_Definition:*

Publication date of source material used to assign international status values for each species, if used.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Enumerated\_Domain:*

*Enumerated\_Domain\_Value:*

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:*

*Attribute\_Label:*

EL\_SPE

*Attribute\_Definition:*

Concatenation of ELEMENT and SPECIES\_ID. This item links the STATUS data table to the BIORES and SPECIES data tables.

*Attribute\_Definition\_Source:*

## NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

E#####

*Enumerated\_Domain\_Value\_Definition:*

Where E is the first character of ELEMENT and the next five characters are SPECIES\_ID (e.g. ELEMENT = 'BIRD' and SPECIES\_ID = 1; EL\_SPE = 'B00001').

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Detailed\_Description:**Entity\_Type:**Entity\_Type\_Label:*

SOURCES

*Entity\_Type\_Definition:*

The data table SOURCES contains the primary sources used to create the ESI data set. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way this table relates to other attribute tables in the ESI data structure.

*Entity\_Type\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

SOURCE\_ID

*Attribute\_Definition:*

Source identifier that links records in the SOURCES data table to the items G\_SOURCE and A\_SOURCE in the SOC\_DAT table; G\_SOURCE and S\_SOURCE in the BIORES table; and SOURCE\_ID and ESI\_SOURCE in the ESI and HYDRO data layers.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Range\_Domain:**Range\_Domain\_Minimum:*

1

*Range\_Domain\_Maximum:*

N

*Attribute:**Attribute\_Label:*

ORIGINATOR

*Attribute\_Definition:*

Author or developer of source material or data set.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

DATE\_PUB

*Attribute\_Definition:*

Date of source material, publication, or date of personal communication with expert source.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Enumerated\_Domain:**Enumerated\_Domain\_Value:*

YYYYMM

*Enumerated\_Domain\_Value\_Definition:*

YYYY for year and optionally MM for month

*Enumerated\_Domain\_Value\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute:**Attribute\_Label:*

TITLE

*Attribute\_Definition:*

Title of source material or data.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

DATA\_FORMAT

*Attribute\_Definition:*

The format of the source material.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

PUB\_PLACE

*Attribute\_Definition:*

Publication place.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

PUBLISHER

*Attribute\_Definition:*

Publisher.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:*

*Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

PUBLICATION

*Attribute\_Definition:*

Additional citation information.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

ONLINE\_LINK

*Attribute\_Definition:*

Online computer resource URL.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

SCALE

*Attribute\_Definition:*

Description of the source scale.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Attribute:**Attribute\_Label:*

TIME\_PERIOD

*Attribute\_Definition:*

Date(s) of data collection that the source material is based upon.

*Attribute\_Definition\_Source:*

NOAA ESI Guidelines

*Attribute\_Domain\_Values:**Unrepresentable\_Domain:*

Acceptable values change from atlas to atlas.

*Overview\_Description:**Entity\_and\_Attribute\_Overview:*

In addition to the geographic data layers, six relational attribute or data tables (BIORES, BREED, SEASONAL, SOURCES, SPECIES, and STATUS) are used to store the complex biological data in the ESI data structure. The geographic data layer containing biological resource information (in this case, HABITATS) is linked to the Biological Resources table (BIORES) using the unique ID and the lookup table BIO\_LUT, or it can be linked directly using RARNUM. The ID is a unique combination of the atlas number (for the

Southern California atlas, the number is 209), an element/layer specific number (BIRDS are layer 1, FISH are layer 2, etc.), and a unique record number. The RARNUM represents a unique combination of species, seasonalities, concentrations, and source information. For each of these groupings, a number is generated. That number is concatenated with the atlas number to create a "resource at risk" number that is unique across atlases. BIORES and the other relational data tables are described in detail in the Detailed\_Description sections. See the Browse\_Graphic section for a link to the entity-relationship diagram, which describes the way these tables relate to the geographic data layers and other attribute tables in the ESI data structure. Due to the complexity of the relational database model, the data items are also post-processed into a flat file format. This table, called BIOFILE, may be used in place of the relational files described below to ease simple data queries. The items in the flat file are ELEMENT, SUBELEMENT, NAME, GEN\_SPEC, S, F, NHP, DATE\_PUB, CONC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC, BREED1, BREED2, BREED3, BREED4, BREED5, RARNUM, G\_SOURCE, S\_SOURCE, and BREED. All of these items are the same as their counterparts in the individual data tables (described in the Detailed\_Description sections), except the BREED1-BREED5 and BREED items. BREED is a newly generated variable used to link to the BREED\_DT data table, a modified, more compact version of the relational BREED data table. BREED1-BREED5 give a text summary of when each life stage occurs within the associated map object. The life stages referred to are the same as those listed in the Detailed\_Description of the BREED data table. The link to the BIOFILE may be made through the BIO\_LUT, using ID to link to RARNUM, or BIOFILE may be linked directly to the RARNUM in each of the geographic layer's attribute data tables. As mentioned, BREED\_DT is an auxiliary support data table to the flat file structure, which allows the user to do searches based on month for seasonal breeding activities. The link from the flat file to BREED\_DT is the BREED item. A second supporting data table is SOURCES. This is the same as the source file described above, and the link from the flat file is both G\_SOURCE and S\_SOURCE. It should be noted that although the flat file eases data query, it is not a normalized database structure, and actual updates performed by the states and other responsible agencies should be done using the relational data tables. The entity-relationship diagram describing relationships between attribute tables in the ESI data structure does NOT include the BIOFILE data table, and this data table is NOT described in a Detailed\_Description section.

*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 ([http://response.restoration.noaa.gov/esi\\_guidelines](http://response.restoration.noaa.gov/esi_guidelines)).

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*Distribution\_Information:*

*Distributor:*

*Contact\_Information:*

*Contact\_Person\_Primary:*

*Contact\_Person:*

John Kaperick

*Contact\_Organization:*



## NOAA, Office of Response and Restoration

*Contact\_Address:**Address\_Type:*

Physical Address

*Address:*

7600 Sand Point Way N.E.

*City:*

Seattle

*State\_or\_Province:*

Washington

*Postal\_Code:*

98115-6349

*Contact\_Voice\_Telephone:*

(206) 526-6400

*Contact\_Facsimile\_Telephone:*

(206) 526-6329

*Resource\_Description:*

Downloadable Data

*Distribution\_Liability:*

Although these data have been processed successfully on a computer system at the National Oceanic and Atmospheric Administration, no warranty, expressed or implied, is made by NOAA regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. NOAA warrants the delivery of this product in computer-readable format, and will offer a replacement copy of the product when the product is determined unreadable by computer input peripherals, or when the physical medium is delivered in damaged condition.

*Custom\_Order\_Process:*

Contact NOAA for distribution options (see Distributor). ESI data are processed into multiple formats to make them useful to the widest community of GIS/mapping users. Distribution formats include Geodatabase; ARC export, MOSS, and Shape files; and MARPLOT map folders. An ArcMap .mxd file, an ArcView 3.x ESI project, and an ESI\_Viewer product for use with the MARPLOT data are also included on the distribution CDs/DVDs for ease of use of the ESI data. The database files are distributed both in the NOAA standard relational database format (see NOAA Technical Memorandum NOS ORCA 115) and in a simplified desktop flat file format. This metadata document includes information on both of these database formats.

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*Metadata\_Reference\_Information:**Metadata\_Date:*

20100927

*Metadata\_Review\_Date:*

20100927

*Metadata\_Contact:**Contact\_Information:**Contact\_Person\_Primary:**Contact\_Person:*

Jill Petersen

*Contact\_Organization:*

NOAA, Office of Response and Restoration

*Contact\_Position:*

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*Contact\_Address:*

*Address\_Type:*

Physical Address

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*State\_or\_Province:*

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(206) 526-6329

*Contact\_Electronic\_Mail\_Address:*

[Jill.Petersen@noaa.gov](mailto:Jill.Petersen@noaa.gov)

*Metadata\_Standard\_Name:*

Content Standards for Digital Geospatial Metadata

*Metadata\_Standard\_Version:*

FGDC-STD-001-1998

*Metadata\_Extensions:*

*Online\_Linkage:*

[http://www.ncddc.noaa.gov/metadatasource/metadata-references/files/ncddcmdprofile\\_v2.pdf](http://www.ncddc.noaa.gov/metadatasource/metadata-references/files/ncddcmdprofile_v2.pdf)

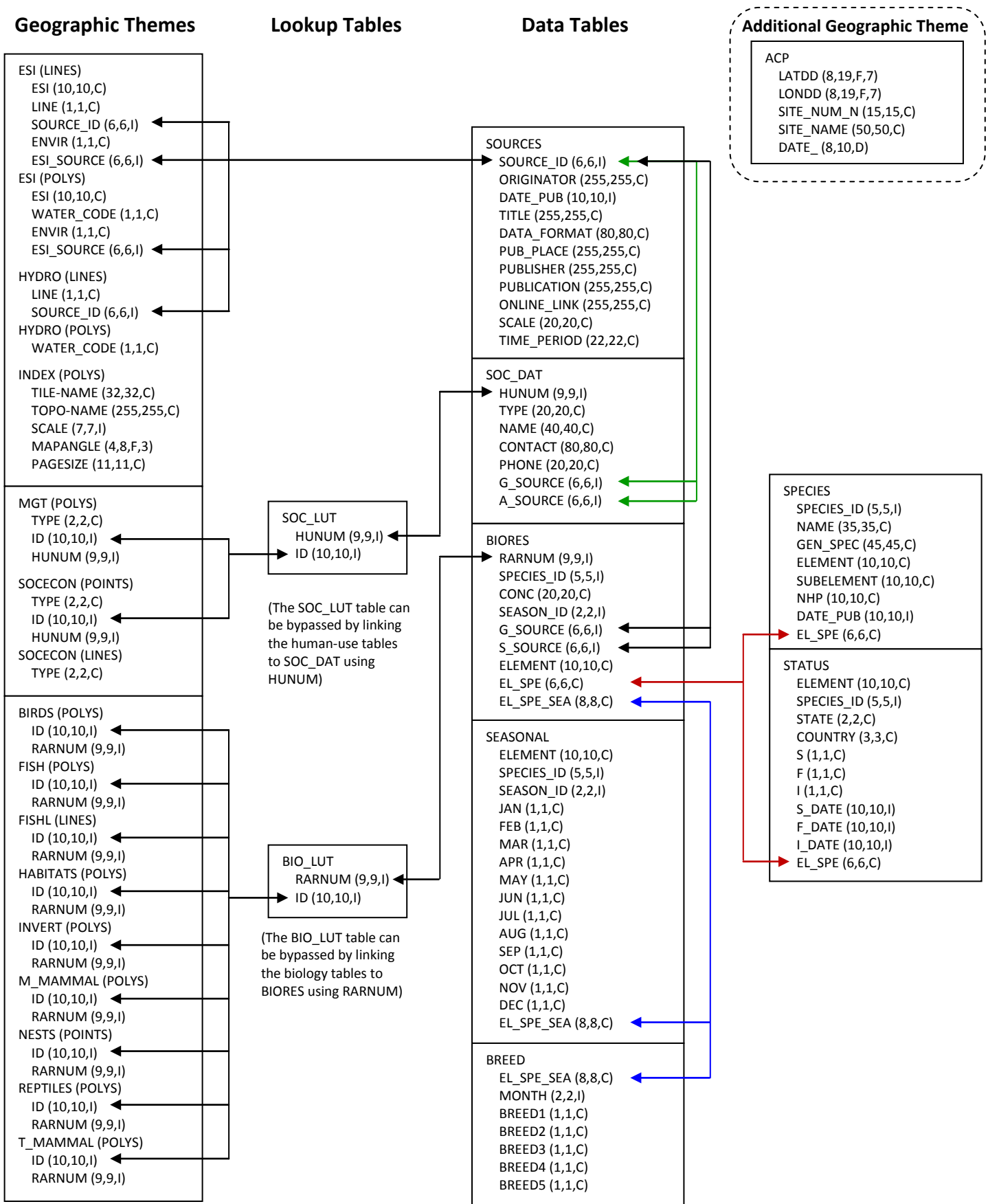
*Profile\_Name:*

Content Specification for Metadata in the National Coastal Data Development Center's Data Catalog Version 2.0

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# Southern California ESI – March 2010

## Entity Relationship Diagram for the Relational Data Tables



# Southern California ESI – March 2010

## Entity Relationship Diagram for the Desktop / Flat File Approach

